



Dispensing Solutions

Fluid dispense and transfer require the right equipment to maximize flow rate and organize your shop. Balcrank manufactures a variety of fluid dispense handles ranging in flow rates up to 18 GPM in both metered and non-metered versions. Also, preset handles allow our customers to enter the desired dispense amount and then automatically shut off to stop the dispense at a desired pre-set volume.

Hose reels organize your shop to keep it safe from tripping obstacles and make it easy to dispense your fluids. Different hose reel sizes can accommodate small to large shops requiring high volume dispensing or evacuation. We manufacture reels in low, medium, and high pressure for Air/Water, Oil, and Grease plus various other fluids and applications with hose sizes from ¼" to 2 ½".



Storage Solutions

Balcrank supplies fully assembled tank packages ranging from 165 to 400-gallon sizes. These packages are available for low, medium, and high-volume applications which determine the pump size used in the package. We also offer fluid evacuation systems for handling used fluid products while maintaining safety by utilizing a high-level pump shut-off to prevent overfilling of the tank. We offer single and double wall packages with a selection of pumps, hose reels, and control handles for each application.



Fluid Management Solutions

In today's bulk fluid market, we see an average of 10% shrinkage in bulk fluid inventory due to theft, reconciliation, and failure to bill for oil on the repair order. These systems monitor each dispense and provide a secure system that allows tracking of each drop of oil. Systems are offered in very simple configurations with low security to complex, feature-rich systems that provide complete security of your inventoried bulk products. They are password protected, linked to a repair order and require the technician to also preset the required fluid dispense amount. Once the dispense is complete, no other product is allowed to dispense unless it is on a separate ticket. Advanced reporting capability allows management to see reports based on each fluid product, who dispensed, when and how much fluid. It also tracks inventory in the bulk tank and can send an alert to your fluid supplier when tank levels get low or high in the case of used fluids. Lost inventory can have a dramatic effect on your cost of inventory as oil can be one of the highest costs of inventory in a service shop.



Balcrank

Balcrank Today

Balcrank is one of the oldest manufacturers of automotive lubrication products. Since its beginning, we have been providing our customers with the best products for the ever changing Automotive, Commercial and Industrial markets. Our products service automotive quick lubes, dealerships, fleet, and commercial vehicle centers. Our product line has expanded, encompassing the heavy-duty market, which includes: trucking, municipalities, railroad, marine, industrial and mining. Our new line of Lion pumps, large hose reels and high volume control handles allows us to dispense oil products up to 32 gallons per minute and grease up to 88 pounds per minute.

We provide system solutions for all types of vehicle maintenance facilities and industrial manufacturing. Our goal is to continue our traditions and evolve in markets and applications that make sense for our continued growth.

On July 9, 2009, Balcrank Corporation was acquired by Linter North America, a subsidiary of the Linter Investments Corporation. Following the same traditions as our parent company, Balcrank's manufacturing is world-class; focused on high quality, fast delivery, and excellent service to our customers.

Balcrank History

Balcrank began in 1906 in the heart of Cincinnati, Ohio's "Machine Tool Colony" as the Cincinnati Ball Crank Company. The first products produced by Balcrank were hand wheels and cranks used by the machine tool industry. That same year Balcrank became the first mass producer of starting cranks for automobiles. In 1908, Balcrank entered the automotive industry with the manufacturing of steering drag links. The steering drag links were an immediate hit. Almost every car manufacturer adopted these drag links and for the first time, steering a car became an easy task. Always looking forward, in 1922 Balcrank entered the lubrication field. The Cincinnati Ball Crank Company got its name from the production of ball-sockets

and hand cranks and was commonly referred to as Ball Crank. In 1933, the Board of Directors voted to change the name Ball Crank to Balcrank, Inc. In 1943, Balcrank received the three-star Army-Navy "E" Award, also known as the Army-Navy Production Award. This award was presented to facilities doing outstanding war production and construction work. After the war, Balcrank returned to its roots, manufacturing aftermarket lubrication equipment. Over the next 50 years, Balcrank introduced an average of three new products a year including the Pride series pumps, fluid inventory control systems, used fluid evacuation systems, and Diesel Exhaust Fluid (DEF) dispensing systems.

1 2 3 4 5 6 7 8 9 10

Table of Contents

OIL PISTON PUMPS PRODUCT SELECTION MATRIX	8	LION™ 450 40:1 PUMPS	48
LYNX® 1:1 STAINLESS STEEL PUMPS	9	LION™ 450 70:1 PUMPS	49
LYNX® 1:1 PUMP PACKAGES	10	LION™ 600 12:1 PUMPS	50
LYNX® 1:1 PUMP COMPONENTS	11	LION™ 600 80:1 PUMPS	51
LYNX® 3:1 PUMPS	12	LION™ INDUCTOR GRAVITY LIFT	52
LYNX® 3:1 PUMP PACKAGES	13	LION™ INDUCTOR DOUBLE POST RAM	53
LYNX® 3:1 PUMP COMPONENTS	14	ACCESSORIES FOR GREASE PISTON PUMPS	54
LYNX® 5:1 HD PUMP	15	REPAIR KITS FOR GREASE PISTON PUMPS	56
PANTHER® HP 3:1 PUMPS	16	DIAPHRAGM PUMPS PRODUCT SELECTION MATRIX	58
PANTHER® HP 3:1 PUMP PACKAGES	17	CENTERFLO CF10 PUMPS	60
PANTHER® HP 3:1 AND LYNX® 5:1 HD PUMP COMPONENTS	18	CENTERFLO CF15 PUMPS	61
PANTHER® HP 5:1 PUMPS	19	CENTERFLO CF30 PUMPS	63
PANTHER® HP 5:1 PUMP PACKAGES	20	CENTERFLO CF50 PUMPS	64
PANTHER® HP 5:1 PUMP COMPONENTS	21	CENTERFLO CF65 PUMPS	65
TIGER® HP 6:1 PUMPS	22	UNIVERSAL PUMP DESIGN TF150	66
TIGER® HP 6:1 PUMP PACKAGES	23	1" UL ALUMINUM PUMP	67
TIGER® HP 6:1 PUMP COMPONENTS	24	ELECTRIC PUMPS	68
LION™ 450 3:1 PUMP	25	CENTERFLO PACKAGES	69
LION™ 450 6:1 PUMP	26	ACCESSORIES FOR AODD PUMPS	71
LION™ 450 10:1 PUMP	27	REPAIR KITS FOR AODD PUMPS	72
LION™ 600 6:1 PUMP	28	HOSE REELS SIGNATURE SERIES PRODUCT SELECTION MATRIX	78
LION™ 600 12:1 PUMP	29	AIR/WATER REEL	79
MOBILE ACCESSORY PACKAGES FOR OIL	30	EVOLUTION	80
ACCESSORIES FOR LION 450/600 PUMPS	31	CLASSIC	81
ACCESSORIES FOR OIL PISTON PUMPS	32	PREMIUM	82
REPAIR KITS FOR OIL PISTON PUMPS	34	EXTENDED VOLUME (EV)	83
GREASE PISTON PUMPS PRODUCT SELECTION MATRIX	37	EXTENDED VOLUME EXTRA (EVX)	84
LYNX® 55:1 PUMPS	38	EXTENDED VOLUME EXTRA+ (EVX+)	85
LYNX® 55:1 PUMP PACKAGES	39	ENCLOSED HOSE REELS	86
PANTHER® HP 50:1 PUMPS	40	HOSE REEL STANDS	87
PANTHER® HP 50:1 PUMP PACKAGES	41	ACCESSORIES FOR HOSE REELS	88
PANTHER® HP 50:1 PUMP COMPONENTS	42	LIGHT CORD REELS	90
LION™ 350 - 60:1 PUMPS	43	REPAIR KITS FOR HOSE REELS	91
LION™ 350 - 60:1 PUMP PACKAGES	44		
LION™ 350 - 60:1 INDUCTOR	45		
LION™ 350 - 60:1 PUMP COMPONENTS	46		
LION™ 450 25:1 PUMPS	47		

1 2 3 4 5 6 7 8 9 10

Table of Contents

CONTROL HANDLES PRODUCT SELECTION MATRIX	94	USED FLUID EQUIPMENT	159
NON-METERED	95	ROUGHNECK II™	160
DR SERIES METERED	96	PREMIUM DUTY DRAIN	161
MO SERIES METERED	97	SPILLGUARD DRAIN	162
MR SERIES METERED	98	USED FLUID EQUIPMENT EVACUATOR	163
MR (PRESET) SERIES METERED	99	TRUCK DRAIN AND DRAIN PIT BOSS	164
HIGH-FLO METERED & NON-METERED	100	AODD USED FLUID EQUIPMENT FOR OIL	165
WATER BASED FLUIDS METERED & NON-METERED	101	AODD USED FLUID EQUIPMENT FOR ANTI-FREEZE	166
EP SERIES METER	102	ACCESSORIES FOR AODD PUMPS	167
METERS	103		
OIL DISPENSING EQUIPMENT	105	SHOP SUPPLIES	169
GREASE HANDLES AND ACCESSORIES	106	FILTER REGULATORS, AND LUBRICATORS SUPPLIES	170
ACCESSORIES FOR CONTROL HANDLES	107	FILTER REGULATORS, AND LUBRICATORS	171
REPAIR KITS FOR CONTROL HANDLES	108	FILLERS, MEASURES, AND FUNNELS	172
		VALVES	173
FLUID INVENTORY CONTROL PRODUCT SELECTION MATRIX	112	PRESSURIZED OIL DISPENSER AND HAND PUMPS	174
NEX-U®	113	HAND PUMPS AND GREASE GUNS	175
SYNERGY	127	GREASE GUNS & CORDLESS GREASE GUN	177
DIRECTOR JR.	134	FILLER PUMPS	178
TM CONTROL	136	WHIP HOSES & CONNECTORS	179
FLUID DISPENSE PACKAGES	137	INSTALLATION ACCESSORIES	181
TANK PACKAGES	138	FITTINGS	182
TANKLESS PACKAGES	139		
PISTON PUMP LIGHTWEIGHT DOUBLE WALL OIL DISPENSE TANK PACKAGES	140	REFERENCE	185
AODD LIGHTWEIGHT DOUBLE TANK PACKAGES FOR WALL WASTE OR WWF	141	PIPING SPECIFICATIONS	186
PISTON PUMP LIGHTWEIGHT DOUBLE WALL DISPENSE TANKLESS PACKAGES	142	REPLACEMENT HOSES	187
TOTE TANKLESS PACKAGES	143	OIL PUMPING SYSTEM SAMPLE	188
TANK ACCESSORIES	144	GREASE PUMPING SYSTEM SAMPLE	189
		HOSE REEL INSTALLATION SAMPLE	190
DIESEL EXHAUST FLUID (DEF)	145	USED FLUID EQUIPMENT EVACUATOR SYSTEM SAMPLE	191
CLOSED SYSTEMS DRUM PACKAGES ELECTRIC DIAPHRAGM PUMP	146	DEF PUMPING SYSTEM SAMPLE	192
CLOSED SYSTEMS TOTE PACKAGES ELECTRIC DIAPHRAGM PUMP	147		
CLOSED SYSTEMS DRUM PACKAGES CF DIAPHRAGM PUMP	148		
CLOSED SYSTEMS TOTE PACKAGES CF DIAPHRAGM PUMP	149		
SYSTEM COMPONENTS ELECTRIC AND AODD PUMPS	150		
HOSE REELS SIGNATURE SERIES EV	151		
SYSTEM COMPONENTS METERS AND NOZZLES	152		
COUPLER COMPONENTS AND KITS	153		
SYSTEM COMPONENTS STICK PUMPS, HOSES, AND HOSE ACCESSORIES	154		
SYSTEM ACCESSORIES	155		
REPAIR KITS FOR DEF PUMPS	156		



1 2 3 4 5 6 7 8 9 10

Pumps

OIL PISTON PUMPS PRODUCT SELECTION MATRIX	8	PANTHER® HP 50:1 PUMPS	40
LYNX® 1:1 STAINLESS STEEL PUMPS	9	PANTHER® HP 50:1 PUMP PACKAGES	41
LYNX® 1:1 PUMP PACKAGES	10	PANTHER® HP 50:1 PUMP COMPONENTS	42
LYNX® 1:1 PUMP COMPONENTS	11	LION™ 350 - 60:1 PUMPS	43
LYNX® 3:1 PUMPS	12	LION™ 350 - 60:1 PUMP PACKAGES	44
LYNX® 3:1 PUMP PACKAGES	13	LION™ 350 - 60:1 INDUCTOR	45
LYNX® 3:1 PUMP COMPONENTS	14	LION™ 350 - 60:1 PUMP COMPONENTS	46
LYNX® 5:1 HD PUMP	15	LION™ 450 25:1 PUMPS	47
PANTHER® HP 3:1 PUMPS	16	LION™ 450 40:1 PUMPS	48
PANTHER® HP 3:1 PUMP PACKAGES	17	LION™ 450 70:1 PUMPS	49
PANTHER® HP 3:1 AND LYNX® 5:1 HD PUMP COMPONENTS	18	LION™ 600 12:1 PUMPS	50
PANTHER® HP 5:1 PUMPS	19	LION™ 600 80:1 PUMPS	51
PANTHER® HP 5:1 PUMP PACKAGES	20	LION™ INDUCTOR GRAVITY LIFT	52
PANTHER® HP 5:1 PUMP COMPONENTS	21	LION™ INDUCTOR DOUBLE POST RAM	53
TIGER® HP 6:1 PUMPS	22	ACCESSORIES FOR GREASE PISTON PUMPS	54
TIGER® HP 6:1 PUMP PACKAGES	23	REPAIR KITS FOR GREASE PISTON PUMPS	56
TIGER® HP 6:1 PUMP COMPONENTS	24	DIAPHRAGM PUMPS PRODUCT SELECTION MATRIX	58
LION™ 450 3:1 PUMP	25	CENTERFLO CF10 PUMPS	60
LION™ 450 6:1 PUMP	26	CENTERFLO CF15 PUMPS	61
LION™ 450 10:1 PUMP	27	CENTERFLO CF30 PUMPS	63
LION™ 600 6:1 PUMP	28	CENTERFLO CF50 PUMPS	64
LION™ 600 12:1 PUMP	29	CENTERFLO CF65 PUMPS	65
MOBILE ACCESSORY PACKAGES FOR OIL	30	UNIVERSAL PUMP DESIGN TF150	66
ACCESSORIES FOR LION 450/600 PUMPS	31	1" UL ALUMINUM PUMP	67
ACCESSORIES FOR OIL PISTON PUMPS	32	ELECTRIC PUMPS	68
REPAIR KITS FOR OIL PISTON PUMPS	34	CENTERFLO PACKAGES	69
GREASE PISTON PUMPS PRODUCT SELECTION MATRIX	37	ACCESSORIES FOR AODD PUMPS	71
LYNX® 55:1 PUMPS	38	REPAIR KITS FOR AODD PUMPS	72
LYNX® 55:1 PUMP PACKAGES	39		

Oil Piston Pumps Product Selection Matrix

1

MAX. SIMUL. DISPENSE POINTS	MAX. LINE LENGTH	MAX. FREE FLOW	FLUID INLET	FLUID OUTLET	RECOMMENDED FLUID TYPES
LYNX® 1:1					
1	Up to 100' (30 m)*	10.6 gal/min (40 l/min)*	1" NPT(F)	3/4" NPT(F)	Petroleum Based Oils, Synthetic Oils
LYNX® 1:1 STAINLESS STEEL					
1	Up to 100' (30 m)*	8.2 gal/min (31 l/min)*	1" NPT(F)	3/4" NPT(F)	Anti-freeze (Glycol), Windshield Wash Fluids
LYNX® 3:1					
1	Up to 125' (38 m)*	6.6 gal/min (25 l/min)*	3/4" NPT(F)	3/4" NPT(F)	Petroleum Based Oils, Synthetic Oils, Gear and ATF
LYNX® 5:1 HD					
1-3	Up to 150' (46 m)*	10 gal/min (38 l/min)*	1" NPT(F)	3/4" NPT(F)	Petroleum Based Oils, Synthetic Oils, Gear and ATF
PANTHER® 3:1					
1-3*	250' (76 m)*	8 gal/min (30 l/min)*	1" NPT(F); 1 1/2" NPT(M)	3/4" NPT(F)	Petroleum Based Oils, Synthetic Oils, Gear and ATF
PANTHER® 5:1					
1-3*	500' (152 m)*	6 gal/min (23 l/min)*	1" NPT(F); 1 1/2" NPT(M)	1/2" NPT(F)	Petroleum Based Oils, Synthetic Oils, Gear and ATF
TIGER® 6:1					
2-4*	500' (152 m)*	16 gal/min (61 l/min)*	1" NPT(F); 1 1/2" NPT(M)	3/4" NPT(F)	Petroleum Based Oils, Synthetic Oils, Anti-freeze (Glycol), and Windshield Wash Fluids
LION™ 450 3:1					
3-4*	Up to 250' (76 m)*	12 gal/min (45 l/min)	1 1/2" NPT(F)	3/4" NPT(F)	Petroleum Based Oils, Synthetic Oils, Gear and ATF
LION™ 450 6:1					
3-4*	Up to 500' (152 m)*	25 gal/min (95 l/min)	1 1/2" NPT(F)	3/4" NPT(F)	Petroleum Based Oils, Synthetic Oils, Gear and ATF
LION™ 450 10:1					
3-4*	Up to 750' (230 m)*	17 gal/min (65 l/min)	1 1/2" NPT(F)	3/4" NPT(F)	Petroleum Based Oils, Synthetic Oils, Gear and ATF
LION™ 600 6:1					
3-4*	Up to 500' (152 m)*	26 gal/min (100 l/min)	1 1/2" NPT(F)	3/4" NPT(F)	Petroleum Based Oils, Synthetic Oils, Gear and ATF
LION™ 600 12:1					
3-4*	Up to 750' (230 m)*	17 gal/min (65 l/min)	1 1/2" NPT(F)	3/4" NPT(F)	Petroleum Based Oils, Synthetic Oils, Gear and ATF

* Pump performance is predicated on fluid viscosity, pumping distance, pipe diameter, and dispense volume requirements. Contact Balcrank for system design assistance and technical data.



LYNX® SERIES



LYNX® HD SERIES



PANTHER® SERIES



TIGER® SERIES

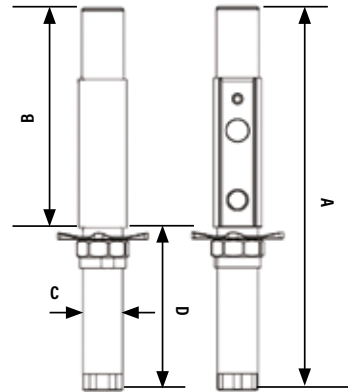


LION™ SERIES

Oil Piston Pumps

LYNX® 1:1 - 1:1 Stainless Steel Pump

The LYNX® 1:1 ratio double acting pump is engineered for outstanding performance and reliability to dispense lubricating oils and similar products up to SAE 90.



DIMENSIONS INCHES (MM)			
1110-010			
A	B	C	D
19 9/16" (497 mm)	11 1/4" (286 mm)	2 3/64" (52 mm)	8 5/16" (211 mm)
1110-009			
46 1/2" (1181 mm)	11 1/4" (286 mm)	2 3/64" (52 mm)	35 1/4" (895 mm)
1160-008			
47 1/4" (1200 mm)	11 1/4" (286 mm)	2" (50 mm)	36" (914 mm)

TECHNICAL DATA	
Operating air pressure	45-150 psi (3-10 bar)
Cycles per gallon	31 cyc/gal (8.2 cyc/liter)
Air consumption 100 psi (7 bar) & 3 gal/min (11 l/min)	3.50 SCFM
Max Fluid stall pressure @ 150 psi (10 bar) ⁽¹⁾	145 psi (10 bar)
Effective Air Piston Diameter	1.375" (35 mm)
1110-010, 1110-009 Free flow pump delivery with SAE 10W30 oil, 68° F (20° C), 150 psi (10 bar) air pressure	10.6 gal/min (40 l/min)
1160-008 Free flow pump delivery with SAE 10W30 oil, 68° F (20° C), 150 psi (10 bar) air pressure	8.2 gal/min (30 l/min)
Air inlet	1/4" NPT(F)
Fluid inlet (stub only)	1" NPT(F)
Fluid outlet 1110-010, 1110-009	3/4" NPT(F)
Fluid outlet 1160-008	3/4" NPT(F)
Wetted materials 1110-010 & 1110-009	Steel, Brass, Aluminum, Buna-N™, and Polyurethane
1160-008	Stainless Steel, Viton®, and PTFE
Service Bulletin 1110-010, 1110-009	SB 1102
Service Bulletin 1160-008	SB 1143

NOTE: Thermal expansion of the fluid in a distribution system can cause an increase in system pressure that can damage lubrication system components. Use pressure relief valve kit 3120-086 for this pump.

(1) Ensure that all hose fittings and piping are rated for fluid outlet pressures. Balcrank recommends a minimum of 3x safety factor.

Warning! Do not use any LYNX® series products with flammable fluids.

Verify fluid compatibility with MSDS sheets.

Contact Balcrank for specific system design performance and technical data.

Fluids & Applications

1

The LYNX® series pump is perfect for small volume users, for synthetics, gear oils, and standard mineral oils.

The 1:1 version is best for higher volume with short distance requirements such as oil bars, taper pumps and medium to light viscosity oils pumping short distances.

Fluids

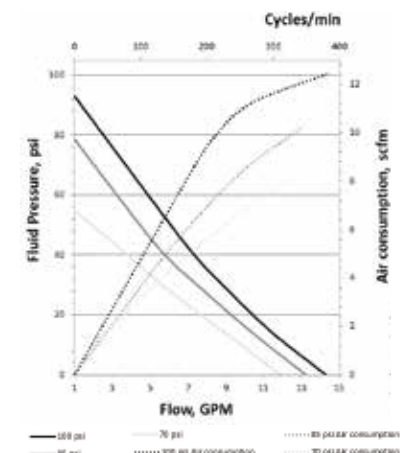
- Synthetic and mineral based lubricants
- Hydraulic fluid
- Transmission fluid
- Anti-freeze/windshield wash fluids (stainless version)

Applications

- Tapper pumps
- Oil bar supply (pumping short distance)
- Roll-around synthetic or mineral oil packages
- Medium volume dispensing in agricultural, in-plant, and maintenance shop applications

Pressure relief valve kit 3120-086 for this pump not included.

MODELS AVAILABLE	DESCRIPTION
1110-010	1:1 Bare carbon steel stub pump with bung adapter
1110-009	1:1 Bare carbon steel drum pump with bung adapter
1160-008	1:1 Bare stainless steel drum pump with bung adapter
3120-086	Kit, Pressure Relief, 3/4", 850 psi (59 bar)



Oil Piston Pumps LYNX® 1:1 Pump Packages

1



16 GAL PUMP PACKAGES	16 GAL NON-METERED 1111-028	16 GAL METERED 1111-027
PUMP	1110-010	1110-010
MP FLUID HOSE 10' x 1/2"	8249-010	8249-010
HANDLE FLEX-MEMORY 1/4 TURN	3320-024	3330-159
F/R MINI AUTO DRAIN 1/4" NPT(F)	3260-033	3260-033
AIR COUPLER 1/4"	3270-003	3270-003
AIR NIPPLE 1/4"	3270-004	3270-004
SUCTION TUBE 1" NPT(M) X 18" - 30°	4412-044	4412-044
LP HOSE 5' X 3/8"	8132-005	8132-005



55 GAL PUMP PACKAGES	55 GAL NON-METERED 1111-030	55 GAL METERED 1111-029
PUMP	1110-009	1110-009
MP FLUID HOSE 10' x 1/2"	8249-010	8249-010
HANDLE FLEX-MEMORY 1/4 TURN	3320-024	3330-159
F/R MINI AUTO DRAIN 1/4" NPT(F)	3260-033	3260-033
AIR COUPLER 1/4"	3270-003	3270-003
AIR NIPPLE 1/4"	3270-004	3270-004
LP HOSE 5' X 3/8"	8132-005	8132-005













LYNX® 2:1 PUMP PACKAGE	TAPPER STUB 1111-035	
PUMP	LYNX® 2:1 with double bung bushing adapter and drip tray	
F/R MINI AUTO DRAIN 1/4" NPT(F)	3260-033	
SPIGOT DISPENSE VALVE	4200-013	
AIR COUPLER 1/4"	3270-003	
AIR NIPPLE 1/4"	3270-004	
SUCTION TUBE	Suction tubes not included. *Choose from suction tubes below.	
	*4412-046	1" NPT(M) x 26" - 30° 55 gal drum
	*4412-049	1" NPT(M) x 32" - 30° 275 gal tote
	*4412-050	1" NPT(M) x 39" - 30° 330 gal tote

Oil Piston Pumps

LYNX® 1:1 Pump Components

1

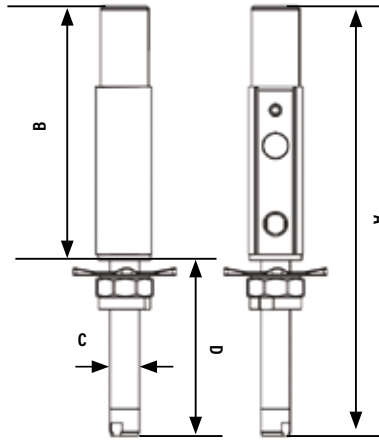
Suction tubes		4412-044 1" NPT(M) x 18" - 30° 16 gal drum	Control handles		3330-159 DR, Flex-mem. ext., 1/4 turn for oil	
		4412-046 1" NPT(M) x 26" - 30° 55 gal drum			3330-205 MO, Flex-mem. ext., 1/4 turn for oil	
		4412-045 1" NPT(M) x 21" - 30° 165/280 gal bench tank			3330-192 MR, Qts., Flex-mem. ext., 1/4 turn for oil	
		4412-048 1" NPT(M) x 30" - 30° 165/280 gal bench tank double tap	Wall mount kit		4410-058 Wall mount kit for LYNX® 8132-005 LP Hose 5' x 3/8" 8249-005 MP Hose 5' x 1/2" 8171-006 Suction Hose 6' x 3/4" 4412-027 Suction Tube 3/4" NPT(M) x 60" - 30° 4411-008 Wall mount bracket	
		4412-047 1" NPT(M) x 28" - 30° 250 gal bench tank double tap				
		4412-051 1" NPT(M) x 42" - 30° 275/330 gal horizontal obround double tap				
		4412-052 1" NPT(M) x 60" - 30° 330 gal vertical obround				
		4412-049 1" NPT(M) x 32" - 30° 275 gal tote	Wall mount bracket		4411-008 Wall mount bracket for LYNX®	
4412-050 1" NPT(M) x 39" - 30° 330 gal tote	Dollies		4310-001	4310-001 Band dolly, 16 gal/120 lb		
			4310-004	4310-003 Band dolly, 16 gal/120 lb wide track		
Filter regulator (F/R)		3260-033 F/R mini auto drain 1/4" NPT(F) See pg. 171 for complete listing	Carts		4320-010	4320-010 4 Wheel drum cart: 120 lb/16 gal
Dispense hose		8263-010 Dispense hose 10' x 3/4"			4320-013	4320-013 3 Wheel drum cart: 400 lb/55 gal
Connecting hose kit			8263-016 Dispense hose 16' x 3/4"	4320-014	4320-014 Heavy duty drum cart: 400 lb/55 gal, 3 wheels with rear locking caster.	
		4410-054 Connecting hose kit LYNX®: 8132-005 LP Hose 5' x 3/8" 8249-005 MP Hose 5' x 1/2" 3270-003 Coupler 1/4" 3270-004 Nipple 1/4" 3270-053 Bushing 3/4" x 1/2"	Hose reel mount kit		To mount hose reel, use 2230-036 hose reel mount kit. 2230-036 Hose reel mount kit for 4320-014 Heavy duty drum cart	

Note: Pump packages include all hoses and adapters required for connecting an oil pump to the air supply and oil dispense line. Balcrank does not provide wall mounting hardware (nuts, bolts, and anchors) for lube packages.

Oil Piston Pumps LYNX® 3:1 Pump

The LYNX® 3:1 ratio double acting pump is engineered for outstanding performance and reliability to dispense lubricating oils and similar products.

1



DIMENSIONS INCHES (MM)			
1110-007			
A	B	C	D
19 9/16" (497 mm)	11 1/4" (286 mm)	1 11/32" (34 mm)	8 5/16" (211 mm)

TECHNICAL DATA	
Operating air pressure	45-150 psi (3-10 bar)
Cycles per gallon	98 cyc/gal (26.5 cyc/liter)
Air consumption 100 psi (7 bar) & 3 gal/min (11 l/min)	18.80 SCFM
Max Fluid stall pressure @ 150 psi (10 bar) ⁽¹⁾	725 psi (50 bar)
Effective Air Piston Diameter	1.375" (35 mm)
Free flow pump delivery with SAE 10W30 oil, 68° F (20° C), 150 psi (10 bar) air pressure	6.6 gal/min (25 l/min)
Air inlet	1/4" NPT(F)
Fluid inlet	3/4" NPT(F)
Fluid outlet	3/4" NPT(F)
Wetted materials	Buna-N™, Steel, Brass, Aluminum, and Polyurethane
Service Bulletin	SB 1101

NOTE: Thermal expansion of the fluid in a distribution system can cause an increase in system pressure that can damage lubrication system components. Use pressure relief valve kit 3120-086 for this pump.

(1) Ensure that all hose fittings and piping are rated for fluid outlet pressures. Balcrank recommends a minimum of 3x safety factor.

Warning! Do not use any LYNX® series products with flammable fluids.

Verify fluid compatibility with MSDS sheets.

Contact Balcrank for specific system design performance and technical data.

Fluids & Applications

The LYNX® series pump is perfect for small volume users, for synthetics, and standard mineral oils. The 3:1 version is best for small tank packages, roll-around units for synthetic and mineral base drum applications.

Fluids

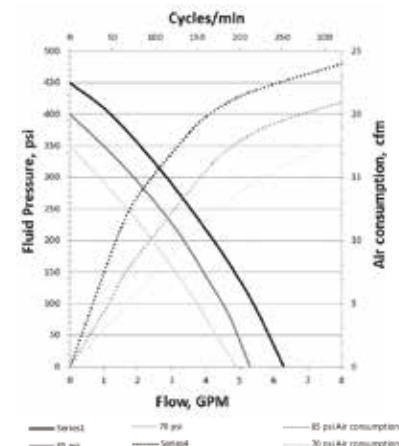
- Synthetic and mineral based lubricants
- Hydraulic fluid
- Transmission fluid

Applications

- Oil bar supply (pumping short distance)
- Roll-around synthetic or mineral oil packages
- Low volume dispensing in agricultural, in-plant, and maintenance shop applications

Pressure relief valve kit 3120-086 for this pump, not included.

MODELS AVAILABLE	DESCRIPTION
1110-007	3:1 Bare carbon steel stub pump with bung adapter
3120-086	Kit, Pressure Relief, 3/4", 850 psi (59 bar)



Oil Piston Pumps LYNX[®] 3:1 Pump Packages



16 GAL PUMP PACKAGES	16 GAL NON METERED 1111-032	16 GAL METERED 1111-031
PUMP	1110-007	1110-007
MP FLUID HOSE 10' x 1/2"	8249-010	8249-010
SUCTION TUBE 3/4" NPT(M) X 18" - 30°	4412-035	4412-035
HANDLE W/FLEX-MEMORY & 1/4 TURN	3320-024	3330-159
F/R MINI AUTO DRAIN 1/4" NPT(F)	3260-033	3260-033
AIR COUPLER 1/4"	3270-003	3270-003
AIR NIPPLE 1/4"	3270-004	3270-004
LP HOSE 5' X 3/8"	8132-005	8132-005













55 GAL PUMP PACKAGES	55 GAL NON METERED 1111-034	55 GAL METERED 1111-033
PUMP	1110-007	1110-007
MP FLUID HOSE 10' x 1/2"	8249-010	8249-010
SUCTION TUBE 3/4" NPT(M)X 26" - 30°	4412-037	4412-037
HANDLE W/FLEX-MEMORY & 1/4 TURN	3320-024	3330-159
F/R MINI AUTO DRAIN 1/4" NPT(F)	3260-033	3260-033
AIR COUPLER 1/4"	3270-003	3270-003
AIR NIPPLE 1/4"	3270-004	3270-004
LP HOSE 5' X 3/8"	8132-005	8132-005

1

Oil Piston Pumps

LYNX® 3:1 Pump Components

1

Suction tubes		4412-035 3/4" NPT(M) x 18" - 30° 16 gal drum	Control handles		3330-159 DR, Flex-mem. ext., 1/4 turn for oil
		4412-037 3/4" NPT(M) x 26" - 30° 55 gal drum			3330-205 MO, Flex-mem. ext., 1/4 turn for oil
		4412-036 3/4" NPT(M) x 21" - 30° 165/280 gal bench tank			3330-192 MR, Qts., Flex-mem. ext., 1/4 turn for oil
		4412-039 3/4" NPT(M) x 30" - 30° 165/280 gal bench tank double tap	Wall mount kit		4410-058 Wall mount kit for LYNX® 8132-005 LP Hose 5' x 3/8" 8249-005 MP Hose 5' x 1/2" 8171-006 Suction Hose 6' x 3/4" 4412-027 Suction Tube 3/4" NPT(M) x 60" - 30° 4411-008 Wall mount bracket
		4412-038 3/4" NPT(M) x 28" - 30° 250 gal bench tank double tap			
		4412-042 3/4" NPT(M) x 42" - 30° 275/330 gal horizontal obround double tap			
		4412-043 3/4" NPT(M) x 60" - 30° 330 gal vertical obround	Wall mount bracket		4411-008 Wall mount bracket for LYNX®
		4412-040 3/4" NPT(M) x 32" - 30° 275 gal tote	Dollies		4310-001 Band dolly, 16 gal/120 lb
		4412-041 3/4" NPT(M) x 39" - 30° 330 gal tote			4310-003 Band dolly, 16 gal/120 lb wide track
Filter regulator (F/R)		3260-033 F/R mini auto drain 1/4" NPT(F)	Carts		4310-004 Dolly, 55 gal/400 lb HD
		See pg. 171 for complete listing			4320-010 4 Wheel drum cart: 120 lb/16 gal
Dispense hose		8263-010 Dispense hose 10' x 3/4"	Hose reel mount kit		4320-013 3 Wheel drum cart: 400 lb/55 gal
		8263-016 Dispense hose 16' x 3/4"			4320-014 Heavy duty drum cart: 400 lb/55 gal, 3 wheels with rear locking caster.
Connecting hose kit		4410-054 Connecting hose kit LYNX®: 8132-005 LP Hose 5' x 3/8" 8249-005 MP Hose 5' x 1/2" 3270-003 Coupler 1/4" 3270-004 Nipple 1/4" 3270-053 Bushing 3/4" x 1/2"			To mount hose reel, use 2230-036 hose reel mount kit.
					2230-036 Hose reel mount kit for 4320-014 Heavy duty drum cart

Note: Pump packages include all hoses and adapters required for connecting an oil pump to the air supply and oil dispense line. Balcrank does not provide wall mounting hardware (nuts, bolts, and anchors) for lube packages.

LYNX® 5:1 HD Pump Drum Package

MODEL AVAILABLE	DESCRIPTION
1131-069	5:1 LYNX HD Portable Pump Package
PUMP	1110-012
CLASSIC HOSE REEL MP 50' x 1/2"	2120-013
SUCTION TUBE 1" NPT(M) X 26" - 30°	4412-046
HANDLE W/FLEX-MEMORY & 1/4 TURN	3330-159
F/R MINI AUTO DRAIN 1/4" NPT(F)	3260-033
NIPPLE 1/4"	3720-041
LP HOSE 5' X 1/2"	8249-005
DRUM CART	4320-014

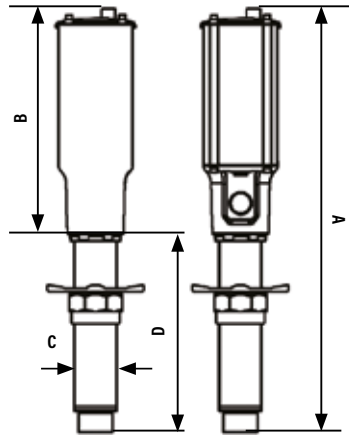


Drum not included

Oil Piston Pumps

LYNX® 5:1 HD Pump

The LYNX® 5:1 HD ratio double acting pump is engineered for outstanding performance and reliability. The LYNX® 5:1 HD pump is designed to dispense lubricating oils and gear oils in piped systems up to SAE 90.



DIMENSIONS INCHES (MM)			
1110-012			
A	B	C	D
19 11/16" (500 mm)	10 5/8" (270 mm)	2" (50 mm)	9 1/16" (230 mm)

TECHNICAL DATA	
Operating air pressure	60-145 psi (4-10 bar)
Cycles per gallon	20 cyc/gal (5.28 cyc/liter)
Air consumption 100 psi (7 bar) & 3 gal/min (11 l/min)	18.80 SCFM
Max Fluid stall pressure @ 150 psi (10 bar) ⁽¹⁾	725 psi (50 bar)
Effective Air Piston Diameter	3" (80 mm)
Free flow pump delivery with SAE 10W30 oil, 68° F (20° C), 150 psi (10 bar) air pressure	24 gal/min (90.85 l/min)
Air inlet	1/4" NPT(F)
Fluid inlet	1" NPT(F)
Fluid outlet	3/4" NPT(F)
Wetted materials	Aluminum, Buna-N [®] , Zamak, Steel, and Polyurethane
Service Bulletin	SB 1128

NOTE: Thermal expansion of the fluid in a distribution system can cause an increase in system pressure that can damage lubrication system components. Use pressure relief valve kit included with this pump.

(1) Ensure that all hose fittings and piping are rated for fluid outlet pressures. Balcrank recommends a minimum of 3x safety factor.

Warning! Do not use any LYNX® series products with flammable fluids.

Verify fluid compatibility with MSDS sheets.

Contact Balcrank for specific system design performance and technical data.

Fluids & Applications

1

The LYNX® 5:1 HD series pump is perfect for medium volume users requiring an economy unit for roll-around synthetics, gear oil and standard mineral oil dispense packages. This pump can also be used for small to medium shops supplying overhead hose reels with a maximum overall flow rate of 5 gpm.

Fluids

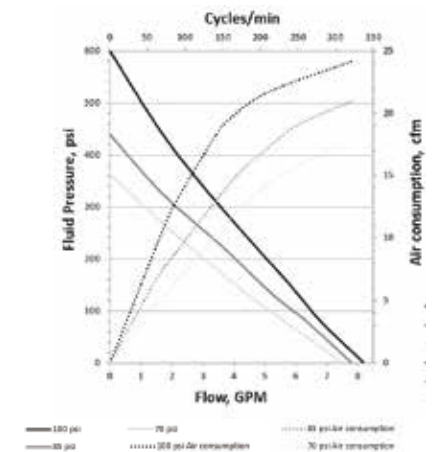
- Synthetic and mineral based lubricants
- Hydraulic fluid
- Transmission fluid
- Gear oil

Applications

- Small to medium sized tank packages
- Low to medium volume maintenance shops
- Small car dealerships
- Quick lubes
- Roll-around gear oil packages

Pressure relief valve kit included with this pump.

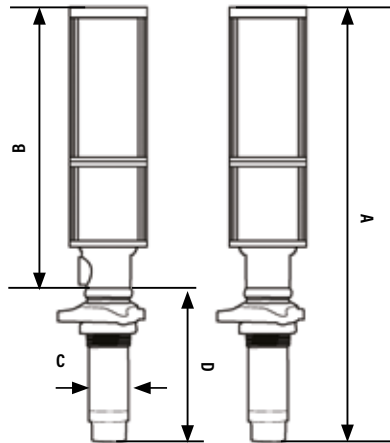
MODELS AVAILABLE	DESCRIPTION
1110-012	5:1 Bare carbon steel stub pump with bung adapter



Oil Piston Pumps PANTHER® HP 3:1 Pumps

The Panther® HP 3:1 ratio double acting pump is engineered for outstanding performance and reliability for dispensing lubricating oils and similar products up to SAE 90.

1



DIMENSIONS INCHES (MM)			
1130-015 & 1130-020			
A	B	C	D
23.5" (523.9 mm)	14 3/8" (285 mm)	2 1/8" (54 mm)	6 1/2" (158.7 mm)
1130-017			
21 8/9" (555.6 mm)	14 3/8" (285 mm)	2 1/8" (54 mm)	7 1/2" (190.5 mm)

TECHNICAL DATA	
Operating air pressure	10-150 psi (7-10 bar)
Cycles per gallon	34 cyc/gal (8.98 cyc/liter)
Air consumption 100 psi (7 bar) & 4 gal/min (15 l/min)	19.70 SCFM
Max. fluid stall pressure @150 psi (10 bar) ⁽¹⁾	490 psi (33.7 bar)
Effective air piston diameter	2.5" (63.5 mm)
Free Flow pump delivery with SAE 10W30 oil, 68° F (20° C), 100 psi (7 bar) air pressure	8 gal/min (30 l/min)
Air inlet	1/4" NPT(F)
Fluid inlet	1" NPT(F); 1 1/2" NPT(M)
Fluid outlet	3/4" NPT(F)
Wetted materials	Steel, Nickel Plated Steel, Stainless Steel, Aluminum, Ultrathane, Buna-N™, and Nylon
Service Bulletin	SB 1064

NOTE: Thermal expansion of the fluid in a distribution system can cause an increase in system pressure that can damage lubrication system components. Use pressure relief valve kit included with this pump.

(1) Ensure that all hose fittings and piping are rated for fluid outlet pressures. Balcrank recommends a minimum of 3x safety factor.

Warning! Do not use any Pride series products with flammable fluids.

Verify fluid compatibility with MSDS sheets.

Contact Balcrank for specific system design performance and technical data.



Fluids & Applications

Pride Series pumps are manufactured with a mechanical air valve and piston design which is more forgiving to environments with contaminated air. The 3:1 version is a medium pressure pump for supplying higher volume than the 5:1 version but at lower operating pressures ideal for medium pumping distances and overall flow rates of 4-5 gpm.

Fluids

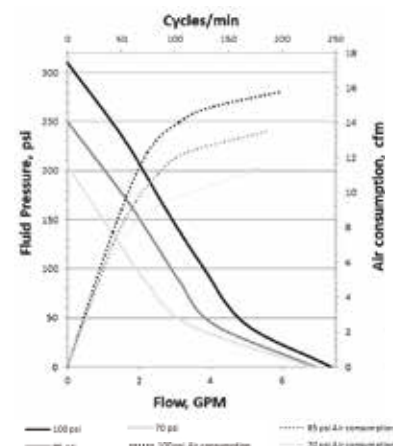
- Synthetic and mineral based lubricants
- Hydraulic fluid
- Transmission fluid

Applications

- Medium sized tank packages
- Medium volume maintenance shops
- Small car dealerships
- Quick lubes

Pressure relief valve kit included with this pump.

MODELS AVAILABLE	DESCRIPTION
1130-015	3:1 Bare carbon steel stub pump
1130-017	3:1 Bare carbon steel stub pump, flange mount
1130-020	3:1 Bare carbon steel pump with bung adapter



Oil Piston Pumps PANTHER® HP 3:1 Pump Packages



16 GAL PUMP PACKAGES	16 GAL NON-METERED 1131-060	16 GAL METERED 1131-059
PUMP	1130-015	1130-015
MP FLUID HOSE 10' x 1/2"	8249-010	8249-010
LP HOSE 5' X 3/8"	8132-005	8132-005
SUCTION TUBE 1" NPT(M) X 18" - 30°	4412-044	4412-044
HANDLE W/FLEX-MEMORY EXT & 1/4 TURN	3320-024	3330-159
F/R MINI AUTO DRAIN 1/4" NPT(F)	3260-033	3260-033
AIR COUPLER 1/4"	3270-003	3270-003
AIR NIPPLE 1/4"	3270-004	3270-004
BUNG ADAPTER	4411-009N	4411-009N














55 GAL PUMP PACKAGES	55 GAL NON-METERED 1131-062	55 GAL METERED 1131-061
PUMP	1130-015	1130-015
MP FLUID HOSE 10' x 1/2"	8249-010	8249-010
LP HOSE 5' X 3/8"	8132-005	8132-005
SUCTION TUBE 1" NPT(M) X 26" - 30°	4412-046	4412-046
HANDLE W/FLEX-MEMORY EXT & 1/4 TURN	3320-024	3330-159
F/R MINI AUTO DRAIN 1/4" NPT(F)	3260-033	3260-033
AIR COUPLER 1/4"	3270-003	3270-003
AIR NIPPLE 1/4"	3270-004	3270-004
BUNG ADAPTER	4411-009N	4411-009N

Oil Piston Pumps

PANTHER® HP 3:1 & LYNX® 5:1 HD Pump Components

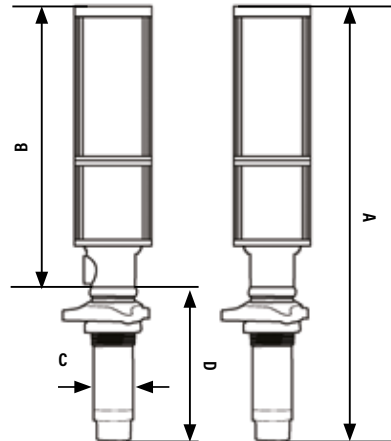
1

Suction tubes		4412-044 1" NPT(M) x 16 gal drum 18" - 30°	Control handles		3330-159 DR, Flex-mem. ext., 1/4 turn for oil
		4412-046 1" NPT(M) x 55 gal drum 26" - 30°			3330-205 M0, Flex-mem. ext., 1/4 turn for oil
		4412-045 1" NPT(M) x 165/280 gal bench tank 21" - 30°			3330-192 MR, Qts., Flex-mem. ext., 1/4 turn for oil
		4412-048 1" NPT(M) x 165/280 gal bench tank 30" - 30° double tap	Wall mount kit		4410-022 Wall mount kit for PANTHER® 8132-005 LP Hose 5' x 3/8" 8249-005 MP Hose 5' x 1/2" 8181-006 Suction Hose 6' x 1" 4412-015 Suction Tube 1" NPT(M) x 48" - 30° 4411-009N Bung Adapter 4411-008 Wall mount bracket
		4412-047 1" NPT(M) x 250 gal bench tank 28" - 30° double tap			
		4412-051 1" NPT(M) x 275/330 gal horizontal 42" - 30° obround double tap			
		4412-052 1" NPT(M) x 330 gal vertical 60" - 30° obround			
		4412-049 1" NPT(M) x 275 gal tote 32" - 30°	Wall mount bracket		4411-008 Wall mount bracket for LYNX® and Panther® HP
		4412-050 1" NPT(M) x 330 gal tote 39" - 30°			
Bung adapter		4411-018N Double tap bushing, nickel plated stainless steel: for use with Panther® HP W/ pressure relief	Dollies		4310-001 Band dolly, 16 gal/120 lb 4310-003 Band dolly, 16 gal/120 lb wide track 4310-004 Dolly, 55 gal/400 lb HD
Filter regulator (F/R)		3260-033 F/R mini auto drain 1/4" NPT(F) See pg. 171 for complete listing			
Dispense hose		8249-005 Dispense hose 5' x 1/2"	Carts		4320-010 4 Wheel drum cart: 120 lb/16 gal
		8263-010 Dispense hose 10' x 3/4"			4320-013 3 Wheel drum cart: 400 lb/55 gal
		8263-016 Dispense hose 16' x 3/4"			4320-014 Heavy duty drum cart: 400 lb/55 gal, 3 wheels with rear locking caster.
Connecting hose kit		4410-054 Connecting hose kit PANTHER®: 8132-005 LP Hose 5' x 3/8" 8249-005 MP Hose 5' x 1/2" 3270-003 Coupler 1/4" 3270-004 Nipple 1/4" 3270-053 Bushing 3/4" x 1/2"	Hose reel mount kit		To mount hose reel, use 2230-036 hose reel mount kit. 2230-036 Hose reel mount kit for 4320-014 Heavy duty drum cart

Note: Pump packages include all hoses and adapters required for connecting an oil pump to the air supply and oil dispense line. Balcrank does not provide wall mounting hardware (nuts, bolts, and anchors) for lube packages.

Oil Piston Pumps PANTHER® HP 5:1 Pumps

The Panther® HP 5:1 ratio double acting pump is engineered for outstanding performance and reliability for dispensing lubricating oils and similar products up to SAE 90.



DIMENSIONS INCHES (MM)			
1130-016 & 1130-021			
A	B	C	D
23.5" (523.9 mm)	14 3/8" (285 mm)	2 4/5" (71 mm)	6 1/2" (158.7 mm)
1130-018			
21 8/9" (555.6 mm)	14 3/8" (285 mm)	1 7/8" (47.6 mm)	7 1/2" (190.5 mm)

TECHNICAL DATA	
Operating air pressure	10-150 psi (.7-10 bar)
Cycles per gallon	57 cyc/gal (15.06 cyc/liter)
Air consumption 100 psi (7 bar) & 4 gal/min (15 l/min)	24.80 SCFM
Max fluid stall pressure @150 psi (10 bar) ⁽¹⁾	760 psi (52 bar)
Effective air piston diameter	2.5" (63.5 mm)
Free Flow pump delivery with SAE 10W30 oil, 68° F (20° C), 100 psi (7 bar) air pressure	6 gal/min (30 l/min)
Air inlet	1/4" NPT(F)
Fluid inlet	1" NPT(F); 1 1/2" NPT(M)
Fluid outlet	1/2" NPT(F)
Wetted materials	Steel, Nickel Plated Steel, Stainless Steel, Aluminum, Ultrathane, Buna-N™, and Nylon
Service Bulletin	SB 1064

NOTE: Thermal expansion of the fluid in a distribution system can cause an increase in system pressure that can damage lubrication system components. Use pressure relief valve kit included with this pump.

(1) Ensure that all hose fittings and piping are rated for fluid outlet pressures. Balcrank recommends a minimum of 3x safety factor.

Warning! Do not use any Pride series products with flammable fluids.

Verify fluid compatibility with MSDS sheets.

Contact Balcrank for specific system design performance and technical data.



Fluids & Applications

Pride Series pumps are manufactured with a mechanical air valve and piston design which is more forgiving to environments with contaminated air. The 5:1 version is a medium pressure pump for supplying higher pressures and for longer pumping distances than the 3:1 version but at lower volume ideal for longer pumping distances and overall flow rates of 4 gpm.

Fluids

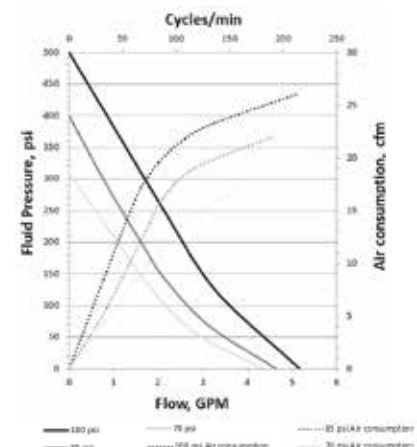
- Synthetic and mineral based lubricants
- Hydraulic fluid
- Transmission fluid
- Gear oil

Applications

- Medium sized tank packages
- Medium volume maintenance shops
- Small car dealerships
- Quick lubes

Pressure relief valve kit included with this pump.

MODELS AVAILABLE	DESCRIPTION
1130-016	5:1 Bare carbon steel stub pump
1130-018	5:1 Bare carbon steel stub pump, flange mount
1130-021	5:1 Bare carbon steel pump with bung adapter



Oil Piston Pumps

PANTHER® HP 5:1 Pump Packages

1














16 GAL PUMP PACKAGES	16 GAL NON-METERED 1131-064	16 GAL METERED 1131-063
PUMP	1130-016	1130-016
MP FLUID HOSE 10' x 1/2"	8249-010	8249-010
LP HOSE 5' X 3/8"	8132-005	8132-005
SUCTION TUBE 1" NPT(M) X 18" - 30°	4412-044	4412-044
HANDLE W/FLEX-MEMORY EXT & 1/4 TURN	3320-024	3330-159
F/R MINI AUTO DRAIN 1/4" NPT(F)	3260-033	3260-033
AIR COUPLER 1/4"	3270-003	3270-003
AIR NIPPLE 1/4"	3270-004	3270-004
BUNG ADAPTER	4411-009N	4411-009N



55 GAL PUMP PACKAGES	55 GAL NON-METERED 1131-066	55 GAL METERED 1131-065
PUMP	1130-016	1130-016
MP FLUID HOSE 10' x 1/2"	8249-010	8249-010
LP HOSE 5' X 3/8"	8132-005	8132-005
SUCTION TUBE 1" NPT(M) X 26" - 30°	4412-046	4412-046
HANDLE W/FLEX-MEMORY EXT & 1/4 TURN	3320-024	3330-159
F/R MINI AUTO DRAIN 1/4" NPT(F)	3260-033	3260-033
AIR COUPLER 1/4"	3270-003	3270-003
AIR NIPPLE 1/4"	3270-004	3270-004
BUNG ADAPTER	4411-009N	4411-009N

Oil Piston Pumps

PANTHER® HP 5:1 Pump Components

Suction tubes		4412-044	1" NPT(M) x 18" - 30°	16 gal drum	Control handles		3330-159	DR, Flex-mem. ext., 1/4 turn for oil
		4412-046	1" NPT(M) x 26" - 30°	55 gal drum			3330-205	MO, Flex-mem. ext., 1/4 turn for oil
		4412-045	1" NPT(M) x 21" - 30°	165/280 gal bench tank			3330-192	MR, Qts., Flex-mem. ext., 1/4 turn for oil
		4412-048	1" NPT(M) x 30" - 30°	165/280 gal bench tank double tap	Wall mount kit		4410-022 Wall mount kit for PANTHER® 8132-005 LP Hose 5' x 3/8" 8249-005 MP Hose 5' x 1/2" 8181-006 Suction Hose 6' x 1" 4412-015 Suction Tube 1" NPT(M) x 48" - 30° 4411-009N Bung Adapter 4411-008 Wall mount bracket	
		4412-047	1" NPT(M) x 28" - 30°	250 gal bench tank double tap				
		4412-051	1" NPT(M) x 42" - 30°	275/330 gal horizontal obround double tap				
		4412-052	1" NPT(M) x 60" - 30°	330 gal vertical obround				
		4412-049	1" NPT(M) x 32" - 30°	275 gal tote	Wall mount bracket		4411-008 Wall mount bracket for Panther® HP	
4412-050	1" NPT(M) x 39" - 30°	330 gal tote						
Bung adapter		4411-018N Double tap bushing, nickel plated stainless steel: for use with Panther® HP W/ pressure relief	Dollies		4310-001	4310-001 Band dolly, 16 gal/120 lb		
Filter regulator (F/R)		3260-033 F/R mini auto drain 1/4" NPT(F) See pg. 171 for complete listing			4310-004	4310-003 Band dolly, 16 gal/120 lb wide track 4310-004 Dolly, 55 gal/400 lb HD		
Dispense hose		8249-005	Dispense hose 5' x 1/2"	Carts		4320-010	4320-010 4 Wheel drum cart: 120 lb/16 gal	
		8263-010	Dispense hose 10' x 3/4"			4320-013	4320-013 3 Wheel drum cart: 400 lb/55 gal	
		8263-016	Dispense hose 16' x 3/4"			4320-014	4320-014 Heavy duty drum cart: 400 lb/55 gal, 3 wheels with rear locking caster. To mount hose reel, use 2230-036 hose reel mount kit.	
Connecting hose kit		4410-054 Connecting hose kit Panther® : 8132-005 LP Hose 5' x 3/8" 8249-005 MP Hose 5' x 1/2" 3270-003 Coupler 1/4" 3270-004 Nipple 1/4" 3270-053 Bushing 3/4" x 1/2"		Hose reel mount kit		2230-036 Hose reel mount kit for 4320-014 Heavy duty drum cart		

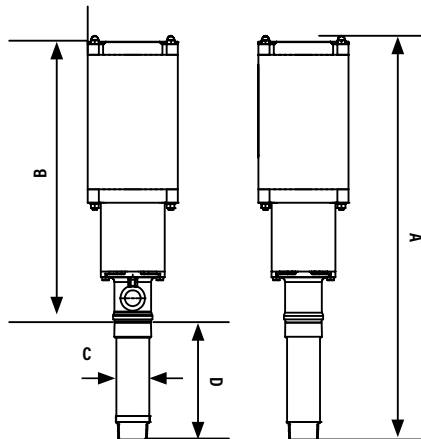
Note: Pump packages include all hoses and adapters required for connecting an oil pump to the air supply and oil dispense line. Balcrank does not provide wall mounting hardware (nuts, bolts, and anchors) for lube packages.

Oil Piston Pumps TIGER® HP 6:1 Pumps

The Tiger® HP 6:1 ratio double acting pump is engineered for outstanding performance and reliability for dispensing lubricating oils and similar products up to SAE 90.



Fluids & Applications



DIMENSIONS INCHES (MM)			
A	B	C	D
21 5/7" (544.5 mm)	16 1/4" (412.9 mm)	2 1/8" (54 mm)	4" (101.6 mm)

Tiger® is the largest of the Pride series pumps. Pride series pumps are manufactured with a mechanical air valve and piston design which is more forgiving of environments with contaminated air. The 6:1 version is a medium pressure pump for supplying higher pressures and longer pumping distances. The larger 3.2" air motor makes this pump ideal for larger users who need higher flow rates and slower pump cycle rates.

Fluids

- Synthetic and mineral based lubricants
- Hydraulic fluid
- Transmission fluid
- Gear oil

Applications

- Large sized tank packages
- Medium-large volume maintenance shops
- Medium to large volume car dealerships
- HD truck/fleet shops
- Off-road construction maintenance shops
- Mass-transit maintenance shops

Windshield wash fluid & water based fluids for use with 1160-007 stainless steel model only.

Pressure relief valve kit included with this pump.

TECHNICAL DATA	
Operating air pressure	40-150 psi (3-10 bar)
Cycles per gallon	31 cyc/gal (8.2 cyc/liter)
Air consumption 100 psi (7 bar) & 8 gal/min (30 l/min)	59 SCFM
Max fluid stall pressure @150 psi (10 bar) ⁽¹⁾	870 psi (60 bar)
Effective Air Piston Diameter	3.2" (81 mm)
Free flow pump delivery with SAE 10W30 oil, 68° F (20° C), 100 psi (7 bar) air pressure	16 gal/min (61 l/min)
Air inlet	3/8" NPT(F)
Fluid inlet	1" NPT(F); 1 1/2" NPT(M)
Fluid outlet	3/4" NPT(F)
Wetted materials 1130-019 - 1130-025 - 1130-026	Carbon steel, Buna-N [®] , Stainless steel, Ultrathane [®] and Aluminum.
1160-007	Stainless Steel and Viton [®]
Service Bulletin	SB 1065

NOTE: Thermal expansion of the fluid in a distribution system can cause an increase in system pressure that can damage lubrication system components. Use pressure relief valve kit included with this pump.

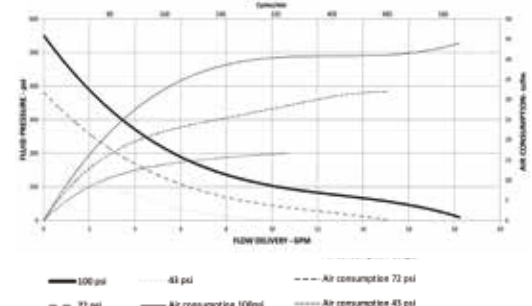
(1) Ensure that all hose fittings and piping are rated for fluid outlet pressures. Balcrank recommends a minimum of 3x safety factor.

Warning! Do not use any Pride series products with flammable fluids.

Verify fluid compatibility with MSDS sheets.

Contact Balcrank for specific system design performance and technical data.

MODELS AVAILABLE	DESCRIPTION
1130-019	6:1 Bare carbon steel stub pump
1130-025	6:1 Bare carbon steel stub pump, flange mount
1130-026	6:1 Bare carbon steel stub pump with bung adapter
1160-007	6:1 Bare stainless steel stub pump



Oil Piston Pumps TIGER® HP 6:1 Pump Packages



TIGER® 6:1 PUMP PACKAGE	55 GAL NON-METERED 1131-068
PUMP	1130-026
MP FLUID HOSE 10' x 1/2"	8249-010
LP HOSE 5' X 3/8"	8134-005
SUCTION TUBE 1" NPT(M) X 26" - 30°	4412-046
HANDLE W/FLEX-MEMORY EXT & 1/4 TURN	3320-024
F/R MINI AUTO DRAIN 3/8" NPT(F)	3260-035
AIR COUPLER 3/8"	3270-121
AIR NIPPLE 3/8"	3270-122














TIGER® 6:1 PUMP PACKAGE	55 GAL METERED 1131-067
PUMP	1130-026
MP FLUID HOSE 10' x 1/2"	8249-010
LP HOSE 5' X 3/8"	8134-005
SUCTION TUBE 1" NPT(M) X 26" - 30°	4412-046
HANDLE W/FLEX-MEMORY EXT & 1/4 TURN	3330-159
F/R MINI AUTO DRAIN 3/8" NPT(F)	3260-035
AIR COUPLER 3/8"	3270-121
AIR NIPPLE 3/8"	3270-122

Oil Piston Pumps

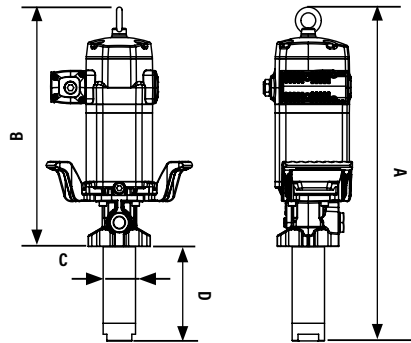
TIGER® HP 6:1 Pump Components

1

Suction tubes		4412-044 1" NPT(M) x 18" - 30° 16 gal drum	Control handles		3330-159 DR, Flex-mem. ext., 1/4 turn for oil
		4412-046 1" NPT(M) x 26" - 30° 55 gal drum			3330-205 MO, Flex-mem. ext., 1/4 turn for oil
		4412-045 1" NPT(M) x 21" - 30° 165/280 gal bench tank			3330-192 MR, Qts, Flex-mem. ext., 1/4 turn for oil
		4412-048 1" NPT(M) x 30" - 30° 165/280 gal bench tank double tap	Wall mount kit		4410-065 Wall mount kit 8134-005 LP Hose 5' x 3/8" 8249-005 MP Hose 5' x 1/2" 8181-006 Suction Hose 6' x 1" 4412-052 Suction Tube 1" NPT(M) x 60" - 30° 4411-009N Bung Adapter 4411-008 Wall mount bracket
		4412-047 1" NPT(M) x 28" - 30° 250 gal bench tank double tap			
		4412-051 1" NPT(M) x 42" - 30° 275/330 gal horizontal obround double tap			
		4412-052 1" NPT(M) x 60" - 30° 330 gal vertical obround			
		4412-049 1" NPT(M) x 32" - 30° 275 gal tote	Wall mount bracket		4411-008 Wall mount bracket for LYNX®, Panther® HP and Tiger®
4412-050 1" NPT(M) x 39" - 30° 330 gal tote	Dollies		4310-001 Band dolly, 16 gal/120 lb		
			4310-003 Band dolly, 16 gal/120 lb wide track		
Bung adapter		4411-018N Double tap bushing, nickel plated stainless steel: for use with Panther® HP W/ pressure relief			4310-004 Dolly, 55 gal/400 lb HD
Filer regulator (F/R)		3260-035 F/R auto drain 3/8" NPT(F) See pg. 171 for complete listing	Carts		4320-010 4 Wheel drum cart: 120 lb/16 gal
Dispense hose		8249-005 Dispense hose 5' x 1/2"			4320-013 3 Wheel drum cart: 400 lb/55 gal
		8263-010 Dispense hose 10' x 3/4"			4320-014 Heavy duty drum cart: 400 lb/55 gal, 3 wheels with rear locking caster. To mount hose reel, use 2230-036 hose reel mount kit.
		8263-016 Dispense hose 16' x 3/4"			
Connecting hose kit		4410-066 Connecting hose kit: 8134-005 LP Hose 5' x 3/8" 8249-005 MP Hose 5' x 1/2" 3270-003 Coupler 1/4" 3270-004 Nipple 1/4" 3270-053 Bushing 3/4" x 1/2"	Hose reel mount kit		2230-036 Hose reel mount kit for 4320-014 Heavy duty drum cart

Note: Pump packages include all hoses and adapters required for connecting an oil pump to the air supply and oil dispense line. Balcrank does not provide wall mounting hardware (nuts, bolts, and anchors) for lube packages.

Oil Piston Pumps Lion™ 450 - 3:1 Pump



DIMENSIONS INCHES (MM)			
A	B	C	D
27 7/8" (708 mm)	19 7/8" (505 mm)	3 35/64" (90 mm)	8 1/32" (204 mm)

TECHNICAL DATA	
Operating air pressure	30 to 180 psi (2 to 12.4 bar)
Cycles per gallon	6
Air Consumption ⁽¹⁾	28 CFM (800 NI/min)
Max fluid outlet pressure ⁽³⁾	510 psi (36 bar)
Air motor effective diameter	4.5" (115 mm)
Air motor stroke	4" (100 mm)
Delivery at 80 cpm	12 gal/min (45 l/min)
Max free flow delivery	32 gal/min (120 l/min)
Air inlet	1/2" NPT(F)
Fluid inlet	1 1/2" NPT(F)
Fluid outlet	3/4" NPT(F)
Wetted materials	Steel, Hard Chromed Steel, Zinc Plated Steel, Stainless Steel, Cast Iron, Polyurethane, Buna-N™, Bronze Filled PTFE
Noise level ⁽²⁾	80 dB
Service Bulletin	SB 1134

(1) Maximum air consumption with 75 psi (5 bar) air inlet pressure and 80 cpm.
 (2) Maximum noise level measured at 3' (1 m) from the pump, 100 psi (7 bar) air pressure and free delivery.
 (3) Ensure that all hose fittings and piping are rated for fluid outlet pressures. Balcrank recommends a minimum of 3x safety factor.

NOTE: Thermal expansion of the fluid in a distribution system can cause an increase in system pressure that can damage lubrication system components. Use pressure relief valve kit included with this pump.

Warning! Do not use any Lion™ 450/600 series products with flammable fluids.
 Verify fluid compatibility with MSDS sheets.
 Contact Balcrank for specific system design performance and technical data.

Fluids & Applications

1

Medium pressure pump for oil systems where high volume dispensing using simultaneous dispense points is required. This pump is recommended for medium pumping distances.

Fluids

- Synthetic and mineral based lubricants
- Hydraulic fluid
- Gear oil
- Transmission fluid

Applications

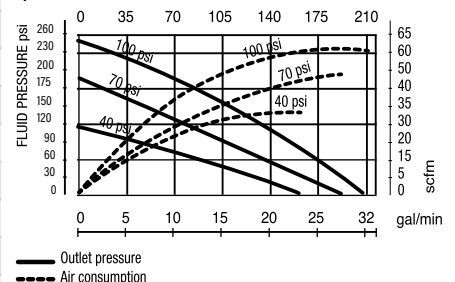
- Heavy duty truck/fleet
- Railroad/mass transit vehicle maintenance
- In-plant high volume transfer
- Marine
- Mining vehicle maintenance
- Large automotive dealerships

Pressure relief valve kit included with this pump.

Wall or floor mount only. Pump OD does not fit 2" bung adapter. See pg. 31 for mounting bracket.

MODELS AVAILABLE	DESCRIPTION
1430-001	Lion™ 450 3:1 stub pump

TEST FLUID: SAE 10
Cycles/min.

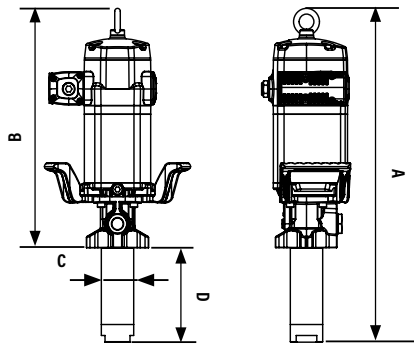


Oil Piston Pumps

Lion™ 450 - 6:1 Pump



1



DIMENSIONS INCHES (MM)			
A	B	C	D
28" (702 mm)	20" (502 mm)	2 3/4" (70 mm)	8" (200 mm)

Fluids & Applications

Medium pressure pump for oil systems where high volume dispensing using simultaneous dispense points is required. Medium/high pressure pump is recommended for longer pumping distances.

Fluids

- Synthetic and mineral based lubricants
- Hydraulic fluid
- Gear oil
- Transmission fluid

Applications

- Heavy duty truck/fleet
- Railroad/mass transit vehicle maintenance
- In-plant high volume transfer
- Marine
- Mining vehicle maintenance
- Large automotive dealerships

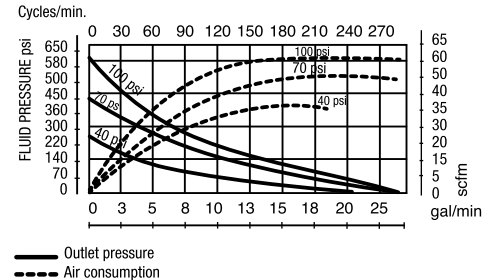
Pressure relief valve kit included with this pump.

Wall or floor mount only. Pump OD does not fit 2" bung adapter. See pg. 31 for mounting bracket.

TECHNICAL DATA	
Operating air pressure	30 to 180 psi (2 to 12.4 bar)
Cycles per gallon	11
Air Consumption ⁽¹⁾	29 CFM (830 NI/min)
Max fluid outlet pressure ⁽³⁾	1,020 psi (72 bar)
Air motor effective diameter	4.5" (115 mm)
Air motor stroke	4" (100 mm)
Delivery at 80 cpm	7 gal/min (25 l/min)
Max free flow delivery	26 gal/min (98 l/min)
Air inlet	1/2" NPT(F)
Fluid inlet	1 1/2" NPT(F)
Fluid outlet	3/4" NPT(F)
Wetted materials	Cast Iron, Hard Chromed Steel, Steel, Polyurethane, Buna-N™, and Zinc
Noise level ⁽²⁾	80 dB
Service Bulletin	SB 1135

MODELS AVAILABLE	DESCRIPTION
1430-002	Lion™ 450 6:1 stub pump

TEST FLUID: SAE 10



(1) Maximum air consumption with 75 psi (5 bar) air inlet pressure and 80 cpm.
 (2) Maximum noise level measured at 3' (1 m) from the pump, 100 psi (7 bar) air pressure and free delivery.
 (3) Ensure that all hose fittings and piping are rated for fluid outlet pressures. Balcrank recommends a minimum of 3x safety factor.

NOTE: Thermal expansion of the fluid in a distribution system can cause an increase in system pressure that can damage lubrication system components. Use pressure relief valve kit included with this pump.

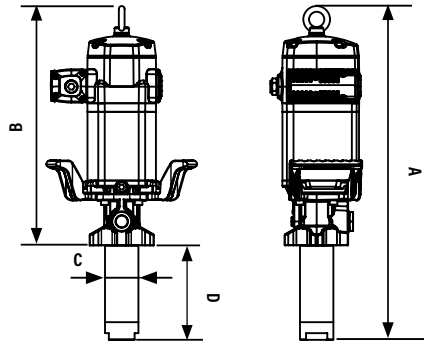
Warning! Do not use any Lion™ 450/600 series products with flammable fluids.

Verify fluid compatibility with MSDS sheets.

Contact Balcrank for specific system design performance and technical data.

Oil Piston Pumps

Lion™ 450 - 10:1 Pumps



DIMENSIONS INCHES (MM)			
1430-003			
A	B	C	D
28" (702 mm)	20" (502 mm)	2" (54 mm)	8" (200 mm)
1430-004			
56 1/4" (1,430 mm)	19 7/8" (505 mm)	2 1/8" (54 mm)	36 13/32" (925 mm)

TECHNICAL DATA	
Operating air pressure	30 to 180 psi (2 to 12.4 bar)
Cycles per gallon	19
Air Consumption ⁽¹⁾	30 CFM (850 NI/min)
Max fluid outlet pressure ⁽³⁾	1,700 psi (120 bar)
Air motor effective diameter	4.5" (115 mm)
Air motor stroke	4" (100 mm)
Delivery at 80 cpm	4 gal/min (15 l/min)
Max free flow delivery	18 gal/min (68 l/min)
Air inlet	1/2" NPT(F)
Fluid inlet	1 1/2" NPT(F)
Fluid outlet	3/4" NPT(F)
Wetted materials	Cast Iron, Hard Chromed Steel, Steel, Polyurethane, Buna-N™, and Zinc
Noise level ⁽²⁾	80 dB
Service Bulletin	SB 1136

(1) Maximum air consumption with 75 psi (5 bar) air inlet pressure and 80 cpm.
 (2) Maximum noise level measured at 3' (1 m) from the pump, 100 psi (7 bar) air pressure and free delivery.
 (3) Ensure that all hose fittings and piping are rated for fluid outlet pressures. Balcrank recommends a minimum of 3x safety factor.

NOTE: Thermal expansion of the fluid in a distribution system can cause an increase in system pressure that can damage lubrication system components. Use pressure relief valve kit included with this pump.

Warning! Do not use any Lion™ 450/600 series products with flammable fluids. Verify fluid compatibility with MSDS sheets.

Contact Balcrank for specific system design performance and technical data.

Fluids & Applications

1

High pressure pump for oil systems where medium volume dispensing using simultaneous dispense points is required. High pressure pump is recommended for long pumping distances and/or cold weather applications.

Fluids

- Synthetic and mineral based lubricants
- Hydraulic fluid
- Gear oil
- Transmission fluid

Applications

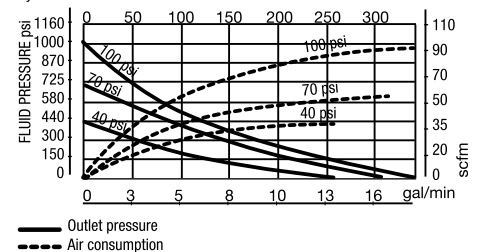
- Heavy duty truck/fleet
- Railroad/mass transit vehicle maintenance
- In-plant high volume transfer
- Marine
- Mining vehicle maintenance
- Large automotive dealerships

Pressure relief valve kit included with this pump.

Pump bung is mountable using 4411-032

MODELS AVAILABLE	DESCRIPTION
1430-003	Lion™ 450 10:1 stub pump
1430-004	Lion™ 450 10:1 drum pump

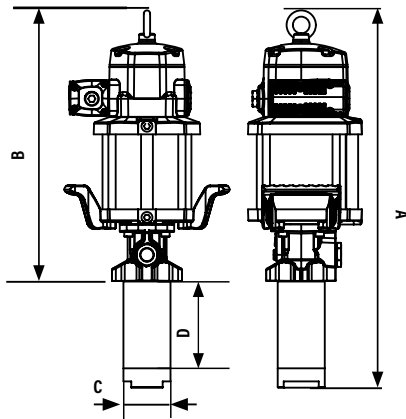
TEST FLUID: SAE 10



Oil Piston Pumps

Lion™ 600 - 6:1 Pump

1



DIMENSIONS INCHES (MM)			
A	B	C	D
28 3/8" (721 mm)	20 23/64" (517 mm)	3 35/64" (90 mm)	8 1/32" (204 mm)

TECHNICAL DATA

Operating air pressure	30 to 175 psi (2 to 12 bar)
Cycles per gallon	6
Air Consumption ⁽¹⁾	39 CFM (1,100 NI/min)
Max fluid outlet pressure ⁽³⁾	1,020 psi (72 bar)
Air motor effective diameter	6" (150 mm)
Air motor stroke	4" (100 mm)
Delivery at 60 cpm	9 gal/min (35 l/min)
Max free flow delivery	26 gal/min (100 l/min)
Air inlet	1/2" NPT(F)
Fluid inlet	1 1/2" NPT(F)
Fluid outlet	3/4" NPT(F)
Wetted materials	Cast Iron, Aluminum, Nickel, Steel, Polyurethane, Buna-N™, and Zinc
Noise level ⁽²⁾	80 dB
Service Bulletin	SB 1137

(1) Maximum air consumption with 75 psi (5 bar) air inlet pressure and 80 cpm.

(2) Maximum noise level measured at 3' (1 m) from the pump, 100 psi (7 bar) air pressure and free delivery.

(3) Ensure that all hose fittings and piping are rated for fluid outlet pressures. Balcrank recommends a minimum of 3x safety factor.

NOTE: Thermal expansion of the fluid in a distribution system can cause an increase in system pressure that can damage lubrication system components. Use pressure relief valve kit included with this pump.

Warning! Do not use any Lion™ 450/600 series products with flammable fluids.

Verify fluid compatibility with MSDS sheets.

Contact Balcrank for specific system design performance and technical data.

Fluids & Applications

Medium/high pressure pump for oil systems where high volume dispensing using simultaneous dispense points is required. This pump operates at slow cycle rates for high volume applications. Medium/high pressure pump is recommended for longer pumping distances.

Fluids

- Synthetic and mineral based lubricants
- Hydraulic fluid
- Gear oil
- Transmission fluid

Applications

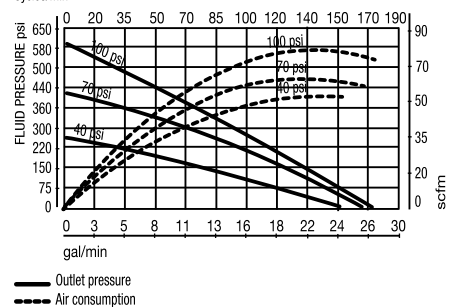
- Heavy duty truck/fleet
- Railroad/mass transit vehicle maintenance
- In-plant high volume transfer
- Marine
- Mining vehicle maintenance
- Large automotive dealerships

Pressure relief valve kit included with this pump.

Wall or floor mount only. Pump OD does not fit 2" bung adapter. See pg. 31 for mounting bracket.

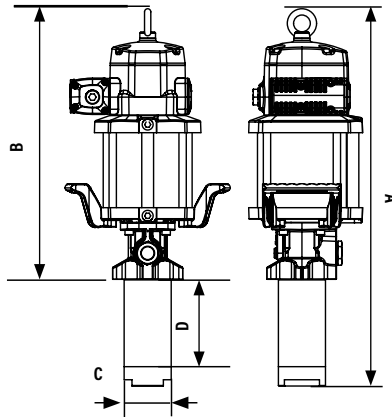
MODELS AVAILABLE	DESCRIPTION
1430-005	Lion™ 600 6:1 stub pump

TEST FLUID: SAE 10
Cycles/min



Oil Piston Pumps

Lion™ 600 - 12:1 Pump



DIMENSIONS INCHES (MM)			
A	B	C	D
28 1/4" (716 mm)	20 1/3" (516 mm)	2 3/4" (70 mm)	8" (200 mm)

TECHNICAL DATA

Operating air pressure	30 to 180 psi (2 to 12.4 bar)
Cycles per gallon	11
Air Consumption ⁽¹⁾	41 CFM (1,150 NI/min)
Max fluid outlet pressure ⁽³⁾	2,040 psi (144 bar)
Air motor effective diameter	6" (150 mm)
Air motor stroke	4" (100 mm)
Delivery at 60 cpm	5 gal/min (20 l/min)
Max free flow delivery	17 gal/min (65 l/min)
Air inlet	1/2" NPT(F)
Fluid inlet	1 1/2" NPT(F)
Fluid outlet	3/4" NPT(F)
Wetted materials	Cast Iron, Hard Chromed Steel, Steel, Polyurethane, and Buna-N™
Noise level ⁽²⁾	80 dB
Service Bulletin	SB 1138

(1) Maximum air consumption with 75 psi (5 bar) air inlet pressure and 80 cpm.

(2) Maximum noise level measured at 3' (1 m) from the pump, 100 psi (7 bar) air pressure and free delivery.

(3) Ensure that all hose fittings and piping are rated for fluid outlet pressures. Balcrank recommends a minimum of 3x safety factor.

NOTE: Thermal expansion of the fluid in a distribution system can cause an increase in system pressure that can damage lubrication system components. Use pressure relief valve kit included with this pump.

Warning! Do not use any Lion™ 450/600 series products with flammable fluids.

Verify fluid compatibility with MSDS sheets.

Contact Balcrank for specific system design performance and technical data.

Fluids & Applications

High pressure pump and high-volume, can be used with simultaneous dispense points. This pump operates at slow cycle rates for large shops requiring long pumping distances applications or when cold weather or low air pressure could limit pump performance.

Fluids

- Synthetic and mineral based lubricants
- Hydraulic fluid
- Gear oil
- Transmission fluid

Applications

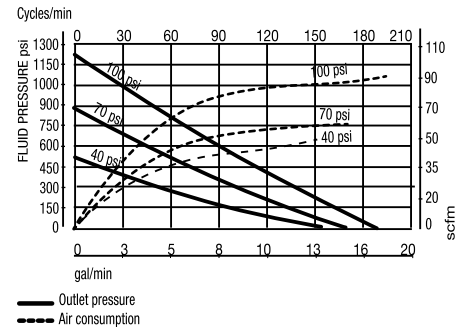
- Heavy duty truck/fleet
- Railroad/mass transit vehicle maintenance
- In-plant high volume transfer
- Marine
- Mining vehicle maintenance
- Large automotive dealerships

Pressure relief valve kit included with this pump.

Wall or floor mount only. Pump OD does not fit 2" bung adapter. See pg. 31 for mounting bracket.

MODELS AVAILABLE	DESCRIPTION
1430-006	Lion™ 600 12:1 stub pump

TEST FLUID: SAE 10



Oil Piston Pumps Accessories Mobile Oil Packages

1



	7120-018 Panther® HP 3:1	7120-019 Panther® HP 5:1	7120-017 TIGER® HP 6:1
DESIGNED FOR DRUM SIZE	400 lb / 55 gal	400 lb / 55 gal	400 lb / 55 gal
BARE PUMP	1130-015	1130-016	1130-019
AIR HOSE 5'	8132-005	8132-005	8144-005
FLUID HOSE 10'	8262-010	8262-010	8261-010
SUCTION TUBE 26.5" X 1" NPT(M)	4412-046	4412-046	4412-046
DRUM COVER OFFSET	4420-013	4420-013	4420-013
FLANGE MOUNT KIT FOR DRUM COVER	7120-026	7120-026	7120-026
HOLD DOWN KIT 400 LB	7120-024	7120-024	7120-024
AIR COUPLER 1/4"	3270-003	3270-003	-
AIR COUPLER 3/8"	-	-	3270-121
AIR NIPPLE 1/4"	3270-004	3270-004	-
AIR NIPPLE 3/8"	-	-	3270-122

Mobile drum covers



MODEL #	DESCRIPTION
4420-014	120 lb / 16 gal (Lion™ 450/600)
4420-013	400 lb / 55 gal (Lion™ 450/600)
7120-012	400 lb / 55 gal (Panther®)

Hold down rod kit









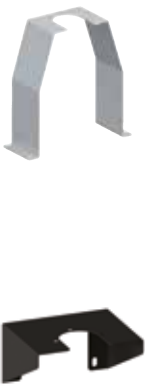
MODEL #	DESCRIPTION
7120-025	120 lb / 16 gal Hold down rod kit, 120 lb for use with 4420-011, 4420-014, and 7120-020 Drum cover
7120-024	400 lb / 55 gal, Hold down rod kit, 400 lb for use with 4420-013 Drum cover

4-Way reversing valve
























MODEL #	DESCRIPTION
3230-014	4-Way reversing valve 1" NPT(F) Pressure 200 psi (13.8 bar)

Oil Piston Pumps Lion™ 450 - 600 Accessories






Suction tubes		4412-031 1 1/2" NPT(M) x 38" - 30° 55 gal drum & bench tank	Control handles		3330-159 DR Flex-mem. ext., 1/4 turn for oil
		4412-032 1 1/2" NPT(M) x 47" - 30° horizontal obround tank			3330-205 M0, Flex-mem. ext., 1/4 turn for oil
		4412-033 1 1/2" NPT(M) x 63" - 30° 275 gal vertical obround tank			3330-192 MR, Qts. Flex-mem. ext., 1/4 turn for oil
		4412-034 1 1/2" NPT(M) x 75" - 30° 330 gal vertical obround tank			3320-051 Hi-flow, non-metered, rigid ext., 3/4" inlet
Connecting hose kit		4410-062 Connecting hose kit Lion™ 450/600 8149-005 LP Hose 5'x1/2" 8264-005 MP Hose 5'x3/4" 3270-132 Coupler, air 3/8" body, 1/2" FPT 3270-143 Nipple, air 3/8" body, 1/2" FPT 3270-158 Elbow 1/2" 3270-057 Union Swivel 3/4"	Control handles		3320-052 Hi-flow, non-metered, flex ext., 3/4" inlet
		4410-064 Suction hose kit Lion™ 450/600 4411-021 Bung Adapter for suction tubes 8191-005 Suction Hose 5'x1 1/2" 833595 Elbow 1 1/2" 3270-160 Hex Nipple 1 1/2" *Select Suction Tube from above			3320-053 Hi-flow, non-metered, rigid ext., 1" inlet
Filter/regulator (F/R)		3260-036 F/R auto drain 1/2" NPT(F) See pg. 171 for complete listing	Control handles		3320-054 Hi-flow, non-metered, flex ext., 1" inlet
Mounting brackets		4411-031 Floor mount for Lion™ 450/600			Control handles
		4411-030 Wall mount for new style Lion™ 450/600	3330-198 Hi-flow, metered, flex ext., 3/4" inlet		
					3330-199 Hi-flow, metered, rigid ext., 1" inlet
					3330-200 Hi-flow, metered, flex ext., 1" inlet

Oil Piston Pumps Accessories

1

PISTON PUMP ACCESSORIES						
Bung adapters		4411-009N Bung adapter: Panther [™] HP & Tiger [™] W/ pressure relief port	Air eliminator		4411-005 Air eliminator 3/4" NPT(F) / 1 1/2" NPT(M) adapter	
		4411-009QX Bung adapter: Panther [™] HP W/ pressure relief port - 10 pieces			4411-010 Air eliminator 1/4" NPT(F) / 1" NPT(M) adapter	
		4411-007N Bung adapter, steel: Lion [™] HP (old style) 5:1 W/ pressure relief port	Pump runaway control prevents runaway condition when out of oil		3241-001 Pump runaway control 1/2" NPT(F)	
		4411-018N Double tap bushing, zinc plated stainless steel: for use with Panther [™] HP W/ pressure relief			3241-002 Pump runaway control 1/4" NPT(F)	
		4411-022 Bung adapter: LYNX [®] 3:1 & LYNX [®] 5:1	Inlet Check Valve Aluminum		4411-014 Inlet Check Valve 3/4" NPT(F)	
		4411-021 Bung adapter: LYNX [®] : 1:1 SS, LYNX [®] 5:1 HD, Lion 450/600 Grease and 1 1/2" suction tube			4411-015 Inlet Check Valve 1" NPT(F)	
		4411-032 Bung Adapter: Lion [™] 450 10:1			4411-038 Inlet Check Valve 1 1/2" NPT(F)	
	4411-012 Bung adapter kit: for use with 1" OD suction tube	HP BALL VALVE				
	4411-024 PVC adapter w/ pressure relief port-2" for use when no additional ports are not available on the tank for pressure relief discharge tube.	Ball valve fully ported		3230-023 Ball valve, 3/8", 7,250 psi (500 bar)		
Couplers, strainers Y-Strainer - For filtering debris at the pump - 580 psi (40 bar) - all strainers have 40 mesh.			3120-211 1/2" NPT(F)		3230-015 Ball valve, 1/2", 7,250 psi (500 bar)	
			3120-212 3/4" NPT(F)		3230-016 Ball valve, 3/4", 5,800 psi (400 bar)	
			3120-213 1" NPT(F)		3230-017 Ball valve, 1", 5,075 psi (350 bar)	
Ensure that all hose fittings and piping are rated for fluid outlet pressures. Balcrank recommends a minimum of 3x safety factor.			MP BALL VALVES WITH OIL/AIR			
In-line pressure relief			3120-085 Pressure relief kit, 1/2" NPT(M) 850 psi for use with Panther [®] 3:1 and 5:1	Ball valve fully ported no bleed		3230-006 Ball valve, 3/8", 2,000 psi (138 bar)
			3120-086 Pressure relief kit, 3/4" NPT(M) 850 psi for use with LYNX [®] 1:1, 3:1			3230-002 Ball valve, 1/2", 2,000 psi (138 bar)
		3120-087 Pressure relief kit, 3/4" NPT(M) 1400 psi			3230-007 Ball valve, 3/4", 2,000 psi (138 bar)	
					3230-018 Ball valve, 1/4", 580 psi (40 bar)	
					3230-019 Ball valve, 3/8", 580 psi (40 bar)	
Pressure relief valves		3120-214 Kit, PR valve 1/4" NPT(M) 850 psi for use with Lion [™] 450 3:1, 6:1 and Lion [™] 600 6:1, kit includes return tube and 1/8" NPT(M) adapter	Shut-off valve bleed type for air		3230-009 Shut-off valve, 3/8" NPT(F), 200 psi (13.7 bar)	
		3120-215 Kit, PR valve 1/4" BSPP 1,450 psi for use with Lion [™] 450 10:1 and Lion [™] 600 12:1, kit includes return tube and 1/8" NPT(M) adapter			3230-010 Shut-off valve, 1/2" NPT(F), 200 psi (13.7 bar)	
					3230-011 Shut-off valve, 3/4" NPT(F), 200 psi (13.7 bar)	

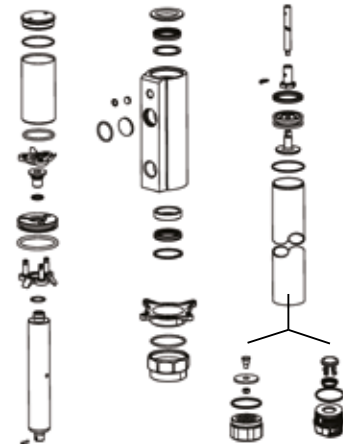
Oil Piston Pumps Accessories

COUPLERS & NIPPLES			COVERS & CARTS		
Balcrank Series		3270-003 Coupler, 1/4" NPT(F)	Covers for 25-35 lb / 5 gal pail		4420-010 25-35 lb/5 gal (for use with 2" bung stub pumps)
		3270-120 Coupler, 3/8" NPT(F)			Covers for 120 lb / 16 gal drum
		3270-119 Coupler, 1/4" NPT(M)	Covers for 400 lb / 55 gal drum	4420-005 120 lb/16 gal (Panther™ HP, Tiger™)	
		3270-121 Coupler, 3/8" NPT(M)		Dollies	
	3270-005 Nipple, 1/4" NPT(F)	Covers for 400 lb / 55 gal drum	4420-013 400 lb/55 gal (Lion™ 450/600). Ask for flange mount kit 7120-026		
	3270-122 Nipple, 3/8" NPT(F)		Dollies		4310-001 Band dolly, 16 gal/120 lb
	3270-004 Nipple, 1/4" NPT(M)	Dollies			4310-003 Band dolly, 16 gal/120 lb wide track
	3270-123 Nipple, 3/8" NPT(M)		Dollies	4310-004 Dolly, 55 gal/400 lb HD	
INDUSTRIAL INTERCHANGE SERIES					
Industrial interchange Series		3270-132 Coupler, air 3/8" body, 1/2" NPT(F)	Carts		4320-010 4 Wheel drum cart: 120 lb/16 gal
		3270-133 Coupler, air 3/8" body, 1/2" NPT(M)			4320-013 3 Wheel drum cart: 400 lb/55 gal
	3270-142 Nipple, air 3/8" body, 1/2" NPT(F)	4320-014 Heavy duty drum cart: 400 lb/55 gal, 3 wheels with rear locking caster (to mount hose reel, use 2230-036 hose reel mount kit)			
	3270-143 Nipple, air 3/8" body, 1/2" NPT(M)				Hose reel mount kit
MOUNTING BRACKETS					
Mounting brackets		4411-008 Wall mount bracket for LYNX™, Panther™ HP, and Tiger™			
		4411-030 Wall mount for new style Lion™ 450/600			
SUCTION TUBES					
LYNX® 1:1, LYNX® 5:1 HD, PANTHER® 3:1 & 5:1, TIGER 6:1 HP		4412-049 1" NPT(M) x 32" - 30° 275 gal tote	4412-042 3/4" NPT(M) x 42" - 30° 275/330 gal horizontal obround double tap		
4412-044 1" NPT(M) x 18" - 30° 16 gal drum	4412-050 1" NPT(M) x 39" - 30° 330 gal tote			4412-043 3/4" NPT(M) x 60" - 30° 330 gal vertical obround	
4412-046 1" NPT(M) x 26" - 30° 55 gal drum	LYNX® 3:1				4412-040 3/4" NPT(M) x 32" - 30° 275 gal tote
4412-045 1" NPT(M) x 21" - 30° 165/280 gal bench tank	4412-035 3/4" NPT(M) x 18" - 30° 16 gal drum			4412-041 3/4" NPT(M) x 39" - 30° 330 gal tote	
4412-048 1" NPT(M) x 30" - 30° 165/280 gal bench tank double tap	4412-037 3/4" NPT(M) x 26" - 30° 55 gal drum			LION™ 450/600	
4412-047 1" NPT(M) x 28" - 30° 250 gal bench tank double tap	4412-036 3/4" NPT(M) x 21" - 30° 165/280 gal bench tank			4412-031 1 1/2" NPT(M) x 38" - 30° 55 gal drum & bench tank	
4412-051 1" NPT(M) x 42" - 30° 275/330 gal horizontal obround double tap	4412-039 3/4" NPT(M) x 30" - 30° 165/280 gal bench tank double tap			4412-032 1 1/2" NPT(M) x 47" - 30° horizontal obround tank	
4412-052 1" NPT(M) x 60" - 30° 330 gal vertical obround	4412-038 3/4" NPT(M) x 28" - 30° 250 gal bench tank double tap			4412-033 1 1/2" NPT(M) x 63" - 30° 275 gal vertical obround tank	
				4412-034 1 1/2" NPT(M) x 75" - 30° 330 gal vertical obround tank	

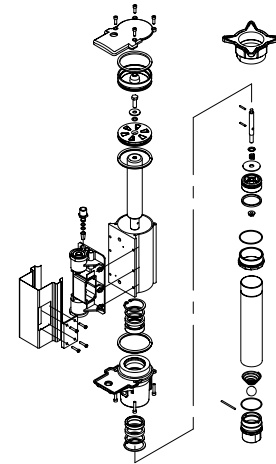
Piston Pump Repair Kits for Oil

1

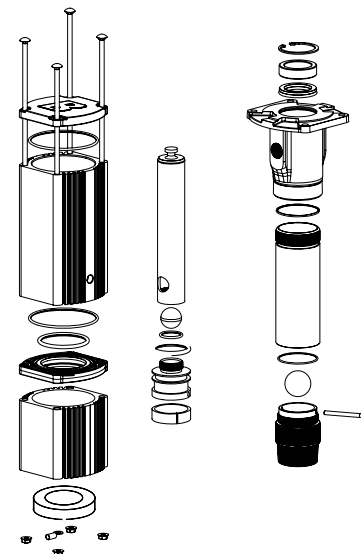
LYNX® 1:1 & 3:1		
PUMP MODELS	KIT NUMBER	DESCRIPTION
LYNX® SERIES PUMPS 1:1 - 1110-010, 1110-009, 1160-008		
1110-009 & 1110-010 Fluid	833109	Fluid seal kit
1110-009, 1110-010, 1110-007	833110	Air valve kit
1160-008	833525	Fluid seal kit
LYNX® SERIES PUMP 2:1 - 1111-035		
1111-035	833346	Air filter kit
	833110	Air valve kit
	833111	Fluid seal kit
LYNX® SERIES PUMPS 3:1 - 1110-007		
1110-007	833111	Fluid seal kit
1110-007	833110	Air valve kit



LYNX® 5:1 HD		
PUMP MODELS	KIT NUMBER	DESCRIPTION
LYNX® SERIES PUMPS 5:1 HD - 1110-012		
1110-012	833437	Fluid seal kit
1110-012	833438	Air motor, complete kit
1110-012	833439	Pump tube, repair kit
1110-012	833440	Fluid piston kit

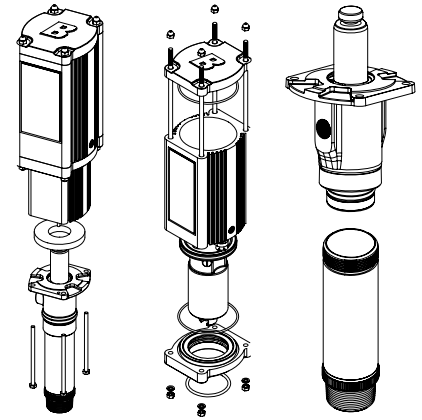


PANTHER® HP 3:1 & 5:1		
PUMP MODELS	KIT NUMBER	DESCRIPTION
PANTHER® HP SERIES PUMPS 3:1 - 1130-015, 1130-017, 1130-020 & 5:1 - 1130-016, 1130-018, 1130-021		
Panther® HP Series Pumps - All	900019	Air motor kit - Trip Rod Assembly
Panther® HP Series Pumps - All	900031	Air motor kit - SOFT parts only
Panther® HP Series Pumps - All	831614	Air motor assembly kit- Includes Piston
Panther® HP Series Pumps - All oil	831613	Air - complete assembly
1130-015, 1130-017 & 1130-020	900020	Fluid seal kit
1130-016, 1130-018 & 1130-021	900021	Fluid seal kit
1130-015, 1130-017 & 1130-020	831612N	Fluid - complete assembly
1130-016, 1130-018 & 1130-021	831615N	Fluid - complete assembly



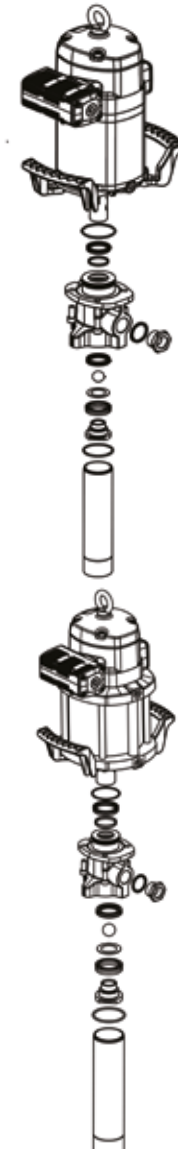
Piston Pump Repair Kits for Oil

TIGER 6:1		
PUMP MODELS	KIT NUMBER	DESCRIPTION
TIGER SERIES PUMPS 6:1 - 1130-019, 1130-025, 1130-026, 1160-007		
Tiger HP Series Pumps - All	900027	Air motor kit - Trip Rod Assembly
Tiger HP Series Pumps - All	900028	Air motor kit - SOFT parts only
Tiger HP Series Pumps - All	831671	Air - complete assembly
1130-019, 1130-025 & 1130-026	900020	Fluid seal kit
1160-007	828070	Fluid seal kit (Stainless Steel)
1130-019, 1130-025 & 1130-026	831672N	Fluid - complete assembly



1

LION™ 450		
PUMP MODELS	KIT NUMBER	DESCRIPTION
LION™ 450 SERIES PUMPS 3:1 - 1430-001, 6:1 1430-002, 10:1 - 1430-003, 1430-004		
1430-001, 1430-002, 1430-003, 1430-004	833412	Air motor seals kit
1430-001, 1430-002, 1430-003, 1430-004	833413	Exhaust muffler kit
1430-001, 1430-002, 1430-003, 1430-004	833414	Spools & seals kit
1430-001	833509	Inlet Check Valve - Poly kit 3:1
1430-002	833510	Inlet Check Valve - Poly kit 6:1
1430-001	833512	Lower seals kit 3:1
1430-002	833513	Lower seals kit 6:1
1430-003, 1430-004	833600	Inlet Check Valve - Poly kit 10:1
1430-003, 1430-004	833603	Lower seals kit 10:1
1430-003, 1430-004	833604	Suction tube kit 10:1



LION™ 600		
PUMP MODELS	KIT NUMBER	DESCRIPTION
LION™ 600 SERIES PUMPS 6:1 - 1430-005, 12:1 - 1430-006		
1430-005, 1430-006	833413	Exhaust muffler kit
1430-005, 1430-006	833414	Spools & seals kit
1430-005	833509	Inlet Check Valve - Poly kit 6:1
1430-006	833510	Inlet Check Valve - Poly kit 12:1
1430-005, 1430-006	833511	Air motor seals kit
1430-005	833512	Lower seals kit 6:1 1430-006
1430-006	833513	Lower seals kit 12:1

1



Grease Piston Pumps Product Selection Matrix

1

MAX. SIMUL. DISPENSE POINTS	MAX. LINE LENGTH	MAX. - FREE FLOW	AIR INLET	FLUID OUTLET	RECOMMENDED FLUID TYPES
LYNX® 55:1					
1	50' (50 m)	1.2 lb/min (0.5 kg/min)	1/4" NPT	1/4" NPT	Up to NLGI-2 grease
PANTHER® 50:1					
1-2*	100' (30 m)	3.4 lb/min (1.54 kg/min)	1/4" NPT	1/4" NPT	Up to NLGI-2 grease
LION™ 350 60:1					
1-2	250' (75 m)	4.4lb/min (2 kg/min)	3/8" NPT	3/8" NPT	Up to NLGI-2 grease
LION™ 450 25:1					
1	250' (75 m)	35 lb/min (16 kg/min)	1/2" NPT	1/2" NPT	Up to NLGI-2 grease High viscosity oil
LION™ 450 40:1					
4	400' (120 m)	24 lb/min (11 kg/min)	1/2" NPT	1/2" NPT	Up to NLGI-2 grease
LION™ 450 70:1					
4	600' (180 m)	16 lb/min (725 kg/min)	1/2" NPT	1/2" NPT	Up to NLGI-2 grease
LION™ 600 12:1					
1	30' (10 m)	88 lb/min (40 kg/min)	1/2" NPT	1" NPT	Up to NLGI-2 grease
LION™ 600 80:1					
4	800' (240m)	18 lb/min (8 kg/min)	1/2" NPT	1/2" NPT	Up to NLGI-2 grease

Pump performance is predicated on viscosity (temperature), pumping distance, pipe diameter and dispense volume requirements. Contact Balcrank for system design assistance and technical data.

Always ensure hoses, fittings, and piping are rated for fluid outlet pressures. Balcrank recommends a minimum of 3x the safety factor.

Grease viscosity above NLGI-2 requires use of double post RAM on pg. 51. Contact Balcrank for product recommendations.



LYNX® SERIES



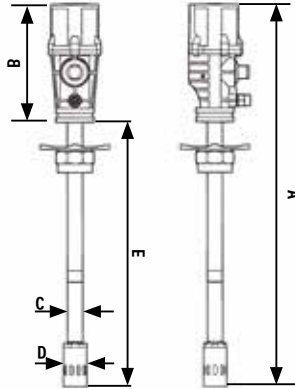
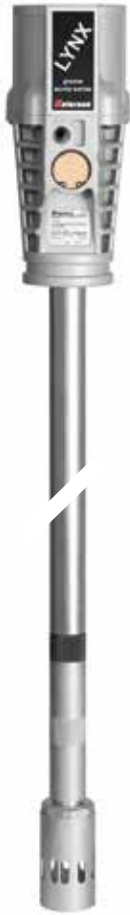
PANTHER® SERIES



LION™ SERIES

Grease Piston Pumps LYNX® 55:1 Pumps

1



DIMENSIONS INCHES (MM)				
1150-022				
A	B	C	D	E
24.40" (620 mm)	8" (202 mm)	1" (26 mm)	1.56" (40 mm)	16.5" (418 mm)
1150-023				
36.62" (930 mm)	8" (202 mm)	1" (26 mm)	1.56" (40 mm)	28.65" (728 mm)
1150-024				
44.12" (1120 mm)	8" (202 mm)	1" (26 mm)	1.56" (40 mm)	36.14" (918 mm)

TECHNICAL DATA	
Pump ratio	55:1
Continuous duty free flow	7 lbs/min
Cycles per lb @ 100 psi (7 bar) free flow	318
Pump delivery, 100 psi (7 bar) air pressure and free flow	0.70 lb/min (0.32 kg/min)
Operating air pressure range	20-140 psi (1.5-10 bar)
Max fluid stall pressure @ 140 psi (10 bar) air	7,700 psi (550 bar)
Effective Air Piston Diameter	2.75" (70 mm)
Air motor stroke	1.5" (38 mm)
Air consumption 90 psi (6 bar) & 110 cycles per minute	5.8 SCFM
Air inlet	1/4" NPT(F)
Fluid outlet	1/4" NPT(F)
Wetted materials	Steel, Zinc, Aluminum, Buna-N™, PTFE (Teflon®)
Noise	92 dB
Service Bulletin	SB 1116

Warning! Do not use any LYNX® series products with flammable fluids.

Verify fluid compatibility with MSDS sheets.

Contact Balcrank for pumping grease higher than NLGI-2 and specific system design performance technical data.

Fluids & Applications

Designed for 25-35, 120, and 400 lb. drums, portable use, and single point dispense. Ideal for the low volume user for grease fittings on smaller vehicles. LYNX® grease pumps are double acting positive displacement capable of delivering up to 1.2 lbs. (.54 kg) per minute.

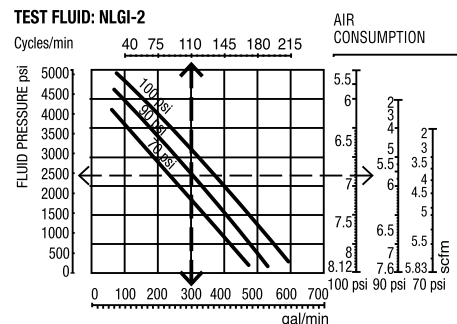
Fluids

- Grease up to NLGI-2

Applications

- Roll-around unit for small vehicle grease points
- Agriculture/farm implements
- Small auto/truck shops
- Tire & transmission shops
- In-plant low volume use

MODELS AVAILABLE	DESCRIPTION
1150-022	LYNX® 55:1 Grease 25-35 lbs
1150-023	LYNX® 55:1 Grease 120 lbs
1150-024	LYNX® 55:1 Grease 400 lbs



Grease Piston Pumps LYNX® 55:1 Pump Packages



1

LYNX® 55:1 PACKAGES	25-35 LB STATIONARY 1151-034	120 LB PORTABLE 1151-035
BARE PUMP	1150-022	1150-023
BUNG ADAPTER	4411-023	4411-023
FLUID HOSE 10' X 3/8"	8331-010	8331-010
F/R AUTO DRAIN 1/4" NPT(F)	3260-033	3260-033
COMFORT GRIP GREASE HANDLE	3310-030	3310-030
DRUM COVER	4420-010 ⁽¹⁾	4420-011
FOLLOWER PLATE	4440-013	4440-014
CART	Optional	4320-012

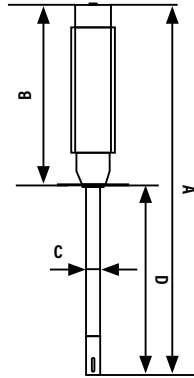
(1) includes carrying handle



LYNX® 55:1 PACKAGES	400 LB PORTABLE 1151-036
BARE PUMP	1150-024
BUNG ADAPTER	4411-023
FLUID HOSE 10' X 3/8"	8331-010
F/R AUTO DRAIN 1/4" NPT(F)	3260-033
COMFORT GRIP GREASE HANDLE	3310-030
DRUM COVER	4420-015
FOLLOWER PLATE	4440-018
CART	4320-013

Grease Piston Pumps Panther® HP 50:1 Pumps

1



DIMENSIONS INCHES (MM)			
1150-009			
A	B	C	D
36.75" (933 mm)	18.75" (476 mm)	1.25" (31.75 mm)	18" (457 mm)
1150-010			
46.75" (1187 mm)	18.75" (476 mm)	1.25" (31.75 mm)	28" (711 mm)
1150-011			
52.75" (1340 mm)	18.75" (476 mm)	1.25" (31.75 mm)	34" (834 mm)

TECHNICAL DATA	
Pump ratio	50:1
Continuous duty free flow	2 lb/min
Cycles per lb @ 100 psi (7 bar) free flow	70
Pump delivery with NLGI-2, 75° F (23.8° C), 100 psi (7 bar) air pressure and free flow	3.4 lb/min (1.54 kg/min)
Operating air pressure range	40-150 psi (2.8-10 bar)
Max fluid stall pressure @ 150 psi (10 bar) air	7500 psi (517 bar)
Effective Air Piston Diameter	2 1/2" (63.5 mm)
Air motor stroke	3.25" (83 mm)
Air consumption 100 psi (7 bar) & 1.5 lb/min (.68 kg/min)	14.5 SCFM
Air inlet	1/4" NPT(F)
Fluid outlet	1/4" NPT(F)
Wetted materials	Stainless Steel, Carbon Steel, Brass, Aluminum, Delrin®, Ultrathane®, and Buna-N™
Noise	92 dB
Service Bulletin	SB 1063

NOTE: Pumping distance and pipe diameter will effect dispensing performance.

Warning! Do not use any Pride series products with flammable fluids.

Verify fluid compatibility with MSDS sheets.

Contact Balcrank for pumping grease higher than NLGI-2 and specific system design performance technical data.



Fluids & Applications

Designed for lower volume users up to 2 dispense points. Designed for 25-35, 120, and 400 lb. drums. Ideal for lower volume grease fittings on trucks and farm implements. Panther® pump is a double acting positive displacement capable of delivering up to 3.4 lbs. (1.54 kg) per minute.

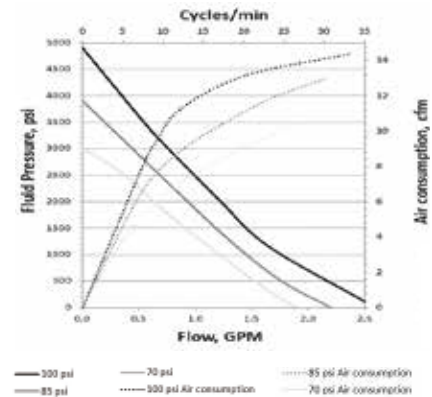
Fluids

- Grease up to NLGI-2

Applications

- Roll-around unit for small vehicle grease points
- Agriculture/farm implements
- Small auto/truck shops
- Tire & transmission shops
- In-plant low volume use

MODELS AVAILABLE	DESCRIPTION
1150-009	Panther® HP 50:1 bare 25-35 lbs
1150-010	Panther® HP 50:1 bare 120 lbs
1150-011	Panther® HP 50:1 bare 400 lbs



Grease Piston Pumps Panther® HP 50:1 Pump Packages



1

PANTHER® HP 50:1 PACKAGES	25-35 LB STATIONARY 1151-003	120 LB PORTABLE 1151-005	400 LB STATIONARY 1151-006
BARE PUMP	1150-009	1150-010	1150-011
AIR HOSE 5' X 3/8"	8132-005	8132-005	8132-005
FLUID HOSE 10' X 3/8"	8331-010	8331-010	8331-010
COMFORT GRIP GREASE HANDLE	3310-030	3310-030	-
DRUM COVER	4420-008	4420-009	4420-004
FOLLOWER PLATE	4440-007	4440-008	4440-009
DOLLY BASE, 120 LB/ 16 GAL	-	4310-001	-
AIR COUPLER 1/4"	3270-003	3270-003	3270-003
AIR NIPPLE 1/4"	3270-004	3270-004	3270-004

Note: Pump packages include all hoses and adapters required for connecting a grease pump to the air supply and dispense line.










PANTHER® HP 50:1 MOBILE PACKAGES	120 LB 7120-015	400 LB 7120-016
BARE PUMP	1150-010	1150-011
FLUID HOSE	8331-010	8331-010
FLANGE MOUNT KIT	7120-026	7120-026
HOLD DOWN KIT	7120-025	7120-024
DRUM COVER	4420-014	4420-013
FOLLOWER PLATE	4440-008	4440-009

Note: Pump packages include all hoses and adapters required for connecting a grease pump to the air supply and dispense line.

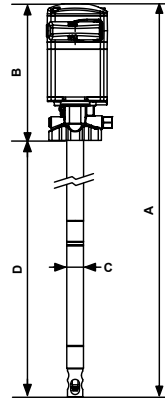
Grease Piston Pumps

Panther® HP 50:1 Pump Components

1

		8390-002 18" Whip Hose HP Flexible Extension 8390-003 36" Whip Hose HP Flexible Extension 8390-004 42" Whip hose HP flexible extension Max. pressure 5,000 psi (345 bar). Hose end 1/8" NPT(M) on both ends. Compatible fluid NLGI-2 Grease	Dollies		4310-005 Dolly Base, 5 gal/25 - 35 lb
		5310-018 Z-Swivel 1/4" NPT(F) x 1/4" NPT(M)			4310-001 Band Dolly, 16 gal/120 lb 4310-003 Dolly, 16 gal/120 lb wide track 4310-004 Dolly, 55 gal/400 lb HD
Grease handle accessories		3310-030 Comfort Grip Grease Handle	Carts		4320-011 Drum cart: 35 lb grease, 2 wheels
		3310-031 Comfort Grip Grease Handle with 18" Whip Hose and Z-swivel			4320-012 Drum cart: 120 lb/16 gal grease, 2 rear wheels. Front stabilizing rubber pads.
		3310-032 Comfort Grip Grease Handle with 36" Whip Hose and Z-swivel			4320-013 3 Wheel drum cart: 400 lb/55 gal
		5310-024 Grease coupler 4-Jaws 4420-012 Holster, for grease gun			4320-014 Drum cart: 400 lb/55gal heavy duty, 3 wheels with rear locking caster (to mount hose reel, use 2230-036 hose reel mount kit)
Drum Covers		4420-008 25-35 lb Pail Panther® HP 50:1	Hose reel mount kit		2230-036 Hose reel mount kit for 4320-014 Heavy duty drum cart
		4420-009 120 lb Panther® HP 50:1			
		4420-004 400 lb for Panther® 50:1			
Follower plates		4440-007 25-35 lb pail for Panther® HP 50:1			
		4440-008 120 lb for Panther® HP 50:1			
		4440-009 400 lb for Panther® HP 50:1			

Grease Piston Pumps Lion™ 350 60:1 Pumps



DIMENSIONS INCHES (MM)			
1450-013			
A	B	C	D
31.6" (803 mm)	11.25" (287 mm)	1.66" (35 mm)	20.3" (516 mm)
1450-012			
40" (1017 mm)	11.25" (287 mm)	1.66" (35 mm)	28.7" (730 mm)
1450-011			
47.7" (1,212 mm)	11.25" (287 mm)	1.66" (35 mm)	36.4" (925 mm)

TECHNICAL DATA	
Pump ratio	60:1
Cycles per lb/min @ 100 psi (7 bar) free flow	50
Operating air pressure range	20-145 psi (1.5-10 bar)
Max pump delivery	4.4 lb/min (2 kg/min)
Pump delivery with NLGI-2, 68° F (20° C), 70 psi (5 bar) air pressure and 80 cycles per minute	1.1 lbs/min (500 g/min)
Max fluid stall pressure	8,700 psi (600 bar)
Air inlet	3/8" NPT(F)
Fluid outlet	3/8" NPT(F)
Effective Air Piston Diameter	3.15" (80 mm)
Wetted materials	Cast Iron, Hard Chromed Steel, Steel, UHMWPE, NBR, PTFE, Viton®
Service Bulletin	SB 1153

Warning! Do not use any Lion™ series products with flammable fluids.

Verify fluid compatibility with MSDS sheets.

Contact Balcrank for pumping grease higher than NLGI-2 and specific system design performance technical data.

Fluids & Applications

1

Designed for 35 lb, 120, and 400 lb. containers. Ideal for the users that need reliable grease delivery and medium length systems that have multiple dispense points. This Lion grease pump delivers up to 4.4 lb (2 kg) per minute.

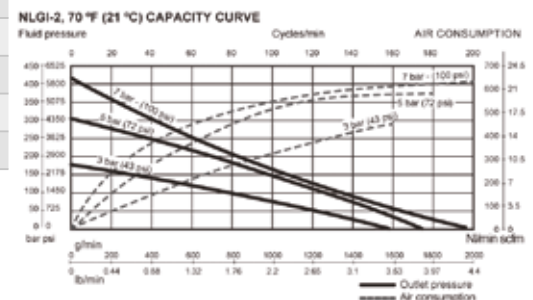
Fluids

- Grease up to NLGI-2

Applications

- Agriculture/farm implements
- Small auto/truck shops
- Tire & transmission shops
- In-plant medium volume use
- Mining and construction
- Truck fleets
- Railroad/Mass transit
- Lube trucks
- Marine

MODELS AVAILABLE	DESCRIPTION
1450-013	Lion™ 60:1 Grease 25-35 lbs
1450-012	Lion™ 60:1 Grease 120 lbs
1450-011	Lion™ 60:1 Grease 400 lbs



Grease Piston Pumps

Lion™ 350 60:1 Pump Packages

1

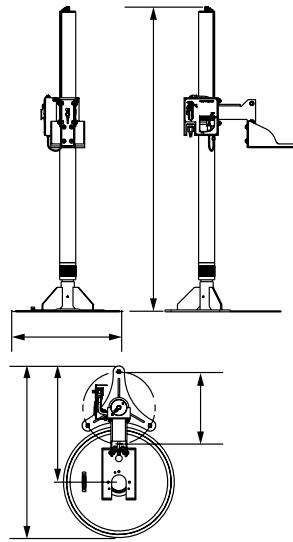


LION™ 350 60:1 PACKAGES	120 LB PORTABLE 1151-038	400 LB PORTABLE 1151-039	400 LB STATIONARY 1151-043
BARE PUMP	1450-012	1450-011	1450-011
FLUID HOSE	8321-016	8321-020	8333-010
AIR HOSE	-	-	8134-005
F/R AUTO DRAIN	3260-033	3260-035	3260-033
COMFORT GRIP GREASE HANDLE	3310-030	3310-030	-
DRUM COVER	4420-011	4420-015	4420-015
FOLLOWER PLATE	4440-014	4440-018	4440-018
COUPLER	3270-003	-	3270-120
NIPPLE	3270-004	-	3270-123
CART	-	4320-013	-
DOLLY	4310-001	-	-



LION™ 350 60:1 MOBILE PACKAGES	120 LB 1151-041	400 LB 1151-042
BARE PUMP	1450-012	1450-011
FLUID HOSE	8134-003	8134-003
HOLD DOWN KIT	7120-025	7120-024
DRUM COVER	4420-014	4420-013
FOLLOWER PLATE	4440-014	4420-018

Grease Piston Pumps Lion™ 350 60:1 Inductor



DIMENSIONS INCHES (MM)				
A	B LOWERED/ RAISED	C	D	E
23.25" (588 mm)	58" (1470 mm) 94.5" (2400 mm)	35.75" (910 mm)	24.03" (617 mm)	15" (381 mm)

TECHNICAL DATA	
Diameter of the pneumatic cylinder	3" (75 mm)
Stroke of the pneumatic cylinder	36.6" (930 mm)
Minimum height of equipment	58" (1,470 mm)
Maximum height of equipment	94.5" (2,400 mm)
Air inlet	1/2" NPT(M)
Maximum air pressure	116 psi (8 bar)
Service Bulletin	SB 4228

Verify fluid compatibility with MSDS sheets.

Contact Balcrank for pumping grease higher than NLGI-2 and specific system design performance technical data.

Fluids & Applications

1

Lion™ 350 60:1 grease pump is used with 120 and 400 lb drums. The air operated pump hoist lifts and lowers the pump, making drum changes easier, faster and safer. The pumps lower end is rigidly fixed to a follower plate with a single rubber lip. The weight of the pump, pump bracket and follower plate plus atmospheric pressure push the assembly against the grease eliminating channelling and air pockets, keeping grease free from contaminants, minimizing waste, and aiding pump priming.

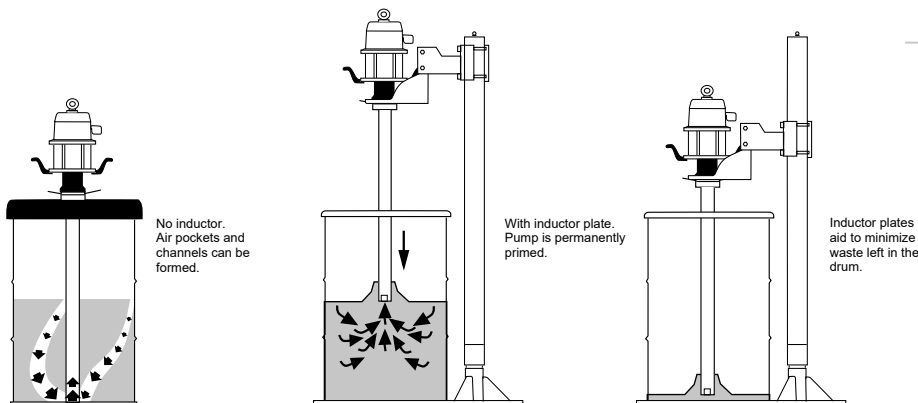
Fluids

- Grease up to NLGI-2

Applications

- Agriculture/farm implements
- Small auto/truck shops
- In-plant medium volume use
- Truck fleets
- Lube trucks
- Marine
























MODELS AVAILABLE	DESCRIPTION
1451-009	Package, Lion™ 350, 60:1 Inductor Includes: 1450-012 Lion™ 60:1 Grease 120 lbs 4450-003 Inductor, Gravity, Pump Lift & follower plate
1451-008	Lion™ 60:1 Grease 400 lbs Package, Lion™ 350, 60:1 Inductor Includes: 1450-011 Lion™ 60:1 Grease 400 lbs 4450-003 Inductor, Gravity, Pump Lift & follower plate
4450-005	Base plate for pump hoist & inductor



Grease Piston Pumps

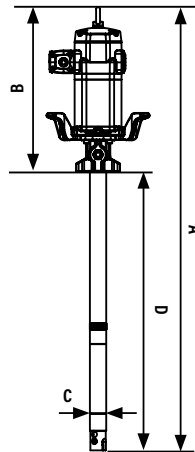
Lion™ 350 60:1 Pump Components

1

Grease handle accessories		<p>8390-002 18" Whip Hose HP Flexible Extension</p> <p>8390-003 36" Whip Hose HP Flexible Extension</p> <p>8390-004 42" Whip hose HP flexible extension. Max. pressure 5,000 psi (345 bar), Hose end 1/8" NPT(M) on both ends.</p>	Connecting hose kit		<p>4410-030 Connecting Hose Kit for Lion™ Grease: 8144-055 LP Hose 5' x 1/2" 8343-010 HP Hose 10' x 1/2" 3270-001 Nipple 3/8" 3270-002 Coupler 3/8"</p>
		5310-018 Z-Swivel 1/4" NPT(F) x 1/4" NPT(M)	Dollies		4310-005 Dolly Base, 5 gal/25 - 35 lb
		3310-030 Comfort Grip Grease Handle		4310-001 Band Dolly, 16 gal/120 lb	
		3310-031 Comfort Grip Grease Handle with 18" Whip Hose and Z-swivel		4310-003 Dolly, 16 gal/120 lb wide track	
		3310-032 Comfort Grip Grease Handle with 36" Whip Hose and Z-swivel		4310-004 Dolly, 55 gal/400 lb HD	
	5310-024 Grease coupler 4-Jaws				
Drum Covers		4420-012 Holster, for grease gun - mounts on pail cover 4420-010	Carts		4320-011 Drum cart: 35 lb grease, 2 wheels
		4420-010 25-35 lb Pail Lion™ 350. Includes carry handle			4320-012 Drum cart: 120 lb/16 gal grease, 2 rear wheels. Front stabilizing rubber pads.
		4420-011 120 lb Lion™ 350			4320-013 3 Wheel drum cart: 400 lb/55 gal
Follower plates		4420-015 400 lb for Lion™ 350			4320-014 Drum cart: 400 lb/55gal heavy duty, 3 wheels with rear locking caster (to mount hose reel, use 2230-036 hose reel mount kit)
		4440-013 25-35 lb pail for Lion™ 350			
		4440-014 120 lb for Lion™ 350			
Filter / Regulator		4440-018 400 lb for Lion™ 350			
		3260-035 Filter/reg, auto drain 3/8"	Hose reel mount kit		2230-036 Hose reel mount kit for 4320-014 Heavy duty drum cart
		See pg. 171 for complete listing			

Grease Piston Pumps

Lion™ 450 25:1 Pump



DIMENSIONS INCHES (MM)			
A	B	C	D
53.25" (1,357 mm)	19.75" (502 mm)	2" (50 mm)	33.5" (855 mm)

TECHNICAL DATA	
Pump ratio	25:1
Continuous duty flow rate	13 lb/min (6 kg/min)
Cycles per lb	6
Maximum free flow	35 lb/min (16 kg/min)
Operating air pressure	30 - 200 psi (1.38 - 14 bar)
Maximum fluid stall pressure	5,000 psi (350 bar)
Air motor effective diameter	4.5" (115 mm)
Air motor stroke	4" (100 mm)
Air consumption ⁽¹⁾	47 CFM (1,340 NI/min)
Air inlet	1/2" NPT(F)
Fluid outlet	1/2" NPT(F)
Wetted materials	Cast Iron, Steel, Hard Chromed Steel, UHMWPE, and Buna-N™
Noise level ⁽²⁾	80 dB
Service bulletin	SB 1139

1) Maximum air consumption with 5 bar air inlet pressure and 80 cpm.
 (2) Maximum noise level measured at 1 m from the pump, 7 bar air pressure and free delivery.
Warning! Do not use any Lion™ 450/600 series products with flammable fluids.
 Verify fluid compatibility with MSDS sheets.

Contact Balcrank for pumping grease higher than NLGI-2 and specific system design performance technical data.

Fluids & Applications

1

This medium pressure double ball pump can be used for both grease and oil in high volume medium pressure bulk transfer applications. The construction of the pump allows for dual use for grease systems that don't require high pressure or a high volume medium pressure oil system.

Fluids

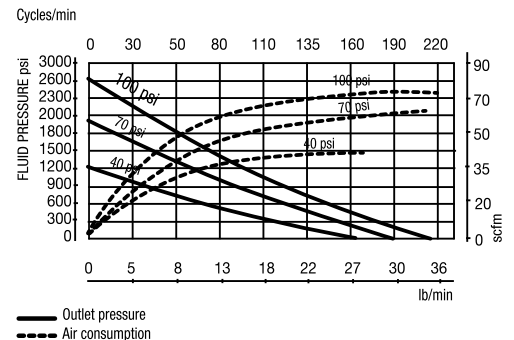
- Grease up to NLGI-2
- High viscosity oil

Applications

- Lube trucks bulk transfer
- Mining and construction; grease and oil transfer
- In-plant supply/maintenance

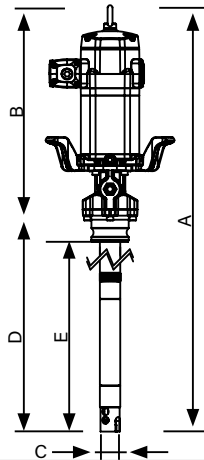
MODELS AVAILABLE	DESCRIPTION
1450-001	Lion™ 450 25:1 grease 400 lb drum pump

TEST FLUID: NLGI-0



Grease Piston Pumps Lion™ 450 40:1 Pumps

1



DIMENSIONS INCHES (MM)				
1450-002				
A	B	C	D	E
53.25" (1,357 mm)	19.75" (502 mm)	2" (50 mm)	33.5" (855 mm)	N/A
1450-003				
45.25" (1,152 mm)	19.75" (502 mm)	2" (50 mm)	25.5" (650 mm)	N/A
1450-004				
39" (992 mm)	19.75" (502 mm)	2" (50 mm)	19.25" (490 mm)	16.25" (410 mm)

TECHNICAL DATA	
Pump ratio	40:1
Continuous duty flow rate	8 lb/min (3.5 kg/min)
Cycles per lb	10
Maximum free flow	24 lb/min (11 kg/min)
Operating air pressure	30 - 200 psi (1.38- 14 bar)
Maximum fluid stall pressure	8,000 psi (560 bar)
Air motor effective diameter	4.5" (115 mm)
Air motor stroke	4" (100 mm)
Air consumption ⁽¹⁾	26.5 CFM (750 NI/min)
Air inlet	1/2" NPT(F)
Fluid outlet	1/2" NPT(F)
Wetted materials	Cast Iron, Steel, Hard Chromed Steel, UHMWPE, Buna-N™, and PTFE
Noise level ⁽²⁾	80 dB
Service Bulletin	SB 1131

(1) Air consumption at 5 bar air pressure, NLGI-0 grease at 20° C and 80 cpm.
(2) Noise level measured at 1 m from the pump, 7 bar air pressure and free delivery.
Warning! Do not use any Lion™ 450/600 series products with flammable fluids.

Verify fluid compatibility with MSDS sheets.
Contact Balcrank for pumping grease higher than NLGI-2 and specific system design performance technical data.

Fluids & Applications

Designed for medium volume applications that require higher flow and pressure delivery. This pump can be used with a follower plate system, combined with a gravity inductor system, or a double post RAM for simultaneous dispense, and higher flow applications (see pg. 50 & 51).

Fluids

- Grease up to NLGI-2

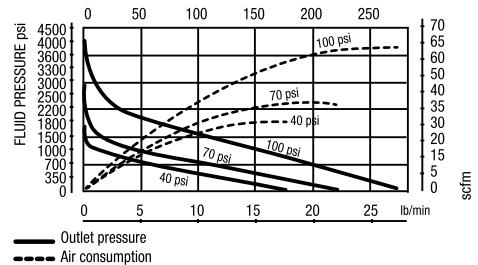
Applications

- HD truck grease dispensing needing simultaneous dispense points
- Truck fleets fifth wheel applications
- Lube trucks
- Railroad/mass transit
- In-plant medium volume usage
- Marine

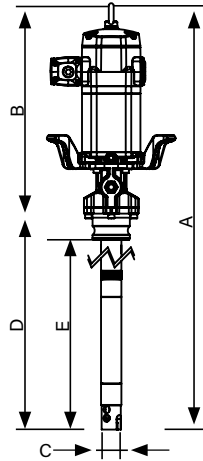
MODELS AVAILABLE	DESCRIPTION
1450-003	Lion™ 450 40:1 grease 120 lb drum pump
1450-002	Lion™ 450 40:1 grease 400 lb drum pump
1450-004	Lion™ 450 40:1 grease bulk tote pump

NLGI-2, 21 °C (70 °F) CAPACITY

Cycles/min



Grease Piston Pumps Lion™ 450 70:1 Pumps



DIMENSIONS INCHES (MM)				
1450-005				
A	B	C	D	E
53.25" (1,357 mm)	19.75" (502 mm)	2" (50 mm)	33.5" (855 mm)	N/A
1450-006				
45.25" (1,152 mm)	19.75" (502 mm)	2" (50 mm)	25.5" (650 mm)	N/A
1450-007				
39" (992 mm)	19.75" (502 mm)	2" (50 mm)	19.25" (490 mm)	16.25" (410 mm)

TECHNICAL DATA	
Pump ratio	70:1
Continuous duty flow rate	5 lb/min (2 kg/min)
Cycles per lb	17
Maximum free flow	16 lb/min (7.25 kg/min)
Operating air pressure ⁽³⁾	30 - 100 psi (1.38 - 7 bar)
Maximum fluid stall pressure	7000 psi (490 bar)
Air motor effective diameter	4.5" (115 mm)
Air motor stroke	4" (100 mm)
Air consumption ⁽¹⁾	32.6 CFM (925 NI/min)
Air inlet	1/2" NPT(F)
Fluid outlet	1/2" NPT(F)
Wetted materials	Cast Iron, Steel, Hard Chromed Steel, UHMWPE, Buna-N™, and PTFE
Noise level ⁽²⁾	80 dB
Service Bulletin	SB 1140

(1) Air consumption at 5 bar air pressure, NLGI-0 grease at 20° C and 80 cpm.
 (2) Noise level measured at 1 m from the pump, 7 bar air pressure and free delivery.
 (3) Pump air limited to 100 psi (7 bar) due to connecting hose pressure limits.
Warning! Do not use any Lion™ 450/600 series products with flammable fluids.

Verify fluid compatibility with MSDS sheets.
 Contact Balcrank for pumping grease higher than NLGI-2 and specific system design performance technical data.

Fluids & Applications

1

Designed for very cold environments and/or applications where only medium pressure air is available to power the pump which could limit the performance and application of greasing. This pump can be used with a follower plate system, combined with a gravity inductor system, or a double post RAM for simultaneous dispense or higher flow applications (see pg. 50 & 51).

Fluids

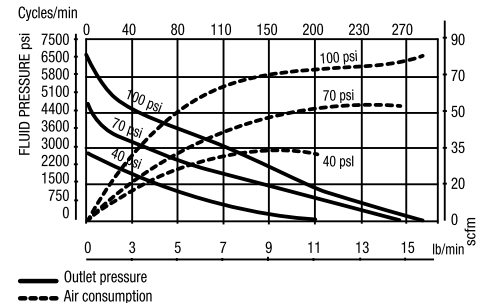
- Grease up to NLGI-2

Applications

- Lube trucks
- Railroad/mass transit
- In-plant long distance pumping
- Marine
- Oil fields/fracking

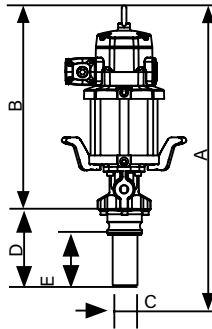
MODELS AVAILABLE	DESCRIPTION
1450-006	Lion™ 450 70:1 grease 120 lb drum pump
1450-005	Lion™ 450 70:1 grease 400 lb drum pump
1450-007	Lion™ 450 70:1 grease bulk tote pump

TEST FLUID: NLGI-2



Grease Piston Pumps Lion™ 600 12:1 Pump

1



DIMENSIONS INCHES (MM)				
A	B	C	D	E
29" (742 mm)	20" (516 mm)	2.75" (70 mm)	9" (226 mm)	5.75" (146 mm)

TECHNICAL DATA	
Pump ratio	12:1
Continuous duty flow rate	33 lb/min (15 kg/min)
Cycles per lb	2
Maximum free flow	88 lb/min (40 kg/min)
Operating air pressure	30 - 100 psi (1.38 - 7 bar)
Maximum fluid stall pressure	1,200 psi (84 bar)
Air motor effective diameter	6" (150 mm)
Air motor stroke	4" (100 mm)
Air consumption ⁽¹⁾	39 CFM (1,100 NI/min)
Air inlet	1/2" NPT(F)
Fluid outlet	1" NPT(F)
Wetted materials	Cast Iron, Steel, Hard Chromed Steel, UHMWPE, Buna-N™, PTFE, and Polyurethane
Noise level ⁽²⁾	80 dB
Service bulletin	SB 1142

(1) Air consumption at 5 bar air pressure, NLGI-0 grease at 20° C and 80 cpm.

(2) Noise level measured at 1 m from the pump, 7 bar air pressure and free delivery.

Warning! Do not use any Lion™ 450/600 series products with flammable fluids.

Verify fluid compatibility with MSDS sheets.

Contact Balcrank for pumping grease higher than NLGI-2 and specific system design performance technical data.

Fluids & Applications

Medium pressure grease pump for very high volume applications. Bulk transfer of grease from large containers to drums or pails, lube trucks or other transfer applications at high delivery rates. Pump comes with a 3" cam-lock for easy installation into grease totes.

Fluids

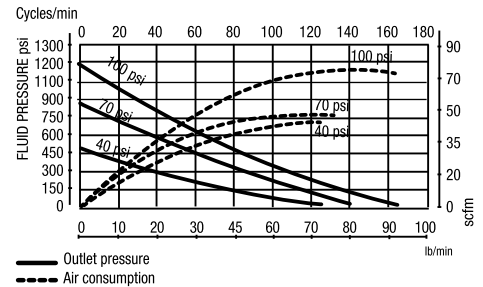
- Grease up to NLGI-2

Applications

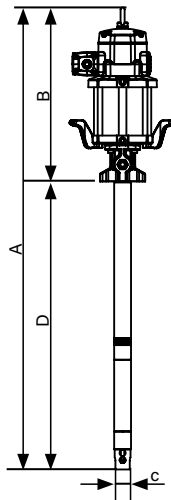
- Mining and construction
- Railroad/mass transit
- In-plant grease transfer

MODELS AVAILABLE	DESCRIPTION
1450-010	Lion™ 600 12:1 grease bulk tote pump

TEST FLUID: NLGI-2



Grease Piston Pumps Lion™ 600 80:1 Pumps



DIMENSIONS INCHES (MM)			
1450-008			
A	B	C	D
53.5" (1,371 mm)	20" (516 mm)	2" (50 mm)	33.5" (855 mm)
1450-009			
45.5" (1,166 mm)	20" (516 mm)	2" (50 mm)	25.5" (650 mm)

TECHNICAL DATA	
Pump ratio	80:1
Continuous duty flow rate	6 lb/min (2.5 kg/min)
Cycles per lb	11
Maximum free flow	18 lb/min (8 kg/min)
Operating air pressure ⁽³⁾	30 - 100 psi (1.38 - 7 bar)
Maximum fluid stall pressure	8,000 psi (560 bar)
Air motor effective diameter	6" (150 mm)
Air motor stroke	4" (100 mm)
Air consumption ⁽¹⁾	39 CFM (1,100 NI/min)
Air inlet	1/2" NPT(F)
Fluid outlet	1/2" NPT(F)
Wetted materials	Cast Iron, Steel, Hard Chromed Steel, UHMWPE, Buna-N™, and PTFE
Noise level ⁽²⁾	80 dB
Service Bulletin	SB 1141

(1) Air consumption at 5 bar air pressure, NLGI-0 grease at 20° C and 80 cpm.
(2) Noise level measured at 1 m from the pump, 7 bar air pressure and free delivery
(3) Pump air limited to 100 psi (7 bar) due to connecting hose pressure limits.

Warning! Do not use any Lion™ 450/600 series products with flammable fluids.

Verify fluid compatibility with MSDS sheets.

Contact Balcrank for pumping grease higher than NLGI-2 and specific system design performance technical data.

Fluids & Applications

1

Designed for very cold environments and/or applications where only medium pressure air is available to power the pump which could limit the performance and application of greasing. This pump can be used with a follower plate system, combined with a gravity inductor system, or a double post RAM for simultaneous dispense, or higher flow applications (see pg. 50 & 51). Similar to the Lion™ 450 70:1 pump but operates at lower cycle rates for severe environments.

Fluids

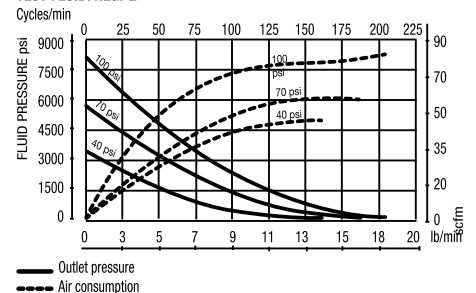
- Grease up to NLGI-2

Applications

- Lube trucks
- Railroad/mass transit
- In-plant long distance pumping
- Marine
- Oil fields/fracking

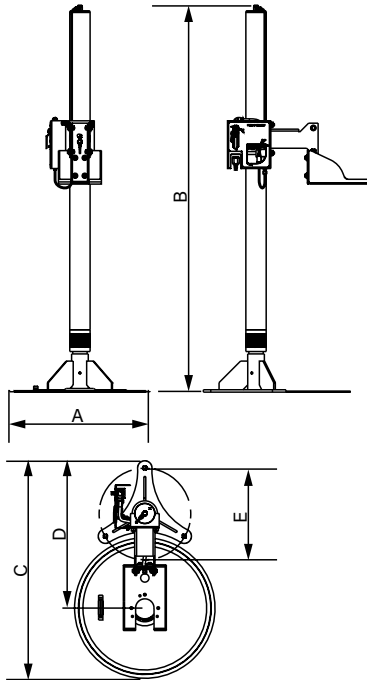
MODELS AVAILABLE	DESCRIPTION
1450-009	Lion™ 600 80:1 grease 120 lb drum pump
1450-008	Lion™ 600 80:1 grease 400 lb drum pump

TEST FLUID: NLGI-2



Grease Piston Pumps Lion™ Inductor

1



DIMENSIONS INCHES (MM)				
A	B LOWERED/ RAISED	C	D	E
23.25" (588 mm)	58" (1470 mm) 94.5" (2400 mm)	35.75" (910 mm)	24.03" (617 mm)	15" (381 mm)

Fluids & Applications

Lion™ 450 and Lion™ 600 grease pumps are used with 400 lb drums in applications where higher volumes of grease are required. The air operated pump hoist lifts and lowers the pump, making drum changes easier, faster and safer. The pump's lower end is rigidly fixed to a follower plate with a single rubber lip. The weight of the pump, pump bracket and follower plate plus atmospheric pressure push the assembly against the grease eliminating channeling and air pockets, keeping grease free from contaminants, minimizing waste and aiding pump priming.

Fluids

- Grease NLGI-2

Applications

- High volume grease applications such as fifth wheel
- Medium/large volume vehicle maintenance shops
- Grease transfer
- In-plant grease supply

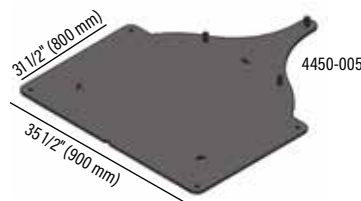
TECHNICAL DATA	
Diameter of the pneumatic cylinder	3" (75 mm)
Stroke of the pneumatic cylinder	36.6" (930 mm)
Minimum height of equipment	58" (1,470 mm)
Maximum height of equipment	94.5" (2,400 mm)
Air inlet	1/2" NPT(M)
Maximum air pressure	116 psi (8 bar)
Service Bulletin	SB 4228

Warning! Do not use any Lion™ 450/600 series products with flammable fluids.

Verify fluid compatibility with MSDS sheets.

Contact Balcrank for pumping grease higher than NLGI-2 and specific system design performance technical data.

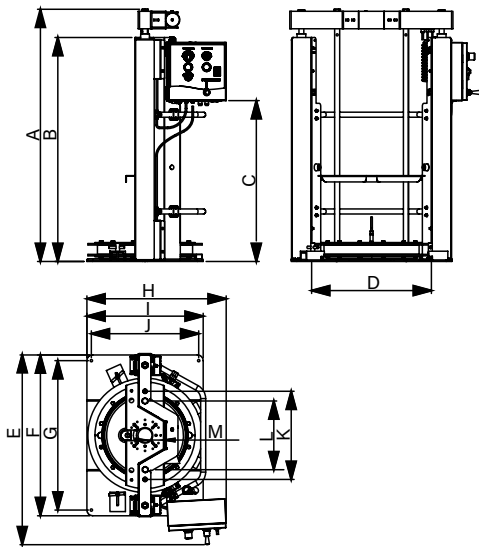
MODELS AVAILABLE	DESCRIPTION
1451-004	Package, Lion™ 450, 40:1 Inductor Includes: 1450-002 Lion™ 450, 40:1 pump 4450-003 Inductor, Gravity, Pump Lift & follower plate
1451-005	Package, Lion™ 450, 70:1 Inductor Includes: 1450-005 Lion™ 450, 70:1 pump 4450-003 Inductor, Gravity, Pump Lift & follower plate
1451-006	Package, Lion™ 600, 80:1 Inductor Includes: 1450-008 Lion™ 600, 80:1 pump 4450-003 Inductor, Gravity, Pump Lift & follower plate
4450-005	Base plate for pump hoist & inductor
4450-003	Inductor, Gravity, Pump Lift & follower plate



Grease Piston Pumps Lion™ Inductor, Double Post RAM



1451-001



MODELS AVAILABLE	DESCRIPTION
1451-001	Package, Lion™ 450, 40:1 pump. Double Post Inductor. Includes: 1450-003 Lion™ 450, 40:1 pump 4450-004 Double Post Inductor 833650 Kit, Collar/Follower-Plate
1451-002	Package, Lion™ 450, 70:1 pump. Double Post Inductor. Includes: 1450-006 Lion™ 450, 70:1 pump 4450-004 Double Post Inductor 833650 Kit, Collar/Follower-Plate
1451-003	Package, Lion™ 600, 80:1 pump. Double Post Inductor. Includes: 1450-009 Lion™ 600, 80:1 pump 4450-004 Double Post Inductor 833650 Kit, Collar/Follower-Plate
1451-007*	Package, Lion™ 600, 12:1 pump. Double Post Inductor. Includes: 1450-010 Lion™ 600, 12:1 pump 4450-004 Double Post Inductor includes 3" Cam-lock for mounting pump to inductor plate
4450-004	Inductor, double post air operated
* When using this RAM with the 12:1, contact Balcrank customer service for additional needed components	
Service Bulletin	SB 4229

DIMENSIONS INCHES (MM)							
A LOWERED/ RAISED	B	C	D	E	F	G	H
52" (1,320 mm) 88" (2,230 mm)	45.5" (1,156 mm)	32.66" (830 mm)	24.5" (74 mm)	38.75" (554 mm)	32.66" (830 mm)	30.33" (771 mm)	28.33" (720 mm)
I	J	K	L	M			
23.66" (600 mm)	21.75" (554 mm)	18" (455 mm)	14" (355 mm)	4" (104 mm)			

Fluids & Applications

1

Lion™ 450 and Lion™ 600 grease pumps are used with 400 lb. drums in applications where high volumes of grease are required, environmental temperatures are low or higher viscosity greases are used. The air operated double post RAM inductor features controlled RAM pressure to assist in pump priming. When the double lip inductor plate is rigidly attached to the lower end of pump tube, the weight of the pump and lift pneumatic pressure of the RAM plus atmospheric pressure on the material forces and improves pump priming. The inductor plate also serves as protection against contaminants and eliminates material waste. For use with 400 lb. (185 kg) drums.

Fluids

- Grease NLGI-2
- Grease NLGI-3

Applications

- High volume grease applications such as fifth wheel with multiple dispense points
- High volume large vehicle maintenance shops
- Industrial grease transfer to machines
- Mining
- Bulk grease transfer

Unit also includes guide rods, drum retaining mechanism and a control box with the following features:

- On-off control of the pump
- Up-down control of the RAM (drum exchange)
- Two independent air pressure regulators, one for the pump and for the power RAM cylinders
- Pump independent air pressure gauge
- Empty drum shut-off safety feature
- Automatic vacuum release

When purchasing the double post inductor without a pump, contact Balcrank technical support for pump requirements.

Warning! Do not use any Lion™ 450/600 series products with flammable fluids.

Verify fluid compatibility with MSDS sheets. Contact Balcrank for pumping grease higher than NLGI-2 and specific system design performance technical data.




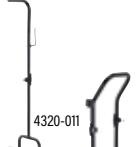








Grease Piston Pumps Accessories

1

Drum cover 25-35 lb		<p>4420-010 25-35 lb Pail LYNX® 55:1 Includes carry handle</p> <p>4420-008 25-35 lb Pail Panther® HP 50:1</p>	Inlet screen mesh		<p>4430-004 Inlet Screen, 30-Mesh Panther® HP Grease Pump</p>
Holster		4420-012 Holster, grease gun holder for LYNX® drum cover 4420-010	Grease handles		3310-008 Pro Series Grease Handle
Drum cover 120 lb		4420-011 120 lb LYNX® 55:1			3310-010 Pro Series Grease Handle with Z-swivel
		4420-009 120 lb Panther® HP 50:1			3310-025 Pro Series Grease Handle with 18" Whip Hose and Z-swivel
		4420-014 Drum cover Lion™ 450/600 120 lb			3310-020 Pro Series Grease Handle with 36" Whip Hose and Z-swivel
Drum cover 400 lb		4420-007 400 lb Off-Set			3310-007 Pro Series Booster Grease Handle
		4420-015 400 lb for LYNX® 55:1			3310-009 Pro Series Booster Grease Handle with Z-swivel
		4420-004 400 lb for Panther® 50:1			3310-030 Comfort Grip Grease Handle
		4420-013 400 lb for Lion™ 450/600			3310-031 Comfort Grip Grease Handle with 18" Whip Hose and Z-swivel
Drum cover 400 lb		4420-003 400 lb for Lion™ HP 50:1 (Old Style)			3310-032 Comfort Grip Grease Handle with 36" Whip Hose and Z-swivel
		Follower plate 25-35 lb			
			4440-007 25-35 lb pail for Panther® HP 50:1	8390-003 36" Whip Hose HP	
Follower plate 120 lb		4440-014 120 lb for LYNX®/ Lion™	8390-004 42" Whip hose HP		
		4440-008 120 lb for Panther® HP 50:1	Max. pressure 5,000 psi (345 bar) Hose end 1/8" NPT(M) on both ends Compatible fluid NLGI-2 Grease Flexible Extension		
		4440-017 120 lb for Lion™ 450/600	5310-018 Z-Swivel 1/4" NPT(F) x 1/4" NPT(M)		
Follower plate 400 lb		4440-018 400 lb for LYNX®/ Lion™	5200-017 Quick Lock grease coupler 1/8" NPT(F)		
		4440-009 400 lb for Panther® HP 50:1	5310-024 Grease coupler 4-Jaws		
		4440-012 400 lb for Lion™ HP (Old Style 50:1)	5400-003 Bearing Packer		
Follower plate 400 lb		4440-015 400 lb for Lion™ 450/600	8340-010 HP Hose 10'x1/2"		
		Hose		8340-020 HP Hose 20'x1/2"	
Bung Adapters				4411-023 Bung adapter, aluminum: LYNX® 55:1	<p>3241-002 Pump Runaway Control 1/4" NPT(F)</p> <p>3241-001 Pump Runaway Control 1/2" NPT(F)</p>
		4411-021 Bung adapter, aluminum: Lion™ 450/600 25:1, 40:1, & 70:1			
Cam-lock		4140-058 Male cam-lock 3" for Lion™ 450/600 for tote applications	<p>4410-035 Connecting Hose Kit w/ Grease Handle for Panther® Grease: 8132-005 LP Hose 5' x 3/8" 8331-010 HP Hose 10' x 3/8" 3270-004 Nipple 1/4" 3270-003 Coupler 1/4" 3310-030 Grease Handle</p>		
		4140-059 Female cam-lock 3" for Lion™ 450/600 for tote applications			
Filter regulator (F/R)		3260-036 F/R auto drain 1/2" NPT(F) See pg. 171 for complete listing	<p>4410-036 Connecting Hose Kit for Panther® Grease: 8132-005 LP Hose 5' x 3/8" 8331-010 HP Hose 10' x 3/8" 3270-004 Nipple 1/4" 3270-003 Coupler 1/4"</p>		
		4410-030 Connecting Hose Kit for Lion™ Grease: 8144-005 LP Hose 5' x 1/2" 8340-010 HP Hose 10' x 1/2" 3270-001 Nipple 3/8" 3270-002 Coupler 3/8"			

Grease Piston Pumps Accessories

1

Dollies	 4310-001  4310-004	4310-005 Dolly Base, 25 - 35 lb/5 gal	Hold down rod kits		7120-025 Hold down rod kit, Lion™ 450/600 120 lb for use with 4420-014 Drum cover for Lion™ 450/600, 120 lb		
		4310-001 Band Dolly, 120 lb/16 gal			4310-003 Band dolly, 120 lb/16 gal wide track	7120-024 Hold down rod kit, Lion™ 450/600 400 lb for use with 4420-013 Drum cover Lion™ 450/600, 400 lb	
		4310-004 Dolly, 400 lb/55 gal HD					
Carts	 4320-011  4320-012  4320-013  4320-014	4320-011 Drum cart: 35 lb grease	Grease pump hoist		4450-002 Pump Lift, Air Operated for Lion™ 450/600		
		4320-012 Drum cart: 120 lb/16 gal grease, 2 rear wheels. Front stabilizing rubber pads.				4320-013 Drum cart: 400 lb/55 gal	
				4320-014 Drum cart: 400 lb/55gal heavy duty, 3 wheels with rear locking caster (to mount hose reel, use 2230-036 hose reel mount kit)	Base plate		4450-005 Base plate for pump hoist & inductor
Shut-off valve bleed type for air		3230-009 Shut-off valve, 3/8" NPT(F), 200 psi (13.7 bar)	Mobile drum cover		4420-014 Mobile drum cover, 120 lb for Panther® HP 50:1- Center (Mobile drum covers require hold down rods, use 7120-025). For use with Panther® pump. Ask for flange mount kit 7120-026.		
		3230-010 Shut-off valve, 1/2" NPT(F), 200 psi (13.7 bar)					
		3230-011 Shut-off valve, 3/4" NPT(F), 200 psi (13.7 bar)					
Ball valve fully ported		3230-023 Ball valve, 3/8" 7250 psi (500 bar)			4420-013 Mobile drum cover, 400 lb for Panther® HP 50:1- Center hole (Mobile drum covers require hold down rods, use 7120-024).		
		3230-015 Ball valve, 1/2" 7250 psi (500 bar)					
		3230-016 Ball valve, 3/4" 5800 psi (400 bar)					
		3230-017 Ball valve, 1" 5075 psi (350 bar)					

Mobile Grease Packages

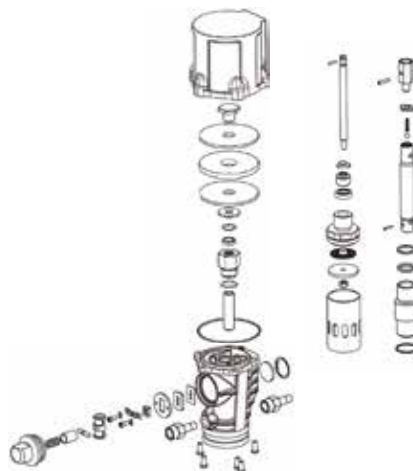


	7120-015 Panther® HP 50:1	7120-016 PANTHER® HP 50:1	1151-041 LION™ 350 60:1	1151-042 LION™ 350 60:1
Designed For Drum Size	120 lb / 16 gal	400 lb / 55 gal	120 lb	400 lb
Bare Pump	1150-010	1150-011	1450-012	1450-011
Air Hose	8132-005	8132-005	-	-
Fluid Hose	8331-010	8331-010	8134-003	8134-003
Follower Plate	4440-008	4440-009	4440-014	4420-018
Drum Cover	4420-014	4420-013	4420-014	4420-013
Flange Mount Kit	7120-026	7120-026	-	-
Hold Down Rod	7120-025	7120-024	7120-025	7120-024

Piston Pump Repair Kits for Grease

1

LYNX® 55:1 SERIES		
PUMP MODELS	KIT NUMBER	DESCRIPTION
LYNX® 55:1 SERIES PUMPS, 1150-022, 1150-023, 1150-024		
1150-022, 1150-023, 1150-024	833038	Air motor kit
1150-022, 1150-023, 1150-024	833039	Packing Seal kit
1150-022, 1150-023, 1150-024	833040	Inlet Check Valve - Poly Kit
1150-022, 1150-023, 1150-024	833041	HP Piston/cylinder & check valve
1150-022, 1150-023, 1150-024	833059	Inlet Filter Kit



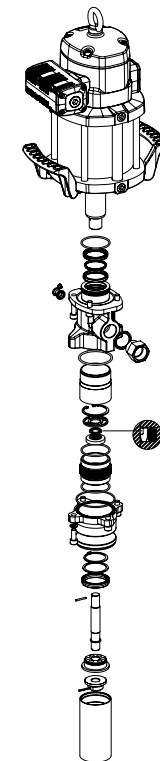
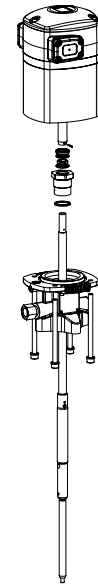
PANTHER® HP 50:1 SERIES		
PUMP MODELS	KIT NUMBER	DESCRIPTION
PANTHER® 50:1 SERIES PUMPS, 1150-009, 1150-010, 1150-011		
Panther® HP Series Pumps - All	900019	Air motor kit - Trip Rod Assembly
Panther® HP Series Pumps - All	831614	Air motor assembly kit- Includes Piston
Panther® HP Series Pumps - All grease	831619	Air - complete Pump assembly
Panther® HP Series Pumps - All grease	900022	Fluid seal kit
1150-009	831616	Fluid - complete Pump assembly
1150-010	831617	Fluid - complete Pump assembly
1150-011	831618	Fluid - complete Pump assembly



Piston Pump Repair Kits for Grease

LION™ 350		
PUMP MODELS	KIT NUMBER	DESCRIPTION
LION™ 60:1 SERIES PUMPS, 1450-013, 1450-012, 1450-011		
1450-013, 1450-012, 1450-011	833815	Spool Kit
1450-013, 1450-012, 1450-011	833812	Lower seal kit
1450-013, 1450-012, 1450-011	833874	Lower valver kit
1450-013, 1450-012, 1450-011	833875	Upper valve kit
1450-013, 1450-012, 1450-011	833813	Air motor kit
1450-013, 1450-012, 1450-011	833814	Muffler kit

LION™ 450/600		
PUMP MODELS	KIT NUMBER	DESCRIPTION
LION™ 450 SERIES PUMPS 25:1, 1450-001, 40:1 - 1450-002, 1450-003, 1450-004, 70:1 - 1450-005, 1450-006, 1450-007		
LION™ 600 SERIES PUMPS 12:1 - 1450-010, 80:1 - 1450-008, 1450-009		
1450-002, 1450-003, 1450-004, 1450-008, 1450-009	833409	Lower seals kit 40:1 & 80:1
1450-002, 1450-003, 1450-004, 1450-008, 1450-009	833410	Inlet Check Valve - Poly kit 40:1
1450-002, 1450-003, 1450-004, 1450-005, 1450-006, 1450-007, 1450-008, 1450-009	833411	Upper Valve kit 40:1 & 70:1
1450-001, 1450-002, 1450-003, 1450-004, 1450-005, 1450-006, 1450-007	833412	Air motor seals kit
1450-001, 1450-002, 1450-003, 1450-004, 1450-005, 1450-006, 1450-007, 1450-008, 1450-009, 1450-010	833413	Exhaust muffler kit
1450-001, 1450-002, 1450-003, 1450-004, 1450-005, 1450-006, 1450-007, 1450-008, 1450-009, 1450-010	833414	Spools & seals kit
1450-002, 1450-006, 1450-009	833650	Collar/follower plate kit
1450-005, 1450-006, 1450-007	833598	Lower seals kit 70:1
1450-005, 1450-006, 1450-007	833599	Inlet Check Valve - Poly kit 70:1
1450-001	833605	Lower seals kit 25:1
1450-001	833606	Inlet Check Valve - Poly kit 25:1
1450-001	833607	Upper valve kit 25:1
1450-008, 1450-009, 1450-010	833511	Air motor seals kit Lion™ 600
1450-010	833512	Lower seals kit 12:1
1450-010	833510	Inlet Check Valve - Poly kit 12:1



1

Diaphragm Pumps Selection Matrix

1

MAX. FREE FLOW	AIR INLET	FLUID IN / OUT	WETTED PARTS		RECOMMENDED FLUID TYPES	RECOMMENDED APPLICATIONS
			CHECK BALLS	DIAPHRAGM		
CF10 POLYPROPYLENE						
10 gal/min (38 l/min)	3/8" NPSM(F)	1/2" NPT(F)	PTFE (Teflon)	Hytrel [®]	Anti-freeze (Glycol) and windshield wash solution	Fluid dispensing and transfer
CF10 POLYPROPYLENE/DEF						
10 gal/min (38 l/min)	3/8" NPSM(F)	1/2" BSPP(F)	PTFE (Teflon)	Hytrel [®]	Diesel exhaust fluid	Fluid dispensing and transfer
CF15 POLYPROPYLENE						
15 gal/min (50 l/min)	3/8" NPSM(F)	1/2" NPT(F)	PTFE (Teflon)	Hytrel [®]	Anti-freeze (Glycol) and windshield wash solution	Fluid dispensing and transfer
CF15 POLYPROPYLENE/DEF						
15 gal/min (50 l/min)	3/8" NPSM(F)	1/2" BSPP(F)	PTFE (Teflon)	Hytrel [®]	Diesel exhaust fluid	Fluid dispensing and transfer
CF15 ALUMINUM						
15 gal/min (50 l/min)	3/8" NPSM(F)	1/2" NPT(F)	Buna-N [™]	Buna-N [™]	Light viscosity fluids synthetic, mineral oils, and used oil	Fluid dispensing and transfer
CF15 SPECIALTY/MIXING NOTE: both fluids and their resulting solution must be compatible with the pump wetted materials						
15 gal/min (50 l/min)	3/8" NPSM(F)	IN - 2-3/8" NPT(F) OUT - 1/2" NPT(F)	PTFE (Teflon)	Hytrel [®]	1:1 solutions of water, Anti-freeze (Glycol), and windshield wash	Dual inlet pumps for 1:1 proportion mixing of fluids with similar viscosity
CF30 POLYPROPYLENE						
28 gal/min (106 l/min)	3/8" NPSM(F)	1" NPT(F)	PTFE (Teflon)	Hytrel [®]	Anti-freeze (Glycol) and windshield wash solution	Fluid dispensing, transfer, and evacuation
CF30 POLYPROPYLENE/DEF						
28 gal/min (106 l/min)	3/8" NPSM(F)	1" BSPP(F)	PTFE (Teflon)	Hytrel [®]	Diesel exhaust fluid	Fluid dispensing and transfer
CF30 ALUMINUM						
28 gal/min (106 l/min)	3/8" NPSM(F)	1" NPT(F)	Hytrel [®]	Buna-N [™]	Light viscosity fluids synthetic, mineral, oils, used oil, and diesel	Fluid dispensing and transfer
CF50 POLYPROPYLENE/DEF						
53 gal/min (200 l/min)	3/8" NPSM(F)	1" ANSI FLANGE	Acetal	Hytrel [®]	Diesel exhaust fluid, Anti-freeze, (Glycol) and windshield wash solution	Fluid dispensing, transfer, and evacuation
CF50 ALUMINUM						
53 gal/min (200 l/min)	3/8" NPSM(F)	1" NPT(F)	Buna-N [™]	Buna-N [™]	Light viscosity fluids, synthetic, mineral oils, used oil, and diesel	Fluid dispensing, transfer, and evacuation



CF10 POLY

CF15 POLY

CF15 ALU

CF15 MIX

CF30 POLY

CF30 ALU

CF50 POLY

CF50 ALU

Diaphragm Pumps Selection Matrix

MAX. FREE FLOW	AIR INLET	FLUID IN / OUT	WETTED PARTS		RECOMMENDED FLUID TYPES	RECOMMENDED APPLICATIONS
			CHECK BALLS	DIAPHRAGM		
CF65 ALUMINUM						
65 gal/min (250 l/min)	1/2" NPSM(F)	1 1/2" NPT(F)	Acetal	Hytrel™	Light viscosity fluids, synthetic, mineral oils, used oil, windshield wash solution, and diesel	High volume transfer, bulk fill, de-watering, and evacuation
65 gal/min (250 l/min)	1/2" NPSM(F)	1 1/2" NPT(F)	Buna-N™	Buna-N™	Light viscosity fluids synthetic, mineral, oils, used oil, and diesel	Fluid dispensing, transfer, and evacuation
TF170 ALUMINUM						
170 gal/min (605 l/min)	3/4" NPSM(F)	2" NPT(F)	Hytrel™	Hytrel™	Light viscosity fluids synthetic, mineral, oils, used oil, and anti-freeze	Fluid dispensing, transfer, and evacuation
CONVENTIONAL UL ALUMINUM						
45 gal/min (170 l/min)	1/2" NPT(F)	1" NPT(F)	Nitrile	Nitrile	Light viscosity fluids synthetic, mineral, oils, used oil, and diesel	Fluid dispensing, transfer, and evacuation
ELECTRIC DIAPHRAGM						
8.5 gal/min (32.18l/min)	-	1" BSPP(M)	-	Stainless Steel, Viton®, PPE	Anti-freeze (Glycol), windshield wash solution and DEF	Fluid dispensing, transfer, and evacuation
9.5 gal/min (34.07l/min)	-	1" BSPP(M)	-	Stainless Steel, Viton®, PPE	Anti-freeze (Glycol), windshield wash solution and DEF	Fluid dispensing, transfer, and evacuation

1



CF65 ALU



TF170 ALU

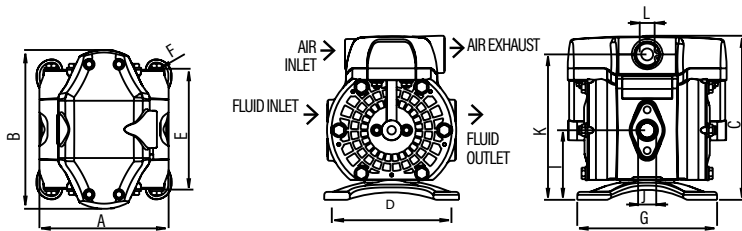


120 V AC
ELECTRIC DIAPHRAGM



12 V DC
ELECTRIC DIAPHRAGM

AODD CenterFlo CF10



DIMENSIONS INCHES										
A	B	C	D	E	F*	G	I	J	K	L
5.12	6.30	6.50	4.13	4.80	0.31	5.54	2.76	1/2" (F)	5.75	3/8" (F)

* Diameter of the holes for fasteners in each of the four pump feet.
Flange connection: 2 bolts - M 5 (1.61" between centers)

	TECHNICAL DATA	
	1120-029A	1120-034A
Air inlet	3/8" NPSM(F)	3/8" NPSM(F)
Fluid inlet port	1/2" NPT(F)	1/2" BSPP(F)
Fluid outlet port	1/2" NPT(F)	1/2" BSPP(F)
Max. free flow	10 gal/min (38 l/min)	10 gal/min (38 l/min)
Air pressure range	22 to 102 psi (1.5 to 7 bar)	22 to 102 psi (1.5 to 7 bar)
Solids in suspension	1/8" (3 mm)	1/8" (3 mm)
Wetted Materials	PTFE (Teflon), Viton [®] , Polypropylene, Stainless Steel, Acetal, and Hytrel [®]	PTFE (Teflon), Viton [®] , polypropylene, stainless steel, acetal, and Hytrel [®]
Recommended Fluids	Anti-freeze (Glycol) and windshield wash solution	Anti-freeze (Glycol) and windshield wash solution
Recommended Applications	Fluid dispensing, transfer, and DEF	Fluid dispensing, transfer, and DEF
Service Bulletin	SB 1145	SB 1145

** Balcrank does not recommend pumping windshield wash or any other fluid below 100° flash point. Contact Balcrank for additional information.

Fluids & Applications

CenterFlo pumps can handle a wide range of fluids used for vehicle service.

Typical applications are transferring and dispensing, up to 10 gal/min. They can be used as stand-alone pumps for transfer applications.

Fluids

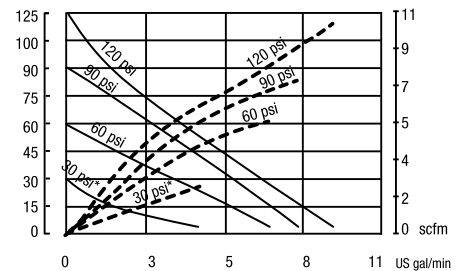
- Anti-freeze (Glycol)
- Windshield wash solution
- DEF

Markets Served

- Car and truck dealers
- Tire shops
- In-plant transfer
- Quick lubes

Pressure relief valve kit 3120-201 for this pump is recommended and not included.

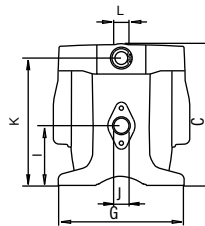
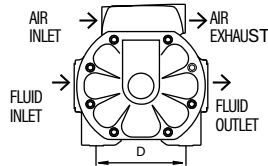
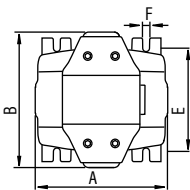
MODELS AVAILABLE	DESCRIPTION
1120-029A	CF10 Polypropylene
1120-034A	CF10 Polypropylene / DEF
3120-201	Pressure Relief for Diaphragm 1/2" NPT



FLUID PRESSURE psi
— Outlet pressure
--- Air consumption

(*) 2 bar test with a PTFE (Teflon) diaphragms pump.

AODD CenterFlo CF15



DIMENSIONS INCHES)FOR ALUMINUM PUMP										
A	B	C	D	E	F*	G	I	J	K	L
6.14	6.30	6.57	4.13	4.80	0.31	5.75	2.76	1/2" (F)	5.91	3/8" (F)
DIMENSIONS INCHES FOR POLYPROPYLENE PUMP										
6.14	6.30	7.28	4.13	4.80	0.31	5.54	3.27	1/2" (F)	6.54	3/8" (F)

* Diameter of the holes for fasteners in each of the four pump feet.
Flange connection: 2 bolts - M 5 (1.61" between centers)

TECHNICAL DATA

	1120-023A	1120-025A	1120-027
Air inlet	3/8" NPSM(F)	3/8" NPSM(F)	3/8" NPSM(F)
Fluid inlet port	1/2" NPT(F) 1120-023A	1/2" BSPP(F)	1/2" NPT(F)
Fluid outlet port	1/2" NPT(F)	1/2" BSPP(F)	1/2" NPT(F)
Max. Free Flow	15 gal/min (50 l/min)	15 gal/min (50 l/min)	15 gal/min (50 l/min)
Air pressure range	22 to 102 psi (1.5 to 7 bar)	22 to 102 psi (1.5 to 7 bar)	22 to 102 psi (1.5 to 7 bar)
Solids in suspension	1/8" (3 mm)	1/8" (3 mm)	1/8" (3 mm)
Wetted Materials	PTFE (Teflon), Viton [®] , Polypropylene, Stainless Steel, and Hytrel [®]	PTFE (Teflon), Viton [®] , Polypropylene, Stainless Steel, and Hytrel [®]	Aluminum, PTFE, Viton [®] , Polypropylene, Buna-N [®] , and Stainless Steel
Recommended fluids	Anti-freeze (Glycol) and windshield wash solution	Diesel exhaust fluid	Light viscosity fluids, synthetic, mineral oils, anti-freeze, and used oil
Recommended Applications	Fluid dispensing and transfer	Fluid dispensing and transfer	Fluid dispensing and transfer
Service Bulletin	SB 1145	SB 1145	SB 1145

** Balcrank does not recommend pumping windshield wash or any other fluid below 100° flash point. Contact Balcrank for additional information.

Fluids & Applications

CenterFlo pumps can handle a wide range of fluids used for vehicle service.

Typical applications are transferring and dispensing up to 15 gal/min. They can be used as stand-alone pumps for transfer applications or as systems pumps in distribution systems that include hose reels.

Fluids

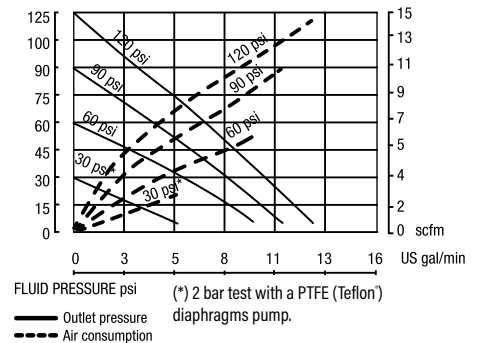
- Anti-freeze (Glycol)
- Light viscosity fluids
- Windshield wash solution
- Synthetic and mineral oils
- DEF
- Used oil & anti-freeze

Markets Served

- Car and truck dealers
- Tire shops
- In-plant transfer
- Quick lubes

Pressure relief valve kit 3120-201 for this pump is recommended and not included.

MODELS AVAILABLE	DESCRIPTION
1120-023A	CF15 Polypropylene
1120-027	CF15 Aluminum
1120-025A	CF15 Polypropylene / DEF
3120-201	Pressure Relief for Diaphragm 1/2" NPT

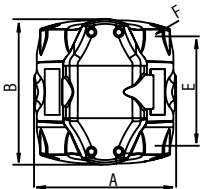
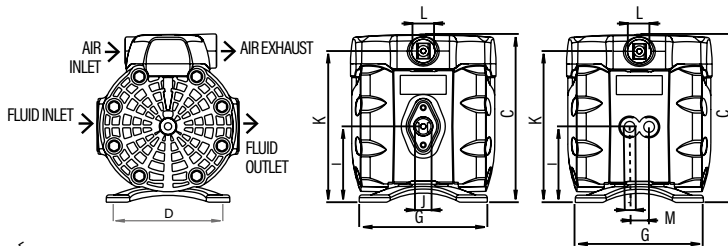


FLUID PRESSURE psi (* 2 bar test with a PTFE (Teflon) diaphragms pump.)
 — Outlet pressure
 - - - Air consumption

** Balcrank does not recommend pumping windshield wash or any other fluid below 100° flash point. Contact Balcrank for additional information.

AODD CenterFlo CF15 Mixing

1



DIMENSIONS INCHES											
A	B	C	D	E	F*	G	I	J	K	L	M
6.14	6.30	7.28	4.13	4.80	0.31	5.54	3.27	0.5" (F)	6.54	3/8" (F)	0.94

* Diameter of the holes for fasteners in each of the four pump feet.
Flange connection: 2 bolts - M 5 (1.61" between centers)

TECHNICAL DATA	
Air inlet	3/8" NPSM(F)
Fluid inlet port	2 - 3/8" NPT(F)
Fluid outlet port	1/2" NPT(F) & flange
Max. free flow	15 gal/min (50 l/min)
Air pressure range	22 to 102 psi (1.5 to 7 bar)
Solids in suspension	1/8" (3 mm)
Wetted Materials	PTFE (Teflon), Viton, Polypropylene, Stainless Steel, Acetal, and Hytrel
Recommended Fluids	Anti-freeze (Glycol) and windshield wash solution
Recommended Applications	Dual inlet pumps for 1:1 proportion mixing of fluids with similar viscosity. NOTE: both fluids and their resulting solution must be compatible with the pump wetted materials
Service Bulletin	SB 1145

** Balcrank does not recommend pumping windshield wash or any other fluid below 100° flash point. Contact Balcrank for additional information.

Fluids & Applications

CenterFlo pumps with a dual inlet for 1:1 ratio mixing of fluids with similar viscosities, like windshield wash or anti-freeze with water. All dual inlet pumps have 2 x 2 - 3/8" NPT(F) inlet ports.

Fluids

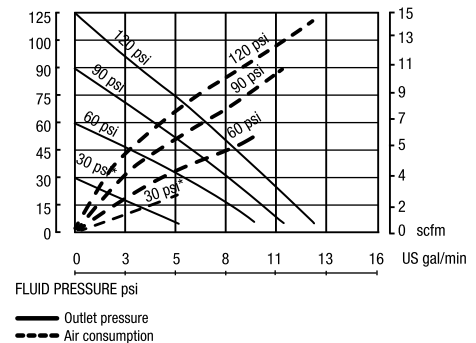
- Anti-freeze (Glycol)
- Windshield wash solution

Markets Served

- Car and truck dealers
- Quick lubes

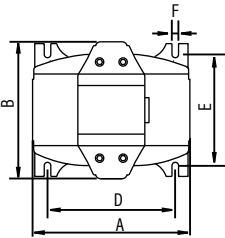
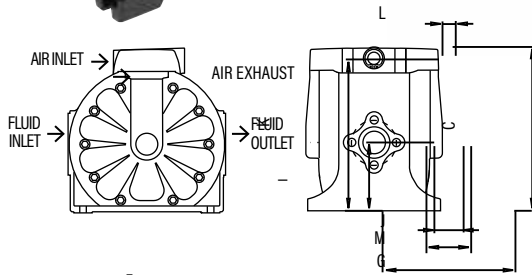
Pressure relief valve kit 3120-201 for this pump is recommended and not included.

MODELS AVAILABLE	DESCRIPTION
1120-028A	CF15 Polypropylene Mixing
3120-201	Pressure Relief for Diaphragm 1/2" NPT



(*) 2 bar test with a PTFE (Teflon) diaphragms pump.

AODD CenterFlo CF30



DIMENSIONS INCHES FOR ALUMINUM PUMP											
A	B	C	D	E	F*	G	I	J	K	L	M
8.50	7.44	8.94	6.89	6.06	0.35	7.24	3.72	1" (F)	8.27	0.37" (F)	2.44**
DIMENSIONS INCHES FOR POLYPROPYLENE PUMP											
8.50	8.58	9.06	6.89	6.06	0.31	7.24	3.72	1" (F)	8.33	0.37" (F)	2.44**

*Diameter of the holes for fasteners in each of the four pump feet.
**Flange connection: 4 bolts - M 10 (2.44" between centers).

TECHNICAL DATA			
	1120-026A	1120-031A	1120-040
Air inlet	3/8" NPSM(F)	3/8" NPSM(F)	3/8" NPSM(F)
Fluid inlet port	1" NPT(F)	1" BSPP(F)	1" NPT(F)
Fluid outlet port	1" NPT(F)	1" BSPP(F)	1" NPT(F)
Max. free flow	28 gal/min (106 l/min)	28 gal/min (106 l/min)	28 gal/min (106 l/min)
Air pressure range	22 to 102 psi (1.5 to 7 bar)	22 to 102 psi (1.5 to 7 bar)	22 to 102 psi (1.5 to 7 bar)
Solids in suspension	3/16" (4 mm)	3/16" (4 mm)	3/16" (4 mm)
Wetted Materials	PTFE (Teflon) [®] , Viton [®] , Polypropylene, Stainless Steel, and Hytrel [®]	PTFE (Teflon) [®] , Viton [®] , Polypropylene, Stainless Steel, and Hytrel [®]	Aluminum, Acetal Teflon [®] , Buna-N [®] , Hytrel [®] , and Stainless Steel
Recommended fluids	Windshield wash solution	Diesel exhaust fluid	Light viscosity fluids, synthetic, mineral oils, and anti-freeze
Recommended applications	Fluid dispensing, transfer, and DEF	Fluid dispensing, transfer, and DEF	Fluid dispensing, transfer, and DEF
Service Bulletin	SB 1145	SB 1145	SB 1145

** Balcrank does not recommend pumping windshield wash or any other fluid below 100° flash point. Contact Balcrank for additional information.

Fluids & Applications

CenterFlo pumps can handle a wide range of fluids used for vehicle service.

Typical applications are transferring and dispensing up to 28 gal/min. They can be used as stand-alone pumps for transfer applications or as systems pumps that include hose reels.

Fluids

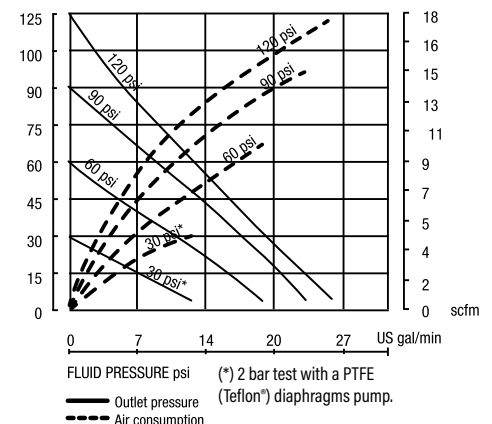
- Anti-freeze (Glycol)
- Light viscosity fluids
- Windshield wash solution
- Synthetic and mineral oils
- DEF
- Used Fluids

Markets Served

- Car and truck dealers
- In-plant transfer
- Lube trucks
- Quick lubes

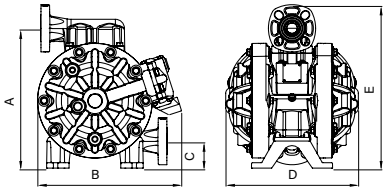
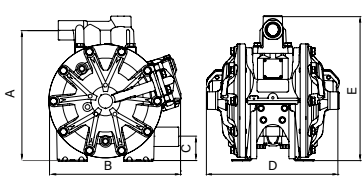
Pressure relief valve kit 3120-201 for this pump is recommended and not included.

MODELS AVAILABLE	DESCRIPTION
1120-026A	CF30 Polypropylene
1120-040	CF30 Aluminum
1120-031A	CF30 Polypropylene/DEF
3120-201	Pressure Relief for Diaphragm 1/2" NPT



AODD CenterFlo CF50

1



DIMENSIONS INCHES (MM)				
A	B	C	D	E
11" (278)	11" (280)	2" (52)	11" (281)	12.13" (308)

DIMENSIONS INCHES (MM)				
A	B	C	D	E
12.25" (311)	12.59" (320)	2.33" (60)	11.66" (295)	14.33" (364)

	TECHNICAL DATA	
	1120-037	1120-038
Air inlet	3/8" NPSM(F)	3/8" NPSM(F)
Fluid inlet port	1" NPT(F)	1" ANSI flange B16.5 150 lb
Fluid outlet port	1" NPT(F)	1" ANSI flange B16.5 150 lbs
Max. free flow	53 gal/min (200 l/min)	53 gal/min (200 l/min)
Air pressure range	22-102 psi (1.5-7 bar)	22-102 psi (1.5-7 bar)
Solids in suspension	1/8" (3.2 mm)	1/8" (3.2 mm)
Wetted Materials	Aluminum, Hytrel®, Acetal, Buna-N™, and Stainless Steel	PTFE (Teflon), Polypropylene, Stainless Steel, Hytrel®, FKN, and ASTM
Recommended Fluids	Light viscosity fluids, synthetic, mineral oils, anti-freeze, and used oil	Windshield wash solution
Recommended Applications	Fluid dispensing, transfer, and evacuation	Fluid dispensing, transfer, and evacuation
Service Bulletin	SB 1147	SB 1147

** Balcrank does not recommend pumping windshield wash or any other fluid below 100° flash point. Contact Balcrank for additional information.

Fluids & Applications

CF50 is a high performance 1" AODD pump with many unique features. Similar to all our CF series pumps, the new CF50 utilizes a flow through fluid design that is more air efficient than traditional AODD pumps. Capable of distributing up to 53 gal/min. This equates to higher performance, versatility along with easy serviceability.

- High performance; increased flow rate with minimal air consumption
- Dependability: non-icing air motor
- Versatile; inlet and outlet ports can be oriented to fit the installation/application
- Ease of service; diaphragms and air motor can be serviced with the pump installed without removal

Fluids

- Used oil
- Used anti-freeze
- Synthetic and mineral based motor oils
- Windshield wash solution

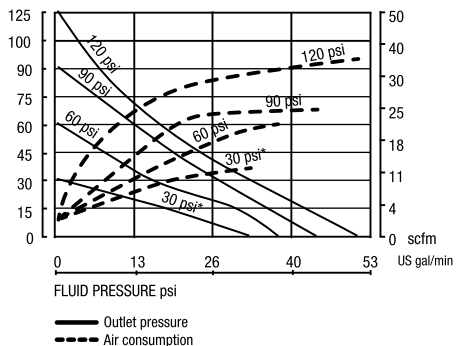
Markets served

- Car and truck dealers
- Mining and construction
- Fleets
- Railroad and mass transit
- In-plant transfer
- Lube trucks

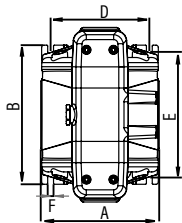
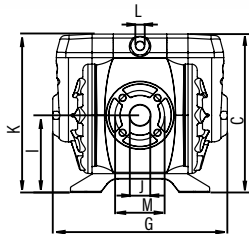
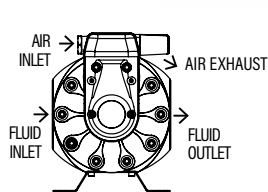
Pressure relief valve kit 3120-202 for this pump is recommended and not included.

1120-038 includes flange kit 4411-037 for pump mounting.

MODELS AVAILABLE	DESCRIPTION
1120-037	CF50 Aluminum
1120-038	CF50 Polypropylene
3120-202	Pressure Relief for Diaphragm 1" NPT



AODD CenterFlo CF65



DIMENSIONS INCHES											
A	B	C	D	E	F*	G	I	J	K	L	M
10.39"	12.20"	13.90"	8.66"	11.02"	0.51"	15.35"	6.77"	1.5" (F)	12.87	0.5" (F)	4.33**

* Diameter of the holes for fasteners in each of the four pump feet.

** ANSI B16.5 150 lb flange connection: 4 bolts - UNC 1/2" - 13 (3.87" between centers)

TECHNICAL DATA

Air inlet	1/2" NPSM(F)
Fluid inlet port	1 1/2" NPT(F) + ANSI flange B16.5 150 lb
Fluid outlet port	1 1/2" NPT(F) + ANSI flange B16.5 150 lb
Max. free flow	65 gal/min (250 l/mn)
Air pressure range	22-102 psi (1.5-7 bar)
Solids in suspension	1/4" (6 mm)
Wetted Materials	Aluminum, Acetal, Buna-N™, and Stainless Steel
Recommended fluids	Anti-freeze (Glycol)
Recommended applications	Fluid dispensing, transfer, and evacuation
Service Bulletin	SB 1132

** Balcrank does not recommend pumping windshield wash or any other fluid below 100° flash point. Contact Balcrank for additional information.

Fluids & Applications

1

CenterFlo pumps can handle a wide range of fluids used for vehicle service.

Typical applications are high volume transferring, bulk fill, and evacuation up to 65 gal/min. They can be used as stand-alone pumps for transfer applications or as systems pumps that include hose reels.

Fluids

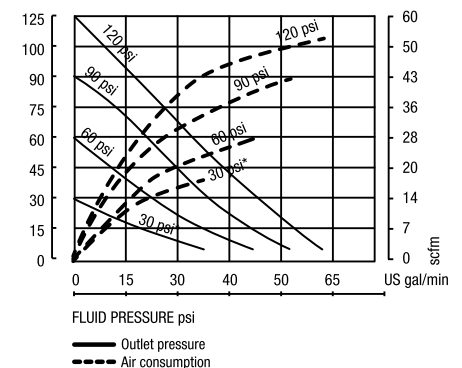
- Anti-freeze (Glycol)
- Light viscosity fluids
- Windshield wash solution
- Synthetic and mineral oil
- Used oil and anti-freeze

Markets Served

- Car and truck dealers
- Fleets
- Mining and construction
- Railroad and mass transit vehicles
- In-plant transfer
- Lube trucks

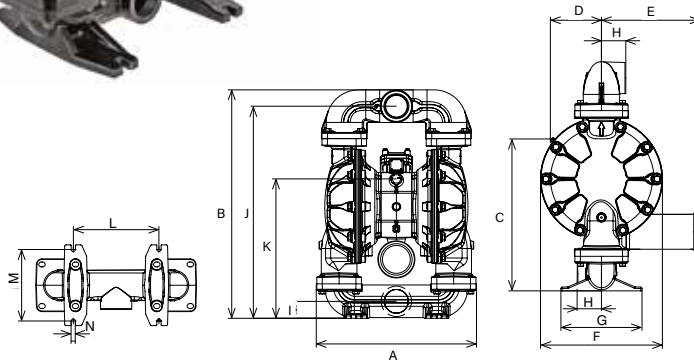
Pressure relief valve kit 3120-202 for this pump is recommended and not included.

MODELS AVAILABLE	DESCRIPTION
1120-033	CF65 Diaphragm Pump
1120-039	CF65 Diaphragm Pump Buna-N™
3120-202	Pressure Relief for Diaphragm 1" NPT



(*) 2 bar test with a Hytrel® diaphragms pump.

AODD TF170 Universal Pump Design



DIMENSIONS INCHES													
1120-041													
A	B	C	D	E	F	G	H	I	J	K	L	M	N
18.3"	26.5"	18.9"	7.3"	13.9"	13.4"	10"	2.4"	19"	24.8"	17.3"	10.1"	9.1"	0.6"

TECHNICAL DATA	
1120-041	
Air inlet	3/4" NPT(F)
Fluid inlet port	2" NPT(F)
Fluid outlet port	2" NPT(F)
Max. free flow	170 gal/min (650 l/min)
Air pressure range	20-120 psi (1.5-8 bar)
Solids in suspension	1/4" (6.4 mm)
Wetted Materials	Aluminum, Hytrel®, Viton®
Recommended Fluids	Anti-freeze (Glycol), windshield wash solution, lubricants, waste oil, waste fluid, used fluid and anti-freeze, hydraulic oil
Recommended Applications	Very large volume transfer, de-watting and fluid evacuation
Service Bulletin	SB 1206

** Balcrank does not recommend pumping windshield wash or any other fluid below 100° flash point. Contact Balcrank for additional information.

Fluids & Applications

TraditionalFlo pump is designed to handle a wide range of fluids in very large volume transfer and fluid evacuation applications.

Balcrank's TraditionalFlo 170 pump transfers fluid up to 170 gal/min. Combining conventional flow design with pivoting air valve for increased delivery and reliable performance.

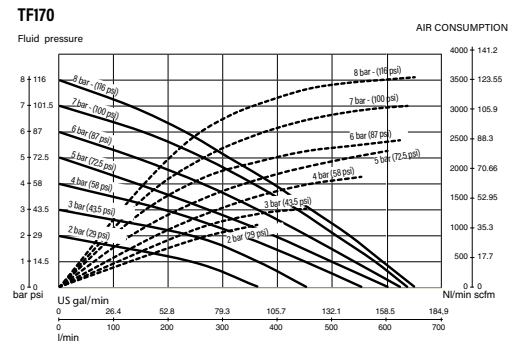
Fluids

- Anti-freeze (Glycol)
- Windshield wash solution
- Used oil
- Synthetic and mineral oil

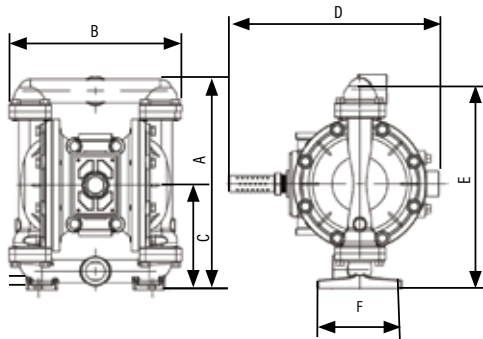
Markets Served

- Mining and construction
- Railroad and mass transit vehicles
- In-plant transfer
- Agriculture/Farm implement
- Lube trucks

MODELS AVAILABLE	DESCRIPTION
1120-041	TF170 Aluminum



AODD 1" UL Aluminum 45 gal/min



DIMENSIONS INCHES					
A	B	C	D	E	F
12.72"	10.25"	6.22"	12.5"	11.84"	5"

TECHNICAL DATA	
Air inlet	1/2" NPT(F)
Fluid inlet port	1" NPT(F)
Fluid outlet port	1" NPT(F)
Max. free flow	45 gal/min (170 l/min)
Air pressure range	45 -100 psi (3-6.8 bar)
Solids in suspension	1/4" (6 mm)
Wetted Materials	Nitrile, neoprene, PTFE, polypropylene and polyethylene
Recommended fluids	Light viscosity fluids synthetic, mineral oils, and Diesel Fuel
Recommended applications	Fluid dispensing, transfer, and evacuation.
Service Bulletin	SB 1113

** Balcrank does not recommend pumping windshield wash or any other fluid below 100° flash point. Contact Balcrank for additional information.

Fluids & Applications

1

This conventional pumps may be used as stand-alone pumps for transfer applications or as system pumps that include hose reels. Model 1120-015S is UL79 listed for pumping: Diesel Fuel, No. 4 Fuel Oils (or lighter), Motor Oil, Kerosene, and Water.

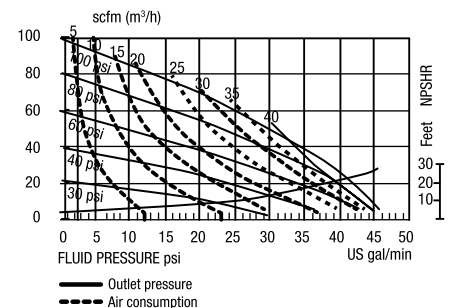
Fluids

- Light viscosity fluids
- Synthetic and mineral oils
- Diesel Fuel
- Used Fluids

Markets Served

- Car and truck dealers
- Fleets
- Construction
- Mass transit vehicles
- In-plant transfer
- Lube trucks

MODELS AVAILABLE	DESCRIPTION
1120-015S	1" UL Aluminum AODD Pump



AODD Electric Pumps



1200-020



1200-021

Fluids & Applications

Electric diaphragm pump is designed for simple and efficient transfer of anti-freeze, windshield wash solution and diesel exhaust fluid (DEF). Accommodates any system.

Fluids

- Anti-freeze (Glycol)
- Windshield wash solution
- DEF

Markets Served

- Car and truck dealers
- Fleets
- Mining and construction
- Railroad and mass transit vehicles
- In-plant transfer
- Lube trucks
- Quick lubes

TECHNICAL DATA		
	1200-020	1200-021
Fluid inlet port	1" BSPP(M)	1" BSPP(M)
Fluid outlet port	1" BSPP(M)	1" BSPP(M)
Flow Rate	8.5 gal/min (32.18 l/min)	9.5 gal/min (34.07 l/min)
Working Pressure	23 psi (1.6 bar)	23 psi (1.6 bar)
Power	120 V AC, UL approved	12 V DC, UL approved
Wetted Materials	Stainless Steel, Viton®, PPE	Stainless Steel, Viton®, PPE
Service Bulletin	SB 1129	SB 1130

MODELS AVAILABLE	DESCRIPTION
1200-020	120 V AC Diaphragm pump, UL auto shut-off
1200-021	12 V DC Diaphragm pump, UL auto shut-off

** Balcrank does not recommend pumping windshield wash or any other fluid below 100° flash point. Contact Balcrank for additional information.

AODD Dispense Packages for Anti-freeze

CF15 Series Wall-Mount Package

Wall mount pumping system for anti-freeze (Glycol) designed for the CF15 series



CF50 Series Wall-Mount Package

Wall mount pumping system for anti-freeze (Glycol) designed for the CF50 series



1121-028 CF15 WALL-MOUNT PACKAGE FOR ANTI-FREEZE	
INCLUDES	
1120-027	Aluminum CF15 Diaphragm Pump
8134-005	LP Hose Assembly 5' x 3/8"
3260-035	F/R Auto Drain 3/8" NPT(F)
3120-201	Pressure Relief Kit 1/2" NPT
8249-005	MP Hose Assembly 5' x 1/2"
4412-019	CenterFlo AODD PVC Suction Tube Kit 1/2"
4411-025	Mounting Bracket for AODD Pumps

1121-029 CF50 WALL-MOUNT PACKAGE FOR ANTI-FREEZE	
INCLUDES	
1120-037	Aluminum CF50 Diaphragm Pump
8134-005	LP Hose Assembly 5' x 3/8"
3260-035	F/R Auto Drain 3/8" NPT(F)
3120-202	Pressure Relief Kit 1" NPT
8264-005	MP Suction Rated Hose Assembly 5' x 3/4" NPT(M)
4412-053	CenterFlo AODD PVC Suction Tube Kit 1"
4411-036	Mounting Bracket for CF50 AODD Pumps

CF15 Series 55 Gal Cart Package

For anti-freeze and windshield wash solution



1121-030	
INCLUDES	
1120-027	Aluminum CF15 Diaphragm Pump
8570-006	Suction Hose with Hose Clamps 6' x 3/4"
3260-060	F/R Auto Drain 1/4" NPT(F)
8141-030	LP Hose Assembly 30' x 1/2"
4530-054	Drip Tray
4530-065	Side Mount Bracket
4520-013	3 wheel drum cart, 400 lb/55 gal
3330-157	DR Handle, Rigid 1/4" turn for oil

AODD Dispense Packages for Windshield Washer Solution

1

CF15 Series Wall-Mount Package

Wall mount pumping system for windshield washer solution, designed for the CF15 series



CF50 Series Wall-Mount Package

Wall mount pumping system for windshield washer solution designed for the CF50 series



1121-015 CF15 WALL-MOUNT PACKAGE FOR WINDSHIELD WASH SOLUTIONS	
INCLUDES	
1120-023A	Polypropylene CF15 Diaphragm Pump
8134-005	LP Hose Assembly 5' x 3/8"
3260-035	F/R Auto Drain 3/8" NPT(F)
3120-201	Pressure Relief Kit 1/2" NPT
8249-005	MP Hose Assembly 5' x 1/2"
8145-005	LP Suction Rated Hose Assembly 5' x 1/2"
4412-019	CenterFlo AODD Suction Tube Kit
4411-025	Mounting Bracket for AODD Pumps

1121-027 CF50 WALL-MOUNT PACKAGE FOR WINDSHIELD WASH SOLUTIONS	
INCLUDES	
1120-038	Polypropylene CF50 Diaphragm Pump
8134-005	LP Hose Assembly 5' x 3/8"
3260-035	F/R Auto Drain 3/8" NPT(F)
3120-202	Pressure Relief Kit 1" NPT
8264-005	Qty 2 - MP Suction Rated Hose Assembly 5' x 3/4" NPT(M)
833677	PVC Suction Pipe 1"
4411-036	Mounting Bracket for AODD Pumps









CF30 Series Wall-Mount Kit

Does not include pump.



4410-063	
INCLUDES	
8134-005	LP Hose Assembly 5' x 3/8"
8264-005	MP Hose Assembly 5' x 3/4"
8181-006	LP Hose Assembly 6' x 1"
3230-019	LP Air Ball Valve 3/8" NPT(F) no bleed
3260-035	F/R Auto Drain 3/8" NPT(F)
4411-025	Mounting Bracket for AODD Pumps

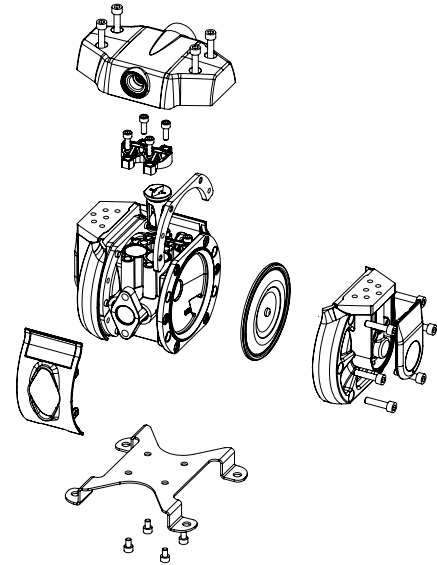
AODD Pump Accessories

Y-STRAINER - 580 PSI (40 BAR)		PRESSURE RELIEF KITS		
All strainers have 40 mesh				
Y-Strainer		3120-211 1/2" NPT(F)	Pressure Relief Kits	
		3120-212 3/4" NPT(F)		
		3120-213 1" NPT(F)		
SUCTION LINE-STRAINER - 150 PSI (10 BAR)		SUCTION TUBES		
All strainers have 20 mesh				
Suction Line-Strainer		3120-219 1" NPT(F)	Suction Tubes	
		3120-125 Replacement screen for strainer 3120-219		
DRY BREAK COUPLER & NIPPLE RATED				
For vacuum or up to 3,000 psi (207 bar)				
Dry Break Coupler & Nipple		4140-016 Coupler 3/4" NPT(F)		4412-044 1" NPT(M) x 18" - 30° 16 gal drum
		4140-050 Coupler 1" NPT(F)		4412-046 1" NPT(M) x 26" - 30° 55 gal drum
		4140-023 Nipple 3/4" NPT(F)		4412-045 1" NPT(M) x 21" - 30° 165/280 gal bench tank
		4140-051 Nipple 1" NPT(F)		4412-048 1" NPT(M) x 30" - 30° 165/280 gal bench tank double tap
CAM-LOCK COUPLER & NIPPLE RATED				
For 250 psi (17 bar)				
Cam-Lock Coupler & Nipple		4140-044 Coupler 3/4" NPT(F)	Suction Tube Kits	
		4140-017 Coupler 1" NPT(F)		
		4140-054 Nipple 3/4" NPT(F)		
		4140-055 Nipple 1" NPT(F)	PVC Suction Kits for Anti-freeze	
		4140-045 Nipple 3/4" NPT(M)		
		4140-018 Nipple 1" NPT(M)		
		4140-046 Dust Cap 3/4" NPT(F)	Wall-mount bracket	
		4140-019 Dust Cap 1" NPT(F)		
		4140-052 Dust Plug 3/4" NPT(M)		
		4140-053 Dust Plug 1" NPT(M)	Ball valve fully ported no bleed	
		Shut-off valve bleed type for air		
			4412-019 CenterFlo AODD PVC Suction Tube Kit 1/2"	
			4412-053 CenterFlo AODD PVC Suction Tube Kit 1"	
			BRACKETS	
			4411-016 Wall Mount Bracket for conventional diaphragm pumps	
			4411-025 Wall Mount Bracket for CF10, 15, & 30 diaphragm pumps	
			4411-036 Mounting Bracket for CF50 AODD Pumps	
			VALVES	
			3230-018 Ball valve, 1/4", 580 psi (40 bar)	
			3230-019 Ball valve, 3/8", 580 psi (40 bar)	
			3230-020 Ball valve, 1/2", 580 psi (40 bar)	
			3230-021 Ball valve, 3/4", 580 psi (40 bar)	
			3230-022 Ball valve, 1", 580 psi (40 bar)	
			3230-009 Shut-off valve, 3/8" NPT(F), 200 psi (13.7 bar)	
			3230-010 Shut-off valve, 1/2" NPT(F), 200 psi (13.7 bar)	
			3230-011 Shut-off valve, 3/4" NPT(F), 200 psi (13.7 bar)	

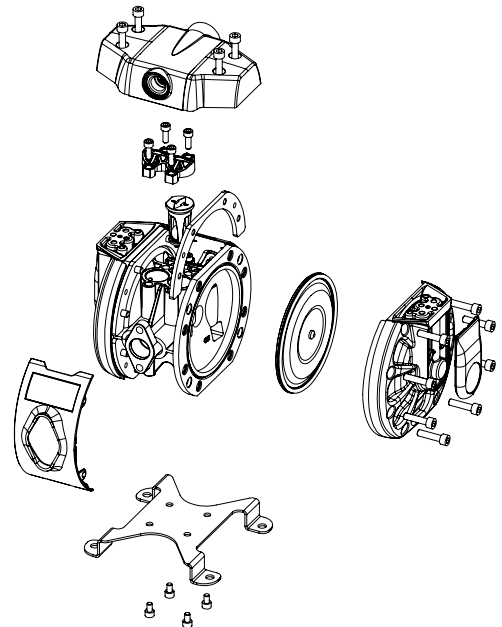
AODD Pumps Repair Kits (CenterFlo)

1

CF10		
PUMP MODELS	KIT NUMBER	DESCRIPTION
CF10 AODD PUMPS - 1120-029A, 1120-034A		
1120-029A, 1120-034A	833732	Air valve kit
1120-029A, 1120-034A	833207	Stroke sensor kit
1120-029A, 1120-034A	833208	Check Ball kit
1120-029A	833735	Ball Seats, O-rings, ball guides
1120-029A, 1120-034A	833209	Ball Seats, O-rings, ball guides
1120-029A, 1120-034A	833337	Diaphragms kit (After to 2/1/2013)
1120-029A	833331	Bushing, seal, push rod (Prior to 2/1/2013)
1120-029A, 1120-034A	833336	Bushing, seal, push rod (After to 2/1/2013)

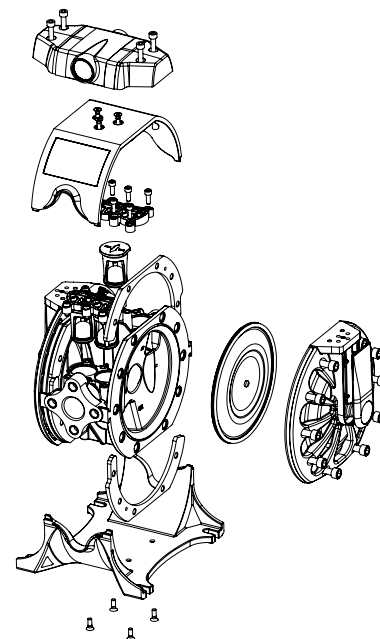


CF15		
PUMP MODELS	KIT NUMBER	DESCRIPTION
CF15 AODD PUMPS - 1120-023A, 1120-025A, 1120-027, 1120-028A		
1120-023A, 1120-025A, 1120-027, 1120-028A	833732	Air valve kit
1120-023A, 1120-025A, 1120-027, 1120-028A	833207	Stroke sensor kit
1120-023A, 1120-025A	833208	Check Ball kit
1120-027, 1120-028A	833236	Check Ball kit
1120-023A, 1120-025A, 1120-028A	833735	Ball Seats, O-rings, ball guides
1120-027, 1120-028A	833330	Ball Seats, O-rings, ball guides
1120-023, 1120-025A, 1120-027, 1120-028A	833209	Ball Seats, O-rings, ball guides
1120-023, 1120-025A, 1120-028A	833210	Bushing, seal, push rod (Prior to 2/1/2013)
1120-023, 1120-025A, 1120-028A	833332	Bushing, seal, push rod (After to 2/1/2013)
1120-027	833333	Diaphragms kit (After to 2/1/2013)
1120-023, 1120-025A, 1120-027, 1120-028A	833211	Diaphragms kit (Prior to 2/1/2013)
1120-023, 1120-025A, 1120-027, 1120-028A	833338	Diaphragms kit (After to 2/1/2013)
1120-023, 1120-025A, 1120-027, 1120-028A	833341	Retrofit Kit (Updates pumps prior to 2/1/2013)



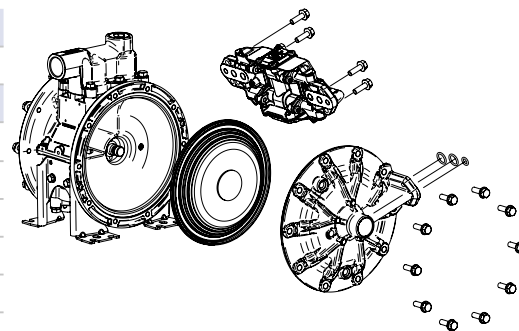
AODD Pumps Repair Kits (CenterFlo)

CF30		
PUMP MODELS	KIT NUMBER	DESCRIPTION
CF30 AODD PUMPS 1120-024, 1120-026A, 1120-031A, 1120-040		
1120-040, 1120-024, 1120-026A, 1120-031A	833212	Air valve kit
1120-040, 1120-024, 1120-026A, 1120-031A	833207	Stroke sensor kit
1120-026A, 1120-031A	833233	Check Ball kit
1120-040, 1120-024	833213	Check Ball kit
1120-026A, 1120-031A	833234	Ball Seats, O-rings, ball guides
1120-040, 1120-024	833214	Ball Seats, O-rings, ball guides
1120-026A, 1120-031A	833335	Bushing, seal, push rod (After to 2/1/2013)
1120-040, 1120-024	833334	Bushing, seal, push rod (After to 2/1/2013)
1120-040, 1120-024, 1120-026A, 1120-031A	833339	Diaphragms kit (After to 2/1/2013)
1120-040, 1120-024, 1120-026A, 1120-031A	833342	Retrofit Kit (Updates pumps prior to 2/1/2013)



1

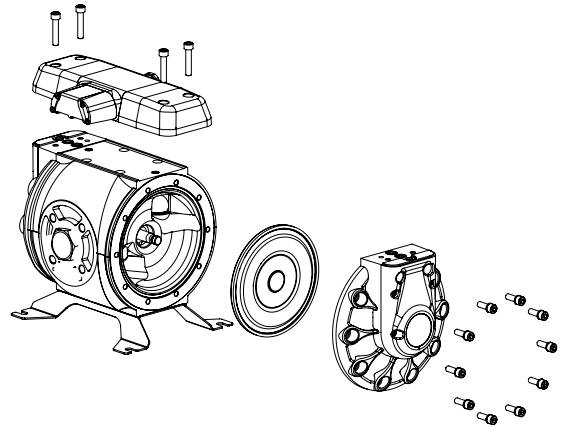
CF50		
PUMP MODELS	KIT NUMBER	DESCRIPTION
CF50 AODD PUMPS 1120-037, 1120-038		
1120-037	833692	Air Valve Kit
1120-038	833693	Stroke sensor kit
1120-037	833698	Bushing, seal, push rod (Acetal/Buna-N/SS)
1120-038	833699	Bushing, seal, push rod (PTFE/Viton/SS)
1120-037	833696	Ball Seats/Seal (Buna-N)
1120-038	833697	Ball Seats/Seal (PP/Viton)
1120-037	833694	Check Ball kit (Acetal)
1120-038	833695	Check Ball kit (PTFE)
1120-037	833700	Diaphragms kit (Buna-N)
1120-038	833436	Diaphragms kit (Hytrel)



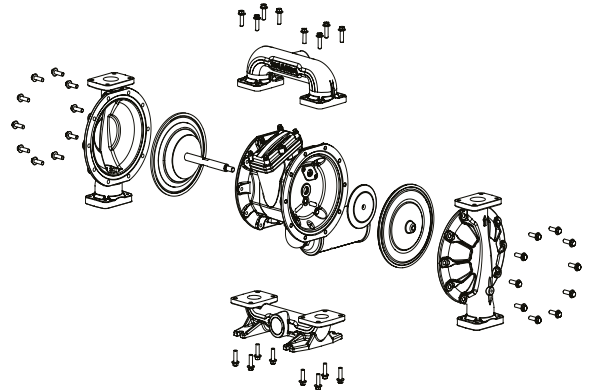
AODD Pumps Repair Kits (CenterFlo and TraditionalFlo)

1

CF65		
PUMP MODELS	KIT NUMBER	DESCRIPTION
CF65 AODD PUMPS - 1120-033, 1120-039		
1120-033	833431	Air valve kit
1120-033	833432	Stroke sensor kit
1120-033	833433	Check Ball kit
1120-033	833434	Ball Seats, O-rings, ball guides
1120-033	833435	Bushing, seal, push rod
1120-033	833436	Diaphragms kit
1120-039	833709	Kit, Balls, Buna-N, CF65
1120-039	833710	Kit, Ball seat/seal/cage, CF65 Buna-N



TRADITIONALFLO TF170 AODD PUMPS		
PUMP MODELS	KIT NUMBER	DESCRIPTION
1120-041		
1120-041	833886	Air valve kit
1120-041	833888	Air sensors
1120-041	833889	Air motor, central body
1120-041	833890	Air motor, lateral body
1120-041	833891	Air exhaust
1120-041	833892	Push rod
1120-041	833893	Diaphragm Cover
1120-041	833894	Inlet manifold
1120-041	833895	Outlet manifold
1120-041	833896	Kit, Ball seat, Hytrel
1120-041	833897	Kit, Ball, Hytrel
1120-041	833898	Kit, Diaphragm kit, Hytrel

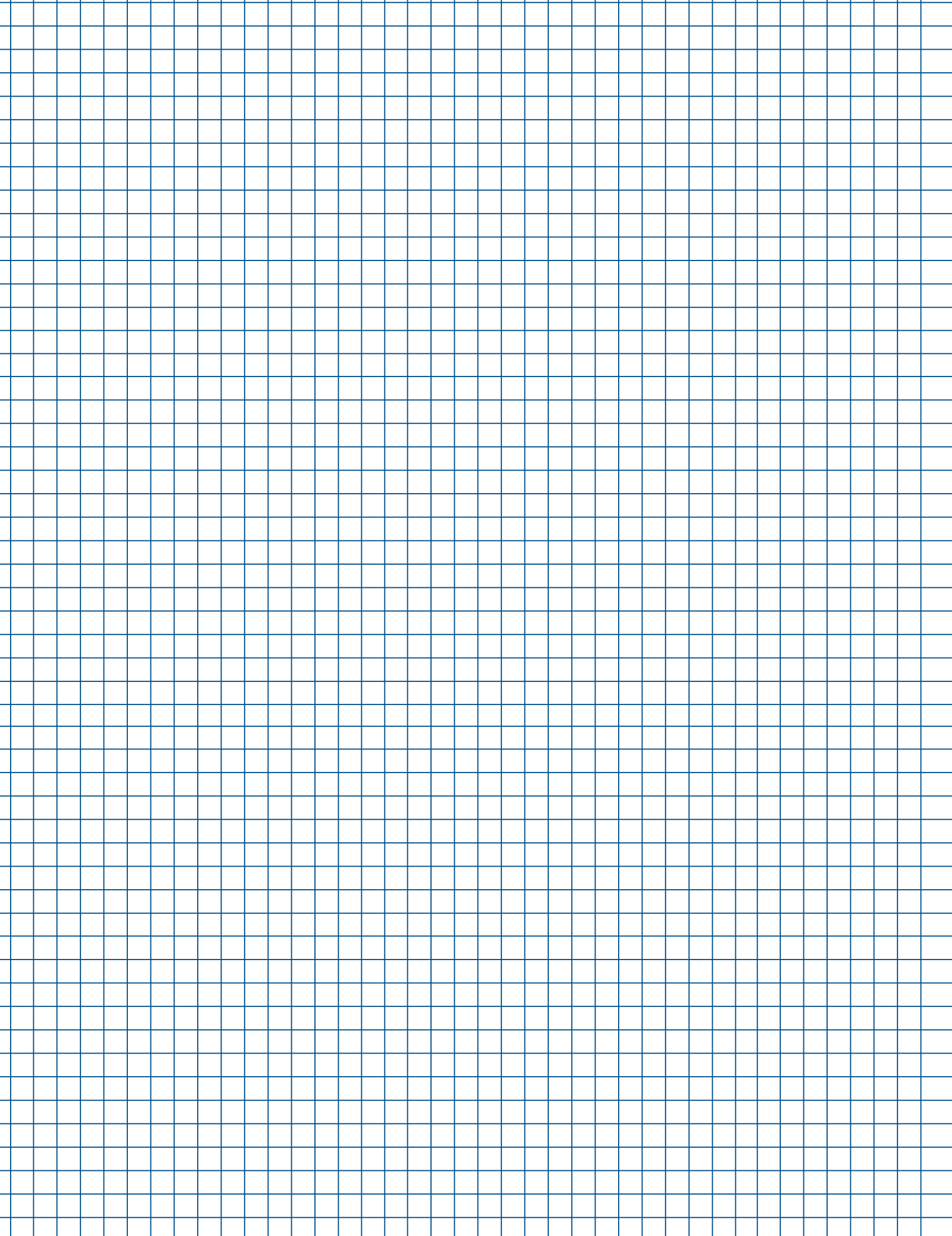


AODD Pumps Repair Kits (TraditionalFlo and Conventional)



1

CONVENTIONAL AODD PUMP		
PUMP MODELS	KIT NUMBER	DESCRIPTION
ALUMINUM AODD PUMPS - 1120-015S		
1120-015S	832973	Air seal kit
1120-015S	832973	Air assembly kit
1120-015S	832974	Fluid seal kit





1 2 3 4 5 6 7 8 9 10

Hose Reels

HOSE REELS SIGNATURE SERIES PRODUCT SELECTION MATRIX	78
AIR/WATER REEL	79
EVOLUTION	80
CLASSIC	81
PREMIUM	82
EXTENDED VOLUME (EV)	83
EXTENDED VOLUME EXTRA (EVX)	84
EXTENDED VOLUME EXTRA+ (EVX+)	85
ENCLOSED HOSE REELS	86
HOSE REEL STANDS	87
ACCESSORIES FOR HOSE REELS	88
LIGHT CORD REELS	90
REPAIR KITS FOR HOSE REELS	91

Hose Reels Product Selection Matrix

2

MAX. HOSE	CONSTRUCTION	RECOMMENDED MARKETS	RECOMMENDED APPLICATIONS	MOUNTING
ECONOMY AIR/WATER				
50' x 3/8"	All steel spool and Pedestal	Small to medium dealerships Tire shops Transmission shops	Air/Water - low pressure	Ceiling, wall, cabinet
EVOLUTION				
50' x 1/2"	Composite spool Steel pedestal Dual ball-bearings	Grease Small to medium dealerships Tire shops Transmission shops	Air/Water - high pressure, hot water Oil - medium pressure Grease - high pressure Enclosed models	Ceiling, floor, wall, truck, tank
CLASSIC				
50' x 1/2" 30' x 3/4"	All steel spool and Pedestal	Grease Auto dealerships Tire shops Transmission Shops	Air/Water - low pressure Oil - medium pressure DEF - medium pressure Grease - high pressure Enclosed models	Ceiling, floor, wall, tank
PREMIUM				
60' x 1/2"	All steel spool and Pedestal Double arm Dual ball-bearings	Truck shops Municipalities Railroad Mining Lube trucks	Air/Water - low pressure Oil - medium pressure Grease - high pressure	Ceiling, floor, wall, truck, tank
EXTENDED VOLUME (EV)				
50' x 3/4" 65' x 3/8" 65' x 1/2"	All steel spool and Pedestal Heavy duty High capacity Double arm Dual ball-bearings	Truck shops Municipalities Railroad Mining Lube trucks	Air/Water - low pressure DEF - low pressure Diesel - low pressure Oil - medium pressure Grease - high pressure	Ceiling, floor, wall, truck, tank
EXTENDED VOLUME EXTRA (EVX)				
50' x 1" 75' x 3/4" 100' x 1/2"	All steel spool and Pedestal Heavy duty High capacity Double arm Dual ball-bearings	Truck shops Municipalities Railroad Mining Lube trucks	Air/Water - low pressure Diesel - low pressure Evacuation - low pressure Oil - medium pressure	Floor, truck, tank
EXTENDED VOLUME+ (EVX+)				
50' x 1 1/2"	All steel spool and Pedestal Heavy duty High capacity Double arm Dual ball-bearings Dual spring	Truck shops Municipalities Railroad Mining Lube trucks	Air/Water - low pressure Diesel - low pressure Oil - medium pressure	Floor, truck, tank



**ECONOMY
AIR/WATER**



EVOLUTION



CLASSIC



PREMIUM



**EXTENDED
VOLUME (EV)**



**EXTENDED
VOLUME EXTRA (EVX)**



**EXTENDED
VOLUME + (EVX+)**

Hose Reels

Economy Air/Water Reel



Air & Water

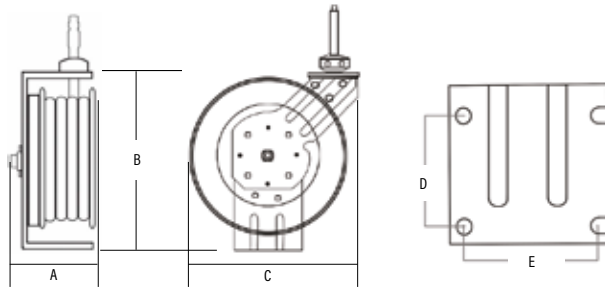
Steel "ECONOMY" Hose Reel: quality and value in a sturdy design

- Easy to install - light weight, compact design, will fit in small spaces.
- Five-position outlet arm - for use with ceiling, wall, cabinet mount.
- Proven design - excess spring torque assures reliable hose return
- Built to last - thick wall fluid swivel and hub; stamped steel rims, arms, and base
- Air hose, made from durable nylon exterior. Ball stop and 3' connection hose included.
- Powder coat black finish - better corrosion resistance

2

MODELS AVAILABLE	DESCRIPTION
	Air & Water 300 psi (21 bar) for delivery
2130-002	50' x 3/8"

TECHNICAL DATA	
Low Pressure Reel	
Fluid inlet port	1/2" NPT(F)
Fluid outlet port	1/4" NPT(F)
Hose outlet thread	1/4" NPT(M)
Max pressure	300 psi (21 bar)
Wetted Parts	Approved for use with air & water



DIMENSIONS INCHES				
A	B	C	D	E
6.7"	18.70"	18"	4"	5"

Hose Reels Evolution

2



**Air & Water
Anti-freeze
Oil
Grease**

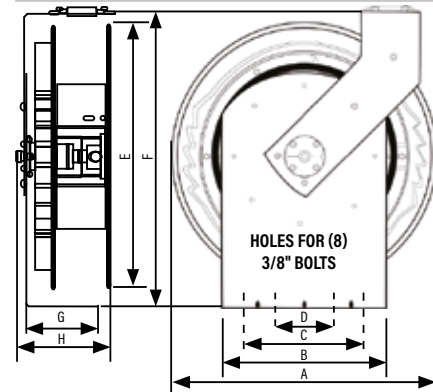
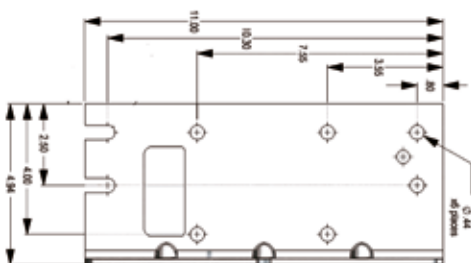
Evolution Hose Reel: an Evolution in Design and Performance

Lightweight but extremely rugged: steel pedestal and arm and dual ball-bearings. The Evolution is a solid performer. The Evolution combines design, performance and reliability with the right features and benefits for today's customers.

All Evolution series reels have a narrow and lightweight design; includes hose, hose stop and a 2.5' connecting hose.

MODELS AVAILABLE	DESCRIPTION	REPLACEMENT HOSE
Air & water low pressure 300 psi (21 bar) for delivery of air, water, windshield wash fluid, and anti-freeze		
2140-021	Bare reel - up to 50' Hose	
2140-007	30' x 3/8" ID hose	8136-030
2140-008	50' x 3/8" ID hose	8136-050
2140-010	30' x 1/2" ID hose	8141-030
2140-011	50' x 1/2" ID hose	8141-050
Oil medium pressure 2,750 psi (190 bar) for delivery of lubricants		
2140-002	Bare reel - up to 50' Hose	
2140-013	30' x 1/2" ID hose	8241-030
2140-014	50' x 1/2" ID hose	8241-050
Grease high pressure 5,000 psi (345 bar) for delivery of grease		
2140-005	Bare reel - up to 50' Hose	
2140-019	30' x 3/8" ID hose	8332-030
2140-020	50' x 3/8" ID hose	8332-050
Water high pressure 2,900 psi (200 bar) for delivery of hot water up to 302° F (150° C)		
2140-003	Bare reel - up to 50' Hose	

TECHNICAL DATA	
Low & medium pressure reels	
Fluid inlet port	1/2" NPT(F) swivel
Fluid outlet port	1/2" NPT(F) swivel
Hose outlet thread	1/4" NPT(M) for 3/8" ID Hoses
	1/2" NPT(M) for 1/2" ID Hoses
Wetted materials	Low Pressure - Brass, Acetal & Buna-N™ Medium pressure - Steel (plated) & Buna-N™
High Pressure Reels	
Fluid inlet port	3/8" NPT(F) swivel
Fluid outlet port	3/8" NPT(F) swivel
Hose outlet thread	1/4" NPT(M) for 3/8" ID Hoses
Wetted materials	Nickel Plated Steel, Hardened steel and Polyurethane, Stainless Steel, Viton™
Service bulletin	SB 2025



DIMENSIONS INCHES							
A	B	C	D	E	F	G	H
18"	11"	9.5"	4"	18"	20"	5"	6.5"

Hose Reels Classic



**Air & Water
Anti-freeze
Windshield wash
Oil
Grease**

The Classic Hose Reel has been the standard of reliability for over a decade. This solid, all steel hose reel is preferred for general duty, automotive dealerships, and service garages. Proven performance and reliable operation.

All Classic series reels include hose, hose stop and a 2.5' connecting hose.

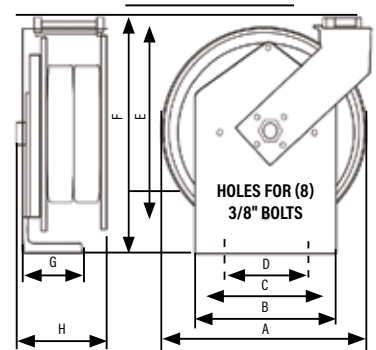
2

STANDARD color	Special color 2-week lead-time						Custom color 6-week lead time
Semi-gloss Black	Wt	Gr	Bl	Rd	Silver	Yl	based on specifications supplied by the customer
-	-002	-003	-004	-005	-006	-007	

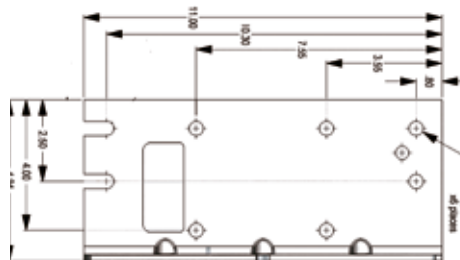
MODELS AVAILABLE	DESCRIPTION	REPLACEMENT HOSE
Air & Water Low Pressure 300 psi (21 bar) for delivery of air, water, anti-freeze and windshield wash***		
2120-016	Bare reel - up to 30' Hose	-
2120-017	Bare reel - up to 50' Hose	-
2120-014	30' x 3/8" ID hose	8136-030
2120-005	40' x 3/8" ID hose	8136-040
2120-015	50' x 3/8" ID hose	8136-050
2120-021*	30' x 3/8" ID hose. No arm	8141-030
2120-020	50' x 1/2" ID hose	8141-050
2120-025	30' x 3/8" ID hose-Nitrogen	8135-030
2120-026	50' x 3/8" ID hose-Nitrogen	8135-050
Oil medium pressure 2,750 psi (190 bar) for delivery of lubricants		
2120-016	Bare reel - up to 30' Hose	-
2120-017	Bare reel - up to 50' Hose	-
2120-011	30' x 1/2" ID hose	8241-030
2120-012	40' x 1/2" ID hose	8241-040
2120-013	50' x 1/2" ID hose	8241-050
2120-022*	16' x 1/2" ID hose. No arm	8241-016
Grease High pressure 5,000 psi (345 bar) for delivery of grease.		
2120-018	Bare reel - up to 30' Hose	-
2120-019	Bare reel - up to 50' Hose	-
2120-003	30' x 3/8" ID hose	-
2120-004	40' x 3/8" ID hose	8331-040
2120-007	50' x 3/8" ID hose	8331-050
2120-001	30' x 1/4" ID hose	8321-030
2120-002	40' x 1/4" ID hose	8321-040
2120-006	50' x 1/4" ID hose	8321-050

* Classic reel less outlet arm for workbench mounting

TECHNICAL DATA	
Low & Medium Pressure Reels	
Fluid inlet port	1/2" NPT(F) swivel
Fluid outlet port	1/2" NPT(F) swivel
Hose outlet thread	1/4" NPT(M) for 3/8" ID Hoses
	1/2" NPT(M) for 1/2" ID Hoses
Wetted materials	Plated steel, Brass, bronze and Buna-N
High Pressure Reels	
Fluid inlet port	3/8" NPT(F) swivel
Fluid outlet port	3/8" NPT(F) swivel
Hose outlet thread	1/4" NPT(M) for 1/4" ID Hoses
	1/4" NPT(M) for 3/8" ID Hoses
Wetted materials	Plated steel, hardened steel and Buna-N
Service Bulletin	SB 2002 SB 2002-A (No arm reels)



DIMENSIONS INCHES							
A	B	C	D	E	F	G	H
16"	11"	9.5"	4"	16"	20"	5"	6-8"



Hose Reels Premium



Air & Water
Anti-freeze
Windshield wash
Oil
Grease

Premium Hose Reel for the toughest shop environments

Today's heavy-duty hose reel market demands an innovative use of components that provide long life, improved serviceability and superior structural design. Our Premium reel incorporates advanced design features that ensures long life in the toughest environments while reducing overall weight.

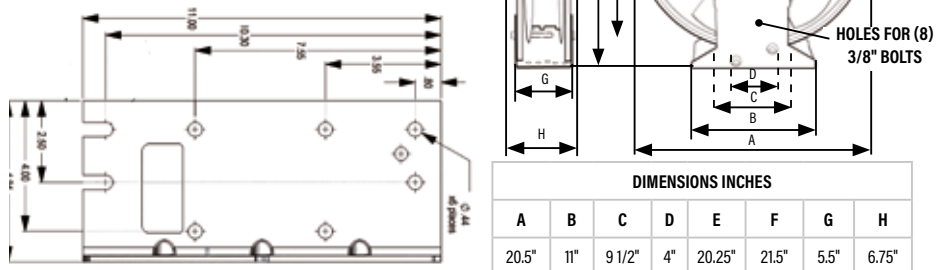
All Premium series reels have a narrow design; includes hose, hose stop and a 2.5' connecting hose.

2

MODELS AVAILABLE	DESCRIPTION	REPLACEMENT HOSE
Air & Water Low Pressure 300 psi (21 bar) for delivery of air, water, anti-freeze and windshield wash**		
2111-048	Bare reel - up to 50' Hose	-
2111-049	Bare reel - up to 60' Hose	-
2111-031	30' x 3/8" ID hose	8136-030
2111-032	40' x 3/8" ID hose	8136-040
2111-033	50' x 3/8" ID hose	8136-050
2111-034	60' x 3/8" ID hose (50' + 10')*	8136-060
2111-035	40' x 1/2" ID hose	8141-040
2111-036	50' x 1/2" ID hose	8141-050
2111-037	60' x 1/2" ID hose (50' + 10')*	8141-060
Oil Medium Pressure 2,750 psi (190 bar) for delivery of lubricants		
2111-027	Bare reel - up to 50' Hose	-
2111-028	Bare reel - up to 60' Hose	-
2111-038	30' x 1/2" ID hose	8241-030
2111-039	40' x 1/2" ID hose	8241-040
2111-040	50' x 1/2" ID hose	8241-050
2111-041	60' x 1/2" ID hose (50' + 10')*	8241-060
Grease High-pressure 5,000 psi (345 bar) for delivery of grease.		
2111-029	Bare reel - up to 50' Hose	-
2111-030	Bare reel - up to 60' Hose	-
2111-045	40' x 3/8" ID hose	8332-040
2111-046	50' x 3/8" ID hose	8332-050
2111-047	60' x 3/8" ID hose (50' + 10')*	8332-060
2111-042	40' x 1/4" ID hose	8323-040
2111-043	50' x 1/4" ID hose	8323-050
2111-044	60' x 1/4" ID hose (50' + 10')*	8323-060

* 50' on spool with 10' hanging

TECHNICAL DATA	
Low & Medium Pressure Reels	
Fluid inlet port	1/2" NPT(F) swivel
Fluid outlet port	1/2" NPT(F) swivel
Hose outlet thread	1/2" NPT(M) for 3/8" ID Hoses 1/2" NPT(M) for 1/2" ID Hoses
Wetted Materials	Low pressure - Brass, Acetal & Buna-N Med. pressure - Steel (plated) & Buna-N
High Pressure Reels	
Fluid inlet port	3/8" NPT(F) swivel
Fluid outlet port	3/8" NPT(F) swivel
Hose outlet thread	1/4" NPT(M) for 1/4" ID Hoses 1/4" NPT(M) for 3/8" ID Hoses
Wetted Materials	Nickel plated steel, hardened steel and Polyethylene
Wetted Materials	Hardened steel and Polyurethane
Service Bulletin	SB 2027



Hose Reels Extended Volume (EV)



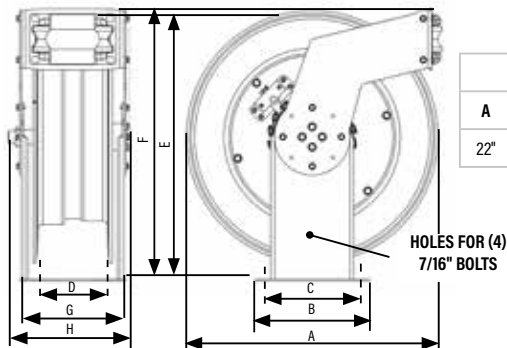
**Air & Water
Anti-freeze
Oil
Grease
Diesel
DEF**

The Extended Volume, EV Series hose reels are designed for high volume heavy-duty applications where large hose diameters are required for increased flow. The EV reels will accommodate up to 50' of 3/4" ID hose or 65' of 1/2" ID hose. Perfect for heavy-duty fleet, construction, mining and industrial applications. **All EV series reels include hose, hose stop and a 2.5' connecting hose.**

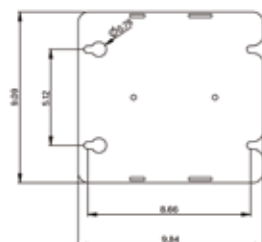
2

MODELS AVAILABLE	DESCRIPTION	REPLACEMENT HOSE
Air & Water Low Pressure 300 psi (21 bar) for delivery of air, water and anti-freeze		
2310-033	Bare reel - up to 65' x 1/2" or 50' x 3/4"	-
2310-027	65' x 1/2" ID hose	8141-065
2310-028	50' x 3/4" ID hose	8161-050
Oil Medium Pressure for delivery of lubricants		
2310-033	Bare reel - up to 65' x 1/2" or 50' x 3/4"	-
2310-031	50' x 3/4" ID hose 1,950 psi (135 bar)	8264-050
2310-029	65' x 1/2" ID hose 2,750 psi (190 bar)	8250-065
Grease High pressure 5,000 psi (345 bar) for delivery of grease		
2310-048	Bare reel - up to 65' x 3/8"	-
2310-046	65' x 3/8" ID hose	8332-065
Diesel Low Pressure 50 psi (3 bar) for delivery of diesel		
2310-033	Bare reel - up to 65' x 1/2" or 50' x 3/4"	-
2310-032	50' x 3/4" ID hose	8466-050
Diesel Exhaust Fluid Low Pressure 150 psi (10 bar) for delivery of diesel exhaust fluid		
2400-010	Bare reel - up to 65' x 1/2" or 50' x 3/4"	-
2400-011	50' x 3/4" ID hose	8569-050

TECHNICAL DATA	
Diesel, Low & Medium Pressure Reels	
Fluid inlet port	3/4" NPT(F) swivel
Fluid outlet port	3/4" NPT(F) swivel
Hose outlet thread	1/2" NPT(M) for 1/2" ID Hoses
	3/4" NPT(M) for 3/4" ID Hoses
Wetted Materials	Nickel plated steel and Buna-N
Service Bulletin	SB 2028
Low Pressure DEF Reels	
Fluid inlet port	3/4" BSPP(F) swivel
Fluid outlet port	3/4" BSPP(F) swivel
Hose outlet thread	3/4" BSPP (M) for 3/4" ID Hoses
Wetted Materials	Stainless Steel, Polypropylene, & Viton [®]
Service Bulletin	SB 2028
High Pressure Reels	
Fluid inlet port	3/8" NPT(F) swivel
Fluid outlet port	3/8" NPT(F) swivel
Hose outlet thread	3/8" NPT(M)
Wetted Materials	Nickel Plated Steel, Hardened steel and Polyurethane
Service Bulletin	SB 2028



DIMENSIONS INCHES							
A	B	C	D	E	F	G	H
22"	8.62"	5"	5.12"	22"	23.5"	9"	9.25"



Hose Reels Extended Volume Extra (EVX)

2

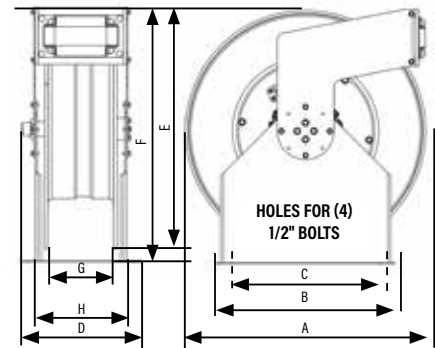


**Air & Water
Anti-freeze
Oil
Diesel
Evacuation**

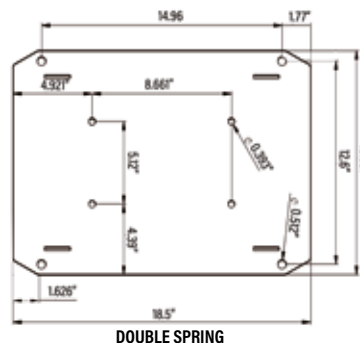
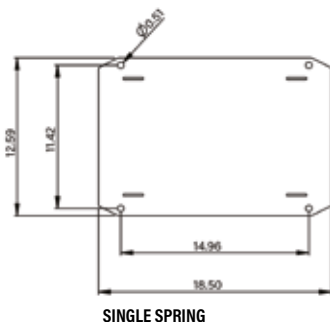
The Extended Volume, EVX Series hose reels are designed for high volume heavy-duty applications where large hose diameters are required for increased flow. The EVX reels will accommodate up to 50' of 1" ID hose or 100' of 1/2" ID hose. Perfect for heavy-duty fleet, construction, mining and industrial applications. All EVX series reels include hose, hose stop and a 2.5' connecting hose.

MODELS AVAILABLE	DESCRIPTION	REPLACEMENT HOSE
Air & Water Low Pressure 300 psi (21 bar) for delivery of air, water and anti-freeze		
2310-034	Bare reel, 50' x 1" ID hose or 75' x 1/2" ID hose	-
2310-035**	Bare reel, 75' x 3/4" ID hose or 100' x 1/2" ID hose	-
2310-036**	75' x 1/2" ID hose	8141-075
2310-037**	100' x 1/2" ID hose	8141-100
2310-038**	75' x 3/4" ID hose	8161-075
2310-039	50' x 1" ID hose	8181-050
Oil Medium Pressure 1,525 psi (105 bar) & 2,320 (160 bar) for delivery of lubricants		
2310-035**	Bare reel, 75' x 3/4" ID hose or 100' x 1/2" ID hose	-
2310-045**	50' x 1" ID hose 1,500 psi	8281-050
2310-041**	75' x 3/4" ID hose 1,525 psi	8264-075
2310-040**	100' x 1/2" ID hose 2,320 psi	8250-100
Diesel & Evacuation Low Pressure 50 psi (3 bar) for delivery of diesel fuel and used oil evacuation*		
2310-034	Bare reel, 50' x 1" ID hose or 75' x 1/2" ID hose	-
2310-043	50' x 1" ID hose Diesel	8481-050
2310-042	50' x 1" ID hose Evacuation	8181-050

TECHNICAL DATA	
Low & Medium Pressure Reels	
Fluid inlet port	1" NPT(F) swivel
Fluid outlet port	1" NPT(F) swivel
Hose outlet thread	1/2" NPT(M) for 1/2" ID Hoses
	3/4" NPT(M) for 3/4" ID Hoses
	1" NPT(M) for 1" ID Hoses
Wetted Materials	Nickel plated steel and Buna-N™
Service Bulletin	SB 2029



* Verify that system design supports the use of an evacuation reel.
** Double spring reel



SINGLE SPRING DIMENSIONS INCHES							
A	B	C	D	E	F	G	H
25"	18.5"	15"	12.6"	25"	26.5"	7"	11.4"

DOUBLE SPRING DIMENSIONS INCHES							
A	B	C	D	E	F	G	H
25"	18.5"	15"	13.9"	25"	26.5"	8.5"	12.6"

Hose Reels Extended Volume+ (EVX+)



**Air & Water
Anti-freeze
Diesel**

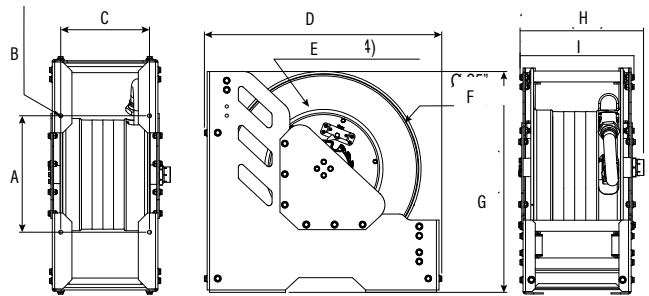
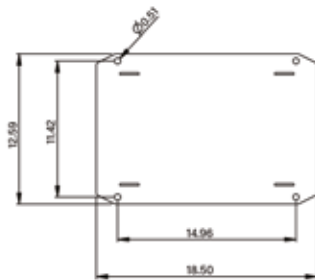
The Extended Volume+, EVX+ Series hose reel is designed for extreme heavy-duty applications where large hose diameters are required for increased flow. The dual spring EVX+ reel will accommodate up to 50' of 1 1/2" ID hose. Perfect for heavy-duty fleet, construction, mining and industrial applications.

2

Hose not included

MODELS AVAILABLE	DESCRIPTION	REPLACEMENT HOSE
	Air, Water, Diesel & Low Pressure Oil Transfer 580 psi (21 bar) for delivery of air, water, diesel & oil transfer	
2310-047	Bare reel - up to 50' x 1 1/2"	-

TECHNICAL DATA	
Diesel, Low Pressure Reels	
Fluid inlet port	1 1/2" NPT(F) swivel
Fluid outlet port	1 1/2" NPT(F) swivel
Hose outlet thread	1 1/2" NPT(M) for 1 1/2" ID Hoses
Wetted Materials	Steel, nickel plated steel, Nitrile rubber, nickel plated aluminum
Service Bulletin	SB 2038



DIMENSIONS INCHES								
A	B	C	D	E	F	G	H	I
15"	0.5"	11.43"	30.5"	14.37"	25"	28.25"	15.5"	14.25"

Hose Reels Enclosed Hose Reels

All metal enclosed cabinet hose reels are designed to improve the appearance of any shop. Standard color is black and six special colors are available to match workbenches, and automotive lifts.

CHOOSE YOUR REEL

MODELS AVAILABLE	DESCRIPTION
Air & Water Low Pressure 300 psi (21 bar) for delivery of air, water and anti-freeze	
2251-338	30' x 3/8" ID hose
2251-538	50' x 3/8" ID hose
2251-312	30' x 1/2" ID hose
2251-512	50' x 1/2" ID hose
Oil Medium Pressure 3,000 psi (207 bar) for delivery of lubricants	
2252-312	30' x 1/2" ID hose
2252-512	50' x 1/2" ID hose
Grease High-pressure 4,000 (276 bar) for delivery of grease	
2253-314	30' x 1/4" ID hose
2253-538	50' x 3/8" ID hose



ADD A LIGHT OR ELECTRIC REEL

MODELS AVAILABLE	DESCRIPTION
2254-518	Light Cord Reel & Bracket 50' x 18 gauge
2254-518D	Dual Light - 2 Light Cord Reels & Bracket - fits 1 single enclosure 50' x 18 gauge
2254-316	Electric Cord Reel & Bracket 30' x 10 amps, 3 outlet



CHOOSE YOUR SIDE ENCLOSURE

Order 1 side enclosure kit per reel

Side enclosure kits include: 2 side panels, 1 roller outlet assembly, 1 quick mounting plate, and hardware

MODELS AVAILABLE	DESCRIPTION
2250-011	Kit, side enclosure black semi-gloss
2250-012	Kit, side enclosure white
2250-013	Kit, side enclosure green
2250-014	Kit, side enclosure blue
2250-015	Kit, side enclosure red
2250-016	Kit, side enclosure silver
2250-017	Kit, side enclosure yellow



CHOOSE YOUR END PANEL KIT

Order 1 end panel kit per reel bank

End panel kits include: 2 end panels, 2 poly end panel inserts, 1 end bar support, and hardware

End Panel insert standard color is black. To order a white insert add a "W" to the model number, listed below.
example - 2250-003W = kit, end panels green with white end panel insert

MODELS AVAILABLE	DESCRIPTION
2250-001	Kit, end panels black semi-gloss
2250-002	Kit, end panels white
2250-003	Kit, end panels green
2250-004	Kit, end panels blue
2250-005	Kit, end panels red
2250-006	Kit, end panels silver
2250-007	Kit, end panels yellow



Air & Water Anti-freeze Windshield wash Oil Grease

Balcrank recommends using mounting channels or framing strut for installation of these enclosures.

- All steel cabinets have high quality, powder coated finish providing corrosion resistance
- Cabinet design provides smooth and easy operation: prevents hose pinch and reduces wear when pulling from any angle
- Simple installation and serviceability
- Cabinet design ties all reels in the bank together to form one complete rigid structure
- Aluminum end panels with removable poly inserts provide fast and easy serviceability

Channels are designed to build a bank of reels

- When mounting directly to an I-Beam, use Mounting Channel I-Beam Bracket Kit #2230-002 to mount channel to a structural I-Beam.

Enclosed hose reels not recommended for wall-mounting

2230-003	Mounting Channel - 1 Reel
2230-004	Mounting Channel - 2 Reel
2230-005	Mounting Channel - 3 Reel
2230-007	Mounting Channel - 5 Reel
2230-002	Mounting Channel I-Beam Bracket Kit. Use two bracket kits for 2 or 3 reels. Use 3 brackets for 5 or 6 reels.

Hose Reels Accessories



2

Hose reel stands

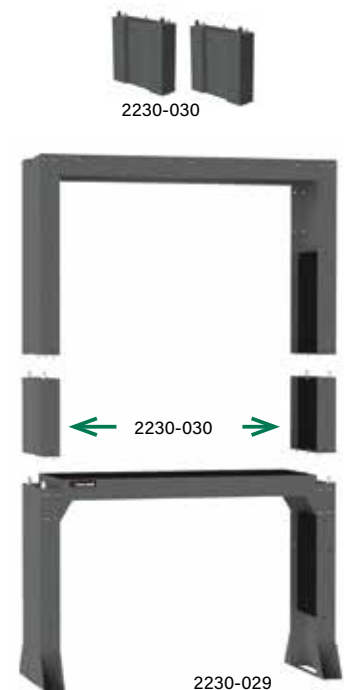
Heavy duty solid steel stands offer an alternative to ceiling or wall mounting hose reels. All stands include mounting plates, gray finish and drip trays to keep unwanted oil off the floor. Available in 3, 5 and 6 reel models. Designed to fit the Evolution, Classic, and Premium Signature series hose reels.

MODELS AVAILABLE	DESCRIPTION
2230-027	3 reel hose stand. Dimensions: 47 x 15.5 x 87.5 inches.
2230-028	5 reel hose stand. Dimensions: 68.9 x 15.75 x 86.6 inches.
2230-029	6 reel hose stand. Dimensions: 78 x 30 x 103 inches.

Hose reel stand options

Accessories are available for use with the six reel stand 2230-029 only. Height extension kits increase the stand height by another 20" and expansion brackets allow for an additional 2-4 reels (2 on each side) to be mounted with a total of 10 possible hose reels. Drip tray keeps unwanted fluids off the floor.




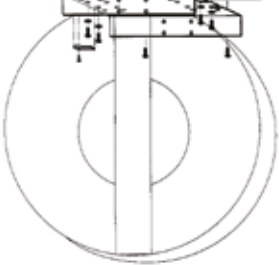





MODELS AVAILABLE	DESCRIPTION
2230-030	Height extension kit Adds 20" additional height. Sold in pairs
2230-031	Expansion bracket Allows 2 additional reels to be mounted on each side of the hose reel stand
2230-035	Drip Tray for use with expansion bracket 2230-031. Purchase one per Expansion bracket



For large quantities check lead times with your Balcrank Representative.

Hose Reels Accessories


2

MOUNTING CHANNEL COMPONENTS		MOUNTING BRACKET KITS			
<p>Channels are designed to build banks of multiple reels.</p> <ul style="list-style-type: none"> • If mounting directly to an I-Beam, use Mounting Channel I-Beam Bracket Kit #2230-002 to mount channel to a structural I-beam. • Use Mounting Channel plate #2230-014 to install open reel to the channel. 		<p>Specially configured kits are designed to facilitate simple field installation of Balcrank hose reels.</p> <p>NOTE: These kits are not to be used with EV or EVX hose reels</p>			
2230-003	Mounting Channel 1 Reel		2230-026	<p>For use with single EVO, Premium and Classic.</p> <p>Allows the hose reel to be wall mounted to the swivel bracket and pivot horizontally</p>	
2230-004	Mounting Channel 2 Reels				
2230-005	Mounting Channel 3 Reels		2230-024	<p>Quick Mounting Plate</p> <p>For use with single EVO, Premium and Classic reel. No mounting channel required, mounts directly to unistrut. For I-beam mounting order 2230-013</p>	
2230-007	Mounting Channel 5 Reels				
2230-002	<p>Mounting Channel I-Beam Bracket Kit.</p> <p>Attaches mounting channel to facility I-beam structure.</p> <p>Use two bracket kits for 2, 3, or 4 reels. Use 3 brackets for 5 or 6 reels.</p>		2230-013	<p>I-Beam Mounting Clamps</p> <p>For use with single EVO, Premium and Classic. Attaches reel directly to structural beams with 4½" to 6½" flange widths or can be used with 2230-024</p>	
2230-014	<p>Mounting Channel Plate for use with open hose reels and a mounting channel. Easy one person installation made easy, plate is bolted to the mounting channel, providing plug & play mount of open reels.</p> <p>Use one per reel</p> <p>NOTE: Not to be used with Enclosed Hose Reels</p>		2230-016	<p>Mounting Adapter Plate Kit</p> <p>For field installation of a Balcrank Signature™ EVO, Premium, or Classic Series Hose Reels onto a previously installed Graco Series 350 mounting plate</p>	

Hose Reels Accessories & Supplies

LUBE CONSOLE	LUBE CONSOLE EXTENSION
	
Lube Console 2600-001	Lube Console Extension 2600-005
Lube Console. Includes Lower Hose Guide 2600-003. Ships with 5 console guides, and 2-3/8" accessory stops	Lube Console Extension. Installs next to 2600-001 Lube Console for added capacity. Ships with 2 console guides

ACCESSORIES		
		
LUBE CONSOLE LOWER Hose Guide 2600-003	LUBE CONSOLE FLOOR Plate Hose Guide 2600-006	Lube Console Basement/Ceiling Plate 2600-007
Lower Hose Guide	Floor Plate Hose Guide	Basement /ceiling plate with two hose outlets Can be used with Lube Console Extension 2600-005

ACCESSORIES		HOSE STOPS
		Purchase hose to fit the correct hose size
Air Chuck	 3340-006 Short Stub Length, Single Chuck Ball Foot Maximum pressure 145 psi (10 bar)	
Tire Inflator	 3340-009 Single Chuck Tire Inflator, Straight on single outlet chuck 3340-010 Double Chuck Tire Inflator, Straight on double outlet chuck Maximum pressure 360 psi (25 bar)	2230-015 Lube Console Hose Guide
Radiator Water Bibb	 3340-014 Radiator Water Bibb Thumb valve, Rubber spout Maximum pressure 145 psi (10 bar)	2230-009 Hose stop for 1/4" ID Hoses. Fits Classic, Premium, and EVO Hose Reels
Coiled Hose	 8137-030 30' x 3/8" Coiled Air Hose for Air/Water Polyurethane 8137-125 25' x 3/8" Coiled Air Hose for Anti-freeze Nylon 300 psi (21 bar)	2230-025 Hose stop for 3/8" ID Hoses. Fits Classic, Premium, and EVO Hose Reels
		2230-010 Hose stop for 1/2" ID Hoses. Fits Classic, Premium, and EVO Hose Reels
		2230-018 Hose stop for 1/2" ID Hoses. Fits EV and EVX Hose Reels
		2230-011 Hose stop for 3/4" ID Hoses. Fits EV and EVX Hose Reels
		2230-012 Hose stop for 1" ID Hoses. Fits EVX Hose Reels
		2230-039 Hose stop for 1 1/2" Hoses. Fits EVX+ Hose Reel

Hose Reels Light Cord Reels



2510-011



2510-016



2510-013



2510-017**

2

MODELS	DESCRIPTION	CORD LENGTH	GAUGE	INLET CORD	PLUG	AMPS	RECEPTACLE	LAMP	SERVICE BULLETIN
2510-011	Electric Cord Reel-30' x10 amps, 3 outlet	30' (10 m)	16/3 SJT	-	Grounded	10	3 outlets	-	-
2510-016	Light Cord Reel-50' x 18 gauge	50' (15 m)	18	-	Polarized	-	-	LED- impact resistant	SB 2016
2510-013	Outlet Reel. Duplex, 40'	40' (13 m)	12/3 SJTO	5.5' (1.67 m) 16/3 SJTO	NEMA 5-20P Grounded	20	NEMA 5-20R GFCI Duplex	-	SB 2030
2510-017**	Light Reel, Stubby II/Tap, 50'	50' (15 m)	16/3 SJTO	5.5' (1.67 m) 16/3 SJTO	NEMA 5-15P Grounded	12	NEMA 5-15R Locking	LED- impact resistant	SB 2030

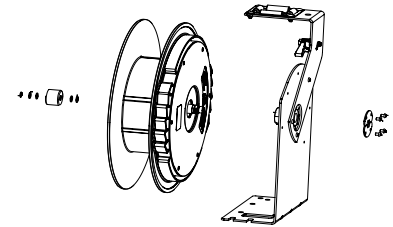
SJTO Cord is rated to 300 volts and has a temperature range of -4 °F to 140 °F and features excellent resistance to oil.

Indoor use only - Dry Locations

** Stubby II light with in-line tool tap on retracting cord

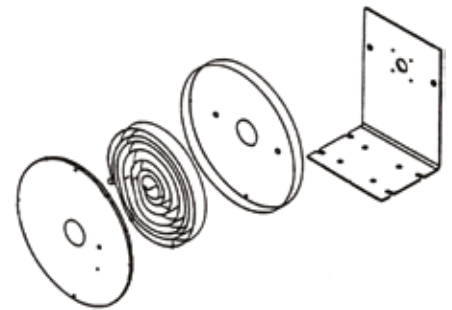
Hose Reels Repair Kits

EVO REELS		
REEL MODELS	KIT NUMBER	DESCRIPTION
LOW/MEDIUM PRESSURE		
All LP/MP EVO reels	833029	Swivel seal kit
All EVO reels	833031	Roller outlet
All Enclosed EVO reels	826175	Roller outlet
All EVO reels	833033	Stop Pawl
All 30' & 50' EVO reels	833032	Spool (including Power Spring - up to 50' of hose)
All Enclosed EVO reels	833292	Spool (including Power Spring - up to 50' + 10' of hose)
HIGH PRESSURE		
All HP EVO reels	833030	Swivel
All EVO reels	833031	Roller outlet
All Enclosed EVO reels	826175	Roller outlet
All EVO reels	833033	Stop Pawl
All 30' & 50' EVO reels	833032	Spool (including Power Spring - up to 50' of hose)
All Enclosed EVO reels	833292	Spool (including Power Spring - up to 50' + 10' of hose)



2

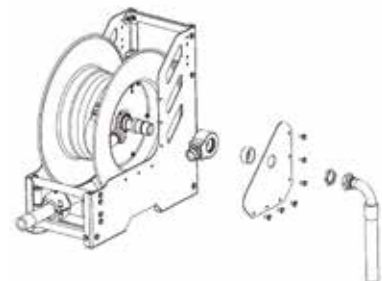
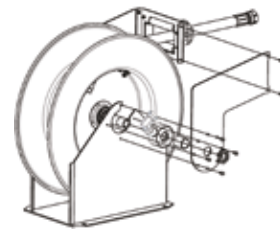
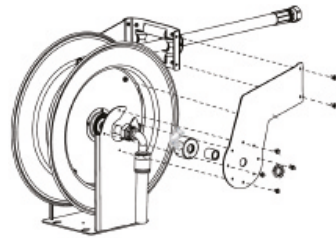
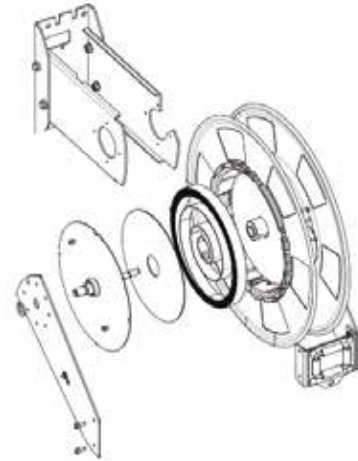
CLASSIC REELS		
REEL MODELS	KIT NUMBER	DESCRIPTION
LOW/MEDIUM PRESSURE		
All LP/MP Classic reels	833314	Swivel with seals
All 30' Classic hose reels	831315	Roller outlet - small arm
All Classic 40' & 50' hose reels; DEF reels, Diesel reel	833313	Roller outlet - large arm
All Enclosed Classic Reels	826175	Roller outlet
All LP/MP Classic reels	833312	Stop Pawl
All 30' Classic hose reels	826728	Power Spring (up to 30' of hose)
All Classic 40' & 50' hose reels; DEF reels, Diesel reel	808966	Power Spring (up to 50' of hose)
HIGH PRESSURE		
All Classic HP reels	809396	Swivel - outlet
All 30' Classic hose reels	831315	Roller outlet - small arm
All Classic 40' & 50' hose reels	833313	Roller outlet - large arm
All Enclosed Classic Reels	826175	Roller outlet
All LP/MP Classic reels	833312	Stop Pawl
All 30' hose reels	826728	Power Spring (up to 30' of hose)
All 40' & 50' hose reels	808966	Power Spring (up to 50' of hose)



Hose Reels Repair Kits

2

PREMIUM REELS		
REEL MODELS	KIT NUMBER	DESCRIPTION
LOW/MEDIUM PRESSURE		
All Premium Reels prior to Year 2012	826175	Roller outlet
All 30' Premium hose reels prior to Year 2012	826728	Power Spring (up to 30' of hose)
All 40' & 50' Premium hose reels prior to Year 2012	808966	Power Spring (up to 50' of hose)
All LP/MP Premium reels after Year 2012	833029	Swivel seal kit
All Premium reels after Year 2012	833031	Roller outlet
All Premium reels after Year 2012	833147	Stop Pawl
All 30', 40', & 50' Premium hose reels after Year 2012	833145	Power Spring (up to 50' of hose)
All 60' Premium hose reels after Year 2012	833146	Power Spring (up to 50' + 10' of hose)
HIGH PRESSURE		
REEL MODELS	KIT NUMBER	DESCRIPTION
All HP Premium reels prior to Year 2012	809396	Swivel - inlet
All Premium reels prior to Year 2012	826175	Roller outlet
All 30' Premium hose reels prior to Year 2012	826728	Power Spring (up to 30' of hose)
All 40' & 50' Premium hose reels prior to Year 2012	808966	Power Spring (up to 50' of hose)
All HP Premium reels after Year 2012	833030	Swivel
All Premium reels after Year 2012	833031	Roller outlet
All Premium reels after Year 2012	833147	Stop Pawl
All 30', 40', & 50' Premium hose reels after Year 2012	833145	Power Spring (up to 50' of hose)
All 60' Premium hose reels after Year 2012	833146	Power Spring (up to 50' + 10' of hose)
EV REELS		
All EV Reels prior to Year 2009	826175	Roller outlet
All EV reels (except DEF)	833267	Swivel with seals
All EV reels (except DEF)	833266	Seal kit (swivel not included)
All DEF EV reels	833315	Swivel with seals
All DEF EV reels	833316	Seal kit (swivel not included)
All EV reels	833265	Roller outlet
All EV reels	833262	Stop Pawl
EVX REELS		
All EVX reels	833264	Swivel with seals
All EVX reels	833263	Seal kit (swivel not included)
All EVX reels	833261	Roller outlet
All EVX reels	833262	Stop Pawl
EVX+ REEL		
EXV+ reel	833262	Stop Pawl
EXV+ reel	833903	Swivel with seals
EXV+ reel	833904	Swivel complete kit
EXV+ reel	833905	Roller outlet assembly (high capacity spring)





1 2 3 4 5 6 7 8 9 10

Control Handles

CONTROL HANDLES PRODUCT SELECTION MATRIX	94
NON-METERED	95
DR SERIES METERED	96
MO SERIES METERED	97
MR SERIES METERED	98
MR (PRESET) SERIES METERED	99
HIGH-FLO METERED & NON-METERED	100
WATER BASED FLUIDS METERED & NON-METERED	101
EP SERIES METER	102
METERS	103
OIL DISPENSING EQUIPMENT	105
GREASE HANDLES AND ACCESSORIES	106
ACCESSORIES FOR CONTROL HANDLES	107
REPAIR KITS FOR CONTROL HANDLES	108

Oil Control Handles Product Selection Matrix

3

UNIT OF MEASURE	FLOW RANGE	MAX. PRESSURE	WEIGHT	RECOMMENDED FLUIDS
NON-METERED				
-	0.26 - 10.5 gal/min (1-40 l/min)	1,450 psi (100 bar)	3.30 lb (1.5 kg)	Oil, transmission fluid, hydraulic fluid, and anti-freeze
DR SERIES METERED				
gallon quart pint liter	0.26 - 8 gal/min (1-30 l/min)	1,450 psi (100 bar)	4 lb (1.80 kg)	Oil, transmission fluid, hydraulic fluid, and anti-freeze
MO SERIES METERED				
quart liter	0.26 - 8 gal/min (1-30 l/min)	1,000 psi (70 bar)	4 lb (1.80 kg)	Oil, transmission fluid, hydraulic fluid, and anti-freeze
MR SERIES METERED				
quart liter	0.26 - 8 gal/min (1-30 l/min)	1,450 psi (100 bar)	3.75 lb (1.7 kg)	Oil, transmission fluid, hydraulic fluid, and anti-freeze
MR SERIES PRESET METERED				
gallon quart liter	0.25 - 8 gal/min (1-30 l/min)	1,450 psi (100 bar)	4.4 lb (2 kg)	Oil, transmission fluid, hydraulic fluid, and anti-freeze
HIGHFLO NON-METERED				
-	0.26 - 24 gal/min (1-90 l/min)	1,450 psi (100 bar)	4.5 lb (2.05 kg)	Oil, transmission fluid, hydraulic fluid, and anti-freeze
HIGHFLO METERED				
gallon quart pint liter	0.52 - 19 gal/min (2-70 l/min)	1,450 psi (100 bar)	6.3 lb (2.85 kg)	Oil, transmission fluid, hydraulic fluid, and anti-freeze
CONTROL HANDLE FOR WATER BASED FLUIDS NON-METERED				
-	8 gal/min (30 l/min)	725 psi (50 bar)	1 lb (0.4 kg)	Anti-freeze, windshield wash solution, and water
CONTROL HANDLE METERED FOR WATER BASED FLUIDS METERED				
gallon quart pint liter	8 gal/min (30 l/min)	725 psi (50 bar)	2.2 lb (1kg)	Anti-freeze, windshield wash solution, and water
ELECTRONIC PRESET METERED				
gallon quart pint liter	0.2 - 8 gal/min (0.8- 30 l/min)	1,425 psi (100 bar)	3.7 lb (1.7 kg)	Oil, transmission fluid, hydraulic fluid, and anti-freeze



NON-METERED

DR SERIES METERED

MO SERIES METERED

MR SERIES METERED

MR SERIES PRESET METERED

HIGHFLO NON-METERED

HIGHFLO METERED

WATER BASED FLUIDS NON-METERED

WATER BASED FLUIDS METERED

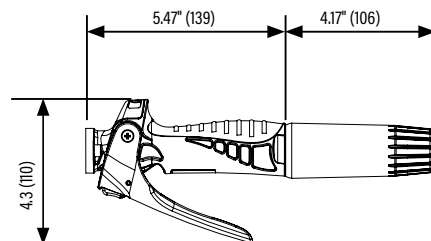
ELECTRONIC PRESET METERED

Control Handles Non-Metered



TECHNICAL DATA	
Flow Rate	0.26-10.5 gal/min (1-40 l/min)
Maximum pressure	1,450 psi (100 bar)
Swivel Inlet	1/2" NPT(F) Swivel
Dispense Nozzle OD	Auto = 0.605" Manual 1/4 turn for OIL = 0.705" Manual 1/4 turn for ATF = 0.315" Verify ID of ATF fill port for compatibility
Operating Temperature	14° F to 140° F (-10° C to 60° C)
Weight	3.30 lb (1.5 kg)
Compatible Fluids	Oil, transmission fluid, hydraulic fluid, and anti-freeze
Wetted Materials	Aluminum, stainless steel, zinc alloy, Buna-N™, zinc plated steel and brass
Service Bulletin	SB 3095

Dimensions inches (mm)



833398 Multi Colored set; red, yellow, green, blue (4 pcs)

Features

- Fully ported, ball bearing, inlet swivel included
- Easy access fluid inlet screen included at swivel
- Included swivel hose-end cover, protects vehicle or machine surfaces from scratches
- Easy access for service of the rotary piston mechanism
- Trigger lock button prevents accidental control valve opening and allows the control valve to be locked in open position for large volumes dispense
- Cam & piston valve design optimized for superb control and minimal flow resistance
- Ergonomically designed grip handle for optimum comfort

Fluids

- Synthetic and mineral based lubricants
- Gear Oil
- Hydraulic oil and fluids
- ATF
- Anti-freeze (Glycol) and anti-freeze water solution

Markets Served

- Car and truck dealers
- Fast lube and maintenance shops
- Fleets
- Mining and construction
- Lube trucks
- Railroad and mass transit

MODELS AVAILABLE	EXTENSION TYPE & NOZZLE	EXTENSION CODE
Verify ID of ATF fill port for compatibility.		
3320-026	Flex Auto	3332-095
3320-022	Rigid 1/4 turn - OIL	3332-091
3320-023	Flex 90 1/4 turn - OIL	3332-092
3320-024	Flex Memory 1/4 turn - OIL	3332-093
3320-032	Flex Memory 1/4 turn - ATF	3332-104
3320-056	Bare	-

Control Handles DR Meter (Digital Register Meter)



Features

- Precision robotically machined aluminum die-cast fluid chamber for repeatable accuracy
- Sealed battery compartment; 2 AAA batteries
- Low power consumption with auto sleep function
- Trip mode function; can operate as a simple fluid management device
- Non-resettable totalizer; maintains total volume of meter since day one
- Ergonomic comfort handle
- Unique 1/4 turn manual tip; fast, simple
- Flanged coupling; prevents leaks commonly found in competitive meters
- Swivel protective cover
- Affordable reparability

Fluids

- Synthetic and mineral based lubricants
- Gear Oil
- Hydraulic oil and fluids
- ATF
- Anti-freeze (Glycol) and anti-freeze water solution

Markets Served

- Car and truck dealers
- Fast lube and maintenance shops
- Fleets
- Mining and construction
- Lube trucks

3

See Dispense nozzle OD for important details

TECHNICAL DATA

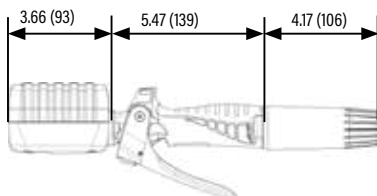
Units of measure	Batch: Gallons, Quarts, Pints, and Liters (in 0.01 increments)
Accuracy	+/- 0.5% of reading (lubricating oils)
Flow Range	0.26-8 gal/min (1-30 l/min)
Maximum pressure	1,450 psi (100 bar)
Swivel inlet	1/2" NPT(F)
Dispense Nozzle OD	Auto = 0.605" Manual 1/4 turn for OIL = 0.705" Manual 1/4 turn for ATF= 0.315" Verify ID of ATF fill port for compatibility
Operating temperature	14° F to 140° F (-10° C to 60° C)
Weight	4 lb (1.80 kg)
Battery	2 x 1.5 v alkaline "AAA"
Compatible Fluids	Oil, transmission fluid, hydraulic fluid, and anti-freeze
Wetted Materials	Liquid Crystal Polymer (LCP), aluminum, Buna-N™, zinc plated steel, stainless steel, neodymium, and brass
Service Bulletin	SB 3095

MODELS AVAILABLE	EXTENSION TYPE & NOZZLE	EXTENSION CODE
------------------	-------------------------	----------------

Verify ID of ATF fill port for compatibility.

3330-161	Flex Auto	3332-095
3330-157	Rigid 1/4 turn - OIL	3332-091
3330-158	Flex 90 1/4 turn - OIL	3332-092
3330-159	Flex-memory 1/4 turn - OIL	3332-093
3330-169	Rigid 1/4 turn - ATF	3332-101
3330-172	Flex-memory 1/4 turn - ATF	3332-104
3330-166	DR bare	-

Dimensions inches (mm)



833398 Multi Colored set; red, yellow, green, blue (4 pcs)

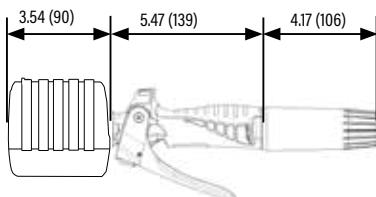
Control Handles MO Meter (Mechanical Oval Gear Meter)



See Dispense nozzle OD for important details

TECHNICAL DATA	
Units of measure	Quarts & Liters (totalizer Gallons)
Accuracy	+/- 1%
Flow Rate	0.25 - 8 gal/min (1 - 30 l/min)
Maximum pressure	1,000 psi (70 bar)
Swivel inlet	1/2" NPT(F)
Dispense Nozzle OD	Auto = 0.605" Manual 1/4 turn for OIL = 0.705" Manual 1/4 turn for ATF= 0.315" Verify ID of ATF fill port for compatibility
Operating temperature	14° F to 140° F (-10° C to 60° C)
Weight	4 lb (1.80 kg)
Compatible Fluids	Oil, transmission fluid, hydraulic fluid, and anti-freeze
Wetted Materials	Acetal, aluminum, stainless steel, NBR, Zinc plated steel, TPU, Polyamide
Service Bulletin	SB 3113

Dimensions inches (mm)



833398 Multi Colored set; red, yellow, green, blue (4 pcs)



Features

- 6-digit totalizer; keeps lifetime record of volume dispensed in gallons
- Meter with odometer display, works without batteries and performs well in all environments
- No calibration required; precision machined metering chamber assures repeatable accuracy
- Ergonomically designed grip handle for optimum comfort
- Unique 1/4 turn manual non-drip tip; fast, simple
- Included swivel hose-end cover, protects vehicle or machine surfaces from scratches

Fluids

- Synthetic and mineral based lubricants
- Gear Oil
- Hydraulic oil and fluids
- ATF
- Anti-freeze (Glycol) and anti-freeze water solution

Markets Served

- Car and truck dealers
- Fast lube and maintenance shops
- Fleets
- Mining and construction
- Lube trucks

MODELS AVAILABLE	EXTENSION TYPE & NOZZLE	EXTENSION CODE U/M
Verify ID of ATF fill port for compatibility.		
3330-205	Flex-memory 1/4 turn - OIL	3332-093 QT
3330-206	Flex-memory 1/4 turn - ATF	3332-104 QT
3330-207	Rigid 1/4 turn - OIL	3332-091 QT
3330-208	Flex 90 1/4 turn - OIL	3332-092 QT
3330-212	Flex-memory 1/4 turn - OIL	3332-093 L
3330-213	Flex 90 1/4 turn - ATF	3332-104 L
3330-214	Rigid 1/4 turn - OIL	3332-091 L
3330-215	Flex-memory 1/4 turn - OIL	3332-092 L
3330-204	Bare	- QT
3330-211	Bare	- L

Control Handles MR Meter (Mechanical Registry Meter)



Features

- 1 piece molded pointer knob is resistant to impacts
- No calibration required; precision machined metering chamber assures repeatable accuracy
- Viscosity and temperature change does not effect accuracy
- 33% improved performance over competitive mechanical meters
- 5-digit totalizer; keeps lifetime record of volume dispensed
- Easy access filter in swivel at meter inlet
Swivel protective cover
- Unique 1/4 turn manual tip; fast, simple
- Flanged coupling; prevents leaks commonly found in competitive meters
- Ergonomic comfort handle

Fluids

- Synthetic and mineral based lubricants
- Gear Oil
- Hydraulic oil and fluids
- ATF
- Anti-freeze (Glycol)

Markets Served

- Car and truck dealers
- Fast lube and maintenance shops
- Fleets
- Mining and construction
- Lube trucks
- Railroad and mass transit

MODELS AVAILABLE	EXTENSION TYPE & NOZZLE	EXTENSION CODE U/M
------------------	-------------------------	--------------------

Verify ID of ATF fill port for compatibility.

3330-189	Rigid 1/4 turn-OIL	3332-091	Qt
3330-192	Flex Memory 1/4 turn-OIL	3332-093	Qt
3330-196	Flex Memory 1/4 turn-ATF, Anti-freeze	3332-104	Qt
3330-177	Rigid 1/4 turn-OIL	3332-091	L
3330-180	Flex Memory 1/4 turn-OIL	3332-093	L
3330-184	Flex Memory 1/4 turn-ATF, Anti-freeze	3332-104	L
3330-202	MR Bare	-	L
3330-203	MR Bare	-	Qt

3



Gallons



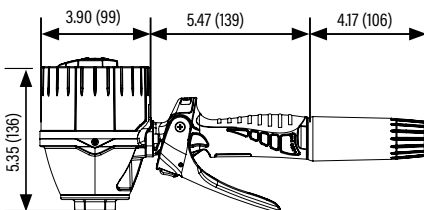
Liters

See Dispense nozzle OD for important details

TECHNICAL DATA

Units of measure	Gallons and Liters (in 0.01 increments)
Accuracy	+/- 0.65%
Flow Rate	0.26 - 8 gal/min (1 - 30 l/min)
Maximum pressure	1,450 psi (100 bar)
Swivel Inlet	1/2" NPT(F) Swivel
Dispense Nozzle OD	Auto = 0.605" Manual 1/4 turn for OIL = 0.705" Manual 1/4 turn for ATF= 0.315" Verify ID of ATF fill port for compatibility
Operating Temperature	14 °F to 140 °F (-10 °C - 60 °C)
Weight	3.75 lb (1.7 kg)
Compatible Fluids	Oil, transmission fluid, hydraulic fluid, and anti-freeze
Wetted Materials	Aluminum, stainless steel, zinc alloy, Buna-N™, zinc plated steel and brass
Service Bulletin	SB 3096

Dimensions inches (mm)



Control Handles MR Meter (Mechanical Preset Meter)



Features

- MR style meter with preset function.
- Preset mode dispensing allows hands-off operation as the meter automatically shuts off once the preset volume is delivered
- Meter with analogue dial display, works without batteries and performs well in all environment. Includes inlet swivel and rigid outlet with non-drip nozzle
- 1 piece molded pointer knob is resistant to impacts
- No calibration required; precision machined metering chamber assures repeatable accuracy
- Viscosity and temperature change does not effect accuracy
- 33% improved performance over competitive mechanical meters
- 5-digit totalizer; keeps lifetime record of volume dispensed
- Easy access filter in swivel at meter inlet
- Swivel protective cover
- Flanged coupling; prevents leaks commonly found in competitive meters
- Ergonomic comfort handle

Fluids

- Synthetic and mineral based lubricants
- Gear Oil
- Hydraulic oil and fluids
- ATF
- Anti-freeze (Glycol) and anti-freeze water solution

Markets Served

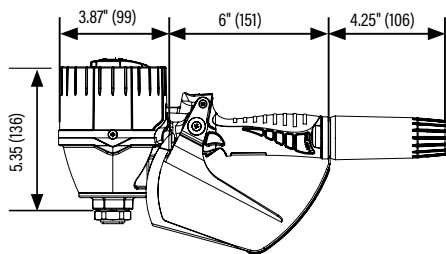
- Car and truck dealers
- Fast lube and maintenance shops
- Fleets
- Mining and construction
- Lube trucks
- Railroad and mass transit

3

TECHNICAL DATA

Units of measure	Gallons, Quarts, and Liters
Accuracy	+/- 0.65%
Flow Rate	0.25 - 8 gal/min (1 - 30 l/min)
Maximum pressure	1,450 psi (100 bar)
Swivel inlet	1/2" NPT(F)
Operating temperature	-49 °F to 158 °F (-45 °C to 70 °C)
Weight	4.4 lb (2 kg)
Compatible Fluids	Oil, transmission fluid, hydraulic fluid, and anti-freeze
Wetted Materials	Zinc alloy, aluminum, Buna-N™, stainless steel, brass, steel, TPU and polyamide
Service Bulletin	SB 3106

Dimensions inches (mm)



MODELS AVAILABLE	EXTENSION TYPE & NOZZLE	U/M DIAL U/M TOTALIZER
3331-024	Rigid straight Semi-auto tip	0-60 Liters
3331-023	Rigid straight Semi-auto tip	0-60 Quarts
3331-025	Rigid straight Semi-auto tip	0-60 Gallons

Control Handles HighFlo



Features

- HighFlo Control Handle is designed for service where higher volume deliveries are required
- High volume rigid or flexible outlets with non-drip tip
- 3/4" or 1" NPT inlet connection thread
- Ideal for bulk fill, transfer and high flow dispense
- Heavy duty rugged design

Fluids

- Synthetic and mineral based lubricants
- Gear Oil
- Hydraulic oil and fluids
- ATF
- Anti-freeze (Glycol)

Markets Served

- Truck dealers
- Fleets
- Mining and construction
- Lube trucks
- Railroad and mass transit

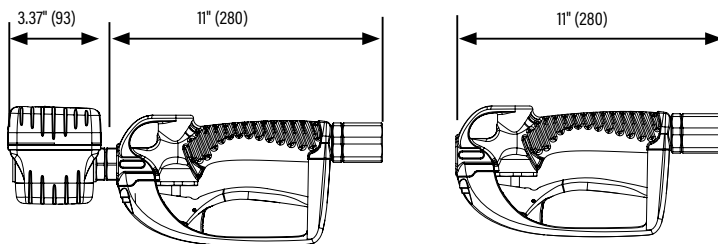
3

TECHNICAL DATA

	NON-METERED	METERED
Units of measure	-	Batch: Liters, quarts, pints, gallons
Accuracy	-	+/-0.5% of reading
Flow Range	0.26-24 gal/min (1-90 l/min)	0.52-19 gal/min (2-70 l/min)
Maximum pressure	1,450 psi (100 bar)	
Swivel inlet:	3/4" or 1" NPT(F)	
Operating Temperature	14 to 140° F (-10 to 60° C)	
Weight	4.5 lb (2.05 kg)	6.3 lb (2.85 kg)
Compatible Fluids	Oil, transmission fluid, hydraulic fluid, and anti-freeze	
Wetted Materials	Aluminum, Buna-N™, zinc plated steel and brass	Acetal, aluminum, stainless steel, Buna-N™, zinc plated steel and brass
Service Bulletin	SB 3097	SB 3097 + SB 3098

MODELS AVAILABLE	DESCRIPTION
3330-197	Rigid - Metered 3/4" NPT(F) Inlet
3330-198	Flex - Metered 3/4" NPT(F) Inlet
3330-199	Rigid - Metered 1" NPT(F) Inlet
3330-200	Flex - Metered 1" NPT(F) Inlet
3320-051	Rigid - Non-Metered 3/4" NPT(F) Inlet
3320-052	Flex - Non-Metered 3/4" NPT(F) Inlet
3320-053	Rigid - Non-Metered 1" NPT(F) Inlet
3320-054	Flex - Non-Metered 1" NPT(F) Inlet

Dimensions inches (mm)



Control Handles Water based fluids



Features

- Reinforced polyamide body and stainless steel valve mechanism
- Ergonomic-grip
- Includes brass inlet swivel 1/2" NPT(F), flex-90 extension and a 1/4 turn manual tip

Fluids

- Anti-freeze (Glycol)
- Windshield wash solution
- Water

Markets Served

- Car and truck dealers
- Fast lube and maintenance shops
- Fleets

3

TECHNICAL DATA		
	NON METERED	METERED
Units of measure	-	Batch: Quarts, Pints, Gallons and Liters (in 0.01 increments)
Accuracy	-	+/- 0.5% of reading (lubricating oils)
Flow Rate	8 gal/min (30 l/min)	
Maximum pressure	725 psi (50 bar)	
Swivel Inlet	1/2" NPT(F)	
Dispense Nozzle OD	Manual 1/4 turn for OIL = 0.705"	
Operating Temperature	122 °F (50 °C)	
Weight	1 lb (0.4 kg)	2.2 lb (1 kg)
Compatible Fluids	Anti-freeze, windshield wash solution, and water	
Wetted Materials	Fiberglass reinforced thermoplastic, polyurethane rubber, and brass	Fiberglass reinforced thermoplastic, polyurethane rubber, Viton®, brass, and stainless steel
Service Bulletin	SB 3105	

MODELS AVAILABLE	EXTENSION TYPE & NOZZLE	EXTENSION CODE
3320-055	Flex 90 1/4 turn - oil	3332-102
3330-201	Metered - Flex 90 1/4 turn - oil	3332-102

Control Handles EP Meter (Electronic Preset Meter)



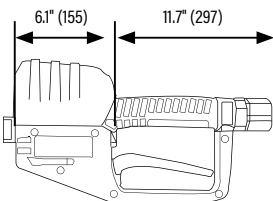
3

TECHNICAL DATA

Units of measure	Quarts, pints, gallons, liters
Accuracy	+/- 0.5 %
Flow Range	0.25-7.5 gal/m (1-30 l/m)
Maximum pressure	1,425 psi (100 bar)
Swivel Inlet	1/2" NPT(F)
Battery	4 x alkaline "AA"
Weight	3.7 lb (1.7 kg)
Compatible Fluids	Oil, transmission fluid, hydraulic fluid, anti-freeze and gear oil
Wetted Materials	Aluminum, AISI316 Stainless Steel, Buna-N™, Delrin, Brass, and Zinc Plated Steel
Service Bulletin	SB 3115

*Patent pending

Dimensions inches (mm)



Features

Preset dispensing allows hands-free operation as the meter automatically shuts off once the desired preset amount is reached.

- Programmable for quarts, pints, gallons, liters
- Save up to 10 preset values in built-in memory
- Operates in manual or automatic preset mode
- Transaction memory: Stores volume delivered of the last 5 transactions
- Low battery indicator

Fluids

- Synthetic and mineral based lubricants
- Gear oil
- Hydraulic fluids
- ATF

Markets Served

- Auto and truck dealerships
- Truck fast lube and maintenance shops
- Fleets
- Mining and construction
- Railroad and mass transit

MODELS AVAILABLE	EXTENSION TYPE & NOZZLE	EXTENSION CODE
3331-031	Rigid 1/4 turn - OIL	3332-091
3331-032	Flex Memory - OIL	3332-093
3331-033	DR bare	-

Accessories & Supplies Meters













DR METER							
	MODEL	MATERIAL	INLET/OUTLET THREADS	UNITS OF MEASURE	MAX PRESSURE	COMPATIBLE FLUIDS	SB
	3120-091 DIGITAL METER	Aluminum	1/2" NPT(F)	Liters, Gallons, Quarts, and pints	1,450 psi (100 bar)	Oil, glycol, and coolant solutions	SB 3095
	3120-013 PULSE METER	CPVC	1/2" NPT(F)	Liters, Gallons, Quarts, and pints	1,450 psi (100 bar)	Glycol, windshield wash solutions and DEF	SB 3107
	3120-114 PULSE METER	Aluminum	1/2" NPT(F)	Liters, Gallons, Quarts, and pints	1,500 psi (100 bar)	Oil, glycol, and coolant solutions	SB 3099
MO METER							
	MODEL	MATERIAL	INLET/OUTLET THREADS	UNITS OF MEASURE	MAX PRESSURE	COMPATIBLE FLUIDS	SB
	3330-209	Aluminum	1/2" NPT(F)	Liter	1,000 psi (70 bar)	Oil, glycol, and coolant solutions	SB 3113
	3330-210	Aluminum	1/2" NPT(F)	Quarts	1,000 psi (70 bar)	Oil, glycol, and coolant solutions	SB 3113
DR METER HIGHFLO							
	MODEL	MATERIAL	INLET/OUTLET THREADS	UNITS OF MEASURE	MAX PRESSURE	COMPATIBLE FLUIDS	SB
	3120-120 DIGITAL METER	Aluminum	3/4" NPT(F)	Liters, Gallons, Quarts, and pints	1,450 psi (100 bar)	Oil, glycol and coolant solutions	SB 3098
	3120-014 PULSE METER	Aluminum	3/4" NPT(F)	Liters, Gallons, Quarts, and pints	1,450 psi (100 bar)	Oil, glycol and coolant solutions	SB 3108

Control Handles Meter Extensions

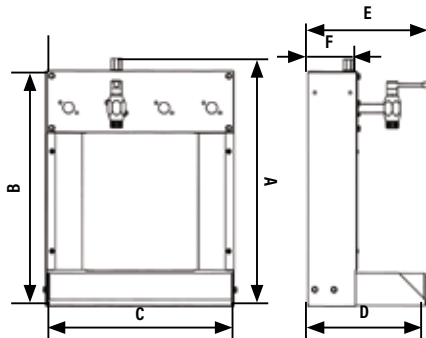
3

DR EXTENSIONS & NOZZLES

Verify ID of ATF fill port for compatibility

	MODEL	INLET	EXT. TYPE	NOZZLE
	3332-098	1/2" NPT(M)	Rigid 60	Auto Tip OD = 0.605"
	3332-095	1/2" NPT(M)	Flex	Auto Tip OD = 0.605"
	3332-094	1/2" NPT(M)	Flex 90	Auto Tip OD = 0.605"
	3332-099	1/2" NPT(M)	Flex Memory	Auto Tip OD = 0.605"
	3332-091	1/2" NPT(M)	Rigid 60	For OIL 1/4 Turn Manual Tip OD = 0.705"
	3332-100	1/2" NPT(M)	Flex	For OIL 1/4 Turn Manual Tip OD = 0.705"
	3332-092	1/2" NPT(M)	Flex 90	For OIL 1/4 Turn Manual Tip OD = 0.705"
	3332-093	1/2" NPT(M)	Flex Memory	For OIL 1/4 Turn Manual Tip OD = 0.705"
	3332-101	1/2" NPT(M)	Rigid 60	For ATF 1/4 Turn Manual Tip OD = 0.315"
	3332-103	1/2" NPT(M)	Flex	For ATF 1/4 Turn Manual Tip OD = 0.315"
	3332-102	1/2" NPT(M)	Flex 90	For ATF 1/4 Turn Manual Tip OD = 0.315"
	3332-104	1/2" NPT(M)	Flex Memory	For ATF 1/4 Turn Manual Tip OD = 0.315"

Control Handles Oil Dispensing Equipment



DIMENSIONS INCHES (MM)					
A	B	C	D	E	F
24.4" (620)	22.8" (580)	19" (480)	11.6" (295)	9.25" (235)	5" (125)

NOTE: fluids must be compatible with wetted materials

Features

Balcrank's oil bar dispenser provides neat and convenient point-of-use dispensing for hand carried containers. This dispenser is easily incorporated into any fluid inventory control system.

- Up to four dispense points
- Heavy duty, metal body
- Drain with steel screen and 1/2" NPT hose connection

Includes:

- One spigot (4200-012) with anti-splash, anti-drip diffuser nozzle
- Additional spigots sold separately

3

TECHNICAL DATA	
Max. Working Pressure	1,000 psi (68.9 bar)
Spigot Inlet	1/2" NPT(F)
Recommended Fluids	Lubricants, gear oil, ATF, hydraulic fluid, and anti-freeze
Wetted Materials	Steel, aluminum, and Buna-N™
Service Bulletin	SB 4038

MODEL AVAILABLE	DESCRIPTION
4200-014	Oil Bar Dispenser -1 Spigot



MODEL AVAILABLE	DESCRIPTION
4200-011	Spigot Only

MODEL AVAILABLE	DESCRIPTION
4200-012	Straight Stem for Oil Bars

MODEL AVAILABLE	DESCRIPTION
4200-013	Goose neck (for use with tapper pumps)

TECHNICAL DATA	
Max operating pressure	1,000 psi (68.9 bar)
Inlet port size	3/8" NPT(F)
Recommended Fluids	Lubricants, gear oil, ATF, Hydraulic Fluid, and anti-freeze NOTE: fluids must be compatible with wetted materials
Wetted Parts	Steel, Aluminum and Buna-N™
Service Bulletin	SB 4037

TECHNICAL DATA	
Max operating pressure	1,000 psi (68.9 bar)
Inlet port size	1/2" NPT(F)
Recommended Fluids	Lubricants, gear oil, ATF, Hydraulic Fluid, and anti-freeze NOTE: fluids must be compatible with wetted materials
Wetted Parts	Steel, Aluminum and Buna-N™
Service Bulletin	SB 4037

TECHNICAL DATA	
Max operating pressure	1,000 psi (68.9 bar)
Inlet port size	3/4" NPT(F)
Recommended Fluids	Lubricants, gear oil, ATF, Hydraulic Fluid, and anti-freeze NOTE: fluids must be compatible with wetted materials
Wetted Parts	Steel, Aluminum and Buna-N™
Service Bulletin	SB 4037

Control Handles Grease - Comfort Grip and Pro Series



3

Features

- Precision-machined, all steel handle and forged body provides reliable service
- Precise, proportional trigger action
- Balanced and knurled grip for less fatigue
- Easily repaired for extended life
- For use with pneumatic grease pumps
- Includes rigid lance, coupler and z-swivel. Some models include whip hoses

MODELS AVAILABLE	DESCRIPTION
3310-030	Comfort Grip Grease Handle
3310-031	Comfort Grip Grease Handle with 18" Whip Hose
3310-032	Comfort Grip Grease Handle with 36" Whip Hose

Pro-Series

- Precision-machined, all steel handle and forged body provides reliable service
- Precise, proportional trigger action
- Balanced and knurled grip
- Inlet screen included
- For use with pneumatic grease pumps

MODELS AVAILABLE	DESCRIPTION
3310-008	Pro Series Grease Handle
3310-010	Pro Series Grease Handle with Z-swivel
3310-025	Pro Series Grease Handle with 18" Whip Hose and Z-swivel
3310-020	Pro Series Grease Handle with 36" Whip Hose and Z-swivel

Pro Series Booster

The Pro Series Booster high pressure control handle is designed for use as a standard control handle and as a "Booster" when extreme pressures is required up to 10,000 psi

MODELS AVAILABLE	DESCRIPTION
3310-007	Pro Series Booster Grease Handle
3310-009	Pro Series Booster Grease Handle with Z-swivel

TECHNICAL DATA

Max pressure Handle	7,250 psi (500 bar)
Whip Hose	5,000 psi (345 bar)
Z-Swivel	5,000 psi (345 bar)
Swivel inlet:	1/4" NPT(F)
Compatible Fluids	NLGI-2 Grease
Wetted Materials	Steel and Aluminum
Service Bulletin	SB 3093

Ensure that all system components are rated for the max outlet pressure, especially pumps over 60:1 ratio



Pro Series





Pro Series Booster

TECHNICAL DATA

	3310-010	3310-009
Max pressure	5,000 psi (345 bar)	5,000 psi (345 bar) building to 10,000 psi (690 bar)
Swivel inlet	1/4" NPT(F)	1/4" NPT(F)
Compatible Fluids	NLGI-2 Grease	NLGI-2 Grease
Wetted Materials	Steel	Steel
Service Bulletin	SB 3018	SB 3006






Ensure that all system components are rated for the max outlet pressure, especially pumps over 60:1 ratio

Control Handles Accessories

	<p>Flexible Extensions Flexible whip hose extensions with crimped ends Includes adapter to attach to grease control handle</p>	<p>8390-002, 18" Whip hose HP flexible extension 8390-003, 36" Whip hose HP flexible extension 8390-004, 42" Whip hose HP flexible extension</p> <p>Max. pressure 5,000 psi (345 bar). Hose end 1/8" NPT(M) on both ends. Compatible fluid NLGI-2 Grease</p>
	<p>Grease Coupler Standard super grip coupler</p>	<p>5200-017 Quick Lock grease coupler 1/8" NPT(F)</p> <p>5310-024 Grease coupler, 4-jaw. Max pressure 10,000 psi (690 bar). Threads 1/8" -27 NPT. Compatible Fluid: NLGI-2 Grease</p>
	<p>Z-Swivel Swivel action for better control Installed between grease handle and fluid hose for freedom of motion Low friction ball bearing swivels High pressure packing</p>	<p>5310-018 Z-Swivel. Max pressure 5,000 psi (345 bar). Inlets: 1/4" NPT(F) x 1/4" NPT(M). Wetted materials: Steel</p>
	<p>Shrouds Protects vehicle or machine surfaces from scratches.</p>	<p>833398 Multi Colored set; red, yellow, green, blue (4 pcs)</p>

3

NOZZLES

	MODEL	INLET	TIP OD	MAX. FLOW	NOZZLE
	3332-097	1/4" NPT(F)	0.612" Verify ID of ATF fill port for compatibility	2.1 gal/min (8 l/min)	Auto
	3332-096	1/4" NPT(F)	0.710" Verify ID of ATF fill port for compatibility	3.7 gal/min (14 l/min)	1/4 Turn Manual for OIL ports
	3332-105	1/4" NPT(F)	0.312" Verify ID of ATF fill port for compatibility	3.7 gal/min (14 l/min)	1/4 Turn Manual for ATF ports
	3332-090	3/8" NPT(F)	0.548" Verify ID of ATF fill port for compatibility	5.0 gal/min (18.9 l/min)	Semi-Auto
	3332-107	1/2" NPT(F)	-	15.5 gal/min (58.79 l/min)	Semi-Auto HighFlo

Control Handle Repair Kits

DR METER		
HANDLE MODELS	KIT NUMBER	DESCRIPTION
All DR handle	833306	Inlet Swivel
All DR handle	833307	Trigger
All DR handle	833308	Valve
All DR handle	833309	Cam kit
DR Meter	833381	O-ring
DR Meter	833310	Gears kit
DR Meter	833873	Circuit Board Kit
DR Meter	833917	Face Plate/Battery Cover



MO METER		
HANDLE MODELS	KIT NUMBER	DESCRIPTION
All MO handle	833306	Inlet Swivel
All MO handle	833307	Trigger
All MO handle	833308	Valve
All MO handle	833309	Cam kit
MO Meter	833381	O-ring



EP METER		
HANDLE MODELS	KIT NUMBER	DESCRIPTION
All EP handle	833924	Oval Gear Kit
All EP handle	833925	Electronic Module
All EP handle	833926	Valve Sealing Kit



MR HANDLE		
HANDLE MODELS	KIT NUMBER	DESCRIPTION
All MR handle	833385	Kit, Knob, MR Meter
All MR handle	833386	Kit, Shroud, MR Meter, Quarts
All MR handle	833387	Kit, Shroud, MR Meter, Liters
All MR handle	833388	Kit, Gear & Inner Dial, MR Meter, Quarts
All MR handle	833389	Kit, Gear & Inner Dial, MR Meter, Liters
All MR handle	833390	Kit, Totalizer, MR Meter
All MR handle	833391	Kit, Metering Chamber, MR Meter, Quarts
All MR handle	833392	Kit, Metering Chamber, MR Meter, Liters
All MR handle	833393	Kit, Packing Gland, Housing, MR Meter
All MR handle	833306	Kit, Inlet Swivel - DR Handle
All MR handle	833307	Kit, Trigger - DR Handle
All MR handle	833308	Kit, Valve - DR Handle
All MR handle	833309	Kit, Cam - DR Handle



3

Control Handle Repair Kits

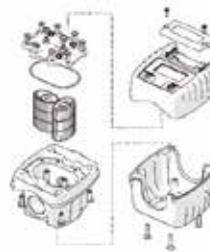
MR HANDLE PRE-SET		
HANDLE MODELS	KIT NUMBER	DESCRIPTION
All Pre-Set MR handle	833594	Kit, Inlet Swivel - DR Handle
All Pre-Set MR handle	833580	Kit, Knob, MR Preset
All Pre-Set MR handle	833581	Kit, Shroud, MR Preset, Liters
All Pre-Set MR handle	833582	Kit, Shroud, MR Preset, Quarts
All Pre-Set MR handle	833583	Kit, Shroud, MR Preset, Gallons
All Pre-Set MR handle	833584	Kit, Gears, MR Preset, Liters
All Pre-Set MR handle	833585	Kit, Gears, MR Preset, Quarts
All Pre-Set MR handle	833586	Kit, Gears, MR Preset, Gallons
All Pre-Set MR handle	833587	Kit, Totalizer, MR Preset, Liters
All Pre-Set MR handle	833588	Kit, Totalizer, MR Preset, Qts/Gal
All Pre-Set MR handle	833589	Kit, Metering Chamber, MR Preset, L
All Pre-Set MR handle	833391	Kit, Metering Chamber, MR Preset, Qts/Gal
All Pre-Set MR handle	833591	Kit, Lock Mechanism, MR Preset
All Pre-Set MR handle	833592	Kit, Handle Cam, MR Preset
All Pre-Set MR handle	833593	Kit, Handle Valve, MR Preset
All Pre-Set MR handle	833594	Kit, Swivel, MR Preset
All Pre-Set MR handle	833381	O-Ring/ Buna/24Mm Id X 2Mm Cs/Dr Meter
All Pre-Set MR handle	833393	Kit, Packing Gland, Housing, MR Meter

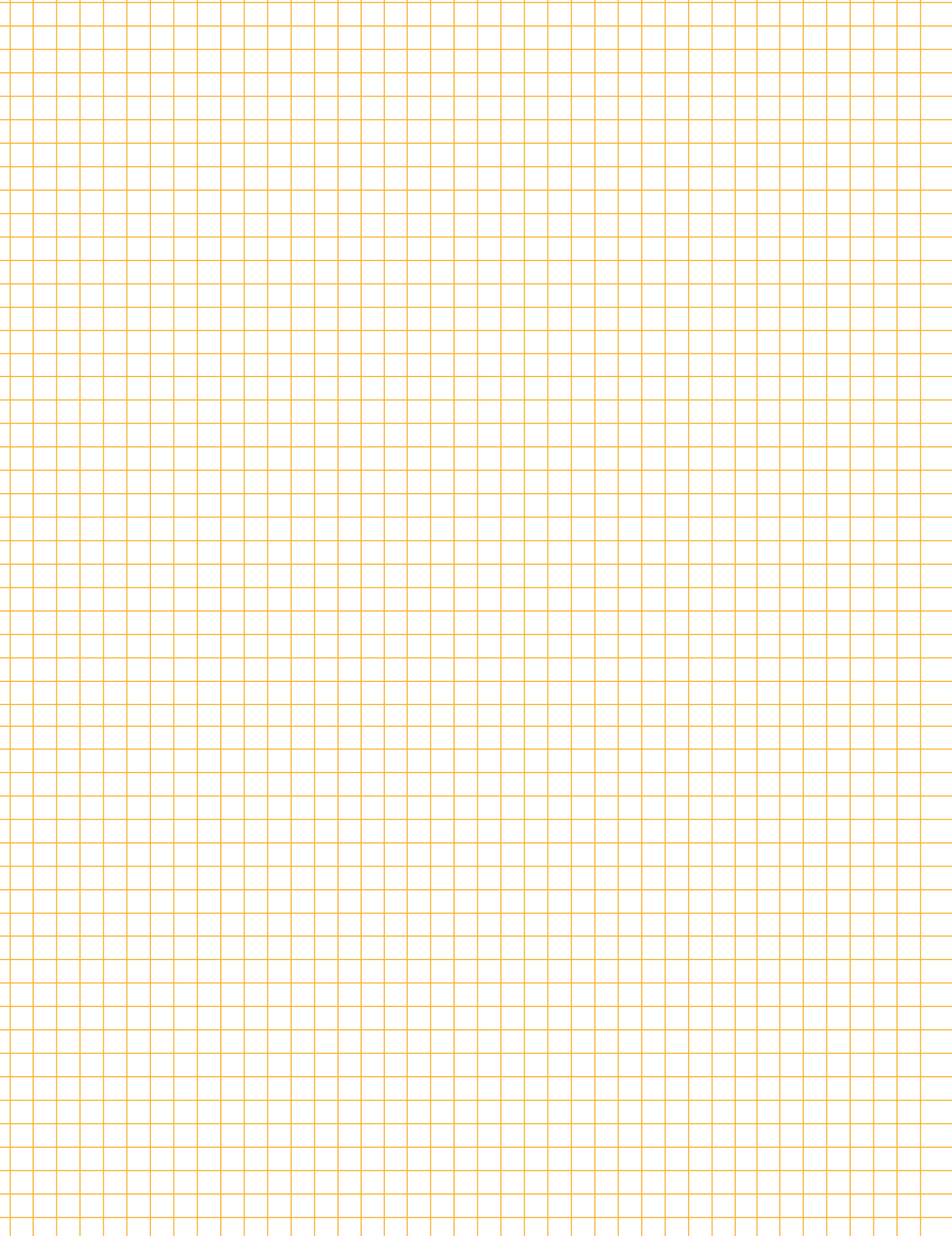
HIGHFLO METER		
HANDLE MODELS	KIT NUMBER	DESCRIPTION
3320-051, 052, 053, 054	833376	3/4" NPT swivel with strainer and O-ring
3320-051, 052, 053, 054	833377	Control valve body with 1" swivel
3320-051, 052, 053, 054	833380	Flex extension with Semi-Auto tip and bonded seal
3320-051, 052, 053, 054	833379	Rigid extension with Semi-Auto tip and bonded seal

PULSE METERS		
METER MODELS	KIT NUMBER	DESCRIPTION
DR FOR DEF		
3120-116	833507	DR Meter Face with Electronic Kit
DR STYLE		
3120-114	833687	Gear Kit
DR STYLE METER HIGH FLOW		
3120-120	833508	Gears Kit
3120-120	833873	Circuit Board Kit
3120-120	833376	3/4" NPT swivel with strainer and O-ring
3120-120	833917	Face Plate/Battery Cover



3







1 2 3 **4** 5 6 7 8 9 10

Fluid Inventory Control

FLUID INVENTORY CONTROL PRODUCT SELECTION MATRIX	112
NEX-U®	113
SYNERGY	127
DIRECTOR JR.	134
TM CONTROL	136



Fluid Inventory Control Product Selection Matrix



FEATURES	NEX-U	SYNERGY	DIRECTOR JR.
Max. number of dispense points	Unlimited	255	10
Max. number of fluids	Without U-tank: Unlimited With U-tank: 50	Unlimited	1
Fluid names	✓	✓	
Number of keypads	Without U-tank: Unlimited With U-tank: 50	Unlimited	1
Job number validation	✓	✓	
Job numbers	✓	✓	
Simultaneous keypad operation	✓	✓	
Simultaneous dispense	✓	✓	
Max. number of tanks	Without U-tank: Unlimited With U-tank: 50	Unlimited	
Calculated tank declining balance	✓	✓	
Real-time tank monitoring	✓	✓	
Tank report over e-mail	✓	✓	
PIN code validation	✓	✓	
Operation PIN codes	✓	✓	
Max. number of PINs	Unlimited	Unlimited	
Extensive user permission configuration	✓	✓	
Preset volumes	✓	✓	✓
Hose Reel ID	✓	✓	✓
Operator names	✓	✓	
Dispense from keypads	✓	✓	✓
Dispense from PC	✓	✓	
Dispense from smart phone/tablet	✓	With Web App Keypad 3110-034	
Max. number of transaction history	U-track: Unlimited U-dat: 5000	Unlimited	
Print reports	✓	✓	
Print receipt	✓	Local / Network	
Custom reports	✓	✓	
Bar Code / Card reader / Dallas Key	✓	✓	
Wireless	✓		
Bluetooth	✓		
DMC Integration - CDK	✓	✓	

4

Fluid Inventory Control Nex-U.®

NEX-U.® Fluid Monitoring Systems

NEX-U.® provides you with the control and the information you require to make your operation more profitable. You will be able to account for every drop of lubricant and other service fluids used.



Today's Challenges

Lost inventory equals lost profit; with today's high oil prices, inventory control eliminates that concern.

The Solution

For almost any lubricant usage or shop size, with today's high cost for these fluids, NEX-U.® quickly pays for itself. Once it is paid for, savings go right to the operation's bottom line in the form of profit; profit previously lost.

NEX-U.® has been conceived with the user in mind, making fluid management and fluid inventory control an easy and trouble-free activity.

NEX-U.® adapts to your way of working

NEX-U.® is a hybrid system that brings you all the advantages of wireless flexibility and hard-wired reliability

Wireless flexibility

- Data can be transmitted wirelessly among the different system components, eliminating long and expensive cable runs
- Easily adds new components when required as your needs grow
- System uses existing Wi-Fi® networks, simplifying its installation. No need for special, custom made, network components

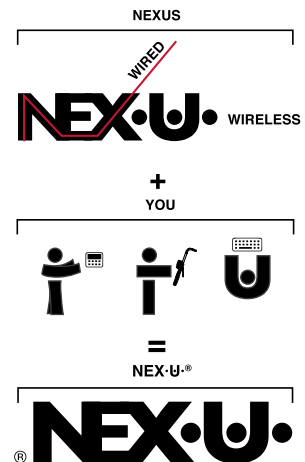
Hard-wired reliability

- A constant and reliable power source is always present to power the solenoid valves that control fluid delivery.
- No uncharged batteries to let you down.
- Hard-wired data transmission to avoid interferences and other obstacles which might interfere with wireless data transmission

NEX-U.® contributes to increased productivity in vehicle service operations

- Provides total control and record of every fluid dispensed
- Secures fluid access to authorized technicians only
- Provides accurate, real-time fluid inventory information

NEXUS + YOU = NEX-U.®



NEX-U.® combines the Latin word "NEXUS", which means connection to wireless or hard-wired connected system components, with "U" (You), the system User, the Human.

NEX-U.® installation must be performed by a Balcrank NEX-U.® Certified Distributor. Contact your Balcrank representative for additional information.

Fluid Inventory Control NEX-U® U-net

U-net is the key NEX-U® component. It is the central processing unit that controls the system communications and houses the U-track software.



U-net

Features

- U-net includes a powerful 2.4 GHz processor and 4 GB RAM
- It controls the system functions and manages the wired and wireless communication between the NEX-U® components
- It has two CAN BUS ports (in/out) for wired communications with other NEX-U® components and an ethernet port that allows U-net to connect to the shop LAN

4

COMPONENT TECHNICAL DATA

Function	Central processing unit that controls the system communications and houses the U-track software
Requirements & Limitations	Intel 2,4 GHz processor - 4 GB RAM memory - 64 GB storage capacity - One Ethernet connection, one HDMI, four USB and two CAN BUS communication ports
Power	10-240V AC - 5V DC transformer included

MODEL AVAILABLE

3110-110	U-net central processing unit. Includes U-track software
3110-133	Virtual Keypad license. Converts any terminal (PC, laptop, tablet or smartphone) into a NEX-U® access Keypad.
3110-137	CDK - Activation fee for integrating with NEX-U®
3110-138	CDK - Monthly fee for integrating with NEX-U®

U-net also includes the U-track software

U-track is a powerful web-based software package that gives you full control of fluid usage and inventory. It is a web-based software that allows multi-user applications. All PCs or tablets in the same network and in the same location can have access to U-track. U-track can work using any web browser.

Compatible with: Chrome, Firefox, and Microsoft Edge.

U-track benefits:

- Simple and intuitive system set-up
- Simplified system maintenance (manage users, fluid inventory, etc.)
- Manage all the system hard-wired and wireless communication
- Generate a wide variety of reports, which can be easily exported to CSV and txt formats
- Record and manage Validated Preset Transactions (required for operating with U-Vision+)
- Transform any PC terminal in the workshop into a NEX-U® virtual keypad license required

U-track also contributes to increasing your operations efficiency and profitability:

- Keeps control of the quantity of fluid dispensed in the system
- Improves inventory accuracy, generating automatic warnings and email notifications for reorders at critical predefined inventory levels
- Generates a variety of reports, to help you track dispense information such as date and time, technician, work order, fluid dispensed, volume delivered, etc.

Fluid Inventory Control NEX-U® U-dat & U-dat Power+

U-dat allows system access to technicians either through a PIN code or by using an RFID card.



Udat Udat power+

Features

- U-dat includes a 7" full color graphics display and a complete QWERTY keypad
- U-dat supports CAN BUS cable communications that carry data and power to open the solenoid valves in the system. "Plug-and-play" connectors make cabling easy
- U-dat includes the transformer required to simultaneously open up to 8 solenoid valves

Power cord not included, use 3130-001.

Optional Bluetooth printer (see accessories pg. 124).

4

COMPONENT TECHNICAL DATA	
Function	Allows system access to technicians either through a PIN code or using a RFID card
Requirements & Limitations	- Requires 110 - 240 V AC - CAN BUS in/out
Power	U-dat requires 110 - 240 V power supply
Service Bulletin	SB 3806

MODEL AVAILABLE	
3110-100	U-dat power+ keypad NEX-U® access keypad with 7" color screen and QWERTY keypad. One USB, one RS232 and in/out CAN BUS ports. 110 - 240 V AC, with a 320 W transformer to open 8 solenoid valves, supports CAN BUS communications.
3110-104	U-dat power keypad NEX-U® access keypad with 7" color screen and QWERTY keypad. One USB, one RS232 and in/out CAN BUS ports. 110 - 240 V AC, with a 75 W transformer to open 2 solenoid valves, supports CAN BUS communications.

NEX-U® adapts to the way you work and it offers multiple possibilities for accessing the system.

Technicians can access NEX-U® via:

- U-dat: System access keypad
- U-vision+
- Any device connected to the same network as U-net (laptop, smartphone or tablet)

Compatible with: Chrome, Firefox, and Microsoft Edge.

U-dat connection panel

All wired connections can be quickly and easily done without opening the U-dat.

It is possible to connect a printer, an external RFID reader, or a barcode reader to the RS-232 port.

Fluid Inventory Control Nex-U.® U-vision & U-vision+

U-vision+ adapts to any Balcrank oil control handle and transforms the handle into a hand-held display and keypad for access to the NEX.U.® system.



4

COMPONENT TECHNICAL DATA

Function	Hand held display module
Requirements	Non-metered control handle, select on pg. 93
Power	U-vision+ is powered with 4 "AA" 1.5 V alkaline batteries
Service Bulletin	
U-vision	SB 3803
U-vision+	SB 3809

Uvision Uvision+

Features

Use the U-vision to display reel, battery level, and delivery. Use U-vision+ to dispense and to interact with the system.

- Modular design fits standard non-metered control handle
- Display dispensed data
- Display and input data

Non-metered control handle not included. Choose handle to fit your needs (pg. 95).

MODEL AVAILABLE

3110-112	U-vision hand-held display module
3110-113	U-vision+ hand-held keypad and display module. (Control handle not included)

U-vision

Hand-held display module to fit a Balcrank oil control handle. Includes a backlight display connected via Bluetooth® with a U-valve, U-meter+ or U-count module and it displays the following parameters:

- Hose reel (fluid outlet number and fluid dispensed type)
- Battery life and Bluetooth® signal strength
- Volume delivered and operation progress
- Solenoid valve open or closed

U-vision+

U-vision+ includes a six-button keypad and it can replace the U-dat keypad for data entry in the system as it allows the following operations:

- User access through PIN entry
- Scroll through existing open job orders to select the one corresponding to each operation or enter the job order number (digits only)
- Enter the volume of fluid to be dispensed
- Confirm fluid type and transaction

Fluid Inventory Control Nex-U® U-valve & U-valve+

U-valve is a compact unit combining a high accuracy pulse meter, a solenoid valve and a large cleanable fluid screen filter with an electronic module. This module is required to control the meter and valve operation and to communicate with other system components.



- Reduces installation time and eliminates the risk of leaks when using separate components
- It has a large, high visibility LED display which shows the U-valve number assigned in the system and the U-valve operation
- Four different LED lights that show the U-valve operation for diagnosis and two buttons for system configuration
- U-valve supports CAN BUS cable communication that transmits data and the electric power required to open the solenoid valve and Bluetooth® connection to a U-vision or a U-vision+ fluid handle with display
- U-valve+ includes Wi-Fi® communications for data transmission to other system components

4

COMPONENT TECHNICAL DATA

Function	- Controls on/off function - Dispense flow controls and monitors - Communicates data to U-net system
Requirements & Limitations	Requires U-power/U-power+ or U-dat/U-dat power+ power supply units
Power	U-valve and U-valve+ require 24 V DC supplied by a U-dat or a U-power module
Service Bulletin	SB 3802

MODEL AVAILABLE

3110-115	U-valve meter, solenoid valve and electronic module. Includes Bluetooth® communication for connecting to a U-vision or U-vision+
3110-114	U-valve+ meter, solenoid valve and electronic module. Includes Bluetooth® connection to a U-vision or U-vision+ and Wi-Fi® for data transmission to other components in the system

PRODUCT SPECIFICATIONS

WETTED PARTS	Aluminium, NBR, stainless steel, acetal
APPLICATIONS	Lubricants, antifreeze solutions * If fluid additives are used, it is recommended to install stainless steel pulse meter and stainless steel solenoid valve
CONNECTION THREADS	1/2" NPT(F)
FLOW RANGE	1-32 qt/min (1-30 l/min)
PULSES PER QUART	310 ppq (328 ppl)
ACCURACY	+/- 0.5 %
MAXIMUM WORKING PRESSURE	1,450 psi (100 bar)
SOLENOID VALVE	24 V DC
COMMUNICATION	CAN BUS, Bluetooth®, Wi-Fi® (U-valve+ only)

Fluid Inventory Control Nex-U[®] U-meter & U-meter⁺

High accuracy, compact pulse meter including the electronic module required to control the meter and valve operation and to communicate with other system components through CAN BUS.



3110-118



3110-117

U-meter U-meter⁺

Features

- The meter has an LED display showing the U-meter number assigned in the system, four different LED lights that show the U-meter operation for diagnosis and two buttons for system configuration
- Equipped with fast connection in/out CAN BUS terminals
- Available in different materials and sizes to match different applications

NOTE: U-meter⁺ includes Bluetooth[®] connection to a U-vision or a U-vision⁺ module.

4

COMPONENT TECHNICAL DATA

Function	In-line meter
Requirements & Limitations	Requires U-power or U-power ⁺ power supply units. Order solenoid separately
Power	U-valve and U-valve ⁺ require 24 V DC supplied by a U-dat or a U-power module

MODEL AVAILABLE

3110-139	U-meter 1/2" NPT(F) Lube
3110-122	U-meter 3/4" NPT(F) Lube, diesel
3110-120	U-meter 1/2" BSPP DEF, WW, AF
3110-118	U-meter 1/2" BSPP DEF, WW, AF
3110-117	U-meter ⁺ 1/2" NPT(F) Lube
3110-123	U-meter ⁺ 3/4" NPT(F) Lube, diesel
3110-121	U-meter ⁺ 1/2" BSPP DEF, WW, AF
3110-119	U-meter ⁺ 1/2" BSPP DEF, WW, AF

U-METER ⁺ , MODELS WITH BLUETOOTH PART NO.	3110-117	3110-123	3110-121	3110-119
U-METER PART NO.	3110-139	3110-122	3110-120	3110-118
Wetted Materials	Aluminium, NBR, stainless steel, acetal	Aluminium, NBR, stainless steel, acetal	PVC, Vectra [®] , stainless steel, Viton [®]	Stainless steel, Vectra [®] , Viton [®]
Applications	Lubricants	Lubricants, diesel	DEF, WW, AF	DEF, WW, AF
Connection threads	1/2" NPT(F)	3/4" NPT(F)	1/2" BSPP	1/2" BSPP
Flow range	1 - 32 qt/min (1 - 30 l/min)	8.4 - 84.4 qt/min (8 - 80 l/min)	1 - 52.8 qt/min (1 - 50 l/min)	1 - 52.8 qt/min (1 - 50 l/min)
Pulses per quart	310 ppq (328 ppl)	103 ppq (109 ppl)	303 ppq (320 ppl)	303 ppq (320 ppl)
Accuracy	+/- 0.5 %	+/- 0.5 %	+/- 0.5 %	+/- 0.5 %
Max working PSI	1,450 psi (100 bar)	1,450 psi (100 bar)	1,450 psi (100 bar)	1,450 psi (100 bar)
Communications	CAN BUS	CAN BUS	CAN BUS	CAN BUS
Service Bulletin	SB 3801	SB 3810	SB 3801	SB 3808

U-METER SOLENOID KITS	3110-125	3110-126	3110-127	3110-128	3110-130	3110-131
Applications	Lubricants, AF	Lubricants, AF	High delivery lubricants & AF solutions	High delivery lubricants & AF solutions	DEF and WW (LP)	DEF and WW (LP)
Connection threads	1/2" NPT(F)	1/2" NPT(F)	3/4" NPT(F)	3/4" NPT(F)	1/2" BSPP	1/2" BSPP
Pulse meter	3110-139 U-meter	3110-117 U-meter ⁺	3110-122 U-meter	3110-123 U-meter ⁺	3110-120 U-meter	3110-121 U-meter ⁺
Solenoid valve	3120-217	3120-217	3120-218	3120-218	3120-226	3120-226
Y-strainer	3120-211	3120-211	3120-212	3120-212	3120-211	3120-211

Only for connection with U-dat, U-valve, or an adjacent U-meter. Requires a 24 V DC solenoid valve.

Fluid Inventory Control NEX-U® U-count & U-view

U-count fluid control module includes a high visibility LED display and the software required to function with the rest of the NEX-U® system components.



3110-135



3110-134

U-COUNT	3110-135
Description	Fluid meter and solenoid valve controller includes Bluetooth®, CAN BUS communications.
Service Bulletin	SB 3805

U-VIEW	3110-134
Description	U-view remote display module
Service Bulletin	SB 3804

U-count

The U-count allows the use of external solenoid/meter combination to control almost any fluid:

- DEF
- Highflow Oil
- Grease
- WW Fluid
- Anti-freeze

U-view

U-view requires hard-wired connection (data and power) to a U-dat keypad or to a 110 - 240 V AC power supply using a 24 V DC external transformer (U-power or U-power*).

Ucount Uview

Features

U-count fluid control module includes a high visibility LED display and the software required to function with the rest of the NEX-U® system components.

The LED display shows the number assigned in the system and four different LED lights show the operation of the valve for diagnosis and two buttons for system configuration. U-count supports CAN BUS hard-wired communication that transmits data and power required to open the solenoid valve, for data communication with other system components and Bluetooth® to communicate with a U-vision or U-vision+ handle.

U-view has remote, high visibility, LED display that shows the volume delivered through various U-valves (no simultaneous operation supported). U-view supports Wi-Fi® and hardwired communication.

MODEL AVAILABLE	
3110-135	U-count meter, solenoid, bluetooth
3110-134	U-view remote display module

4

Fluid Inventory Control NEX-U® Compact

NEX-U® also offers solutions for smaller workshops where web-based software is not needed. NEX-U® Compact is a simple system based on a special U-dat keypad that is able to control a maximum of 8 dispensing points.



NEX-U.

Features

The Keypad includes a 7" colored screen and a simplified version of the U-track software. The software included provides workshops with:

- Full control of bulk stored fluid usage.
- Inventory control using declining balance method. NEX-U® Compact will give a warning signal once a certain inventory is reached, and restricts access to those outlets that have run out of inventory.
- Ability to generate full reports in CSV format that can provide useful management information.

NEX-U® Compact 75.

With a 75 W transformer for opening up to 2 solenoid valves and dispensing 2 fluids

NEX-U® Compact 320.

With a 320 W transformer for opening up to 8 solenoid valves and dispensing 8 fluids

4

NEX-U® COMPACT	3110-101 & 3110-103
Description	NEX-U® Compact keypad
Service Bulletin	SB 3806

MODELS AVAILABLE

3110-101	NEX-U® Compact 75
3110-103	NEX-U® Compact 320.

Power cord not included, use 3130-001.

NEX-U® Compact does not support working within a network or PC connection.



Fluid Inventory Control NEX-U.® Mobile

NEX-U.® Mobile allows fluid inventory and usage control in mobile service trucks. NEX-U.® Mobile is a special U-dat keypad module, which includes the software required for an autonomous operation, can control up to maximum of 8 fluid outlets. Completed transactions can be saved to a USB memory stick in an Excel format.



NEX-U.

Features

NEX-U.® MOBILE can work with any NEX-U.® fluid meter: U-valve; U-meter or U-meter+ with 24 V DC solenoid valve and filter.

Standard U-count and U-pulser solenoid valve are compatible with NEX-U.® Mobile as long as they are connected to a 24 V DC solenoid valve.

NEX-U.® Mobile Keypad
24 V DC keypad or opening up to 8 solenoid valves and dispensing 8 fluids

NEX-U.® MOBILE	3110-102
Description	NEX-U- Mobile keypad 24 U DC
Service Bulletin	SB 3806

MODEL AVAILABLE	
3110-102	NEX-U- Mobile keypad

4



Fluid Inventory Control Nex-U.® U-pulser

U-pulser high accuracy in-line pulse meter.



U-pulser

Features

U-pulser high accuracy in-line pulse meter. Equipped with connection terminal and valve open indication light.

This meter does not have a display or function buttons and requires a 24 V DC solenoid valve.

Only for connection to a U-count module.

4

U-PULSER METER	3120-114	3120-014	3120-013	3120-227	3120-228
Wetted Materials	Aluminium, NBR, stainless steel, acetal	Aluminium, NBR, stainless steel, acetal	PVC, Vectra®, stainless steel, Viton®	Stainless steel, Vectra®, Viton®	Aluminium, acetal, NBR, Stainless steel
Applications	Lubricants	Oil, diesel	DEF, WW and AF solutions	DEF, WW and AF solutions	Oil, diesel
Connection threads	1/2" NPT(F)	3/4" NPT(F)	1/2" BSPP	1/2" BSPP	1" NPT(F)
Flow range	1-32 qt/min (1-30 l/min)	8.4-84.4 qt/min (8-80 l/min)	1-52.8 qt/min (1-50 l/min)	1 - 52.8 qt/min (1 - 50 l/min)	10.4-84.4 qt/min (10-80 l/min)
Pulses per quart	310 ppq (328 ppl)	104 ppq (110 ppl)	303 ppq (320 ppl)	303 ppq (320 ppl)	104 ppq (110 ppl)
Accuracy	+/- 0.5 %	+/- 0.5 %	+/- 0.5 %	+/- 0.5 %	+/- 0.5%
Max working PSI	1,450 psi (100 bar)	1,450 psi (100 bar)	435 psi (30 bar)	1,450 psi (100 bar)	1,450 psi (100 bar)
Service Bulletin	SB 3099				

MODEL AVAILABLE	
3120-114	U-pulser 1/2" NPT(F) Lube, AF
3120-014	U-pulser 3/4" NPT(F) Oil, glycol, coolant solutions, diesel
3120-013	U-pulser 1/2" BSPP DEF, WW, AF
3120-227	U-pulser 1/2" BSPP DEF, WW, AF
3120-228	U-pulser 1" NPT(F) DEF, WW, AF

Fluid Inventory Control Nex-U.® U-tank

Provides real-time inventory control, reducing concerns about running out of inventory or used fluid tanks overflow.



U-tank

Features

U-tank is a monitor module capable of controlling two tanks using digital or analog level gauges. Can be connected to solenoid valves to control pump operation, and to external warning devices.

U-tank has two independent graphic displays and level bars, where the inventory available in each tank can be checked. It also has a set-up keypad for inventory adjustment if required⁽¹⁾.

See pg. 124 for probes and alarm

COMPONENT TECHNICAL DATA		MODEL AVAILABLE	
Function	Monitor tank fluid levels	3110-105	U-tank tank monitoring module. Can control up to two tanks. Supports CAN BUS communications. 110 - 240 V
Requirements	- Requires 110 V		
Power	110 -240 V AC supply		
Service Bulletin	SB 3807		

4

The number of input and output ports are:

- One analog input per tank for a pressure probe with 4-20 mA or 0-10V
- Three digital inputs per tank for a low, intermediate or high-level probe ⁽¹⁾
- One output per tank for a solenoid valve to control air supply to each pump
- One output per tank for an electro-pneumatic valve to prevent tank overflow
- One output for controlling an air solenoid valve to stop the air supply to all pumps when the workshop is closed
- One output per tank for controlling a flash warning light or an acoustic alarm

U-tank supports CAN BUS wired communication with other NEX-U.® system components plus Wi-Fi® with optional CAN BUS to Wi-Fi® converter.

(1) The use of digital probes does not allow real-time inventory monitoring. NEX-U.® will use declining balance for inventory control and will require manual inventory adjustment when fluid is supplied to the tank.


Only for connection with U-dat, U-valve, or an adjacent U-meter. Requires a 24 V DC solenoid valve.

Fluid Inventory Control Nex-U- Accessories

4

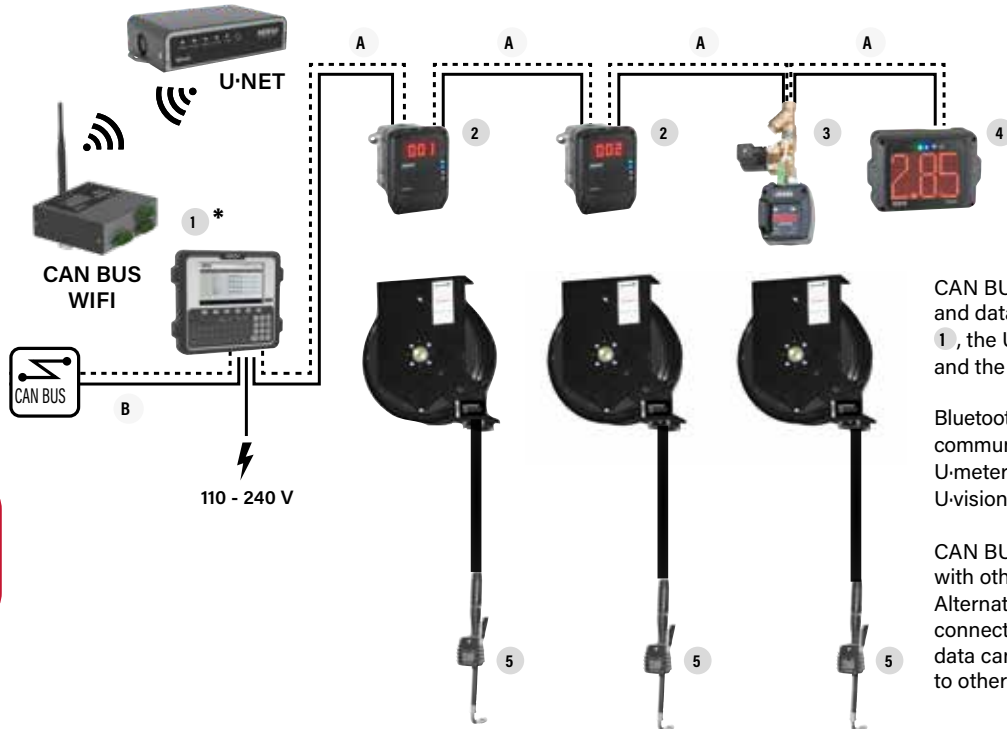
	MODEL	DESCRIPTION
 <p>3110-106 & 3110-108</p> <p>3110-146</p>	U-POWER & U-POWER+	
	3110-106	U-power+. Power supply unit with a 320 W transformer for use with 8 solenoid valves. Two CAN BUS ports (one input/one output)
	3110-108	U-power. Power supply unit with a 75 W transformer for use with 2 solenoid valves. Two CAN BUS ports (one input/one output)
	3110-146	U-power+. Power supply unit with a 320 W transformer for use with 8 solenoid valves. Three CAN BUS ports (two input/one output)
	CAN BUS TO WIFI CONVERTER	
	3110-145	Allows wireless communication among the different components of the system. Equipped with an external antenna, it allows for extended signal coverage. It can be configured from a Windows or Android application. Can be used with any CAN BUS component
	BLUETOOTH PRINTER	
	3110-109	Optional printer for use with NEX-U- COMPACT, connected via Bluetooth to the U-dat.
	BARCODE	
	3110-140	Bar code laser reader. Reads any one dimensional code. For use with a U-dat, U-dat Power+ and U-dat for NEX-U- mobile and compact systems.
	U-VALVE BRACKET	
	2230-040	Allow for mounting U-valve on top of a hose reel stand.
 <p>3130-110 3130-500 3130-100</p> <p>3110-143</p> <p>3110-141</p> <p>3110-136</p>	CABLES & CORDS	
	3130-110	100' (30.5 m) CAN BUS communication cable
	3130-500	500' (152.4 m) CAN BUS communication cable
	3130-100	1,000' (304 m) CAN BUS communication cable
	3110-143	Jumper cable. 1.6' (0.5 m) cable with pre-wired connectors 3110-141 for connecting adjacent elements with a CAN BUS cable
	3110-141	In/out electrical connectors. For use with U-meter, U-meter+
	3110-136	Allows wiring connection between U-valves
	3130-001	AC Power Cord, 6', 3 prong plus, 16/3 SJE00W, 13 amps/125 V, rated for outdoor use
 <p>3120-084</p> <p>3120-079</p> <p>3120-029</p>	LEVEL GAUGES	
	3120-084	Tank level pressure gauge. Allows real-time monitoring of the volume in a tank. Maximum tank depth 11 1/2" (350 cm)
	3120-079	Digital level gauge. Detects minimum, intermediate or maximum volume in a tank. Does not allow real-time monitoring. Adjustable height, includes 16' (5 m) cable
	3120-029	Remote flash and acoustic alarm
 <p>3120-217</p> <p>3120-218</p>	SOLENOID VALVES FOR FLUIDS	
	NEX-U- requires 24 V DC, normally closed solenoid valves to operate. U-valve and U-valve+ include a solenoid valve. For other metering elements, a solenoid valve compatible with the fluid and the application requirements must be used.	
	3120-217	Oil and antifreeze solutions. Brass and NBR Pressure: 725 PSI (50 bar) Connection: 1/2" NPT (F/F) Power: 24 V DC
	3120-218	Coolant, diesel, water, oil. Brass and NBR Pressure: 725 PSI (50 bar) Connection: 3/4" NPT (F/F) Power: 24 V DC
3120-226	DEF; antifreeze and windshield wash solutions, stainless steel and EPDM Pressure: 145 PSI (10 bar) Connection: 1/2" NPT (F/F) Power: 24 V DC	

Fluid Inventory Control Nex-U Accessories

	MODEL	DESCRIPTION
 <p>3120-220</p>	SOLENOID VALVES FOR COMPRESSED AIR - PUMP CONTROL	
	3120-033	Compressed air. Brass and NBR Pressure: 145 PSI (10 bar) Connection: 1/2" NPT (F/F) Power: 24 V AC
	3120-220	Compressed air. Brass, Buna-N™, Stainless Steel, and Copper Normally Opened. Air Solenoid provides for the remote shutdown of dispensing pumps from the fluid control console. Order one per controlled pump. Pressure: 150 PSI (10.3 bar) Connection: 1/2" NPT (F/F) Power: 24 V AC
	3120-225	Compressed air. Brass and NBR Pressure: 145 PSI (10 bar) Connection: 1/2" NPT (F/F) Power: 24 V DC

Fluid Inventory Control Nex-U.®

Access through U-dat



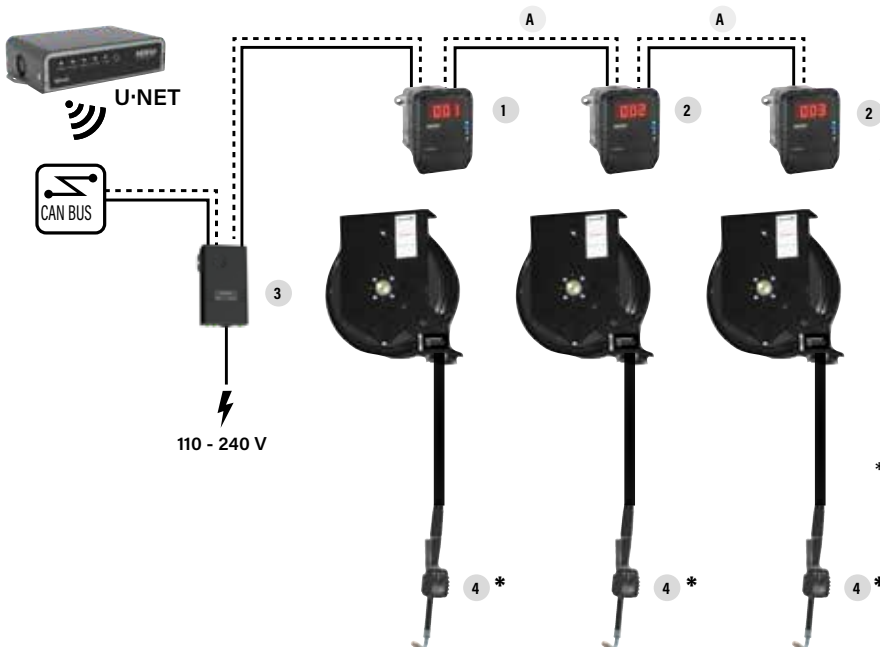
CAN BUS cable **A**, transmits power and data between the U-dat keypad **1**, the U-valves **2**, the U-meter+ **3** and the U-view remote display **4**.

Bluetooth® connection is used to communicate each U-valve **2** and U-meter+ **3** with its corresponding U-visor **5** hand-held display.

CAN BUS cable **B** communicates with other NEX-U.® components. Alternatively, if the keypad **1**, is connected to the wireless network, data can be transmitted wirelessly to other NEX-U.® components.

* Dispense input

Access through U-vision+



Power and data are transmitted using CAN BUS cable **A** between the U-valves+ **1** and the other U-valves **2**. Power to energize the solenoid valves is supplied by the U-power **3**, connected to U-valves+ **1**.

Each U-valves+ **1** and U-valve **2** is connected to its corresponding U-visor+ **4**, hand-held display and systems access Keypad.

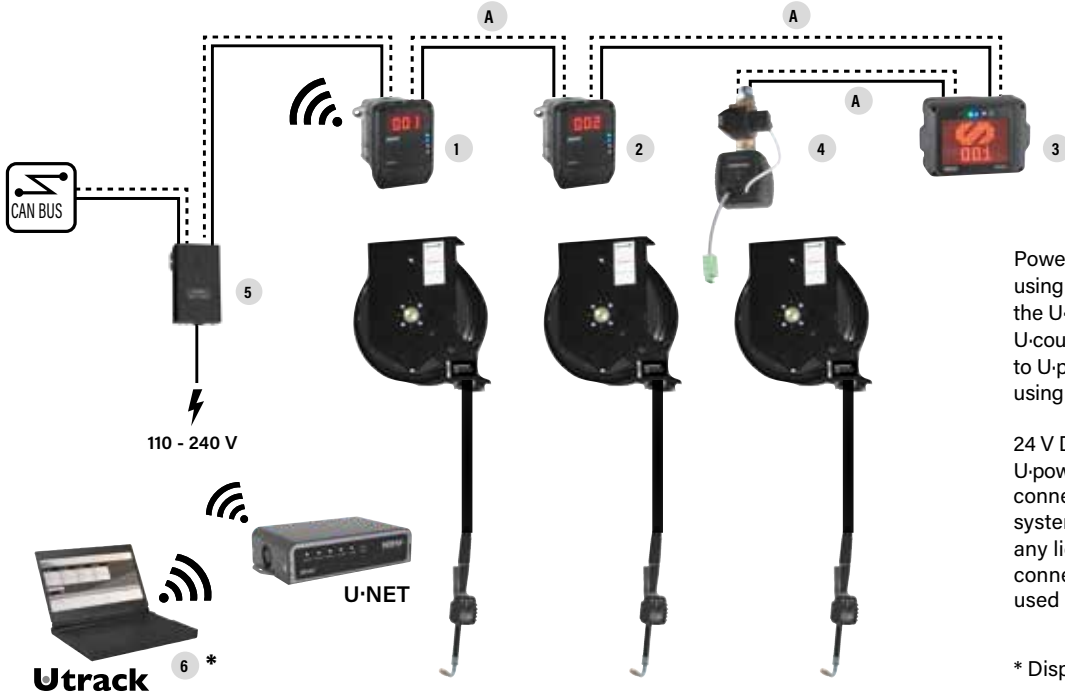
Wireless data transmission is done by U-valves+ **1**.

* Dispense input

4

Fluid Inventory Control Nex-U.®

PC - Laptop Connection



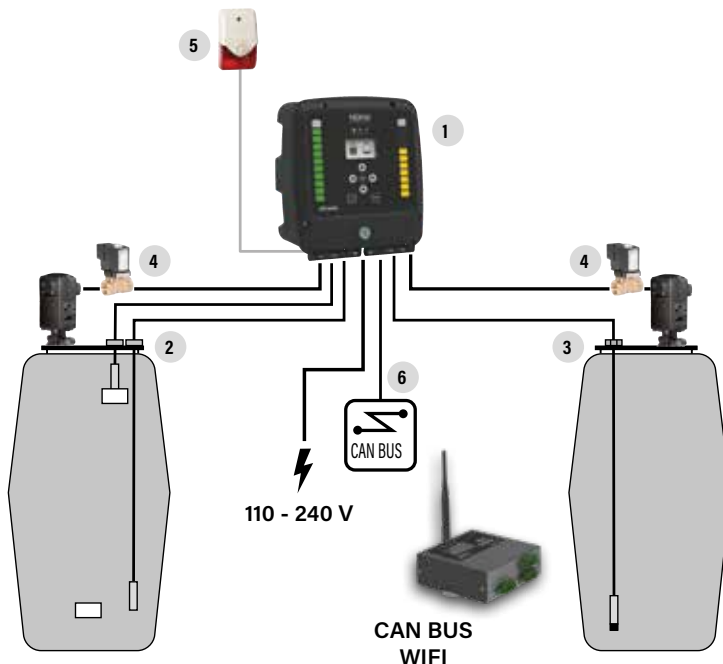
Power and data are transmitted using CAN BUS cable **A** between the U-valve+ **1**, U-valve **2** and U-count **3**. U-count **3** is connected to U-pulser solenoid valve **4** also using CAN BUS connection.

24 V DC power is supplied by U-power **5** to U-valve+ **1** connecting using Wi-Fi* with all system components, including any licensed terminal **6** that is connected to U-track and can be used as a virtual access keypad.

* Dispense input



Tank Monitoring



U-tank **1** can monitor up to two tanks. Each tank can be fitted with low and high level sensors **2** or with a pressure gauge **3** for real-time control of the inventory in the tank. U-tank **1** can also control pump operation opening or closing an air solenoid valve **4** that prevents pump from running dry or air entering the oil distribution lines if there is no oil in the tanks.

U-tank **1** can also control a remote flash light or siren **5** to warn when any tank is empty.

U-tank **1** can communicate with other NEX-U.® elements using Wi-Fi* or through CAN BUS **6** wired connection.

Fluid Inventory Control Synergy Components

Multi Point Dispense Module, Keypad and LED Display

Features

Multi-Point Dispense Module

- The Multi-Point Dispense Module handles metering and fluid solenoid control from any keypad or PC in the entire system.
- One module controls up to 4 reel dispense points and offers a keyed manual override.
- Every outlet port can be given unique functions: Volume, time out, job number, group access, Pulse Per Unit, display information, min./max. volume.

Keypad

- The standard keypads are designed to be located in strategic locations to allow remote entry of reel selection, PIN, job number, etc.
- Can be equipped with optional Serial Port Kit for use with an external reader.
- No limit for number of keypads in the system.
- Any reel dispense points can be opened from any keypad.

LED Display

- Large display, easy to see from long distances.
- The active reel dispense points is shown in the lower left corner.
- When equipped with a clock module or connected with a PC LED Display unit shows the current time when the system is not in use.
- Displays the active dispense volume
- Can display tank volume when used in a system with a tank control module and an analog sensor.

NOTE: If the LED Display unit is used to display tank volume, it cannot be used to display dispenses, and can only display the volume of a single tank.

MODELS AVAILABLE

3110-017	Multi-Point Dispense Module
3130-001	AC Power Cord
3110-016	Standard Keypad, 6' 3 Prong Plus
3110-030	Keypad with Serial Port
3120-068	LED Display



Multi Point Dispense Module

Keypad

LED Display

MULTI POINT DISPENSE MODULE TECHNICAL DATA

Function	Module controls 4 dispense points/solenoids
Requirements & Limitations	4 outlets/dispense points Limit of 30' max. distance per dispense point from MPDM to meter valve AC Power cord (not included), see part 3130-001
Power	Input-110 VAC, output - 24 V DC

KEYPAD TECHNICAL DATA

Function	Module allows remote entry of PIN, job number, qty, etc.
Requirements & Limitations	Minimum 1 keypad required to operate a remote system No limit for number of keypads in the system
Power	Input - 24 V DC, output - 24 V DC

LED DISPLAY TECHNICAL DATA

Function	Displays active dispense point & time
Requirements & Limitations	Accommodates a clock module for a non-PC system
Power	Input - 24 V DC, Output - 24 V DC

Fluid Inventory Control Synergy Components

PC Interface Module and Printer Module



Printer Module

Features

PC Interface Module

- Interfaces Synergy system to the PC
- Includes basic software
- Allowing graphic visualization of the Synergy system components.
- Export system data to a simple text file.
- Synchronization of the system time with the PC
- Enhance system capabilities with Synergy Professional software, see page 130 for software upgrade, sold separately.
- Operator interface, includes powerful database manager with professional software, page 130

Printer Module

- Interfaces FIC system to the optional ticket printer
- Internal database stores user, PIN, and job information, when no PC is used
- Transaction details printed on the optional ticket printer
- Can also be used in a PC system for job tickets anywhere in a system layout

PC INTERFACE MODULE TECHNICAL DATA

Function	Allows PC Interface
Requirements & Limitations	<p>PC Requirements:</p> <ul style="list-style-type: none"> - Runs under Windows 7 / 2000 / XP / Vista / Windows 8, 8.1, 10 - Intel Pentium 2-333Mhz 128Mb RAM - Must have free compatible 9-pin serial port. <p>Comes with Basic Software:</p> <ul style="list-style-type: none"> - Graphically view system - Set system time, update tank levels - Simple data export
Power	Input - 24 V DC, output - 24 V DC

PRINTER MODULE TECHNICAL DATA

Function	Controls printability
Requirements & Limitations	<p>Max. 912 transactions</p> <p>32 users</p> <p>8 tanks</p> <p>Accommodates a clock module for a non-PC system</p> <p>The non-PC system requires the Printer Module to create printouts of all transactions to ticket printer (3120-069)</p>
Power	Input - 24 V DC, Output - 24 V DC

MODELS AVAILABLE

3110-019	PC Interface Module
3110-018	Printer Module

Fluid Inventory Control Synergy Components

Tank Surveillance Module and Tank Control Module

Features



Tank Surveillance Module



Tank Control Module

4

Tank Surveillance Module

- The Tank Surveillance Module is used to monitor up to 4 fresh and/or waste oil tanks per module using either high/low level sensors or analog probes. Control pumps - automatic start and stop
- Controls up to 4 solenoids (air or fluid) and can be used for either standalone tank monitoring or integrated with a PC based system
- Equipped with key switch for normal operation, emergency override and On/Off functions
- Green, red, & yellow LED's on the front cover provide current tank status at a glance
- Used Oil - warning lights indicate ready, high level, and full
- Fresh oil - warning lights indicate ready, low level, and empty

Tank Control Module

- The Tank Control Module is used to monitor up to 4 fresh and/or used oil tanks per module using either high/low level sensors or analog probes. Control pumps - automatic start and stop
- Controls air solenoid valves
- Equipped with key switch for normal operation, emergency override and On/Off functions
- Controls waste pump/solenoid valves providing high level warning for Used Oil or low level warning and reorder point for fresh oil on PC

TECHNICAL DATA		
	TANK SURVEILLANCE MODULE	TANK CONTROL MODULE
Function	Controls tank monitoring with LED status lights	Controls tank monitoring
Requirements & Limitations	4 tanks per module Can be used as a stand alone, in a non-PC based system, or in a PC based system	4 tanks per module Can only be used in the PC based system
Power	Input - 110 VAC, Output - 24 V DC	Input - 110 VA C, Output - 24 V DC

MODELS AVAILABLE	
3110-021	Tank Surveillance Module
3110-020	Tank Control Module

Fluid Inventory Control Synergy Components

Synergy Web App Keypad



Features

Synergy Web App Keypad

The Synergy Web App Keypad enables increased flexibility, mobility and efficiency by initiating Synergy dispenses from a web capable device such as a smartphone, tablet or computer web browser. Using the web app keypad allows a workshop use their own internal IT components, regardless of platform, to perform fluid dispensing operations using Synergy.

4

COMPONENT TECHNICAL DATA	
Function	Web app keypad enabling fluid dispensing from smartphone, tablet or computer web browser
Requirements	Minimum Synergy version - R10 HTML5 capable web browser and internet connectivity, camera (if the scanner feature will be used)

MODELS AVAILABLE	DESCRIPTION
3110-034	Synergy Web PC keypad interface

Easy set up

- A driver is added to the Synergy engine which communicates with our central WebKeypad Server
- Users and administrators are set up on our WebKeypad Server
- Any devices required to access the system are configured

How it works

When everything is configured the workflow is identical to using regular keypads, such as selecting the reel, entering the PIN and workorder number and finally the volume to be dispensed.

Built-in bar code scanner

The web app keypad features a built-in software based scanner for inputting work order numbers via QR codes or conventional bar codes.















Drivers for external ERP/DMS systems

Works with all OCP 1.xx based drivers for real-time validating of work order numbers in an ERP/DMS system.

Subscription based






The web app keypad is offered as a service with a monthly fee (invoiced annually), this allows your business to easily scale up or down depending on your current needs, providing better overview of the costs. Free support is included for customers with existing Synergy support agreements.

Fluid Inventory Control Synergy Components

DR METER - PULSE METERS							
	MODEL	MATERIAL	INLET/OUTLET THREADS	UNIT OF MEASURE	MAX PRESSURE	COMPATIBLE FLUIDS	SB
	3120-013	CPVC	1/2" NPT(F)	Liters, Gallons, Quarts, and pints	450 psi (10 bar)	Glycol, windshield wash solutions and DEF	SB 3107
	3120-007	Aluminum	1/2" NPT(F)	Quarts	1,000 psi (70 bar)	Oil, glycol and coolant solutions	SB 3003
DR METER HIGHFLO							
	3120-014	Aluminum	3/4" NPT(F)	Liters, Gallons, Quarts, and pints	1450 psi (10 bar)	Oil, glycol and coolant solutions	SB 3108
			MODEL	DESCRIPTION	COMPONENT TECHNICAL DATA		
METER/VALVE KITS							
Solenoid Valve Kits - High precision meter modules include pulse meter, and solenoid valve. Balcrank recommends the use of a Y-Strainer on the dispense side of the pump. Order one per dispense point for use with Synergy							
	3120-117		Oil		Pressure: 1450 psi (100 bar) Connection: 1/2" NPT(M/M) Power: 24 V DC		
	3120-074		Grease		Pressure: 7250 psi (500 bar) Connection: In: 1/4" NPT(M) Out: 1/4" NPT(M) Power: 24 V DC		
	3120-075		Diesel		Pressure: 145 psi (10 bar) Connection: 3/4" NPT(M/M) Power: 24 V DC		
	3120-077		Windshield Washer Fluid		Pressure: 725 psi (50 bar) Material: 1/2" NPT(M/M) Power: 24 V DC		
	3120-078		DEF		Pressure: 725 psi (50 bar) Material: 1/2" NPT(M/M) Power: 24 V DC		
	3120-031		-		Ready Light Alerts technician when fluid batch is available for dispensing.		
FIC ACCESSORIES							
Bar code, Card, and Dallas Key Reader require a Serial Port Kit							
	3120-204		Clock Module for LED or Printer Module				
	3120-205		Serial Port Kit				
	3120-208		Bar Code Reader + Serial Port Kit				
	3120-209		Card Reader + Serial Port Kit				
	3120-210		Dallas Key Reader + Serial Port Kit				

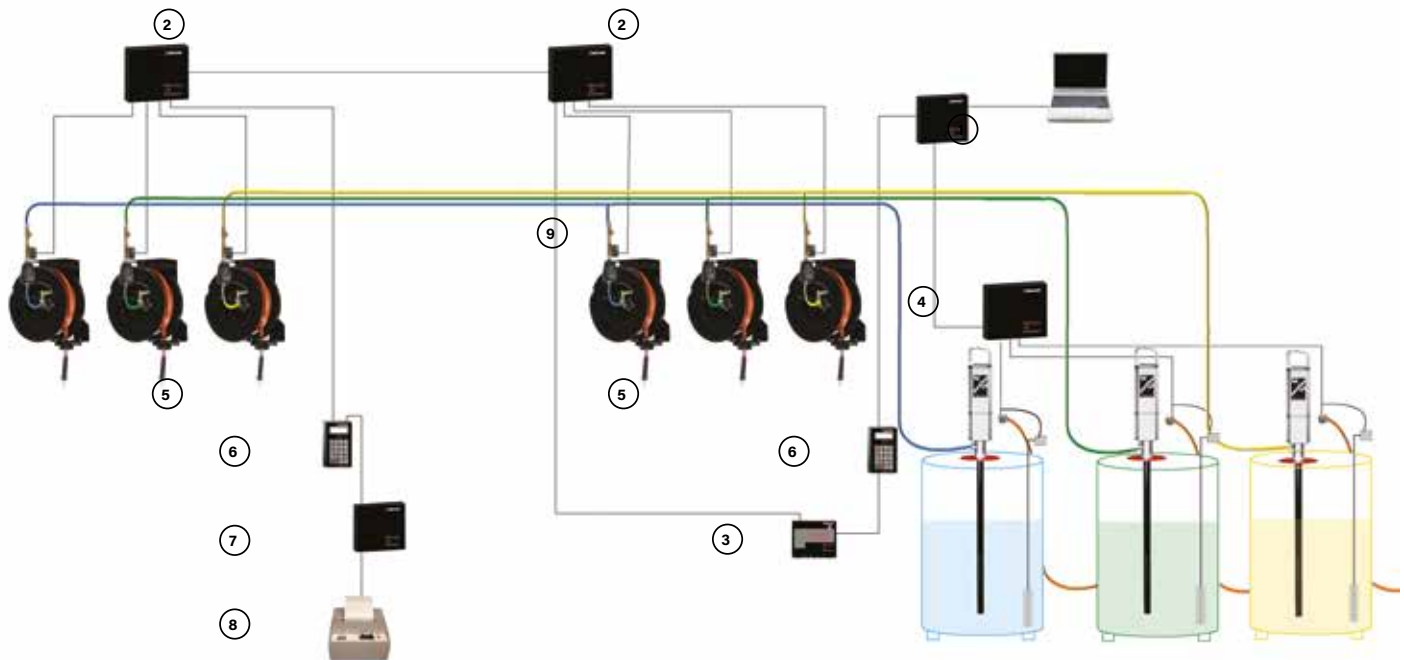
4

Fluid Inventory Control Synergy Components

	MODEL	DESCRIPTION	COMPONENT
	PROGRAMS & APPLICATIONS		
	3120-072	Professional Software Full-featured PC database. Easy system configuration Variety of standard & customized reports	
	3120-070	Tank Alerts via E-mail	
	3110-023	DB Dock Service. Synchronize mobile database with main database	
	COMMUNICATION & CONTROL		
	3128-050	Communication Cable 50 ft.	
	3128-100	Communication Cable 100 ft.	
	3128-150	Communication Cable 150 ft.	
	3128-250	Communication Cable 250 ft.	
	3129-050	Control Cable 50 ft.	
	3129-100	Control Cable 100 ft.	
	3129-150	Control Cable 150 ft.	
	3129-250	Control Cable 250 ft.	
	3130-001	AC Power Cord, 6', 3 prong plus, 16/3 SJE00W, 13 amps/125 V, rated for outdoor use	
	TANK SENSORS		
	Tank sensors (switches provide low level/high level responses, depending on model. For use with Tank Control Module 3110-020 and Tank Surveillance Module 3110-021		
	3120-079	Level Sensor, Switch, Oil. Low level stop, 3.5 ft. with 17 ft. cable	
	3120-080	Level Sensor, Switch, Other Fluids. Low level stop, 3.5 ft. with 17 ft. cable	
	3120-081	2 Level Sensor, Switch, Oil. Low level alarm and stop, 3.5 ft. with 17 ft. cable	
	3120-082	2 Level Sensor, Switch, Other Fluids. Low level alarm and stop, 3.5 ft. with 17 ft. cable	
	3120-083	2 Level Sensor, Switch, Used Oil. High level alarm and stop, 11.75" warning and 6" off/stop	
	3120-084	Level Sensor, Analog, Oil. Provides low level/high level actual volume, for tanks up to 13 ft. tall with 23 ft. cable	
	3120-092	1 Level Sensor, Switch, Single Probe, 5.6 ft. with 33 ft. cable	
	3120-093	2 Level Sensor, Switch, Double Probe, 3 ft. & 5.5 ft. with 33 ft. cable	
	3120-094	1 Level Sensor, Switch, Flex Adjustable Single Probe, 16 ft. cable	
	TICKET PRINTER		
	3120-069	Optional ticket printer for use with Printer Module 3110-018	
	Y-STRAINER - 580 PSI (40 BAR) ALL STRAINERS HAVE 40 MESH		
	3120-211	1/2" NPT(F)	
	3120-212	3/4" NPT(F)	
	3120-213	1" NPT(F)	

Fluid Inventory Control Synergy

Example of Mid-Range Synergy System



BOM's

- ① 3110-019 - PC Interface Module
 - ② 3110-017 - Multi-Point Dispense Module (MPDM)
 - ③ 3120-068 - LED Display
 - ④ 3110-020 - Tank Control Module
 - ⑤ Hose Reels x 6 units
 - ⑥ 3110-016 - Standard Keypads
 - ⑦ 3110-018 - Printer Module
 - ⑧ 3120-069 - Ticket Printer
 - ⑨ 3120-033 - Air Solenoids x 3 units
- Pulse Meter/Solenoid Valve Kits x 6 units - select the meter to match the fluid type.
See page 131 for meter/valve kits.

Fluid Inventory Control TM Control



Features

TM Control




Standalone tank controller with 4 channels capable of controlling up to 4 different tanks or fluids. Each channel can connect to a solenoid valve, remote alarm or strobe light.

The TM Control can be used as a high or low-level control to prevent overflow, or as a pump shutoff to prevent the pump from running dry, and allowing air to enter the system.

TECHNICAL DATA




Function	Stand alone tank controller
Requirements & Limitations	4 tanks or 4 fluids
Power	Input - 110-230 V AC Required Voltage - 110/60 Hz 240/50 Hz V AC

RECOMMENDED ACCESSORIES

MODEL	DESCRIPTION	COMPONENT TECHNICAL DATA
 3120-029	Tank alert strobe alarm	Power: 24 V DC
 3120-033	Air Solenoid Valve - Normally Closed	Air Solenoid Provides for the remote shutdown of pumps from the fluid control console. Order one per controlled pump. Pressure: 200 PSI (12 bar) Connection: 3/8" NPT (F/F) Power: 24 V DC
 3120-225	Air Solenoid Valve - Normally Open	Air Solenoid Provides for the remote shutdown of pumps from the fluid control console. Order one per controlled pump. Pressure: 200 PSI (12 bar) Connection: 1/2" NPT (F/F) Power: 24 V DC

TANK SENSORS

Tank sensors (switches provide low level/high level responses, depending on model)

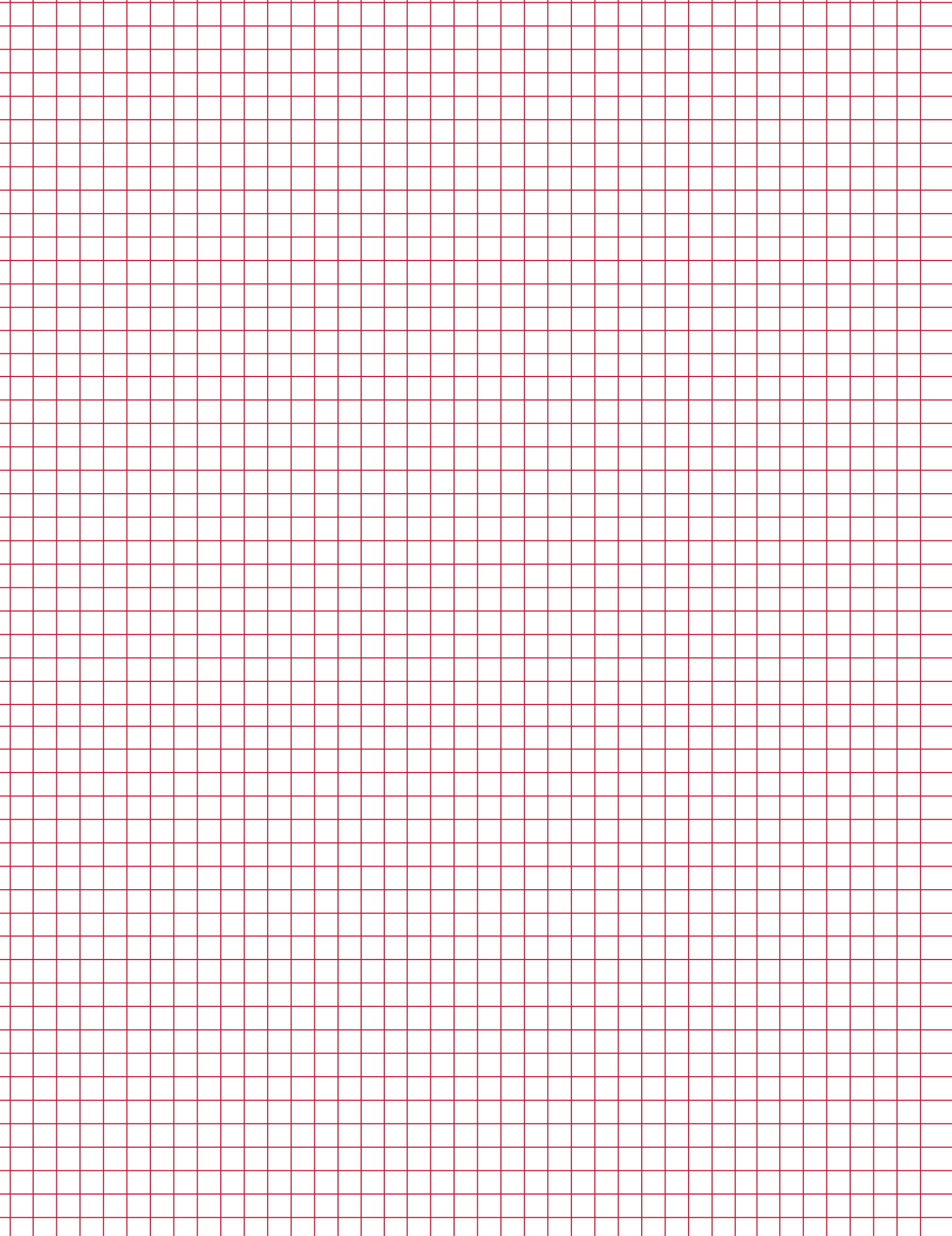
 3120-092	1 Level Sensor, Switch, Single Probe, 5.6 ft. with 33 ft. cable
 3120-093	2 Level Sensor, Switch, Double Probe, 3 ft. & 5.5 ft. with 33 ft. cable
 3120-094	1 Level Sensor, Switch, Flex Adjustable Single Probe, 16 ft. cable

Main Features

- Controls up to four channels. Each channel can be assigned to a different tank, or multiple channels can be assigned to a single tank
- Each channel controls solenoid valves, relays, external alarms, etc.
- This unit can be a standalone unit; no need to connect to auxiliary software or systems
- TM Control works with tank alert strobe light and alarm 3120-029
- One button for setup, resetting alarms, and system test
- Use the key switch for bypass mode control, setup access, or rebooting the system
- Status LEDs: yellow indicates bypass mode and white on indicates system status; on
- Input LED for each channel; red blinking LED indicates level warning
- Outputs can be configured to "normally-open" or "normally closed"

MODELS AVAILABLE

3110-033	TM Control
----------	------------





1 2 3 4 5 6 7 8 9 10

Fluid Dispense Packages

FLUID DISPENSE PACKAGES	137
TANK PACKAGES	138
TANKLESS PACKAGES	139
PISTON PUMP LIGHTWEIGHT DOUBLE WALL OIL DISPENSE TANK PACKAGES	140
AODD LIGHTWEIGHT DOUBLE TANK PACKAGES FOR WALL WASTE OR WWF	141
PISTON PUMP LIGHTWEIGHT DOUBLE WALL DISPENSE TANKLESS PACKAGES	142
TOTE TANKLESS PACKAGES	143
TANK ACCESSORIES	144

Tank Packages

Ships fully assembled

Package includes:

- UL 142 Tanks (Single and Double Wall)
- DR Handle w/Flex Ext & Auto Tip
- Choice of:
 - LYNX® or Panther® 3:1 Pump
 - 50' x 1/2" ID Classic or Evolution Hose Reel

*As with all tanks, be sure to follow local and state guidelines for tank placement and installation. Some cities and counties have not approved the UL 2258 certification, as it is different than the familiar UL142 that pertains to steel tanks, so be sure to check with your local Fire Marshal and/or city and county regulations before ordering.

Features

- Tanks have 2" lockable fill cap and gauge
- Select packages come fully assembled with everything you need for immediate use
- Available in additional sizes. Contact Balcrank for more information



Workbench Tank Packages

Workbench style tanks are the best choice when work space is at a premium. The flat top and 30-33" height make workbench style tanks the perfect choice for crowded shops that need additional workspace.

MODELS AVAILABLE	DESCRIPTION
1134-007	250 gal 30" H x 32" W x 60" L Single Wall Construction (Ships Fully Assembled). Evolution Hose Reel & LYNX® 3:1 Pump
1134-015	280 gal 33" H x 33" W x 60" L Single Wall Construction (Ships Fully Assembled). Evolution Hose Reel & LYNX® 3:1 Pump

* Check local codes for venting and installation equipment.

5



Vertical Obround Tank Packages

Choose vertical Obround tanks when floor space is limited. Vertical Obround tanks have the smallest footprint per gallon of oil. Assembly required for 330 gallon vertical packages: equipment ships separately.

MODELS AVAILABLE	DESCRIPTION
1134-017	275 gal 60" H x 44" W x 27" L dimensions. Single Wall Construction. (Ships Fully Assembled) Classic Hose Reel & Panther® HP 3:1 Pump
1134-018	275 gal 60" H x 44" W x 27" L dimensions. Double Wall Construction. (Ships Fully Assembled) Classic Hose Reel & Panther® HP 3:1 Pump
1134-028	330 gal 72" H x 44" W x 27" L dimensions. Double Wall Construction. (Assembly Required) Evolution Hose Reel & LYNX® 3:1 Pump



Horizontal Obround Tank Packages

Horizontal Obround tanks have a small overall footprint with a narrow width dimension of 27". The fill cap and hose reel are located a convenient 44" from the floor.

MODELS AVAILABLE	DESCRIPTION
1134-030	275 gal 44" H x 27" W x 60" L dimensions. Single Wall Construction. (Ships Fully Assembled) Evolution Hose Reel & LYNX® 3:1 Pump, DR Flex-memory 1/2 turn manual oil
1134-009	275 gal 44" H x 27" W x 60" L Single Wall Construction (Ships Fully Assembled) Classic Hose Reel & Panther® HP 3:1 Pump

Tailgate delivery and advance notification available.

Piston Pump Tankless Packages

For use with steel single and double wall tanks

All packages include:

- DR Handle w/flex-m ext. & 1/4 turn manual tip for oil
- F/R auto drain 1/4" NPT(F)
- 2.5' reel inlet hose
- Evolution series hose reel, 1/2" x 30' or 50' or chose Classic series hose reel 1/2" x 30' or 50' (for the heavy duty packages)
- Pump connecting hose kit
- Piston pump - choice of LYNX® 3:1, LYNX® HD 5:1, or Panther® 3:1

Light Duty Applications

- Tank packages
- Low volume, small service centers



Medium Duty Applications

- Tank packages
- Low to medium volume, small service centers



Medium/Heavy Duty Applications

- Tank packages
- Medium volume service centers



Features

Suitable for dispensing of all petroleum based and synthetic oils and similar products up to SAE 90. Packages may be mounted to a variety of tanks including Balcrank's UL 142 single and double wall tanks. Available in workbench, vertical obround, and horizontal obround styles.

MODELS AVAILABLE	DESCRIPTION		
1132-016	Tankless Package, LYNX®/30', DR-Flex-M	4410-054	Pump Hose Kit
	1110-007 LYNX® 3:1 Bare Pump	3330-159	DR Handle w/flex-m ext.
	2140-013 Evo Reel 30' x 1/2" for Oil	3260-065	F/R manual 1/4" NPT(F)
1132-017	Tankless Package, LYNX®/50', DR-Flex-M	4410-054	Pump Hose Kit
	1110-007 LYNX® 3:1 Bare Pump	3330-159	DR Handle w/flex-m ext.
	2140-014 Evo Reel 50' x 1/2" for Oil	3260-065	F/R manual 1/4" NPT(F)

MODELS AVAILABLE	DESCRIPTION		
1132-020	Tankless Package, LYNX® HD/30', DR-Flex-M	4410-054	Pump Hose Kit
	1110-012 LYNX® HD 5:1 Bare Pump	3330-159	DR Handle w/flex-m ext.
	2140-013 Evo Reel 30' x 1/2" for Oil	3260-065	F/R manual 1/4" NPT(F)
1132-021	Tankless Package, LYNX®/50', DR-Flex-M	4410-054	Pump Hose Kit
	1110-012 LYNX® HD 5:1 Bare Pump	3330-159	DR Handle w/flex-m ext.
	2140-014 Evo Reel 50' x 1/2" for Oil	3260-065	F/R manual 1/4" NPT(F)

MODELS AVAILABLE	DESCRIPTION		
1132-018	Tankless Package, Panther®/30', DR-Flex-M	4410-054	Pump Hose Kit
	1130-020 Panther® 3:1 Bare Pump	3330-159	DR Handle w/flex-m ext.
	2140-013 Evo Reel 30' x 1/2" for Oil	3260-065	F/R manual 1/4" NPT(F)
1132-019	Tankless Package, Panther®/50', DR-Flex-M	4410-054	Pump Kit
	1130-020 Panther® 3:1 Bare Pump	3330-159	DR Handle w/flex-m ext.
	2140-014 Evo Reel 50' x 1/2" for Oil	3260-065	F/R manual 1/4" NPT(F)
1132-022	Tankless Package, Panther®/30', DR-Flex-M	4410-054	Pump Hose Kit
	1130-020 Panther® 3:1 Bare Pump	3330-159	DR Handle w/flex-m ext.
	2120-011 Classic Reel 30' x 1/2" for Oil	3260-065	F/R manual 1/4" NPT(F)
1132-023	Tankless Package, Panther®/50', DR-Flex-M	4410-054	Pump Kit
	1130-020 Panther® 3:1 Bare Pump	3330-159	DR Handle w/flex-m ext.
	2120-013 Classic Reel 50' x 1/2" for Oil	3260-065	F/R manual 1/4" NPT(F)

Piston Pump Lightweight Double Wall Oil Dispense Tank Packages

Package includes

- Double wall tank - choice of 165 gal (L 29" x W 28" x H 61"), 275 gal (L 43" x W 28" x H 61"), or 400 gal (L 64" x W 30" x H 68")
- Hose reel - choice of Evolution or Classic series hose reel, 30' or 50'x 1/2"
- Piston pump - choice of LYNX® 3:1, LYNX® 5:1 HD, or Panther® 3:1
- DR handle w/flex-m ext. & 1/4 turn manual tip for oil
- F/R auto drain 1/4" NPT(F)
- 2.5' reel inlet hose
- 5' air connecting hose
- Air quick connect coupler & nipple
- Sight gauge
- Vented fill cap
- Pump & reel bracket

(See additional tank accessories on pg. 142)

*As with all tanks, be sure to follow local and state guidelines for tank placement and installation. Some cities and counties have not approved the UL 2258 certification, as it is different than the familiar UL142 that pertains to steel tanks, so be sure to check with your local Fire Marshal and/or city and county regulations before ordering.

Features

These double wall tanks feature:

- Inner tank made of blow-molded, high-density, seamless polyethylene that is leak-proof and will never corrode
- Outer tank is made of weld-free galvanized steel and roll seamed with an oil and fire-resistant seal
- Outer tank holds 110 percent of inner tank for maximum protection
- Extremely light, up to 50 percent lighter than conventional steel tanks
- Can be used for DEF, diesel and bio fuels, motor oil, and ATF
- Compact, economical design (8 sq. ft. for 1000 l)
- Wide handles on each end allow for easy handling and transportation
- UL 2258 certified*
- 4 x 2" bung openings
- All tanks ship assembled



5

Light Duty Applications

- Low volume, small service centers

MODELS AVAILABLE	DESCRIPTION
1135-001	30' EVO Reel, LYNX® 3:1 pump, 165 gal
1135-004	50' EVO Reel, LYNX® 3:1 pump, 165 gal
1135-007	30' Classic Reel, LYNX® 3:1 pump, 165 gal
1135-010	50' Classic Reel, LYNX® 3:1 pump, 165 gal
1135-013	30' EVO Reel, LYNX® 3:1 pump, 275 gal
1135-016	50' EVO Reel, LYNX® 3:1 pump, 275 gal
1135-019	30' Classic Reel, LYNX® 3:1 pump, 275 gal
1135-022	50' Classic Reel, LYNX® 3:1 pump, 275 gal
1135-025*	30' EVO Reel, LYNX® 3:1 pump, 400 gal
1135-028*	50' EVO Reel, LYNX® 3:1 pump, 400 gal
1135-031*	30' Classic Reel, LYNX® 3:1 pump, 400 gal
1135-034*	50' Classic Reel, LYNX® 3:1 pump, 400 gal

Medium Duty Applications

- Low to medium volume, small service centers

MODELS AVAILABLE	DESCRIPTION
1135-002	30' EVO Reel, LYNX® 5:1 HD pump, 165 gal
1135-005	50' EVO Reel, LYNX® 5:1 HD pump, 165 gal
1135-008	30' Classic Reel, LYNX® 5:1 HD pump, 165 gal
1135-011	50' Classic Reel, LYNX® 5:1 HD pump, 165 gal
1135-014	30' EVO Reel, LYNX® 5:1 HD pump, 275 gal
1135-017	50' EVO Reel, LYNX® 5:1 HD pump, 275 gal
1135-020	30' Classic Reel, LYNX® 5:1 HD pump, 275 gal
1135-023	50' Classic Reel, LYNX® 5:1 HD pump, 275 gal
1135-026*	30' EVO Reel, LYNX® 5:1 HD pump, 400 gal
1135-029*	50' EVO Reel, LYNX® 5:1 HD pump, 400 gal
1135-032*	30' Classic Reel, LYNX® 5:1 HD pump, 400 gal
1135-035*	50' Classic Reel, LYNX® 5:1 HD pump, 400 gal

Medium/Heavy Duty Applications

- Medium volume service centers

MODELS AVAILABLE	DESCRIPTION
1135-003	30' EVO Reel, Panther® 3:1 pump, 165 gal
1135-006	50' EVO Reel, Panther® 3:1 pump, 165 gal
1135-009	30' Classic Reel, Panther® 3:1 pump, 165 gal
1135-012	50' Classic Reel, Panther® 3:1 pump, 165 gal
1135-015	30' EVO Reel, Panther® 3:1 pump, 275 gal
1135-018	50' EVO Reel, Panther® 3:1 pump, 275 gal
1135-021	30' Classic Reel, Panther® 3:1 pump, 275 gal
1135-024	50' Classic Reel, Panther® 3:1 pump, 275 gal
1135-027*	30' EVO Reel, Panther® 3:1 pump, 400 gal
1135-030*	50' EVO Reel, Panther® 3:1 pump, 400 gal
1135-033*	30' Classic Reel, Panther® 3:1 pump, 400 gal
1135-036*	50' Classic Reel, Panther® 3:1 pump, 400 gal

*165 gallon and 275 gallon ship assembled. 400 gallon ship equipment and tank separately

AODD Pump Anti-freeze & Windshield Wash Fluid



Package includes*

- Double wall tank - choice of 165 gal (L 29" x W 28" x H 61") or 275 gal (L 43" x W 28" x H 61")
- CenterFlo polypropylene AODD pump - choice of CF30 or CF50
- Pump bracket
- F/R auto drain 1/4" NPT(F)
- Tank sight gauge
- Vented 2" evac cap/port
- Air supply hose with quick coupler
- Hose reel - choice of Evolution hose reels 30' or 50'
- Shipped completely assembled and ready for use

(See additional accessories on pg. 144)

*Control handle not included. Select the appropriate control handle based on the material being dispenses, anti-freeze or windshield wash fluids.

Lightweight Double Wall Package Used Fluid



Package includes

- Double wall tank - choice of 275 gal (L 43" x W 28" x H 61") or 400 gal (L 64" x W 30" x H 68")
- CenterFlo aluminum AODD pump - choice of CF30 or CF50
- Pump bracket
- F/R auto drain 1/4" NPT(F)
- Y-strainer on used oil models
- 1" evacuation hose with 1" cam-lock for used oil (3/4" for anti-freeze)
- High level pump shut-off
- Tank site gauge
- Vented 2" evac cap/port
- Air supply hose with quick coupler
- Shipped completely assembled and ready for use

*As with all tanks, be sure to follow local and state guidelines for tank placement and installation. Some cities and counties have not approved the UL 2258 certification, as it is different than the familiar UL142 that pertains to steel tanks, so be sure to check with your local Fire Marshal and/or city and county regulations before ordering.

Features

Our lightweight double wall used oil and anti-freeze evacuation packages come completely assembled and ready for use; simply connect the pump air supply hose and fill with oil.

The **A/F and WW packages** include a 1" poly AODD pump, hose reel and all hoses and fittings.

The **used oil packages** include a high-level pump shut-off, site gauge, Y-strainer and a 1" cam-lock connector. The used anti-freeze packages come with a 3/4" cam lock to prevent accidental contamination of fluids.

Select your control handle separately (pg. 94) based on the fluid you are dispensing

MODELS AVAILABLE	DESCRIPTION
ANTI-FREEZE & WINDSHIELD WASH FLUID	
1135-037	CF30 Polypropylene, 165 gal, EVO 30', A/F & WWS
1135-038	CF30 Polypropylene, 165 gal, EVO 50', A/F & WWS
1135-039	CF30 Polypropylene, 275 gal, EVO 30', A/F & WWS
1135-040	CF30 Polypropylene, 275 gal, EVO 50', A/F & WWS
1135-037T	Tankless CF30 Polypropylene, 165 gal, EVO 30', A/F & WWS
1135-038T	Tankless CF30 Polypropylene, 165 gal, EVO 50', A/F & WWS
1135-039T	Tankless CF30 Polypropylene, 275 gal, EVO 30', A/F & WWS
1135-040T	Tankless CF30 Polypropylene, 275 gal, EVO 50', A/F & WWS
USED FLUID	
4140-072	CF50, 400 gal, EVAC for oil
4140-071	CF50, 275 gal, EVAC for oil
4140-068	CF30, 400 gal, EVAC for A/F
4140-069	CF30, 275 gal, EVAC for A/F

Piston Pump Lightweight Double Wall Tankless Packages

Packages includes

- Hose reel - choice of Evolution or Classic series hose reel, 30' or 50' x 1/2"
- Piston pump - choice of LYNX® 3:1, LYNX® 5:1 HD, or Panther® 3:1
- DR handle w/flex-m ext. & 1/4 turn manual tip for oil
- F/R auto drain 1/4" NPT(F)
- 2.5' reel inlet hose
- 5' air connecting hose
- Air quick connect coupler & nipple
- Sight gauge
- Vented fill cap
- Pump & reel bracket

Features

Suitable for storage and dispensing of all petroleum based and synthetic oils and similar products up to SAE 90. Packages are designed for lightweight double wall tanks, which are available in 165 gal, 275 gal, and 400 gal.



Light Duty Applications

- Tank packages
- Low volume, small service centers



Medium Duty Applications

- Tank packages
- Low to medium volume, small service centers



Medium/Heavy Duty Applications

- Tank packages
- Medium volume service centers

5

MODELS AVAILABLE	PACKAGE
1135-001T	30' EVO Reel, LYNX® 3:1 pump, 165 gal
1135-004T	50' EVO Reel, LYNX® 3:1 pump, 165 gal
1135-007T	30' Classic Reel, LYNX® 3:1 pump, 165 gal
1135-010T	50' Classic Reel, LYNX® 3:1 pump, 165 gal
1135-013T	30' EVO Reel, LYNX® 3:1 pump, 275 gal
1135-016T	50' EVO Reel, LYNX® 3:1 pump, 275 gal
1135-019T	30' Classic Reel, LYNX® 3:1 pump, 275 gal
1135-022T	50' Classic Reel, LYNX® 3:1 pump, 275 gal
1135-025T	30' EVO Reel, LYNX® 3:1 pump, 400 gal
1135-028T	50' EVO Reel, LYNX® 3:1 pump, 400 gal
1135-031T	30' Classic Reel, LYNX® 3:1 pump, 400 gal
1135-034T	50' Classic Reel, LYNX® 3:1 pump, 400 gal

MODELS AVAILABLE	PACKAGE
1135-002T	30' EVO Reel, LYNX® 5:1 HD pump, 165 gal
1135-005T	50' EVO Reel, LYNX® 5:1 HD pump, 165 gal
1135-008T	30' Classic Reel, LYNX® 5:1 HD pump, 165 gal
1135-011T	50' Classic Reel, LYNX® 5:1 HD pump, 165 gal
1135-014T	30' EVO Reel, LYNX® 5:1 HD pump, 275 gal
1135-017T	50' EVO Reel, LYNX® 5:1 HD pump, 275 gal
1135-020T	30' Classic Reel, LYNX® 5:1 HD pump, 275 gal
1135-023T	50' Classic Reel, LYNX® 5:1 HD pump, 275 gal
1135-026T	30' EVO Reel, LYNX® 5:1 HD pump, 400 gal
1135-029T	50' EVO Reel, LYNX® 5:1 HD pump, 400 gal
1135-032T	30' Classic Reel, LYNX® 5:1 HD pump, 400 gal
1135-035T	50' Classic Reel, LYNX® 5:1 HD pump, 400 gal

MODELS AVAILABLE	PACKAGE
1135-003T	30' EVO Reel, Panther® 3:1 pump, 165 gal
1135-006T	50' EVO Reel, Panther® 3:1 pump, 165 gal
1135-009T	30' Classic Reel, Panther® 3:1 pump, 165 gal
1135-012T	50' Classic Reel, Panther® 3:1 pump, 165 gal
1135-015T	30' EVO Reel, Panther® 3:1 pump, 275 gal
1135-018T	50' EVO Reel, Panther® 3:1 pump, 275 gal
1135-021T	30' Classic Reel, Panther® 3:1 pump, 275 gal
1135-024T	50' Classic Reel, Panther® 3:1 pump, 275 gal
1135-027T	30' EVO Reel, Panther® 3:1 pump, 400 gal
1135-030T	50' EVO Reel, Panther® 3:1 pump, 400 gal
1135-033T	30' Classic Reel, Panther® 3:1 pump, 400 gal
1135-036T	50' Classic Reel, Panther® 3:1 pump, 400 gal

Tote Packages

Top Mount Packages include

- Hose reel (see options below)
- Pump (see options below)
- Filter/regulator with auto drain
- 2.5' reel connecting hose
- 5' air connecting hose
- Air quick coupler & nipple
- Top mount pump & reel bracket
- Pump direct immersion suction tube & dust shroud



*control handle not included

Side Mount Packages include

- Hose reel (see options below)
- Pump (see options below)
- Filter/regulator with auto drain
- 2.5' reel connecting hose
- 5' air connecting hose
- Air quick coupler & nipple
- Side mount pump & reel swivel bracket
- 6" vented cap with dual 2" ports & pressure relief port
- Vented fill cap
- Top tote suction tube and hose



*control handle not included

Features

CenterFlo Packages include

- Hose reel (see options below)
- Pump (see options below)
- Filter/regulator with auto drain
- 2.5' reel connecting hose
- 3' air connecting hose
- Air quick coupler & nipple
- Top mount pump & reel bracket
- Pump direct immersion suction tube & dust shroud



*control handle not included

Top Mount

MODELS AVAILABLE	LIGHT DUTY
1136-213	275 Gal LYNX® 3:1 & EVO 30'
1136-215	275 Gal LYNX® 3:1 & EVO 50'
1136-313	330 Gal LYNX® 3:1 & EVO 30'
1136-315	330 Gal LYNX® 3:1 & EVO 50'
MODELS AVAILABLE	MEDIUM/HEAVY DUTY
1136-223	275 Gal LYNX® 5:1 HD & EVO 30'
1136-225	275 Gal LYNX® 5:1 HD & EVO 50'
1136-323	330 Gal LYNX® 5:1 HD & EVO 30'
1136-325	330 Gal LYNX® 5:1 HD & EVO 50'
1136-233	275 Gal Panther 3:1 & EVO 30'
1136-235	275 Gal Panther 3:1 & EVO 50'
1136-333	330 Gal Panther 3:1 & EVO 30'
1136-335	330 Gal Panther 3:1 & EVO 50'

Side Mount

MODELS AVAILABLE	LIGHT DUTY
1137-213	275 Gal LYNX® 3:1 & EVO 30'
1137-215	275 Gal LYNX® 3:1 & EVO 50'
1137-313	330 Gal LYNX® 3:1 & EVO 30'
1137-315	330 Gal LYNX® 3:1 & EVO 50'

* Control handles sold separately, see page 92

MODELS AVAILABLE	MEDIUM/HEAVY DUTY
1137-223	275 Gal LYNX® 5:1 HD & EVO 30'
1137-225	275 Gal LYNX® 5:1 HD & EVO 50'
1137-323	330 Gal LYNX® 5:1 HD & EVO 30'
1137-325	330 Gal LYNX® 5:1 HD & EVO 50'
1137-233	275 Gal Panther 3:1 & EVO 30'
1137-235	275 Gal Panther 3:1 & EVO 50'
1137-333	330 Gal Panther 3:1 & EVO 30'
1137-335	330 Gal Panther 3:1 & EVO 50'

CenterFlo

MODELS AVAILABLE	A/F & OIL PACKAGE
1136-243	275 Gal CF15 Alum & EVO 30'
1136-245	275 Gal CF15 Alum & EVO 50'
1136-343	330 Gal CF15 Alum & EVO 30'
1136-345	330 Gal CF15 Alum & EVO 50'
1136-253	275 Gal CF30 Alum & EVO 30'
1136-255	275 Gal CF30 & EVO 50'
1136-353	330 Gal CF30 & EVO 30'
1136-355	330 Gal CF30 & EVO 50'
MODELS AVAILABLE	WWS PACKAGE
1136-263	275 Gal CF15 Poly & EVO 30'
1136-265	275 Gal CF15 Poly & EVO 50'
1136-363	330 Gal CF15 Poly & EVO 30'
1136-365	330 Gal CF15 Poly & EVO 50'
1136-273	275 Gal CF30 Poly & EVO 30'
1136-275	275 Gal CF30 Poly & EVO 50'
1136-373	330 Gal CF30 Poly & EVO 30'
1136-375	330 Gal CF30 Poly & EVO 50'

* Order control handle separately

Tank Package Accessories

5

BUNG ADAPTERS			TOTE CAPS		
Bung Adapter		4411-009N Aluminum Panther® HP, Tiger W/ Pressure Relief	Tote caps		4530-066 Center cap, 6" diameter x 2.5" ID ABUT (American Buttress)
		4411-009QX Aluminum Panther® HP, Tiger W/ Pressure Relief 10 pk			4530-067 Center cap, vented, 6" diameter x 2.5" ID ABUT (American Buttress)
		4411-022 Bung Adapter LYNX®: 3:1, 5:1			4530-068 Center cap with filter vent, 6" diameter x 2.5" ID ABUT (American Buttress)
		4411-021 Bung Adapter LYNX®: 1:1 & 2:1			4530-069 Center cap, 6" diameter with (2) 2" NPT
TANK LEVEL GAUGE			VENTS		
Tank level gauge		4520-014 Black Knight Gauge Display dial shows the remaining fluid depth in inches as the attached float level changes. Mount on tank bung fitting. (For stationary tanks only. Not recommended for mobile lubbers.)	Vents		4520-007 Tank Vent Cap 2" NPT(F)
BRACKETS & TRAYS					4520-018 Emergency vent 4" NPT(M)
Drip tray		4520-020 Control Handle Drip Tray. Fits Lightweight Double Wall tanks and IBC totes			4520-019 Vented fill cap 2" NPT(M)
Swivel bracket for mounting hose reels		2230-026 Swivel Bracket for use with single EVO, Premium and Classic. Allows the hose reel to be wall mounted to the swivel bracket and pivot horizontally			4411-024 PVC adapter w/ pressure relief port-2" for use when no additional ports are not available on the tank for pressure relief discharge tube.
Side mount bracket for IBC totes		4411-035 Pump Mount Bracket, for bung mounted pumps to side tote bracket 4411-035 Side Mount Bracket for IBC Totes	4520-067 Vent Cap Mounting Kit (for attaching 4520-006 to vent outlet of obround tanks)		
Top mount bracket for IBC totes		4411-034 Top Mount Bracket for IBC Totes	TANK SADDLE		
Lightweight double wall tank brackets		1136-003 Top Mount Bracket for 165/275 gal, 26" 1136-004 Top Mount Bracket for 400 gal, 28"	Tank saddle		4520-006 Tank Saddle. Use our exclusive saddle bracket to quickly attach Balcrank hose reels to any 275 gal or 330 gal horizontal obround tank. One step attachment, no welding or tank modifications required. Order separate vent kit, Model 4520-067, to attach the saddle to standard oval tanks at the vent cap location.
Lightweight double wall tank tie down kit		1136-001 Tie Down Anchor Kit for 165/275 gal 1136-002 Tie Down Anchor Kit for 400 gal			



1 2 3 4 5 **6** 7 8 9 10

Diesel Exhaust Fluid (DEF)

DIESEL EXHAUST FLUID (DEF)	145
CLOSED SYSTEMS DRUM PACKAGES ELECTRIC DIAPHRAGM PUMP	146
CLOSED SYSTEMS TOTE PACKAGES ELECTRIC DIAPHRAGM PUMP	147
CLOSED SYSTEMS DRUM PACKAGES CF DIAPHRAGM PUMP	148
CLOSED SYSTEMS TOTE PACKAGES CF DIAPHRAGM PUMP	149
SYSTEM COMPONENTS ELECTRIC AND AODD PUMPS	150
HOSE REELS SIGNATURE SERIES EV	151
SYSTEM COMPONENTS METERS AND NOZZLES	152
COUPLER COMPONENTS AND KITS	153
SYSTEM COMPONENTS STICK PUMPS, HOSES, AND HOSE ACCESSORIES	154
SYSTEM ACCESSORIES	155
REPAIR KITS FOR DEF PUMPS	156

Closed Systems Drum Packages Electric Diaphragm Pump



DEF Packages do not include coupler systems. Order Separately.

Features

- Compact design mounting bracket
- Heavy-duty cart - Easily holds and rolls up to 55 gallon drum
- Large semi-pneumatic tires - Allow for easy maneuvering of cart
- Large non-marking rear caster - Built in brake for safe and secure dispensing

Includes:

- 8570-006 6' x 3/4" Suction hose
- 8561-012 12' x 3/4" Discharge hose
- 4530-054 Drip tray
- 4320-014 Drum cart 55 gal for DEF
- 4530-065 Side mount bracket

Options:

- 3120-116 Meter DR style for DEF
- 1200-020 120 V AC Electric diaphragm pump
- 1200-021 12 V DC Electric diaphragm pump
- 3340-012 Auto nozzle, stainless steel
- 3340-015 Manual nozzle, polyethylene

Pump includes automatic shutoff.

Pump is UL approved

6

TECHNICAL DATA

	DATA 120 V AC (1200-020)	DATA 12 V DC (1200-021)
Max. Free Flow	8.5 GPM	9.5 GPM
Working Pressure	23 psi (1.6 bar)	23 psi (1.6 bar)
Power	120 V AC	12 V DC
Wetted Materials (pump)	Stainless Steel, Viton®, PPE	Stainless Steel, Viton®, PPE
Service Bulletin	SB 1129	SB 1130

MODELS AVAILABLE	DESCRIPTION
1210-046P	120 V AC Non-metered, Manual Nozzle
1210-048P	120 V AC Non-metered, Auto Nozzle
1210-049P	120 V AC Metered, Auto Nozzle
1210-053P	12 V DC Metered, Auto Nozzle

CLOSED system containers have a valve coupling system that seals the container opening on drums and totes (IBC) to prevent dirt, debris, bugs, etc., from entering the container and contaminating the diesel exhaust fluid. Liquid in container system is sealed and secure, throughout container life cycle.

DEF Packages do not include coupler systems. Order Separately.

You must choose a coupler kit to create a complete system for your distribution needs.

For closed systems, use Reusable Poly Valve (RPV) or Reusable Stainless Valve (RSV) systems accessories. RSV and RPV components are interchangeable.

Closed Systems Tote Packages Electric Diaphragm Pump



Features

- Compact design mounting bracket

Includes

- 8570-006 6' x 3/4" Suction hose
- 8561-020 20' x 3/4" Discharge hose
- 4530-054 Drip tray
- 4530-065 Side mount bracket

Options

- 3120-116 Meter DR style for DEF
- 1200-020 120 V AC Electric diaphragm pump
- 1200-021 12 V DC Electric diaphragm pump
- 3340-012 Auto nozzle, stainless steel
- 3340-015 Manual nozzle, polyethylene

Pump includes automatic shutoff.

Pump is UL approved

DEF Packages do not include coupler systems. Order Separately.

TECHNICAL DATA		
	DATA 120 V AC (1200-020)	DATA 12 V DC (1200-021)
Max. Free Flow	8.5 gal/min (32.18 l/min)	9.5 gal/min (34.07 l/min)
Working Pressure	23 psi (1.6 bar)	23 psi (1.6 bar)
Power	120 V AC	12 V DC
Wetted Materials (pump)	Stainless Steel, Viton, PPE	Stainless Steel, Viton, PPE
Service Bulletin	SB 1129	SB 1130

MODELS AVAILABLE	DESCRIPTION
1210-046	120 V AC Non-metered, Manual Nozzle
1210-047	120 V AC Metered, Manual Nozzle
1210-048	120 V AC Non-metered, Auto Nozzle
1210-049	120 V AC Metered, Auto Nozzle
1210-050	12 V DC Non-metered, Manual Nozzle
1210-052	12 V DC Non-metered, Auto Nozzle
1210-053	12 V DC Metered, Auto Nozzle

6

CLOSED system containers have a valve coupling system that seals the container opening on drums and totes (IBC) to prevent dirt, debris, bugs, etc., from entering the container and contaminating the diesel exhaust fluid. Liquid in container system is sealed and secure, throughout container life cycle.

DEF Packages do not include coupler systems. Order Separately.

You must choose a coupler kit to create a complete system for your distribution needs.

For closed systems, use Reusable Poly Valve (RPV) or Reusable Stainless Valve (RSV) systems accessories. RSV and RPV components are interchangeable.

Closed Systems Drum Packages CF Diaphragm Pump

Features



- Compact design mounting bracket
- Heavy-duty cart - Easily holds and rolls up to 55 gallon drum
- Large semi-pneumatic tires - Allows for easy maneuvering of cart
- Large non-marking rear caster - Built in brake for safe and secure dispensing

Includes

- 1120-025A CF15 AODD Pump for DEF
- 8570-006 6' x 3/4" suction hose
- 8561-012 12' x 3/4" discharge hose
- 4530-054 Drip tray
- 4320-014 Drum cart 55 Gal for DEF
- 4530-065 Side mount bracket
- 3260-060 Filter Reg 1/4" auto drain, mini

Options

- 3120-116 Meter DR style for DEF
- 3340-012 Auto nozzle, stainless steel

MODELS AVAILABLE	DESCRIPTION
1210-054P	CF15 Non-metered, Manual Nozzle
1210-055P	CF15 Metered, Manual Nozzle
1210-056P	CF15 Non-metered, Auto Nozzle
1210-057P	CF15 Metered, Auto Nozzle

DEF Packages do not include coupler systems. Order Separately.

TECHNICAL DATA

Air inlet	3/8" NPSM(F)
Fluid inlet port	1/2" BSPP(F) DEF
Fluid outlet port	1/2" BSPP(F) DEF
Max. Free Flow	14 gal/min (50 l/min)
Air pressure range	45-100 psi (3-7 bar)
Solids in suspension	1/8" (3 mm)
Wetted Materials	PTFE (Teflon) , Viton [®] , Polypropylene, Stainless Steel, Hytrel [®]
Recommended fluids	Diesel exhaust fluid
Recommended Applications	Fluid dispensing, transfer, evacuation and distribution systems
Service Bulletin	SB 1145

6

CLOSED system containers have a valve coupling system that seals the container opening on drums and totes (IBC) to prevent dirt, debris, bugs, etc., from entering the container and contaminating the diesel exhaust fluid. Liquid in container system is sealed and secure, throughout container life cycle.

Note: Pump packages include all hoses and adapters required for connecting a DEF pump to the air supply and DEF dispense line.

DEF Packages do not include coupler systems.

You must choose a coupler kit to create a complete system for your distribution needs.

For closed systems, use Reusable Poly Valve (RPV) or Reusable Stainless Valve (RSV) systems accessories. RSV and RPV components are interchangeable.

Closed Systems Tote Packages CF Diaphragm Pump



Features

- Compact design mounting bracket
- Includes**
- 1120-025A CF15 AODD Pump for DEF
- 8570-006 6' x 3/4" Suction hose
- 8561-020 20' x 3/4" Discharge hose
- 4530-054 Drip tray
- 4530-065 Side mount bracket
- 3260-060 Reg 1/4" auto drain, mini
- Options**
- 3120-116 Meter DR style for DEF
- 3340-018 Manual nozzle, polyethylene- BSPP

Pump includes automatic shutoff.
Pump is UL approved

DEF Packages do not include coupler systems. Order Separately.

TECHNICAL DATA	
Air inlet	3/8" NPSM(F)
Fluid inlet port	1/2" BSPP(F) DEF
Fluid outlet port	1/2" BSPP(F) DEF
Max. Free Flow	14 gal/min (50 l/min)
Air pressure range	45-100 psi (3-7 bar)
Solids in suspension	1/8" (3 mm)
Wetted Materials	PTFE (Teflon) , Viton [®] , Polypropylene, Stainless Steel, Hytrel [®]
Recommended fluids	Diesel exhaust fluid
Recommended Applications	Fluid dispensing, transfer, evacuation and distribution systems
Service Bulletin	SB 1145

MODELS AVAILABLE	DESCRIPTION
1210-054	CF15 Non-metered, Manual Nozzle
1210-055	CF15 Metered, Manual Nozzle
1210-056	CF15 Non-metered, Auto Nozzle
1210-057	CF15 Metered, Auto Nozzle

CLOSED system containers have a valve coupling system that seals the container opening on drums and totes (IBC) to prevent dirt, debris, bugs, etc., from entering the container and contaminating the diesel exhaust fluid. Liquid in container system is sealed and secure, throughout container life cycle.

Note: Pump packages include all hoses and adapters required for connecting a DEF pump to the air supply and DEF dispense line.

DEF Packages do not include coupler systems.

You must choose a coupler kit to create a complete system for your fluid distribution needs.

For closed systems, use Reusable Poly Valve (RPV) or Reusable Stainless Valve (RSV) systems accessories. RSV and RPV components are interchangeable.

System Components

Electric and AODD Pumps



MODELS AVAILABLE	DESCRIPTION
1200-020	120 V AC Diaphragm pump, UL auto shut-off
1200-021	12 V DC Diaphragm pump, UL auto shut-off



MODELS AVAILABLE	DESCRIPTION
1120-034A	CF10 Diaphragm pump
1120-025A	CF15 Diaphragm pump
1120-031A	CF30 Diaphragm pump

6

TECHNICAL DATA 120 V AC 1200-020 120 V AC Diaphragm pump	
Fluid inlet port	1" BSPP(M)
Fluid outlet port	1" BSPP(M)
Flow Rate	8.5 gal/min (32.18 l/min)
Working Pressure	23 psi (1.6 bar)
Power	120 V AC, UL approved
Wetted Materials	Stainless Steel, Viton®, PPE
Service Bulletin	SB 1129

TECHNICAL DATA 12 V DC 1200-021 12 V DC Diaphragm pump	
Fluid inlet port	1" BSPP(M)
Fluid outlet port	1" BSPP(M)
Flow Rate	9.5 gal/min (34.07 l/min)
Working Pressure	23 psi (1.6 bar)
Power	12 V DC, UL approved
Wetted Materials	Stainless Steel, Viton®, PPE
Service Bulletin	SB 1130

TECHNICAL DATA CF10 - CF15 Diaphragm pump		
	1120-034A CF10	1120-025A CF15
Air inlet	3/8" NPSM (F)	1/2" BSPP(F)
Fluid inlet port	1/2" BSPP(F) DEF	1/2" BSPP(F) DEF
Fluid outlet port	1/2" BSPP(F) DEF	1/2" BSPP(F) DEF
Max. Free Flow	10 gal/min (38 l/min)	14 gal/min (50 l/min)
Air pressure range	22 to 102 psi (1.5 to 7 bar)	22 to 102 psi (1.5 to 7 bar)
Solids in suspension	1/8" (3 mm)	1/8" (3 mm)
Wetted Materials	PTFE (Teflon), Viton®, Polypropylene, Stainless Steel, Acetal, and Hytrel®	PTFE (Teflon), Viton®, Polypropylene, Stainless Steel, Hytrel®
Service Bulletin	SB 1145	SB 1145

TECHNICAL DATA CF30 Diaphragm pump	
	1120-031A CF30
Air inlet	3/8" NPSM(F)
Fluid inlet port	1" BSPP(F) DEF
Fluid outlet port	1" BSPP(F) DEF
Max. Free Flow	28 gal/min (100 l/min)
Air pressure range	22 to 102 psi (1.5 to 7 bar)
Solids in suspension	3/16" (4 mm)
Wetted Materials	PTFE (Teflon), Viton®, Polypropylene, Stainless Steel, and Hytrel®
Service Bulletin	SB 1145

Hose Reels Extended Volume (EV)

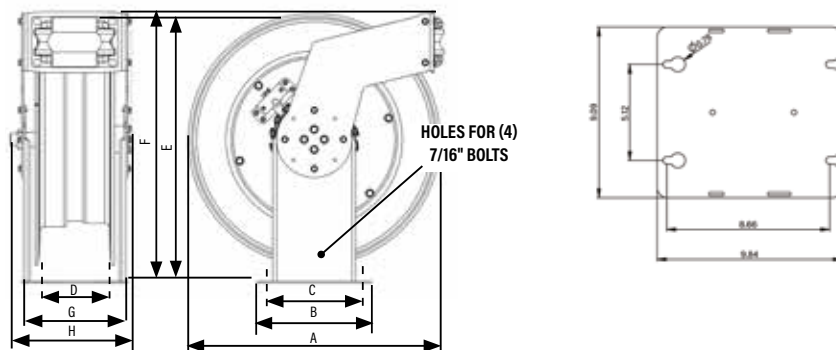


DEF

The EV reel is for longer hose lengths and higher flow requirements. Includes hose, hose stop and a 2.5' connecting hose.





MODELS AVAILABLE	DESCRIPTION	REPLACEMENT HOSE
EXTENDED VOLUME (EV) DEF (Diesel Exhaust Fluid) Low pressure 150 psi (10 bar) for delivery of DEF		
2400-010	Bare reel, up to 50' x 3/4" ID BSPP (F) hose	-
2400-011	50' x 3/4" ID BSPP (M) includes 3' inlet hose	8569-050






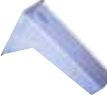
TECHNICAL DATA	
Fluid inlet port	3/4" BSPP cone seal bare
Fluid outlet port	3/4" BSPP bare
Inlet/Outlet thread	3/4" BSPP for 3/4" hoses
Wetted Materials	Stainless steel, Polypropylene, and Viton [®]
Service Bulletin	SB 2028



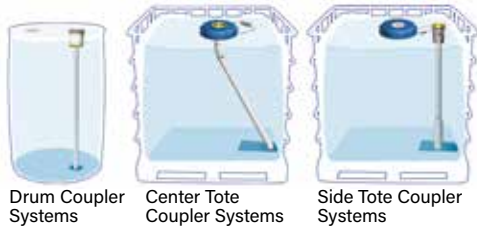
DIMENSIONS SERIES (INCHES)							
A	B	C	D	E	F	G	H
22"	85/8"	5"	5 1/8"	22"	23 1/2"	9"	9 1/4"

System Components Meters and Nozzles

METERS AND SOLENOIDS						
	MODEL	DESCRIPTION	INLET/OUTLET PORT	FLOW RATE	OPERATING PRESSURE	POWER
	3120-116	DR Style Meter for DEF	1/2" BSPP(F/F) & flange	0.25 - 13.2 gal/min (1 - 50 l/min)	435 psi (30 bar)	2 x 1.5 V alkaline batteries size "AAA"
	3120-119	DEF Turbine Meter	1" BSPP(M/M)	1.3-26.4 gal/min (4.92-99.94 l/min)	145 psi (10 bar)	2 x 1.5 V alkaline batteries size "AAA"
	3120-206	Turbine Meter, pulse-out	1" BSPP(F/F)	83 PPQ	145 psi (10 bar)	24 V AC
	3120-207	Solenoid	3/4" NPT(F/F)	8.4 gal/min (32.71 l/min)	150 psi (10 bar)	24 V AC

NOZZLES	
MODEL	DESCRIPTION
	3340-011 Nozzle, manual Polyethylene 3/4" barb (M)
	3340-018 Nozzle, manual Polyethylene 3/4" BSPP(F)
	3340-015 Nozzle, manual Polyethylene 1" barb (M)
	3340-012 Nozzle, automatic shut-off Stainless steel, 3/4" BSPP(F)
	3340-017 Nozzle, Magnetic, 3/4" BSPP(F)
	4530-054 Nozzle holder, drip tray

Coupler Components and Kits



Drum Coupler Systems

Center Tote Coupler Systems

Side Tote Coupler Systems

NOTE: When ordering suction kits ensure you have selected the correct dip tube orientation for your system. DEF Packages do not include coupler systems. You must choose a coupler kit to create a complete system for your fluid distribution needs.




OPEN SYSTEMS COMPONENTS

For open systems, use Drum Quick Pro (DQP) accessories.

DRUM QUICK PRO (DQP)

	4530-001	Coupler, polyethylene 3/4" barb
	3250-002	Replacement filter, air - used on 4530-001
	4530-002	Insert, polyethylene, 2" ABUT (American Buttress)
	4530-006	Dip tube, 55 gal drum mount length
	4530-005	Dip tube, 275 gal tote mount length

SUCTION KITS

	4530-007	Suction Kit, DQP series Includes: coupler, insert, key and 55 gal drum mount length dip tube
	4530-008	Suction Kit, DQP series Includes: coupler, insert, key and 275 gal tote mount length dip tube
	4530-009	Suction Kit, DQP series Includes: coupler, insert, key and 330 gal tote mount length dip tube

CLOSED SYSTEMS

For closed systems, use Reusable Poly Valve (RPV) or Reusable Stainless Valve (RSV) systems accessories. RSV and RPV components are interchangeable

REUSABLE STAINLESS VALVE (RSV)






4 Prong, Green Seal - Preferred and Balcrank recommended

	4530-036	Coupler, Stainless Steel 3/4" barb. For use with 4530-037 only
	4530-048	Coupler, Fill head 1" NPT(M) For use with 4530-037 only
	4530-037	Insert, stainless steel, 2" ABUT (American Buttress)
	4530-038	Key, stainless steel, RSV/RPV

REUSABLE POLY VALVE (RPV)

	4530-057	Coupler, RSV/RPV, Poly - 3/4" barb
	4530-063	Insert, polyethylene, 2" ABUT (American Buttress) (M)
	4530-058	Key - Poly, RSV/RPV



RSV/RPV DIP TUBES

	4530-041	Dip tube, 55 gal drum mount length
	4530-044	Dip tube, 275 gal tote - center mount length
	4530-040	Dip tube, 275 gal tote - side mount length
	4530-043	Dip tube, 330 gal tote - center mount length
	4530-039	Dip tube, 330 gal tote - side mount length

SUCTION KITS

	4530-042	Suction Kit, RSV series - includes: coupler 4530-036, insert and 55 gal drum mount length dip tube
	4530-045	Suction Kit, RSV series - includes: coupler 4530-036, insert 2- 275 gal tote mount length dip tube
	4530-046	Suction Kit, RSV series - includes: coupler 4530-036, insert and 2- 330 gal tote mount length dip tube
	4610-001	Suction Kit, RSV/RPV SS series - includes: coupler 4530-036, DEF Hose 6' x 3/4" ID, Fitting 1" BSPP(F) x 3/4" barb
	4530-059	Suction Kit, RPV Poly series - includes: coupler 4530-057, insert and 55 gal drum dip mount length tube
	4530-060	Suction Kit, RPV Poly series - includes: coupler 4530-057, insert and 2-275 gal tote mount length dip tube
	4530-061	Suction Kit, RPV Poly series - includes: coupler 4530-057, insert and 2- 330 gal tote mount length dip tube
	4610-003	Suction Kit, RPV Poly series - includes: coupler 4530-057, DEF Hose 6' x 3/4" ID, Fitting 1" BSPP(F) x 3/4" barb

COUPLER KIT ACCESSORIES

	4530-066	Center cap, tote 6" diameter x 2.5" ID ABUT (American Buttress)
	6210-001	Funnel with spout, 1 pt. 1/2" spout

System Components

Hand Pump, Hoses, and Hose Accessories



MODELS AVAILABLE	DESCRIPTION
1300-028	Hand Pump, Manual lever

TECHNICAL DATA	
All polypropylene construction, includes a 2" bung adaptor	
Delivery Volume	1 pint per stroke (500 cc)
Temp Range	23 °F to 113 °F (-5 °C to 45 °C)
Wetted Materials	Polypropylene, EPDM
Service Bulletin	SB 1117

HOSE - SUCTION - BEFORE PUMP



8570-003 3' x 3/4" ID Cut-end

8570-006 6' x 3/4" ID Cut-end

8572-006 6' x 1" ID Cut-end w/ hose clamps

HOSE - DISPENSE - AFTER PUMP

All hoses are specially formulated polyurethane unless otherwise stated



8551-006 6' x 1" ID w/hose clamps and simple spout

8560-003 3' x 3/4" ID w/hose clamps

8560-012 12' x 3/4" ID w/hose clamps

8562-003 3' x 3/4" ID Swivel 3/4" BSPP(M) - Straight 3/4" BSPP(M)

8569-016 16' x 3/4" ID Swivel 3/4" BSPP(M/M)

8569-020 20' x 3/4" ID Swivel 3/4" BSPP(M/M)

8569-030 30' x 3/4" ID Swivel 3/4" BSPP(M/M)

8569-050 50' x 3/4" ID Swivel 3/4" BSPP(M/M)

HOSE - DISPENSE - AFTER PUMP - CLAMP NOT INCLUDED

All hoses are specially formulated polyurethane unless otherwise stated



8561-003 3' x 3/4" ID Swivel 3/4" BSPP(M) cut end requires a hose clamp NOT included Order 2230-032

8561-006 6' x 3/4" ID Swivel 3/4" BSPP(M) cut end requires a hose clamp NOT included Order 2230-032

8561-012 12' x 3/4" ID Swivel 3/4" BSPP(M) cut end requires a hose clamp NOT included Order 2230-032

8561-016 16' x 3/4" ID Swivel 3/4" BSPP(M) cut end requires a hose clamp NOT included Order 2230-032

8561-020 20' x 3/4" ID Swivel 3/4" BSPP(M) cut end requires a hose clamp NOT included Order 2230-032

8561-030 30' x 3/4" ID Swivel 3/4" BSPP(M) cut end requires a hose clamp NOT included Order 2230-032

HOSE ACCESSORIES



2230-033 Hose bend restrictors - 12" black poly



2230-032 Stainless steel hose clamp 3/4"

System Accessories

ADAPTERS-ELBOW			SEALS			
	3270-162	Poly Hose elbow, 1" BSPP(M) to 3/4" barb		3270-171	3/4" Stainless steel /Viton' bonded seal	
	3270-176	Poly Hose elbow, 1" NPT(M) to 3/4" barb		3270-169	1" Stainless steel /Viton' bonded seal	
	3270-175	Stainless steel elbow, 1" BSPP(M) X 3/4" BSPP(F) 90 DEG	FILTERS			
ADAPTERS - HOSE BARB				3250-001	Filter, in-line 10 micron - 3/4" NPT (filter included). For replacement filter use 832796	
	3270-163	Poly Hose barb, 1" BSPP(M) to 3/4" barb		BRACKETS		
	3270-165	Poly Hose barb, 1" NPT(M) to 3/4" barb		4530-064	CF AODD Pump Shelf For use with the 4530-065 side mount bracket. Use CF AODD pump shelf to attach the CF15 pump to the side mount bracket	
	3270-166	Poly Hose barb, 3/4" NPT(M) to 3/4" barb			4411-016	Conventional AODD Wall Mount Bracket
	3270-177	Poly Hose barb, 1/2" NPT(M) to 3/4" barb			DOLLY BASES AND DRUM CARTS	
3270-164	Stainless steel swivel 3/4" BSPP(M) to 3/4" barb			4320-014	Drum Cart, 55-gal heavy duty <ul style="list-style-type: none"> • Heavy-duty cart - Easily holds and rolls up to 55 gallon drum • Large semi-pneumatic tires - Allows for easy maneuvering of cart • Large non-marking rear caster - Built in brake for safe and secure dispensing 	
ADAPTERS - COUPLERS (F/F)					4310-004	Dolly Base, 55-gal heavy duty
	3270-173		Poly coupler, 1" NPT(F) to 1" BSPP(F)			
	3270-167	Stainless steel coupler, 1" BSPP(F) to 1" BSPP(F)				
	3270-168	Poly coupler, reducer - 1" BSPP(F) to 3/4" BSPP(F)				
ADAPTERS - HEX NIPPLE				3270-172	Stainless steel Adapter, 1" BSPP(M) x 3/4" NPT(M)	
ADAPTERS - SWIVEL UNION				3270-174	Stainless steel swivel, 1" BSPP(F) to 3/4" BSPP(M)	

Repair Kits for DEF Pumps

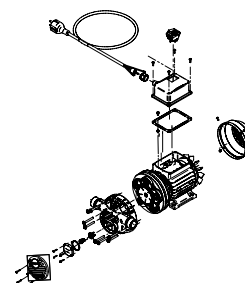
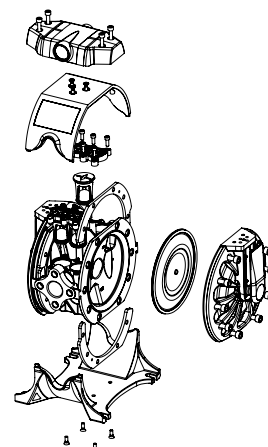
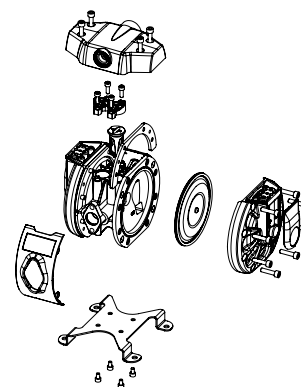
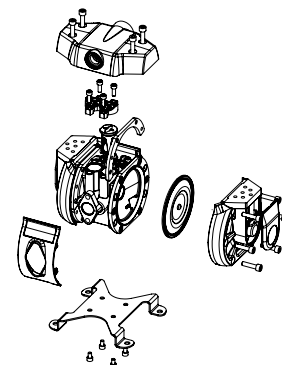
6

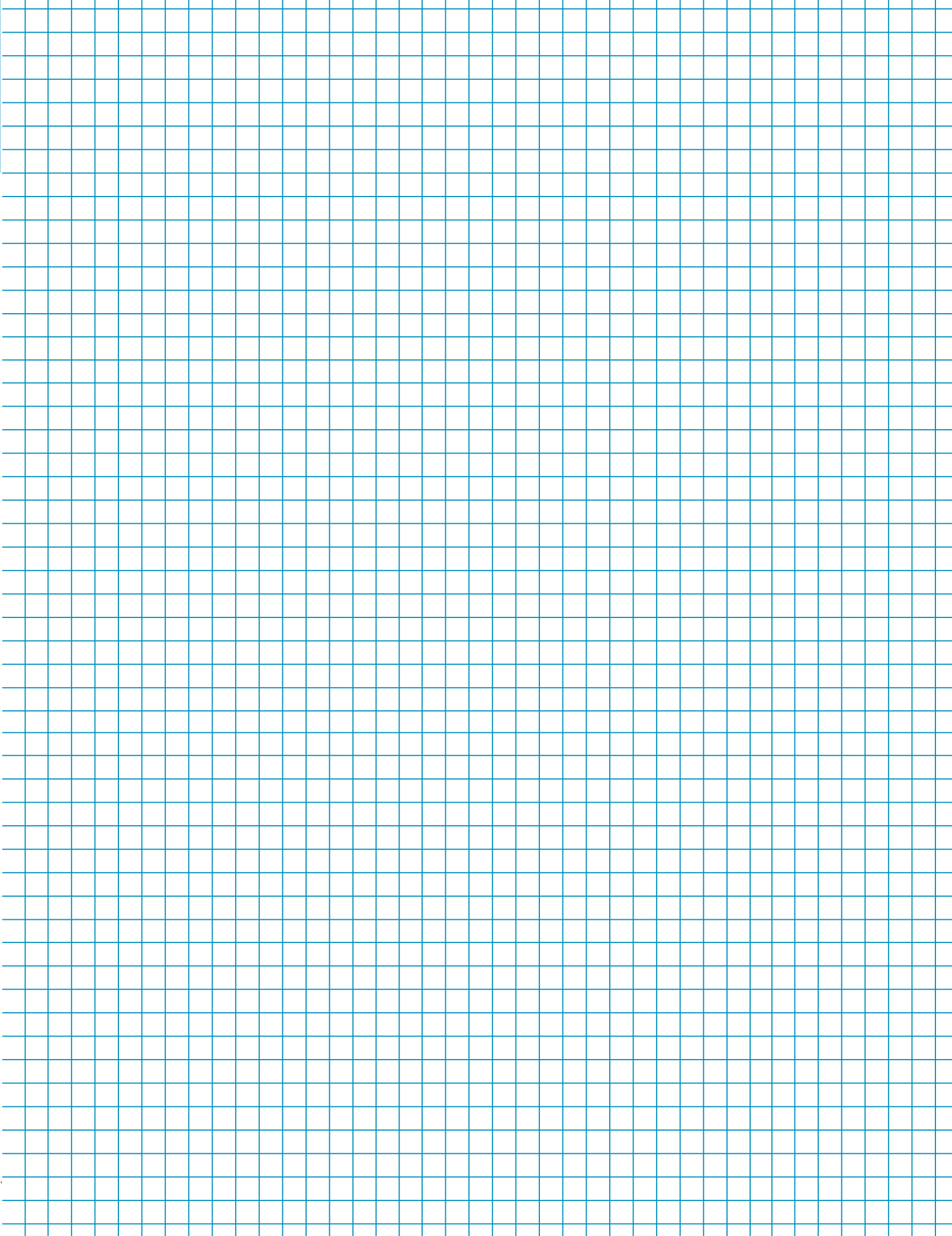
CF10		
PUMP MODELS	KIT NUMBER	DESCRIPTION
CF10 AODD PUMPS - 1120-034A		
1120-034A	833732	Air valve kit
1120-034A	833207	Stroke sensor kit
1120-034A	833208	Check Ball kit
1120-034A	833735	Ball Seats, O-rings, ball guides
1120-034A	833338	Diaphragms kit
1120-034A	833332	Bushing, seal, push rod

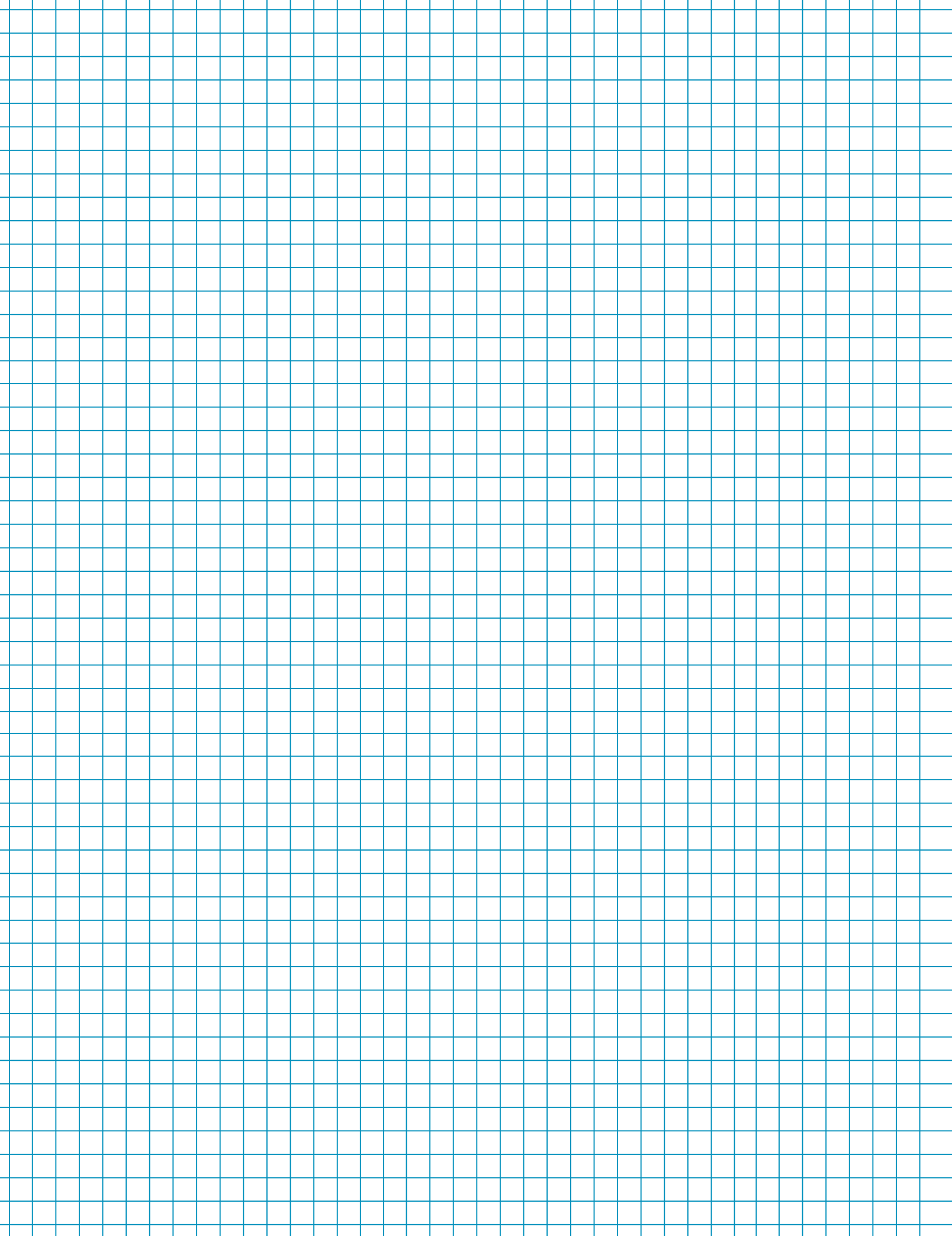
CF15		
PUMP MODELS	KIT NUMBER	DESCRIPTION
CF15 AODD PUMPS - 1120-025A		
1120-025A	833372	Air valve kit
1120-025A	833207	Stroke sensor kit
1120-025A	833208	Check Ball kit
1120-025A	833735	Ball Seats, O-rings, ball guides
1120-025A	833210	Bushing, seal, push rod (Prior to 2/1/2013)
1120-025A	833332	Bushing, seal, push rod (After to 2/1/2013)
1120-025A	833211	Diaphragms kit (Prior to 2/1/2013)
1120-025A	833338	Diaphragms kit (After to 2/1/2013)
1120-025A	833341	Retrofit Kit (Updates pumps prior to 2/1/2013)

CF30		
PUMP MODELS	KIT NUMBER	DESCRIPTION
CF30 AODD PUMPS - 1120-031A		
1120-031A	833733	Air valve kit
1120-031A	833207	Stroke sensor kit
1120-031A	833233	Check Ball kit
1120-031A	833738	Ball Seats, O-rings, ball guides
1120-031A	833235	Bushing, seal, push rod (Prior to 2/1/2013)
1120-031A	833335	Bushing, seal, push rod (After to 2/1/2013)
1120-031A	833339	Diaphragms kit (After to 2/1/2013)
1120-031A	833342	Retrofit Kit (Updates pumps prior to 2/1/2013)

ELECTRIC DIAPHRAGM PUMPS		
PUMP MODELS	KIT NUMBER	DESCRIPTION
ALUMINUM AODD PUMPS - 1200-020 120V AC, 1200-021 120V DC		
1200-020, 1200-021	833415	Bypass valve kit
1200-020, 1200-021	833416	Pump head kit
1200-020, 1200-021	833417	Fan cover kit
1200-020	833418	Electric connection kit
1200-021	833419	Electric connection kit for 12V pump









1 2 3 4 5 6 7 8 9 10

Used Fluid Equipment

USED FLUID EQUIPMENT	159
ROUGHNECK II™	160
PREMIUM DUTY DRAIN	161
SPILLGUARD DRAIN	162
USED FLUID EQUIPMENT EVACUATOR	163
TRUCK DRAIN AND DRAIN PIT BOSS	164
AODD USED FLUID EQUIPMENT FOR OIL	165
AODD USED FLUID EQUIPMENT FOR ANTI-FREEZE	166
ACCESSORIES FOR AODD PUMPS	167

Used Fluid Equipment Roughneck II™

The Roughneck II™ drain captures used fluids and transfers them to any bulk storage tank. The unit uses regular shop air and can be pressurized to allow for self-evacuating.



TECHNICAL DATA

Air Pressure Operating Range	5-25 psi (.34-1.72 bar)
Tank Capacity	23 gal (87 l)
Telescoping Range	45"-72" (1.14-1.83 m)
Maximum Pressure	25 psi (1.72 bar)
Pressure Relief Valve	30 psi (2.07 bar)
Air Inlet Size (quick connect)	1/4" NPT
Fluid Outlet Nozzle	1" OD
Estimated Evacuation Time	3 - 4 min.
Wetted Materials	Zinc Plated Steel, Steel, Viton®, HDPE, and PVC
Service Bulletin	SB 4027

Features

- Patented automatic fluid evacuation valve eliminates gravity draining, pouring, or the need for an evacuation pump, **made in the USA**
- 23 gallon storage tank; fewer drain intervals
- A low pressure safety valve prevents over pressurization of tank.
- Clear evacuation hose; provides fast fluid evacuation and shows fluid levels in tank.

Includes:

- 19.25" diameter catch basin that features an inlet strainer and s-hooks for tools
- Splashguard bowl design prevents splattering, speeds drainage
- Fully adjustable bowl height from 45" to 72"
- One hand operation. No ball valves required for evacuation of fluid
- Roughneck outlet tube mounts securely into bulk used fluid reservoir
- 7' evacuation tube provides sight gauge for fluid level
- Tank handle makes maneuvering easy.
- Heavy gauge, all-steel construction guarantees long life
- Tip-resistant balanced design
- Large diameter rear rubber wheels and non-marking wide front casters maneuver the toughest shop floors

MODELS AVAILABLE	DESCRIPTION
4110-022	Roughneck II™ Used Oil Drain
4110-023	Roughneck II™ Used Anti-freeze Drain
4140-064	Replacement Drain Bowl

Used Fluid Equipment Premium Duty

Premium drains capture used fluids and transfers them to any bulk storage tank using a cam-lock kit and evacuation system.



Features

- All steel tank and base design made from heavy gauge steel, guaranteeing long life, made in the USA
- Non-marking rubber wheels and 4" casters for easy maneuvering on any floor surface
- Drainage bowl made from high strength poly to provide collapsible safety feature
- Tip resistant balanced design
- Prevents splattering and includes strainer to keep debris from entering tank and speed drainage
- High quality powder coating for corrosion resistance. Drains are offered in black for used fluid and green for used Anti-freeze (Glycol)
- Used oil drains will come with a 1" cam-lock nipple and dust cap
- Used anti-freeze drains will come with a 3/4" cam-lock nipple and dust cap

TECHNICAL DATA	
Tank Capacity	23 gal (87 l)
Telescoping Range	45" - 72" (1.14 - 1.83 m)
Air Inlet Size (quick connect)	1/4" NPT
Fluid Outlet	Used oil 1" cam-lock nipple Used anti-freeze 3/4" cam-lock nipple
Wetted Materials	Zinc Plated Steel, Steel, Viton®, HDPE, and PVC
Service Bulletin	SB 4226

MODELS AVAILABLE	DESCRIPTION
4110-024	Premium Duty Used Oil Drain
4110-025	Premium Duty Used Anti-freeze (Glycol) Drain

CAM-LOCK COUPLER & NIPPLE RATED FOR 250 PSI (17 BAR)		
Cam-Lock Coupler & Nipple		4140-044 Coupler 3/4" NPT(F)
		4140-017 Coupler 1" NPT(F)
		4140-054 Nipple 3/4" NPT(F)
		4140-055 Nipple 1" NPT(F)
		4140-045 Nipple 3/4" NPT(M)
		4140-018 Nipple 1" NPT(M)
		4140-046 Dust Cap 3/4" NPT(F)
		4140-019 Dust Cap 1" NPT(F)
		4140-052 Dust Plug 3/4" NPT(M)
		4140-053 Dust Plug 1" NPT(M)

DRY BREAK COUPLER & NIPPLE RATED FOR VACUUM OR UP TO 3,000 PSI (207 BAR)		
Dry Break Coupler & Nipple		4140-016 Coupler 3/4" NPT(F)
		4140-050 Coupler 1" NPT(F)
		4140-023 Nipple 3/4" NPT(F)
		4140-051 Nipple 1" NPT(F)
Drain Bowl		4140-064 Replacement Drain Bowl
OLD STYLE DRAIN CONVERSION Conversion of old style drains with dry break couplers use		
For Used Oil		3270-054 Bushing 1" x 3/4"
		4140-018 Nipple 1" NPT(M)
For Anti-freeze		4140-045 Nipple 3/4" NPT(M)



Used Fluid Equipment Spillguard

Spillguard drains capture used fluids and transfer to any bulk storage tank using a cam-lock kit and evacuation system



Features

- Balcrank "wide track" 4" caster dolly set for easy maneuvering on any floor surface
- All steel cover, container, and base design, made in the USA
- Drainage bowl made from high strength poly to provide collapsible safety feature and to assist in preventing container failure when an object is lowered onto drainage bowl
- Drain bowl prevents splattering and includes strainer to keep debris from entering container and speed drainage
- Tip resistant balanced design
- High quality powder coating for corrosion resistance. Drains are offered in black for used fluid and green for used Anti-freeze (Glycol)
- Used oil drains will come with a 1" cam-lock nipple and dust cap
- Used anti-freeze drains will come with a 3/4" cam-lock nipple and dust cap

7

TECHNICAL DATA		MODELS AVAILABLE	DESCRIPTION
Tank Capacity	16 gal (60.5 l)	4110-026	Spillguard used oil drain
Telescoping Range	0-27 in. (0-69 m)	4110-027	Spillguard used oil drain drumless
Air Inlet (quick connect)	1/4" NPT	4110-028	Spillguard used anti-freeze (Glycol) drain
Fluid Outlet	Used oil 1" cam-lock nipple Used anti-freeze 3/4" cam-lock nipple	4110-029	Spillguard used anti-freeze (Glycol) drain drumless
Wetted Materials	Zinc Plated Steel, Steel, Viton®, HDPE, and PVC		
Service Bulletin	SB 4225		

CAM-LOCK COUPLER & NIPPLE RATED FOR 250 PSI (17 BAR)	
Cam-Lock Coupler & Nipple	4140-044 Coupler 3/4" NPT(F)
	4140-017 Coupler 1" NPT(F)
	4140-054 Nipple 3/4" NPT(F)
	4140-055 Nipple 1" NPT(F)
	4140-045 Nipple 3/4" NPT(M)
	4140-018 Nipple 1" NPT(M)
	4140-046 Dust Cap 3/4" NPT(F)
	4140-019 Dust Cap 1" NPT(F)
	4140-052 Dust Plug 3/4" NPT(M)
	4140-053 Dust Plug 1" NPT(M)

DRY BREAK COUPLER & NIPPLE RATED FOR VACUUM OR UP TO 3,000 PSI (207 BAR)	
Dry Break Coupler & Nipple	4140-016 Coupler 3/4" NPT(F)
	4140-050 Coupler 1" NPT(F)
	4140-023 Nipple 3/4" NPT(F)
	4140-051 Nipple 1" NPT(F)
Drain Bowl	4140-064 Replacement Drain Bowl
OLD STYLE DRAIN CONVERSION Conversion of old style drains with drybreak couplers use	
For Used Oil	3270-054 Bushing 1" x 3/4" 4140-018 Nipple 1" NPT(M)
For Anti-freeze	4140-045 Nipple 3/4" NPT(M)

Used Fluid Equipment Evacuators



Features

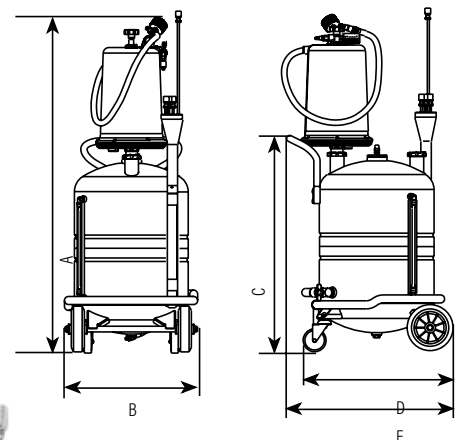
- Extract used oil and other fluids from any vehicle - safer, cleaner
- No more stripped drain plugs
- Great for cars, boats, motorcycles, and small engines
- Easily remove overfills
- Vacuum-charged unit is completely portable and easy to use
- Includes five suction probes (metal and flexible)
- Suction probes equipped with quick disconnect couplers
- Adapters for BMW and Volkswagen included
- Self-evacuating feature makes emptying clean and easy
- Available version with clear bowl
Capacity: 2 gal (7.5 l)

TECHNICAL DATA		
	4140-056	4140-057
Tank capacity	18.5 gal (64.35 l)	18.5 gal (64.35 l)
Max. draining capacity	70%	80%
Air pressure for vacuum	100 psi (7 bar)	100 psi (7 bar)
Depressurization time	2' 15"	2' 15"
Suction hose	6 1/2" (2m)	6 1/2" (2m)
Draining hose	5' (1.5 m)	5' (1.5 m)
Service Bulletin	SB 4081	SB 4082

Warning! Not to be used with flammable fluids.

MODELS AVAILABLE	DESCRIPTION
4140-056	Oil Evacuators
4140-057	Oil Evacuators with Clear Dome and Mercedes adapter

EXTRACTOR WANDS			
Part Number	Material	Wand Kit	Wand Kit Includes
833453	All	Wand Kit	Wand Kit Includes
833462	Flex	.27 X .19 X 39.37 (7 X 5 X 1000)	✓
833465	Flex	.23 X .15 X 27.55 (6 X 4 X 700)	✓
833466	Flex	.31 X .23 X 27.55 (8 X 6 X 700)	✓
833463	Rigid Copper	.19 X .15 X 27.55 (5 X 4 X 700)	✓
833464	Rigid Copper	.23 X .19 X 27.55 (6 X 5 X 700)	✓
833460	Adapter	Volkswagen, Audi Group	✓
833461	Adapter	Peugeot Group	✓



DIMENSIONS INCHES (MM)				
A	B	C	D	E
46.06" (1,170)	18.5" (470)	29.5" (750)	18.70" (475)	22.84" (580)

7

Used Fluid Equipment Truck Drain and Drain-Pit Boss

The truck drain comes pre-assembled allowing for immediate use. Includes "used oil only" and "used anti-freeze only" decals for fluid identification. Connects to a used oil evacuation system using a cam-lock kit and evacuation system.

The Pit Boss rolling pit drain captures used fluids. Specifically designed to easily roll on guide tracks in the user's pit and connect to a used fluid evacuation system.

The low volume truck drain comes pre-assembled allowing for immediate use. Connects to a used oil evacuation system using a 3/4" cam-lock kit for anti-freeze or a 1" cam-lock kit for used fluid.



4140-020*

*See evacuation kit 1121-001 for Pit Boss on pg. 163

Features

Truck Drain

- Two fixed 8" wheels and one swivel caster
- Double baffles with upper screen and a catch lip help prevent fluid from splashing out
- Tubular U-handle design for excellent maneuvering
- All steel design

Low Profile Truck Drain

- Two anti-splash baffles, side splash guards and a metal catch screen. Select a 3/4" cam-lock kit for anti-freeze or a 1" cam-lock kit for used fluid

Pit Boss

- Two anti-splash baffles, side splash guards and a metal catch screen
- Front and rear drain ports
- 3" diameter wheels which are mounted to accommodate a pit track width of 34" to 53"
- Tool shelf below the tank for pit service tool
- All steel design

TECHNICAL DATA

MODELS	4120-003 4120-004	4120-006	4140-060 4140-020
Tank Capacity	5.2 gal (20 l)	26 gal (98.4 l)	34 gal (128.7 l)
Fluid Outlet	4120-003 3/4" for anti-freeze 4120-004 1" for used oil	1"	4140-060 1" cam-lock nipple 4140-020 1" NPT(F) bare
Measurements	9" H x 15" W x 32" L	9" H x 24" W x 36" L	16.72" H x 28.4" W x 34" L, 2" adjustable unit height
Wetted Materials	Zinc Plated Steel, Steel, Viton, HDPE, and PVC	Zinc Plated Steel, Steel, Viton, HDPE, and PVC	Zinc Plated Steel, Steel, Viton, HDPE, and PVC
Service Bulletin	SB 4234	SB 4051	SB 4018

Warning! Not to be used with flammable fluids.

MODELS AVAILABLE	DESCRIPTION
4120-003	Low Profile Truck Drain for anti-freeze
4120-004	Low Profile Truck Drain for oil
4120-006	Low Profile Truck Drain Bare
4140-060	Drain - Pit Boss with Quick Connect Kit 4140-061
4140-020	Drain - Pit Boss Bare

CAM-LOCK COUPLER & NIPPLE RATED FOR 250 PSI (17 BAR)

Cam-Lock Coupler & Nipple		4140-044 Coupler 3/4" NPT(F)
		4140-017 Coupler 1" NPT(F)
		4140-054 Nipple 3/4" NPT(F)
		4140-055 Nipple 1" NPT(F)
		4140-045 Nipple 3/4" NPT(M)
		4140-018 Nipple 1" NPT(M)
		4140-046 Dust Cap 3/4" NPT(F)
		4140-019 Dust Cap 1" NPT(F)
		4140-052 Dust Plug 3/4" NPT(M)
		4140-053 Dust Plug 1" NPT(M)

CAM-LOCK COUPLER & NIPPLE RATED FOR VACUUM OR UP TO 3,000 PSI (207 BAR)

Cam-Lock Kits		4140-061 Cam-Lock Kit 1" for used oil for use with Pit Boss Bare 4140-020 Includes: Fluid Ball Valve, Cam-Lock nipple, Cap, and Hex nipple
		4140-067 Cam-Lock Kit 3/4" for anti-freeze for use with Pit Boss Bare 4140-020 Includes: Fluid Ball Valve, Cam-Lock nipple, Cap, and Hex nipple
Hose Kit for waste oil evacuation		4140-013 Hose Kit for waste oil evacuation Includes: 4140-017 - Cam-lock coupler 1", 8181-002X - Hose low pressure 2.5' x 1"

AODD Used Fluid Equipment for Oil

Differential Evacuation Package

Evacuation system for differential oil



1121-001 EVACUATION PACKAGE FOR USED OIL	
INCLUDES	
1120-011A	1/2" Polypropylene Diaphragm Pump
833009	MP Hose, Clear 10' x 1/2"
3260-060	F/R Auto Drain 1/4" NPT(F)
829131	Mounting Bracket for Pit Boss

Warning! Not to be used with flammable fluids.

CF50 Series Evacuation Package

Evacuation system for used oil



1121-024 CF50 EVACUATION PACKAGE FOR USED OIL	
INCLUDES	
1120-037	Aluminum CF50 Diaphragm Pump
8134-005	LP Hose Assembly 5' x 3/8"
8281-005	MP Hose Assembly 5' x 1"
8182-005	LP Hose Assembly Suction Rated 5' x 1"
4140-017	Cam-lock Coupler 1"
4140-053	Cam-lock Dust Plug 1"
3230-019	LP Air Ball Valve 3/8" NPT(F) no bleed
3230-022	LP Air Ball Valve 1" NPT(F) no bleed
3260-035	F/R Auto Drain 3/8" NPT(F)
4411-036	Mounting Bracket for CF50 AODD Pumps
3120-219	Y-Strainer 1" NPT(F)

Warning! Not to be used with flammable fluids.

Conventional 1" UL Evacuation Package

Evacuation system for use when UL is specified. Package designed for used oil evacuation.



1121-026 UL SPECIFIED EVACUATION PACKAGE FOR USED OIL			
INCLUDES			
1120-015S	1" UL Aluminum AODD Pump	3230-019	LP Air Ball Valve 3/8" NPT(F) no bleed
8134-005	LP Hose Assembly 5' x 3/8"	4140-017	Cam-lock Coupler 1"
3260-035	F/R Auto Drain 3/8" NPT(F)	4140-053	Cam-lock Dust Plug 1"
8281-005	MP Hose Assembly 5' x 1"	4411-016	Mounting Bracket for Diaphragm Pump
8182-005	LP Hose Assembly Suction Rated 5' x 1"	3120-219	Y-Strainer 1" NPT(F)
3230-022	LP Air Ball Valve 1" NPT(F) no bleed		

Warning! Not to be used with flammable fluids.

AODD Used Fluid Equipment for Anti-freeze

CF30 Series Evacuation Package

Evacuation system for anti-freeze disposal



CF50 Series Evacuation Package

Evacuation system for anti-freeze disposal



1121-023 CF30 EVACUATION PACKAGE FOR USED ANTI-FREEZE	
INCLUDES	
1120-040	Buna/Hytrel® CF30 Diaphragm Pump
8134-005	LP Hose Assembly 5' x 3/8"
8264-005	Qty 2 - MP Hose Assembly Suction Rated 5' x 3/4"
4140-044	Cam-lock Coupler 3/4"
4140-052	Cam-lock Dust Plug 3/4"
3230-019	LP Air Ball Valve 3/8" NPT(F) no bleed
3230-021	LP Air Ball Valve 3/4" NPT(F) no bleed
3260-035	F/R Auto Drain 3/8" NPT(F)
4411-025	Mounting Bracket for AODD Pumps

Warning! Not to be used with flammable fluids.

1121-025 CF50 EVACUATION PACKAGE FOR USED ANTI-FREEZE	
INCLUDES	
1120-037	Buna/Hytrel® CF50 Diaphragm Pump
8134-005	LP Hose Assembly 5' x 3/8"
8264-005	Qty 2 - MP Hose Assembly Suction Rated 5' x 3/4"
4140-044	Cam-lock Coupler 3/4"
4140-052	Cam-lock Dust Plug 3/4"
3230-019	LP Air Ball Valve 3/8" NPT(F) no bleed
3230-021	LP Air Ball Valve 3/4" NPT(F) no bleed
3260-035	F/R Auto Drain 3/8" NPT(F)
4411-036	Mounting Bracket for CF50 AODD Pumps

Warning! Not to be used with flammable fluids.

7

Accessory Evacuation Packages for Oil & Anti-freeze

Does not include pump.



4140-062 EVACUATION PACKAGE FOR OIL DESIGNED FOR THE CF30	
INCLUDES	
8134-005	LP Hose Assembly 5' x 3/8"
8264-005	MP Hose Assembly 5' x 3/4"
8181-006	LP Hose Assembly Suction Rated 6' x 1"
4140-017	Cam-lock Coupler 1"
3230-019	LP Air Ball Valve 3/8" NPT(F) no bleed
3230-022	LP Air Ball Valve 1" NPT(F) no bleed
3260-035	F/R Auto Drain 3/8" NPT(F)
4411-025	Mounting Bracket for AODD Pumps

Warning! Not to be used with flammable fluids.

4140-063* EVACUATION PACKAGE FOR ANTI-FREEZE DESIGNED FOR THE CF30	
INCLUDES	
8134-005	LP Hose Assembly 5' x 3/8"
8264-005	Qty 2 - MP Hose Assembly Suction Rated 5' x 3/4"
4140-044	Cam-lock Coupler 3/4"
3230-019	LP Air Ball Valve 3/8" NPT(F) no bleed
3230-021	LP Air Ball Valve 3/4" NPT(F) no bleed
3260-035	F/R Auto Drain 3/8" NPT(F)
4411-025	Mounting Bracket for AODD Pumps

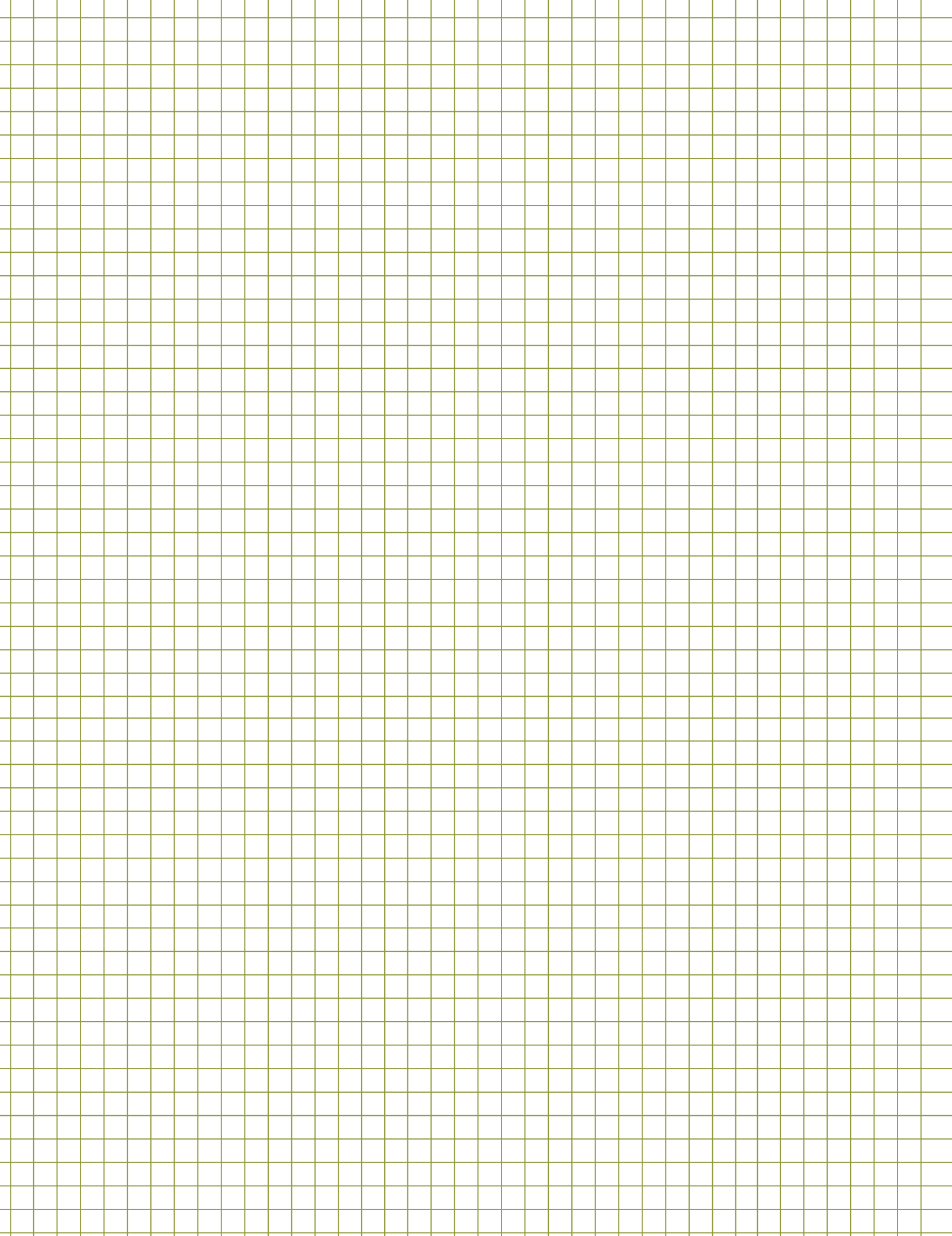
*Pressure relief recommended. See pg. 68 for pressure relief kits.

Warning! Not to be used with flammable fluids.

AODD Pump Accessories

Y-STRAINER - 580 PSI (40 BAR) All strainers have 40 mesh			CAM-LOCK COUPLER & NIPPLE RATED for 250 psi (17 bar)		
Y-Strainer		3120-211 1/2" NPT(F)	Auto Shut-off Controls		4520-023 Overfill pump control, auto shut-off, non-electric, sensing tube, pump controller
		3120-212 3/4" NPT(F)			
		3120-213 1" NPT(F)			
SUCTION LINE-STRAINER - 150 PSI (10 BAR) All strainers have 20 mesh			PRESSURE RELIEF KITS		
Suction Line-Strainer		3120-219 1" NPT(F)	Pressure Relief Kits		3120-201 Pressure Relief for Diaphragm 1/2" NPT 250 psi (17.2 bar) Includes: Valve, Tube 3' x 1/4" and 1/2" nipple
		3120-125 Replacement screen for strainer 3120-219			3120-202 Pressure Relief for Diaphragm 1" NPT 150 psi (10.3 bar) Includes: Valve, Tube 3' x 1/4" and 1" nipple
DRY BREAK COUPLER & NIPPLE RATED For vacuum or up to 3,000 psi (207 bar)			SUCTION TUBES		
Dry Break Coupler & Nipple		4140-016 Coupler 3/4" NPT(F)	Suction Tubes		4412-044 1" NPT(M) x 18" - 30° 16 gal drum
		4140-050 Coupler 1" NPT(F)			4412-046 1" NPT(M) x 26" - 30° 55 gal drum
		4140-023 Nipple 3/4" NPT(F)			4412-045 1" NPT(M) x 21" - 30° 165/280 gal bench tank
		4140-051 Nipple 1" NPT(F)			4412-048 1" NPT(M) x 30" - 30° 165/280 gal bench tank double tap
CAM-LOCK COUPLER & NIPPLE RATED For 250 psi (17 bar)			Suction Tubes		4412-047 1" NPT(M) x 28" - 30° 250 gal bench tank double tap
Cam-Lock Coupler & Nipple		4140-044 Coupler 3/4" NPT(F)			4412-051 1" NPT(M) x 42" - 30° 275/330 gal horizontal obround double tap
		4140-017 Coupler 1" NPT(F)			4412-052 1" NPT(M) x 60" - 30° 330 gal vertical obround
		4140-054 Nipple 3/4" NPT(F)			4412-049 1" NPT(M) x 32" - 30° 275 gal tote
		4140-055 Nipple 1" NPT(F)			4412-050 1" NPT(M) x 39" - 30° 330 gal tote
		4140-045 Nipple 3/4" NPT(M)			
		4140-018 Nipple 1" NPT(M)			
		4140-046 Dust Cap 3/4" NPT(F)			
		4140-019 Dust Cap 1" NPT(F)			
		4140-052 Dust Plug 3/4" NPT(M)			
		4140-053 Dust Plug 1" NPT(M)			
			BRACKETS		
			Wall-mount bracket		4411-016 Wall Mount Bracket for conventional diaphragm pumps
					4411-025 Wall Mount Bracket for CF10, 15, & 30 diaphragm pumps
					4411-036 Mounting Bracket for CF50 AODD Pumps







1 2 3 4 5 6 7 8 9 10

Shop Supplies

SHOP SUPPLIES	169
FILTER REGULATORS, AND LUBRICATORS SUPPLIES	170
FILTER REGULATORS, AND LUBRICATORS	171
FILLERS, MEASURES, AND FUNNELS	172
VALVES	173
PRESSURIZED OIL DISPENSER AND HAND PUMPS	174
HAND PUMPS AND GREASE GUNS.	175
GREASE GUNS & CORDLESS GREASE GUN.	177
FILLER PUMPS	178
WHIP HOSES & CONNECTORS	179

Air Accessories & Supplies

Filter Regulators

Filter Regulators

Compressed Air Preparation Means Better System

Performance

Mini-series for low volume air applications

- Small, compact size
- In-line mounting using standard piping and nipples
- Effective filtration with automatic drain
- Accurate pressure regulation, precise lubrication
- Ideal for control of pumps for oil bars, spigot dispensers and reduced flow transfer pumps
- For pressures up to 150 psi (10 bar) and flows of 15 SCFM

Standard Series for Heavy Duty Lube Systems

- Heavy duty metal body and bowls
- Sight glasses standard on metal bowls for visible liquid levels
- Rated for air system pressures up to 250 psi (17.24 bar)
- Optional automatic drains available for filters
- Available as individual units or assembled
- In-line mounting using standard piping and nipples

Standard Series

Filters

- Excellent water removal with 40-micron filter, large filter element surface
- Heavy duty zinc die cast body metal bowl with sight glass

Regulators

- Heavy duty zinc die cast body
- Pressure gauge standard

Lubricators

- Heavy duty zinc die cast body
- Metal bowl with sight glass
- Proportional oil delivery
- Precision needle valve
- Bowl can be filled while airline is under pressure
- Transparent sight dome for 360° visibility

1-Piece Combo Units

- Excellent water removal efficiency, 40-micron filter
- Heavy duty zinc die cast body
- Metal bowl with sight glass
- Pressure gauge standard

Mini Series

Filters

- Excellent water removal with 5-micron filter element
- Heavy duty zinc die cast body
- 0-250 psi (0-17.24 bar) Zinc die cast bowl

Regulators

- Heavy duty zinc die cast body
- Pressure gauge standard

Lubricators

- Heavy duty zinc die cast body
- Proportional oil delivery
- Precision needle valve
- Transparent sight dome for 360° visibility
- High strength polycarbonate bowl

FRL ACCESSORIES

MODEL #	DESCRIPTION
3260-058	Auto Drain Kit
3261-005	Air Gauge 0 -300 1/4" NPT(M)
3261-006	Air Gauge 0 -160 1/8" NPT mini models only
3261-007	Mounting Bracket 1/4" mini models only
3261-008	Mounting Bracket - Filter Regulators or Lubricators 1/4", 1/2", 3/8"
3261-009	Mounting Bracket - Filter, Regulators, or Lubricators 3/8", 1/2", 3/4"
3261-010	Mounting Bracket - 2 or 3 Unit Combos 1/4", 3/8", 1/2"
3261-011	Mounting Bracket - 2 or 3 Unit Combos 3/8", 1/2", 3/4"
3261-013	Mounting Bracket 1/2" Water Separator
3261-014	Mounting Bracket 3/4" Water Separator

RECOMMENDED FRL SIZING

MAX. SCFM	CHOOSE SERIES
15	1/4" NPT(F) (mini)
40	1/4" NPT(F)
60	3/8" NPT(F)
90	1/2" NPT(F)
100	3/4" NPT(F)



Liquid Separator

Liquid Separator removes bulk liquid at all points within the compressed air system. Protecting filters by providing high liquid removal efficiencies under all flow conditions.

MODEL #	TECHNICAL DATA	DRAIN	MOUNTING BRACKET
3260-067	1/2" NPT(F) 85 SCFM	Auto	3261-013
3260-068	3/4" NPT(F) 233 SCFM	Auto	3261-014
3260-069	1" NPT(F) 233 SCFM	Auto	3261-014

Accessories & Supplies Filters Regulators, and Lubricators (FRL)



1-piece Piggy Back Filter / Regulator

Best choice for pump air control. Filter prolongs wear life of pump, automatic drain removes moisture, regulator adjusts pump air supply pressure for best performance.



2-piece Piggy Back FRL Units

Air line filter and regulator with gauge allow for maximum air flow. Provides efficient water and particle removal and features an easy to read water level indicator.



3-piece FRL Units

Full air line control and conditioning for pump operation. Select from 1/4" through 3/4" and miniature sizes. Manual drain. (Automatic or mini).

F/R Minis For pressures up to 150 psi (10 bar) and flows of 15 SCFM

F/R standard For pressures up to 250 psi (17.24 bar) and flows of 25 SCFM

MODEL #	TECHNICAL DATA	DRAIN	MOUNTING BRACKET
3260-060	1/4" NPT(F) mini, poly bowl	Auto	3261-007
3260-033	1/4" NPT(F) mini, zinc bowl	Auto	3261-007
3260-065	1/4" NPT(F) mini, zinc bowl	Manual	3261-007
3260-066	1/4" NPT(F) mini, poly bowl	Manual	3261-007
3260-034	1/4" NPT(F)	Auto	3261-010
3260-035	3/8" NPT(F)	Auto	3261-010
3260-036	1/2" NPT(F)	Auto	3261-010
3260-037	3/4" NPT(F)	Auto	3261-011

MODEL #	TECHNICAL DATA	DRAIN	MOUNTING BRACKET
3260-059	1/4" NPT(F) mini, poly bowl	Auto	3261-007
3260-048	1/4" NPT(F) mini, zinc bowl	Auto	3261-007
3260-049	1/4" NPT(F)	Auto	3261-010 or 3261-008
3260-050	3/8" NPT(F)	Auto	3261-010 or 3261-008
3260-051	1/2" NPT(F)	Auto	3261-010 or 3261-008

MODEL #	TECHNICAL DATA	DRAIN	MOUNTING BRACKET
3260-053	1/4" NPT(F) mini	Auto	3261-007
3260-054	1/4" NPT(F)	Manual	3261-010 or 3261-008
3260-055	3/8" NPT(F)	Manual	3261-010 or 3261-008
3260-056	1/2" NPT(F)	Manual	3261-010 or 3261-008
3260-057	3/4" NPT(F)	Manual	3261-011 or 3261-009



Air Line Filter

Use air filters to remove moisture and particulate solids from air supply lines. Manual drain. (Automatic or mini).



Air Regulators

Use air regulators to individually adjust supply pressure to air-operated pumps. Includes gauge.



Air Line Lubricators

Full air line control and conditioning for pump operation.



MODEL #	TECHNICAL DATA	DRAIN	MOUNTING BRACKET
3260-038	1/4" NPT(F) mini	Auto	3261-008
3260-040	3/8" NPT(F)	Manual	3261-008
3260-041	1/2" NPT(F)	Manual	3261-008
3260-042	3/4" NPT(F)	Manual	3261-008
3260-061	1" NPT(F)	Manual	-

MODEL #	TECHNICAL DATA	DRAIN	MOUNTING BRACKET
3260-028	1/4" NPT(F) mini	-	3261-007
3260-030	3/8" NPT(F)	-	3261-010
3260-031	1/2" NPT(F)	-	3261-010

MODEL #	TECHNICAL DATA	DRAIN	MOUNTING BRACKET
3260-043	1/4" NPT(F) mini, poly bowl	-	N/A

Accessories & Supplies

Fillers, Measures, and Funnels

		MODEL #	DESCRIPTION	FEATURES
Fillers and bottles		6110-017	Battery Filler	2 1/4" capacity Bronze plastic finish
		6111-002	Replacement Spout for Battery Filler	Black plastic
		6110-010	Radiator Filler	12 qt. capacity Black plastic
Funnels and measures		6110-025	Measure with spout	1 qt. (1 l), plastic Molded in high density polyethylene with flexible spout
		6110-026	Measure with spout	2 qt. (2 l), plastic Molded in high density polyethylene with flexible spout
		6110-027	Measure with spout	3 qt. (3 l), plastic Molded in high density polyethylene with flexible spout
		6110-028	Measure with spout	5 qt. (5 l), plastic Molded in high density polyethylene with flexible spout
		6111-003	Spout, small	For use with measures 6110-025, 6110-026, 6110-028, and funnel 6210-027, plastic
		6111-004	Spout, large	For use with measures 6110-028 and funnel 6210-028
		6111-007	Cap, small	Cover for measure 6110-025, plastic
		6111-008	Cap, medium	Cover for measure 6110-026 and 6110-027, plastic
		6111-009	Cap, large	Cover for measure 6110-028, plastic
		6111-005	Filter, oil	Filter for use with funnel 6210-029
		6111-006	Filter, diesel	Filter for use with funnel 6210-029
		6210-027	Funnel w/ spout	Plastic 7.5" (190 mm) diameter. 0.5 gal capacity
		6210-028	Funnel w/ spout	Plastic 9" (230 mm) diameter. 0.9 gal capacity
		6210-029	Garage funnel	w/o filter
6330-005	Drain Pan	3.25 gal capacity 16" Dia x 4" deep Galvanized metal		

Accessories & Supplies Valves

Pump Runaway Control



MODEL #	TECHNICAL DATA	
3241-002	1/4" NPT(F)	Pump Runaway Control
3241-001	1/2" NPT(F)	Pump Runaway Control

4-Way Reversing Valve



MODEL #	DESCRIPTION
3230-014	4-Way reversing valve 1" NPT(F) Pressure 200 psi (13.8 bar)

Inlet Check Valve - Poly



MODEL #	DESCRIPTION
4411-029	Inlet Check Valve - Poly 3/4" NPT. Not for petroleum based products
4411-026	Inlet Check Valve - Poly 1" NPT. Not for petroleum based products

Inlet Check Valve - Alum



MODEL #	DESCRIPTION
4411-014	Inlet Check Valve 3/4" NPT(F)
4411-015	Inlet Check Valve 1" NPT(F)
4411-038	Inlet Check Valve 1 1/2" NPT(F)

Shut-off Valve Bleed Type for Air



MODEL #	DESCRIPTION
3230-009	Shut-off Valve, 3/8" NPT(F), 200 psi (13.7 bar)
3230-010	Shut-off Valve, 1/2" NPT(F), 200 psi (13.7 bar)
3230-011	Shut-off Valve, 3/4" NPT(F), 200 psi (13.7 bar)

Ball Valve - Fully Ported for Grease



MODEL #	DESCRIPTION
3230-023	Ball Valve, 3/8" 7250 psi (500 bar)
3230-015	Ball Valve, 1/2" 7250 psi (500 bar)
3230-016	Ball Valve, 3/4" 5800 psi (400 bar)
3230-017	Ball Valve, 1" 5075 psi (350 bar)

Ball Valve - Fully Ported for Air/Oil



MODEL #	DESCRIPTION
3230-006	Ball valve, 3/8", 2,000 psi (138 bar)
3230-002	Ball valve, 1/2", 2,000 psi (138 bar)
3230-007	Ball valve, 3/4", 2,000 psi (138 bar)
3230-018	Ball Valve, 1/4", 580 psi (40 bar)
3230-019	Ball Valve, 3/8", 580 psi (40 bar)
3230-020	Ball Valve, 1/2", 580 psi (40 bar)
3230-021	Ball Valve, 3/4", 580 psi (40 bar)
3230-022	Ball Valve, 1", 580 psi (40 bar)

Shut-off Valve Needle Fully Ported for Grease



MODEL #	DESCRIPTION
3230-012	Shut-off Valve, 3/4" NPT(F) 10,000 psi (689 bar)
3230-001	Shut-off Valve, 1/2" NPT(F) Both ends, 10,000 psi (689 bar)
3230-013	Shut-off Valve, 1" NPT(F) 10,000 psi (689 bar)

Accessories & Supplies Pressurized Oil Dispenser & Hand Pumps



MODEL #	DESCRIPTION
1200-022	Pressurized Dispenser, Metered
1200-023	Pressurized Dispenser, Non-metered

FEATURES & TECHNICAL DATA

Fluids:
Synthetic and mineral based lubricants
Gear Oil
Transmission fluid
Hydraulic Fluid

Max pressure is 116 psi (8 bar)
Includes 6.5 gal tank, sight gauge, 5' clear dispensing hose.
The metered version comes with the 3330-159 DR Control handle. The non-metered version comes with the 3320-026 Flex Auto handle.



MODEL #	DESCRIPTION
1300-017	Mobile Hand pump Non-metered Lube for 16 gal
Includes	Dispense hose 6' Dolly base 4310-001

TECHNICAL DATA

Pressure	600 psi (41.4 bar)
Stroke per lb	6
Wetted Materials	Steel, Brass, and Buna-N™
SB 1016	



MODEL #	DESCRIPTION
1300-018	Mobile Hand pump Metered Lube for 16 gal
Includes	Dispense hose 6' In-line meter 3120-091 Dolly base 4310-001

TECHNICAL DATA

Pressure	600 psi (41.4 bar)
Stroke per lb	6
Wetted Materials	Steel, Brass, and Buna-N™
SB 1016	



MODEL #	DESCRIPTION
1300-010	Hand pump Non-metered Lube for 16 gal
Includes	Dispense hose 6'

TECHNICAL DATA

Pressure	600 psi (41.4 bar)
Stroke per lb	6
Wetted Materials	Steel, Brass, and Buna-N™
SB 1016	



MODEL #	DESCRIPTION
1300-011	Hand pump Metered Lube for 16 gal
Includes	Dispense hose 6' In-line meter 3120-091

TECHNICAL DATA

Pressure	600 psi (41.4 bar)
Stroke per lb	6
Wetted Materials	Steel, Brass, and Buna-N™
SB 1016	



MODEL #	DESCRIPTION
1300-021	Piston Hand Pump for 5 gal pails
Includes	Dispense hose 4'

TECHNICAL DATA

Pressure	Check Ball kit
Stroke per lb	6
Wetted Materials	Steel, Aluminum, and Buna-N™
SB 1083	

Accessories & Supplies Hand Pumps



MODEL #	DESCRIPTION
1300-001	Hand pump, Heavy Duty for 16 and 55 gal
TECHNICAL DATA	
Pressure	6,000 psi (417 bar)
Stroke per gal	16 (1 per lb)
Wetted Materials	Steel, Brass
SB 1054	



MODEL #	DESCRIPTION
1300-019	Piston Hand pump 5 & 55 gal drums or tanks
Includes	Bung Adaptor 2"
TECHNICAL DATA	
Pressure	Hand operated
Stroke per gal	12
Fluids	For diesel, Lubricants, hydraulic oils, gear oils, anti-freeze, degreasers, and windshield washer fluid
Wetted Materials	Polypropylene and Viton™
SB 1149	



MODEL #	DESCRIPTION
1300-022	Hand pump High Flow Rotary for 16 & 55 gal drums or tanks
Includes	Bung Adaptor 2"
TECHNICAL DATA	
Pressure	Hand operated
Stroke per gal	1 per revolution
Fluids	For non-corrosive lubricants, diesel, lubricants, hydraulic oils and gear oils
Wetted Materials	Cast iron, Steel, and Buna-N™
SB 1100	



MODEL #	DESCRIPTION
1300-033	Hand pump High Flow Rotary PVC action drum pump for 16 & 55 gal drum or tank
Includes	Bung Adaptor 2"
TECHNICAL DATA	
Pressure	Hand operated
Stroke per gal	.7 per revolution
Fluids	For acid-based corrosive fluids and water based fluids from 16, 55 gal drums
Wetted Materials	PVC and Steel
SB 1150	



MODEL #	DESCRIPTION
1300-037	Hand Pump, 5-16 gal drums. Poly lift pump for solvents and chemicals
1300-038	Hand Pump, 55 gal drums. Poly lift pump for solvents and chemicals
TECHNICAL DATA	
Pressure	Hand operated
Fluids	For solvents and chemicals
Wetted Materials	Nylon and PTFE



MODEL #	DESCRIPTION
1300-039	Hand Pump, 55 gal drums. 316 stainless steel lift pump for solvents and chemicals
TECHNICAL DATA	
Pressure	Hand operated
Stroke per qt	0.86
Fluids	For solvents and chemicals
Wetted Materials	Stainless Steel and PTFE

Accessories & Supplies

Hand Pumps & Grease Guns



MODEL #	DESCRIPTION
1300-030	Hand Pump, siphon, drums
1300-029	Hand Pump, siphon, pails
TECHNICAL DATA	
Pressure	Hand operated
Fluids	For solvents, acetate, toluene, xylene, acids, chlorinated fluids
Wetted Materials	Polyethylene, PVC



MODEL #	DESCRIPTION
5200-016	Professional Series Grease Gun
FEATURES & TECHNICAL DATA	
<ul style="list-style-type: none"> • 14 oz capacity • Variable stroke operation • Filler nipple and bleeder valve • Up to 10,000 psi max. pressure • Includes outlet pipe and coupler 	



MODEL #	DESCRIPTION
5200-006	Lever Style Grease Gun
FEATURES & TECHNICAL DATA	
<ul style="list-style-type: none"> • 14 oz capacity • Filler nipple • Up to 10,000 psi max. pressure • Includes outlet pipe and coupler 	



MODEL #	DESCRIPTION
5200-014	Pistol Style Grease Gun
FEATURES & TECHNICAL DATA	
<ul style="list-style-type: none"> • 14 oz capacity • Filler nipple • One hand operation • Up to 5,000 psi max. pressure • Includes outlet pipe and coupler 	

Accessories & Supplies Grease Guns & Cordless Grease Gun



MODEL #	DESCRIPTION
5200-013	Mini Grease Gun

FEATURES & TECHNICAL DATA
<ul style="list-style-type: none"> • Short stroke grip action for easy use • Heavy duty professional grade construction • Three way filling <p>Includes air vent and filler plug • 9" Whip hose, hose and straight spout with coupler</p>



MODEL #	DESCRIPTION
1300-026	Suction Gun

FEATURES & TECHNICAL DATA
<ul style="list-style-type: none"> • For all purpose draining and filling • No need for priming • 11" flexible hose included



MODEL #	DESCRIPTION
5200-010	Air Operated, Continuous Feed, Grease Gun

FEATURES & TECHNICAL DATA
<ul style="list-style-type: none"> • Patented 360° rotating cartridge barrel. • Heavy Duty professional grade construction • Three-way filling • With air vent and filler plug • 2,400 - 6,000 psi Max WP



MODEL #	DESCRIPTION
5200-015	Battery Operated Grease Gun
8390-004	42" Hose Whip for 5200-015

FEATURES & TECHNICAL DATA
<p>Includes:</p> <ul style="list-style-type: none"> • Carrying case with shoulder strap • 42" whip hose with coupler • Bend restrictors on hose • Two 18 V Li-Ion batteries • 1 hour quick charger <p>Specifications:</p> <ul style="list-style-type: none"> • Pump has the capability of developing 9,500 psi maximum fluid pressure.

Accessories & Supplies Filler Pumps



MODEL #	DESCRIPTION
1300-031	Grease Bucket Pump
FEATURES & TECHNICAL DATA	
<ul style="list-style-type: none"> • 35 lb oval shape steel bucket with carrying handle and foot rest • Delivery per stroke: 0.7, 0.5 or 0.35 oz., depending on the lever selected. • Up to 5,000 psi maximum fluid pressure. • Includes 7' grease hose with coupler 	
SB 1146	



MODEL #	DESCRIPTION
1300-036	Gear Oil Bucket Pump
FEATURES & TECHNICAL DATA	
<ul style="list-style-type: none"> • 4 gal. oval shape steel bucket with carrying handle and foot rest • 5' rubber delivery hose with angled nozzle • Lever action pump, delivers 100 cc per stroke 	
SB 1148	



MODEL #	DESCRIPTION
1300-009	Grease Hand pump Non-metered for 25-35 lb/5 gal
Includes	Dispense hose 5'
TECHNICAL DATA	
Pressure	5,500 psi (379 bar)
Stroke per lb	6
Wetted Materials	Steel, Brass, and Buna-N™
SB 1018	



MODEL #	DESCRIPTION
1300-032	High Pressure Grease Pump
FEATURES & TECHNICAL DATA	
<ul style="list-style-type: none"> • For use with 35 lb grease pails • Includes follower disc and cover with height adjustable bung adaptor • 5' high pressure grease hose with coupler • All metal high pressure grease pump, up to 5,000 psi maximum fluid pressure 	



MODEL #	DESCRIPTION
1300-034	Filler Pump for 35 lb pails
1300-035	Filler Pump for 120 lb kegs
FEATURES & TECHNICAL DATA	
<p>For fast, clean and efficient filling of side lever, one hand, air operated and cordless grease guns equipped with a filler nipple.</p> <ul style="list-style-type: none"> • Includes pump with filler valve, cover and follower plate for 35 lb grease pails • Includes pump with filler valve, cover and follower plate for 120 lb kegs 	

Accessories & Supplies Whip Hoses & Connectors

Filler fittings, couplers and adaptors



5310-033
Filler fitting standard
1/8"NPT(M)



5310-030
Needle nose adaptor, 1/8"
NPT(F)



5310-024
Grease coupler 4-Jaws,
1/8" NPT(F)



5310-027
Lock sleeve, 1/8"NPT(M)



5310-037
Rubber tip seal-off
with lock sleeve 1/8"
NPT(F)



5310-026
Giant button-head
coupler,
1/8" NPT(F)



5310-029
Threaded swivel
adaptor, 1/8" NPT(F)



5310-031
Needle nose adaptor with
lock sleeve, 1/8" NPT(F)



5200-017
Quick Lock grease coupler
1/8" NPT(F)



5310-035
Lock sleeve,
1/8"NPT(F)



5310-028
Rubber tip seal-off
adaptor, 1/8" NPT(F)



5310-025
Standard buttonhead
coupler, 1/8" NPT(F)



5310-036
90° adaptor, coupler and
lock sleeve, 1/8"NPT(F)



5310-034
Air bleeder valve
1/8"NPT(M)



5400-003
Bearing Packer



5310-018
Z-Swivel 1/4" NPT(F)
x 1/4" NPT(M)



5310-032
Rigid flex adaptor with hydraulic coupler, 1/8" NPT(F)

Grease outlet hoses for hand and air operated equipment

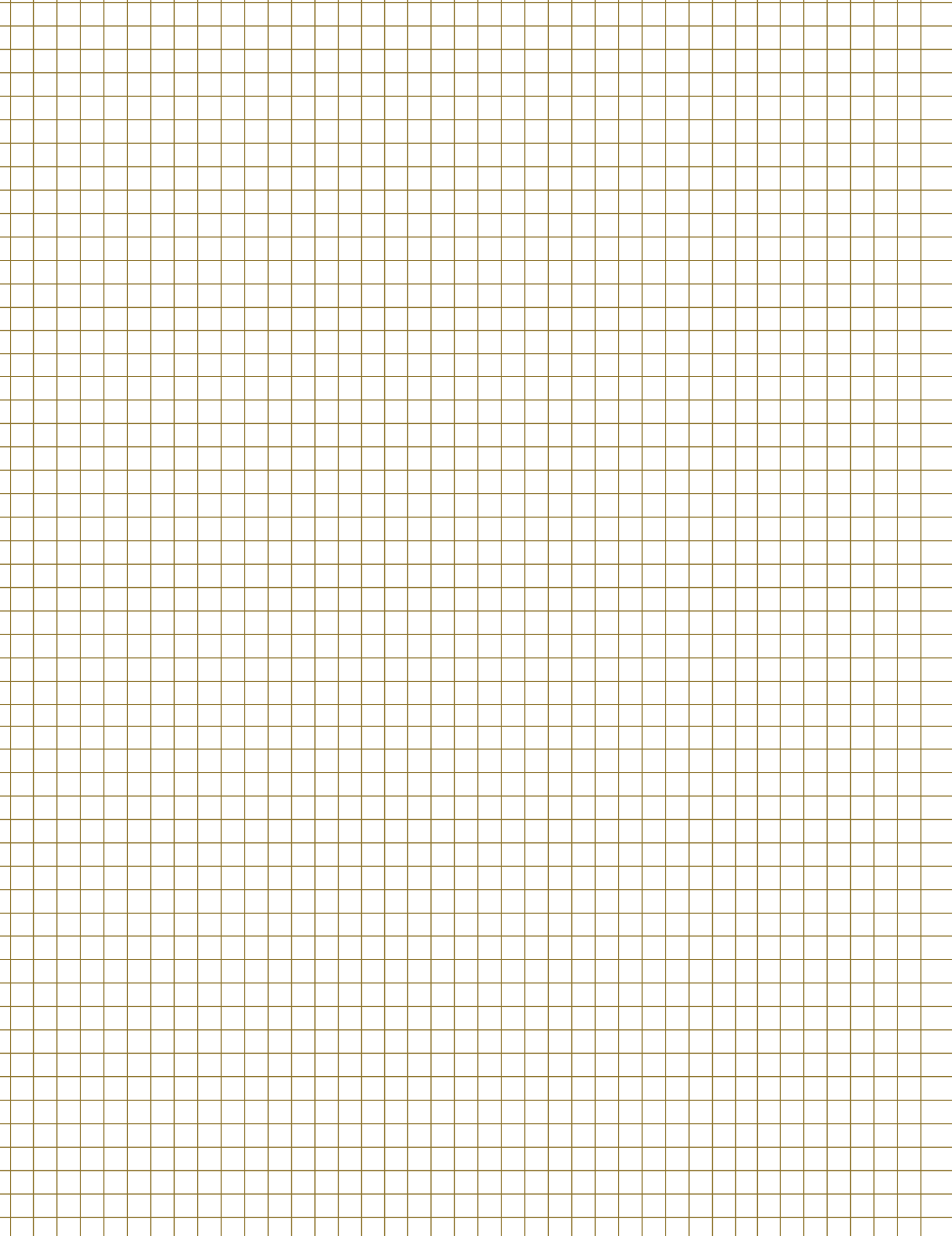


8390-002 18" Whip Hose HP

8390-003 36" Whip Hose HP

8390-004 42" Whip hose HP

Max. pressure 5,000 psi (345 bar)
Hose end 1/8" NPT(M) on both ends
Compatible fluid NLGI-2 Grease
Flexible Extension





1 2 3 4 5 6 7 8 **9** 10

Fittings

INSTALLATION ACCESSORIES 181
FITTINGS 182

Fittings

ADAPTERS			
	MODEL	NPT(M X M)	TECHNICAL DATA
	3270-033	1/2" x 1/2"	Brass 3,400 psi (234.4 bar)
	MODEL	NPT(F X M)	TECHNICAL DATA
	3270-007	1/8" x 1/2"	Brass 1,000 psi (68.9 bar)
	3270-078	3/8" x 1/4"	Steel 3,000 psi (207 bar)
	3270-082	3/8" x 3/8"	Steel 3,000 psi (207 bar)
3270-021	1/2" x 1/4"	Steel 3,000 psi (207 bar)	
3270-081	1/2" x 3/4"	Steel 3,000 psi (207 bar)	
BUSHINGS - STANDARD & REDUCING			
	MODEL	NPT(M X F)	TECHNICAL DATA
	3270-076	1/4" x 1/2"	Steel 3,000 psi (207 bar)
	3270-071	3/8" x 1/4"	Steel 3,000 psi (207 bar)
	3270-077	3/8" x 3/8"	Steel 3,000 psi (207 bar)
	3270-016	1/2" x 1/4"	Steel 3,000 psi (207 bar)
	3270-052	1/2" x 3/8"	Steel 3,000 psi (207 bar)
	3270-075	1/2" x 1/2"	Steel 3,000 psi (207 bar)
	3270-070	1/2" x 3/4"	Steel 3,000 psi (207 bar)
	3270-072	3/4" x 1/4"	Steel 3,000 psi (207 bar)
	3270-074	3/4" x 3/8"	Steel 3,000 psi (207 bar)
	3270-053	3/4" x 1/2"	Steel 3,000 psi (207 bar)
	3270-073	1" x 1/2"	Steel 3,000 psi (207 bar)
	3270-054	1" x 3/4"	Steel 3,000 psi (207 bar)
	COUPLERS - STANDARD		
	MODEL	NPT(M X F)	TECHNICAL DATA
	3270-084	1/4" x 1/4"	Steel 3,000 psi (207 bar)
	3270-085	3/8" x 3/8"	Steel 3,000 psi (207 bar)
	3270-086	1/2" x 1/2"	Steel 3,000 psi (207 bar)
	3270-087	3/4" x 3/4"	Steel 3,000 psi (207 bar)
	3270-088	1" x 1"	Steel 3,000 psi (207 bar)
HEX NIPPLES STANDARD & REDUCING			
	MODEL	NPT(M X M)	TECHNICAL DATA
	3270-009	1/8" JIC 37° x 1/8"	Steel 4,000 psi (275.6 bar)
	3270-089	1/4" x 1/8"	Steel 3,000 psi (207 bar)
	3270-041	1/4" x 1/4"	Brass 1,200 psi (82.3 bar)
	3270-093	3/8" x 1/8"	Steel 3,000 psi (207 bar)
	3270-090	3/8" x 1/4"	Steel 3,000 psi (207 bar)
	3270-042	3/8" x 3/8"	Brass 1,000 psi (68.9 bar)
	3270-094	1/2" x 1/4"	Steel 3,000 psi (207 bar)

Fittings

HEX NIPPLES STANDARD & REDUCING			
	MODEL	NPT(M X M)	TECHNICAL DATA
	3270-091	1/2" x 3/8"	Steel 3,000 psi (207 bar)
	3270-043	1/2" x 1/2"	Brass 1,000 psi (68.9 bar)
	3270-095	3/4" x 3/8"	Steel 3,000 psi (207 bar)
	3270-092	3/4" x 1/2"	Steel 3,000 psi (207 bar)
	3270-044	3/4" x 3/4"	Brass 1,000 psi (68.9 bar)
	3270-096	1" x 3/4"	Steel 3,000 psi (207 bar)
	3270-045	1" x 1"	Steel 3,000 psi (207 bar)
SQUARE HEADED PLUG			
	MODEL	NPT(M)	TECHNICAL DATA
	3270-150	1/8"	Black Iron 2,000 psi (137.8 bar)
	3270-151	1/4"	Steel 3,000 psi (207 bar)
	3270-152	3/8"	Steel 3,000 psi (207 bar)
	3270-153	1/2"	Steel 3,000 psi (207 bar)
	3270-154	3/4"	Steel 3,000 psi (207 bar)
	3270-155	1"	Steel 3,000 psi (207 bar)
3270-156	2"	Steel 3,000 psi (207 bar)	
STREET ELBOW			
	MODEL	NPT(F X M)	TECHNICAL DATA
	3270-157	1/4" x 1/4"	Steel 3,000 psi (207 bar)
	3270-083	3/8" x 3/8"	Steel 3,000 psi (207 bar)
	3270-158	1/2" x 1/2"	Steel 3,000 psi (207 bar)
3270-159	3/4" x 3/4"	Steel 3,000 psi (207 bar)	
SWIVEL UNIONS 45°			
	MODEL	NPT(M) X NPS(F)	TECHNICAL DATA
	3270-066	1/2" x 1/2"	Steel 3,500 psi (241.3 bar)
	3270-062	3/4" x 3/4"	Steel 2,000 psi (137.8 bar)
3270-061	1" x 1"	Steel 2,000 psi (137.8 bar)	
SWIVEL UNIONS RIGID			
	MODEL	NPT(M) X NPS(F)	TECHNICAL DATA
	3270-097	1/8" x 1/4"	Steel 3,000 psi (207 bar)
	3270-025	1/4" x 1/4"	Steel 5,000 psi (344.7 bar)
	3270-098	1/4" x 3/8"	Steel 3,000 psi (207 bar)
	3270-050	3/8" x 3/8"	Steel 3,000 psi (207 bar)
	3270-046	3/8" x 1/2"	Steel 3,000 psi (207 bar)
3270-028	1/2" x 3/8"	Steel 3,000 psi (207 bar)	

Fittings



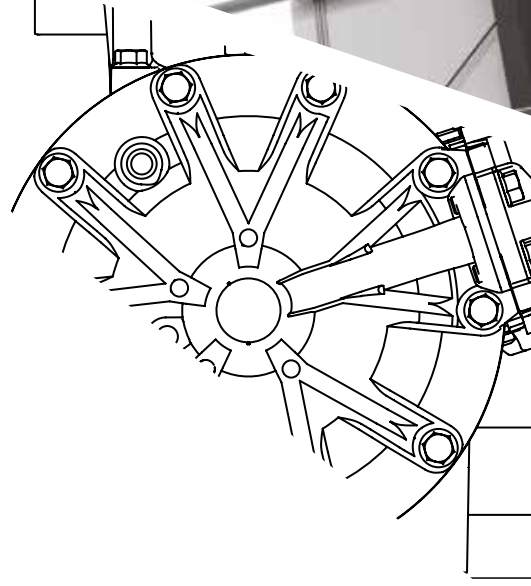
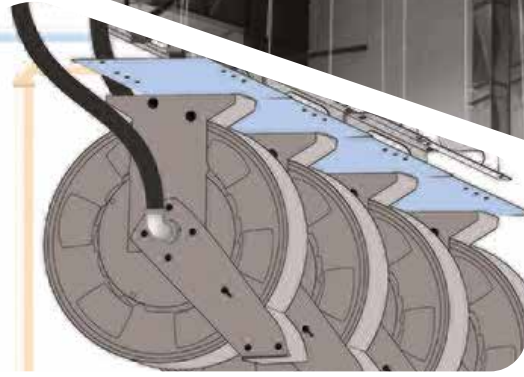
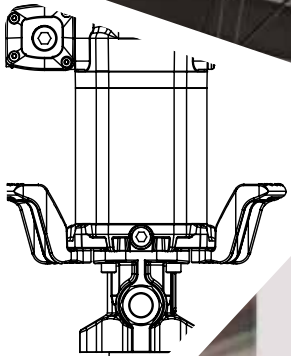
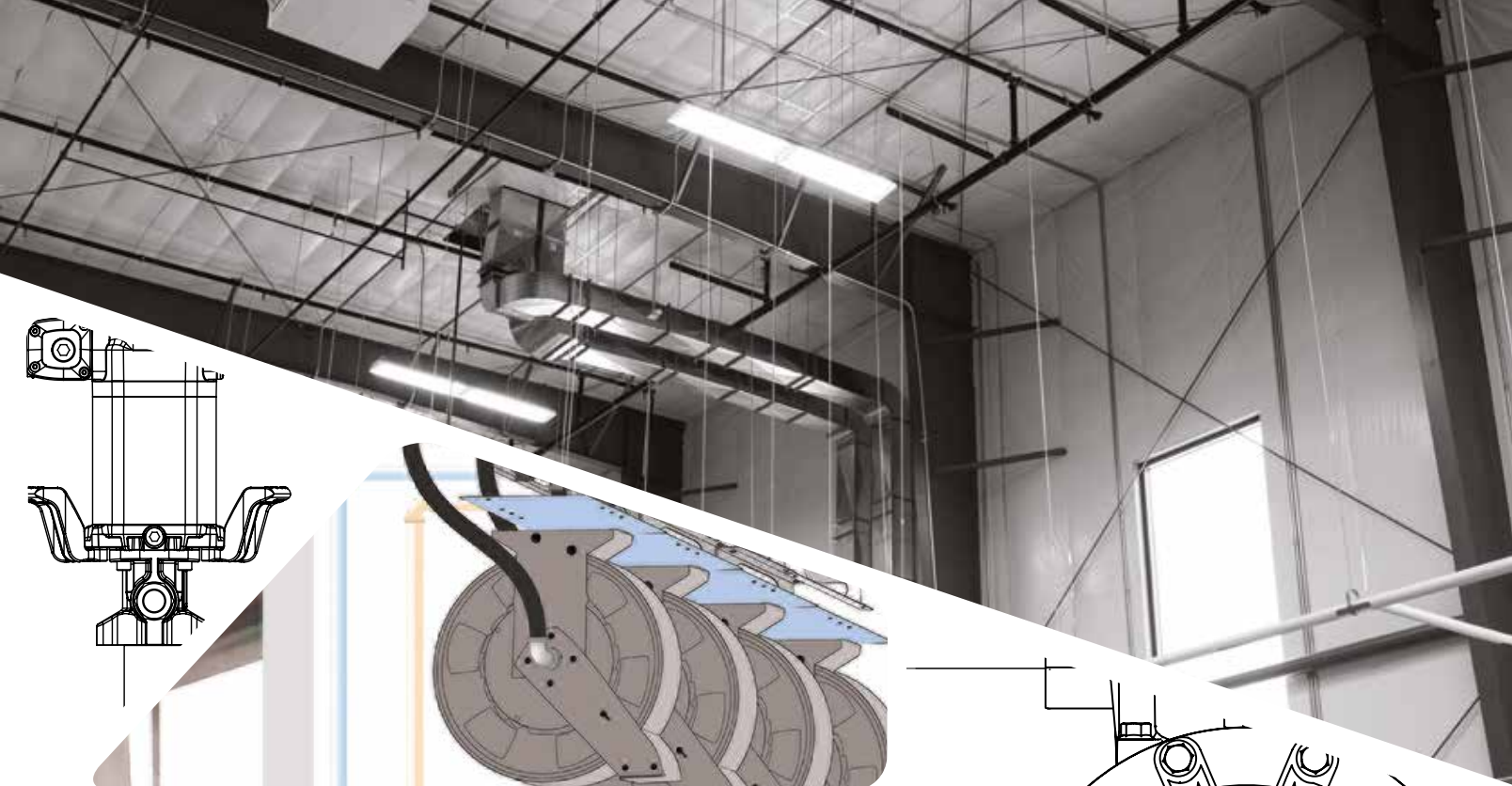
SWIVEL UNIONS RIGID

MODEL	NPT(M) X NPS(F)	TECHNICAL DATA
3270-027	1/2" x 1/2"	Steel 3,000 psi (207 bar)
3270-047	1/2" x 3/4"	Steel 2,250 psi (172.4 bar)
3270-099	3/4" x 3/4"	Steel 3,000 psi (207 bar)
3270-100	3/4" x 1/2"	Steel 3,000 psi (207 bar)
3270-101	3/4" x 1"	Steel 3,000 psi (207 bar)
3270-048	1" x 3/4"	Steel 2,000 psi (137.8 bar)
3270-102	1" x 1"	Steel 3,000 psi (207 bar)
MODEL	NPT(F) X NPS(F)	TECHNICAL DATA
3270-103	1/4" x 1/4"	Steel 3,000 psi (207 bar)
3270-106	3/8" x 1/4"	Steel 3,000 psi (207 bar)
3270-109	3/8" x 3/8"	Steel 3,000 psi (207 bar)
3270-104	1/2" x 1/4"	Steel 3,000 psi (207 bar)
3270-107	1/2" x 3/8"	Steel 3,000 psi (207 bar)
3270-110	1/2" x 1/2"	Steel 3,000 psi (207 bar)
3270-105	3/4" x 3/4"	Steel 3,000 psi (207 bar)
3270-108	1" x 1"	Steel 3,000 psi (207 bar)

SWIVEL UNIONS 90°



MODEL	NPT(F) X NPS(F)	TECHNICAL DATA
3270-111	1/4" x 1/4"	Steel 3,000 psi (207 bar)
3270-056	3/8" x 3/8"	Steel 4,000 psi (275.8 bar)
3270-113	3/8" x 1/4"	Steel 3,000 psi (207 bar)
3270-055	1/2" x 1/2"	Steel 3,000 psi (207 bar)
3270-114	1/2" x 3/8"	Steel 3,000 psi (207 bar)
3270-058	3/4" x 3/4"	Steel 3,000 psi (207 bar)
3270-060	1" x 1"	Steel 3,000 psi (207 bar)
MODEL	NPT(M) X NPS(F)	TECHNICAL DATA
3270-115	1/4" x 1/4"	Steel 3,000 psi (207 bar)
3270-050	3/8" x 3/8"	Steel 2,000 psi (137.8 bar)
3270-116	3/8" x 1/2"	Steel 3,000 psi (207 bar)
3270-117	3/8" x 1/4"	Steel 3,000 psi (207 bar)
3270-051	1/2" x 1/2"	Steel 3,500 psi (241.13 bar)
3270-118	1/2" x 3/8"	Steel 3,000 psi (207 bar)
3270-057	3/4" x 3/4"	Steel 2,500 psi (172.36 bar)
3270-059	1" x 1"	Steel 2,500 psi (172.36 bar)
MODEL	NPT(M) X NPS(M)	TECHNICAL DATA
3270-065	1" x 1/2"	Steel 2,500 psi (172.36 bar)



1 2 3 4 5 6 7 8 9 **10**

Reference

REFERENCE	185
PIPING SPECIFICATIONS	186
REPLACEMENT HOSES	187
OIL PUMPING SYSTEM SAMPLE	188
GREASE PUMPING SYSTEM SAMPLE	189
HOSE REEL INSTALLATION SAMPLE	190
USED FLUID EQUIPMENT EVACUATOR SYSTEM SAMPLE	191
DEF PUMPING SYSTEM SAMPLE	192

Lube Piping Specifications

Use these guidelines for selecting line sizes, tubing wall thicknesses and piping schedules for lubrication distribution systems. Air and water recommendations are for supply of air/water hose reels or for supply of air to pumps. Except as noted, maximum pressures shown represent the fluid pressure at the pump outlets when connected to their highest rated air supply pressure.

MOTOR OIL, GEAR OIL, ATF 0-200 FT			TUBING		PIPE		MOTOR OIL, GEAR OIL, ATF OVER 200 FT			TUBING		PIPE	
PUMP	RATIO	MAX PRESSURE	OD	WALL	SIZE	WALL	PUMP	RATIO	MAX PRESSURE	OD	WALL	SIZE	WALL
LYNX®	1:1	120 psi (8 bar)	3/4"	0.025	3/4"	SCH 40	LYNX®	1:1	120 psi (8 bar)	N/A	N/A	N/A	N/A
LYNX®	3:1	490 psi (34 bar)	3/4"	0.025	3/4"	SCH 40	LYNX®	3:1	490 psi (34 bar)	N/A	N/A	N/A	N/A
LYNX® HD	5:1	760 psi (52 bar)	3/4"	0.025	3/4"	SCH 40	LYNX® HD	5:1	760 psi (52 bar)	1"	0.035	1"	SCH 40
Panther™	3:1	490 psi (34 bar)	3/4"	0.025	3/4"	SCH 40	Panther™	3:1	490 psi (34 bar)	1"	0.035	1"	SCH 40
Panther™	5:1	760 psi (52 bar)	3/4"	0.025	3/4"	SCH 40	Panther™	5:1	760 psi (52 bar)	1"	0.035	1"	SCH 40
Tiger™	6:1	870 psi (60 bar)	1"	0.035	1"	SCH 40	Tiger™	6:1	870 psi (60 bar)	1 1/4"	0.042	1 1/4"	SCH 40
Lion™ 450	3:1	540 psi (37 bar)	3/4"	0.035	3/4"	SCH 40	Lion™ 450	3:1	540 psi (37 bar)	1"	0.035	1"	SCH 40
Lion™ 450	6:1	1,080 psi (74 bar)	3/4"	0.035	3/4"	SCH 40	Lion™ 450	6:1	1,080 psi (74 bar)	1"	0.049	1"	SCH 40
Lion™ 450	10:1	1,800 psi (124 bar)	3/4"	0.049	3/4"	SCH 40	Lion™ 450	10:1	1,800 psi (124 bar)	1"	0.065	1"	SCH 40
Lion™ 600	6:1	1,050 psi (73 bar)	3/4"	0.035	3/4"	SCH 40	Lion™ 600	6:1	1,050 psi (73 bar)	1"	0.049	1"	SCH 40
Lion™ 600	12:1	2,160 psi (149 bar)	3/4"	0.065	3/4"	SCH 40	Lion™ 600	12:1	2,160 psi (149 bar)	1"	0.083	1"	SCH 40

GREASE 0-200 FT			TUBING		PIPE		GREASE OVER 200 FT			TUBING		PIPE	
PUMP	RATIO	MAX PRESSURE	OD	WALL	SIZE	WALL	PUMP	RATIO	MAX PRESSURE	OD	WALL	SIZE	WALL
Panther®	50:1	6,000 PSI (414 bar)	5/8"	0.125	1/2	Sch 80	Panther®	50:1	5,000 PSI (345 bar)	3/4"	.125	3/4"	Sch 80
Lion™ 450	25:1	5,000 PSI (345 bar)	5/8"	0.125	1"	Sch 40	Lion™ 450	25:1	5,000 PSI (345 bar)	3/4"	.125	1 1/2"	Sch 80
Lion™ 450	40:1	8,000 PSI (551 bar)	5/8"	0.125	1/2"	Sch 80	Lion™ 450	40:1	8,000 PSI (551 bar)	3/4"	.109	3/4"	Sch 80
Lion™ 450	70:1	7,000 PSI (483 bar)	5/8"	0.095	1/2"	Sch 160	Lion™ 450	70:1	7,000 PSI (483 bar)	3/4"	.109	3/4"	Sch 160
Lion™ 600	80:1	8,000 PSI (551 bar)	5/8"	0.095	1/2"	Sch 160	Lion™ 600	80:1	8,000 PSI (551 bar)	3/4"	.109	3/4"	Sch 160

AIR & WATER 0-200 FT		TUBING		PIPE	
MAX PRESSURE		OD	WALL	SIZE	WALL
150 PSI (10 bar)		5/8"	.025	1/2	SCH 40
250 PSI (17 bar)		5/8"	.025	1/2	SCH 40
AIR & WATER 0-200 FT		TUBING		PIPE	
MAX PRESSURE		OD	WALL	SIZE	WALL
150 PSI (10 bar)		3/4"	.025	3/4"	SCH 40
250 PSI (17 bar)		3/4"	.025	3/4"	SCH 40

Additional notes:

- 1) Line pressures for grease pumps are limited by the strength of steel tubing and grease hose working pressure ratings. Regulate air supply pressure for grease pumps to ("max pressure"/50) psi to avoid line pressure limits.
- 2) Based on use of fully annealed steel tubing, 15,000 psi (1,034 bar) yield strength.
- 3) Multiple air-operated pumps supplied by a common air line may require larger line sizes. Consult your Balcrank Representative for efficient size recommendations.
- 4) Minimize the number of elbows in grease line to reduce pressure drop. Use radius bends is preferred to elbows where installation permits.
- 5) When thermal expansion of oil may be present, use a pump pressure relief valve.

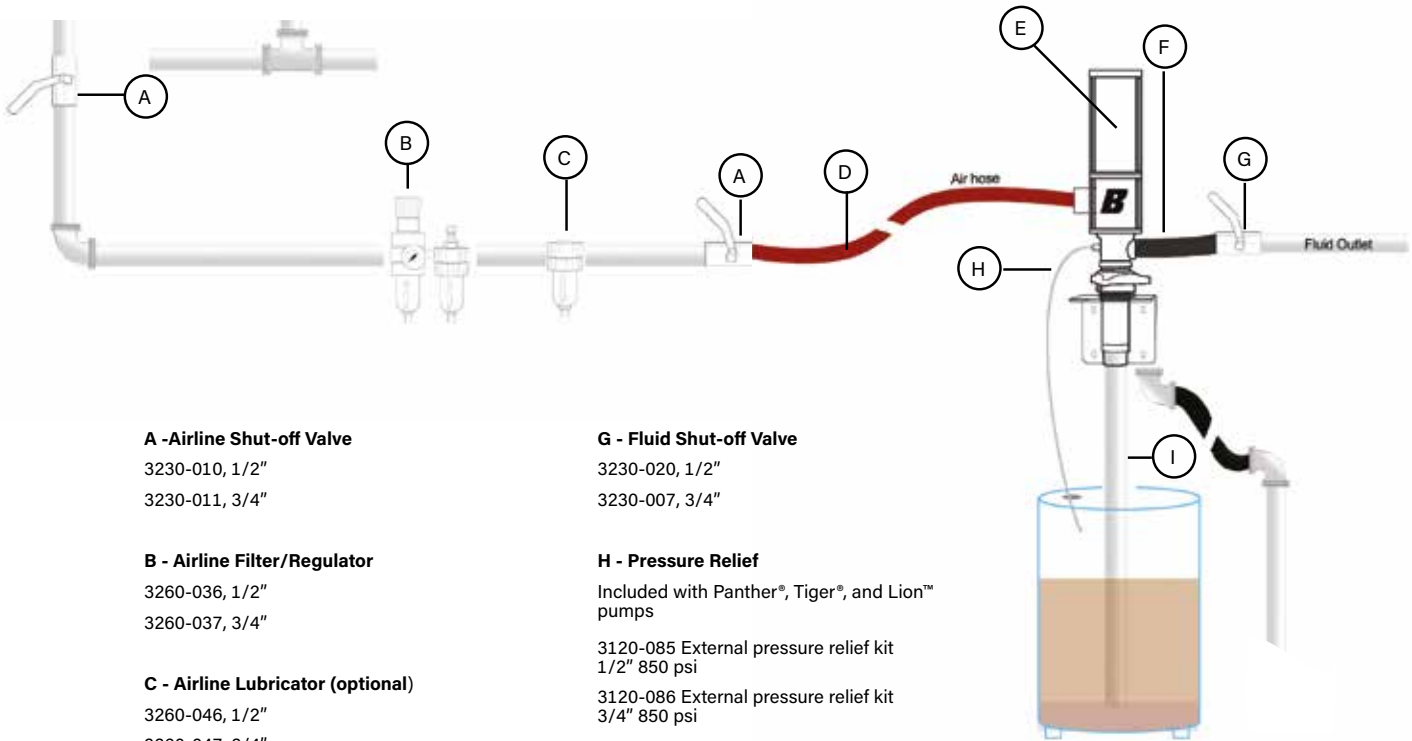


Replacement Hoses

MODEL PREFIX	HOSE TYPE	HOSE I.D.	MAX.WP (PSI)	HOSE END THREADS (NPT)	LENGTH SUFFIX IN FEET														
					2	3	5	6-7	8-12	16	20-25	30	40	50	60	70-75	100		
8132	Air / Water	3/8"	300	1/4" M x 1/4" M			-005												
8134	Air / Water	3/8"	300	3/8" M x 3/8" MSW		-003	-005												
8135	Nitrogen-Green	3/8"	250	1/4" M x 1/2" M								-030	-040	-050					
8135	Nitrogen-Green	3/8"	250	1/2" M x 1/2" M	-002x														
8136	Air / Water	3/8"	300	1/4" M x 1/2" M						-016		-030	-040	-050	-060				
8141	Air / Water	1/2"	300	1/2" M x 1/2" M		-003	-005					-030	-040	-050	-060	-075	-100		
8142	Air / Water	1/2"	300	1/2" M x 1/2" MSW	-002x														
8144	Air / Water	1/2"	300	1/2" M x 3/8" M		-003	-005												
8145	Air / Water	1/2"	300 & suc	1/2" M x 1/2" MSW			-005												
8146	Air / Water	1/2"	300 & suc	1/2" MSW x 3/8" F					-010										
8149	Air/Water	1/2"	300	1/2" M x 1/2" MSW			-005												
8161	Air/Water	3/4"	300	3/4" M x 3/4" MSW	-002x									-050	-060	-075			
8171	Air / Water	3/4"	250 & suc	3/4" MSW x 3/4" MSW				-006											
8181	Air / Water	1"	250 & suc	1" MSW x 1" MSW	-002x		-005	-006						-050					
8241	Oil	1/2"	3,000	1/2" M x 1/2" M	-002	-003		-006	-008	-016	-020 & -025	-030	-040	-050	-060	-070			
8242	Oil	1/2"	3,000	3/8" M x 3/8" M	-002	-003	-005	-006	-010		-020	-030	-040	-050	-060				
8249	Oil	1/2"	3,000	1/2" M x 1/2" MSW	-002x	-004	-005	-006	-008 & -010	-016									
8250	Oil	1/2"	2,320	1/2" MSW x 1/2" M											-065	-075	-100		
8261	Oil	3/4"	1,525	3/4" M x 3/4" M		-003	-005		-010										
8262	Oil	3/4"	1,525	1/2" MSW x 1/2" MSW					-010										
8263	Oil	3/4"	1,525	3/4" M x 1/2" MSW					-010										
8264	Oil	3/4"	1,525	3/4" M x 3/4" MSW	-002x	-003	-005					-030		-050		-075			
8281	Oil	1"	2,250	1" M x 1" MSW	-002x		-005												
8321	Grease	1/4"	5,000	1/4" M x 1/4" MSW				-007				-030	-040	-050	-060				
8322	Grease	1/4"	5,000	1/2"-27 F x 1/2"-27 F	-002	-003	-005		-010		-020			-050					
8323	Grease	1/4"	5,000	1/4" M x 3/8" M								-030	-040	-050	-060				
8331	Grease	3/8"	4,000	1/4" M x 1/4" MSW			-005	-007	-010	-016	-020	-030	-040	-050	-060				
8332	Grease	3/8"	4,000	1/4" M x 3/8" M			-005	-007	-010		-020	-030	-040	-050	-060				
8333	Grease	3/8"	4,000	3/8" M x 3/8" M			-005	-007	-010		-030								
8334	Grease	3/8"	4,000	3/8" M x 3/8" MSW	-002x														
8340	Grease	1/2"	5,000	1/2" M x 1/2" MSW	-002x				-010		-020						-075		
8466	Diesel	3/4"	50	3/4" M x 3/4" MSW	-002x							-030		-050					
8481	Diesel	1"	50	1" M x 1" MSW	-002x									-050					
THREADS (BSPP)																			
8551	DEF	1"	50	cut end x simple spout				-006											
8560	DEF	3/4"	150	cut ends w/ hose clamps		-003			-012										
8561	DEF	3/4"	150	cut end x 3/4" M		-003		-006	-012	-016	-020	-030							
8562	DEF	3/4"	150	3/4" M x 3/4" MSW		-003													
8569	DEF	3/4"	150	3/4" MSW x 3/4" MSW W/restrictors						-016	-020	-030		-050					
8570	DEF	3/4"	150	Cut ends w/ hose clamps		-003		-006											
8572	DEF	1"	150	Cut ends w/ hose clamps				-006											

For complete hose model specification, combine "Model Prefix" in the first column with a "Length Suffix" in the right-hand table. Example: Model 8134-030, 3/8" Air/Water Hose, 30 ft. length.

Oil pumping system



A - Airline Shut-off Valve

3230-010, 1/2"
3230-011, 3/4"

B - Airline Filter/Regulator

3260-036, 1/2"
3260-037, 3/4"

C - Airline Lubricator (optional)

3260-046, 1/2"
3260-047, 3/4"

D - Air Connection Hose

8144-005, 5' x 1/2"

E - Balcrank oil piston pump

1130-015 Panther® 3:1
1130-016 Panther® 5:1
1130-019 Tiger® 6:1
1430-001 Lion™ 450 3:1
1430-003 Lion™ 450 10:1

F - Fluid Connection Hose

8249-005, 5' x 3/8"
8149-005, 5' x 4/1"

G - Fluid Shut-off Valve

3230-020, 1/2"
3230-007, 3/4"

H - Pressure Relief

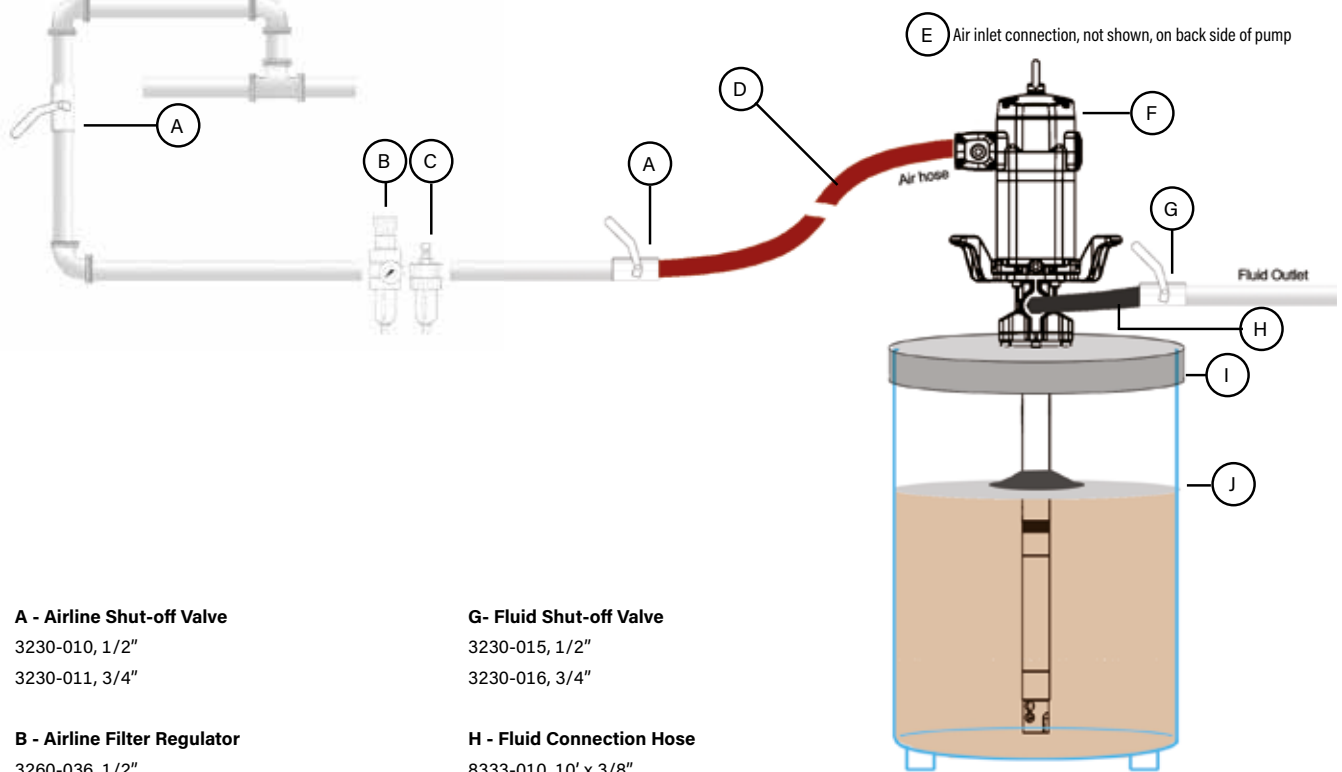
Included with Panther®, Tiger®, and Lion™ pumps

3120-085 External pressure relief kit
1/2" 850 psi
3120-086 External pressure relief kit
3/4" 850 psi

I - Suction Tube for Direct Immersion for Panther® 3:1, 5:1, and Tiger® 6:1 HP

4412-044	1" NPT(M) x 18" - 30°	16 gal drum
4412-046	1" NPT(M) x 26" - 30°	55 gal drum
4412-045	1" NPT(M) x 21" - 30°	165/280 gal bench tank
4412-048	1" NPT(M) x 30" - 30°	165/280 gal bench tank double tap
4412-047	1" NPT(M) x 28" - 30°	250 gal bench tank double tap
4412-051	1" NPT(M) x 42" - 30°	275/330 gal horizontal obround double tap
4412-052	1" NPT(M) x 60" - 30°	330 gal vertical obround
4412-049	1" NPT(M) x 32" - 30°	275 gal tote
4412-050	1" NPT(M) x 39" - 30°	330 gal tote

Grease pumping system



A - Airline Shut-off Valve

3230-010, 1/2"
3230-011, 3/4"

B - Airline Filter Regulator

3260-036, 1/2"
3260-037, 3/4"

C - Airline Lubricator (optional)

3260-046, 1/2"
3260-047, 3/4"

D - Air Connection Hose

8144-005, 5' x 1/2"

E - Air inlet connection

3270-001, Nipple
3270-002, coupler

F - Balcrank piston grease pump

1450-002 Lion™ 450 40:1 400 lb
1150-011 Panther® 50:1 400 lb

G- Fluid Shut-off Valve

3230-015, 1/2"
3230-016, 3/4"

H - Fluid Connection Hose

8333-010, 10' x 3/8"
8322-005, 5' x 1/4"

I - Drum Cover 400 lb drum

4420-004 Panther® 50:1
4420-013 Lion™ 40:1

J - Follower Plate

4440-009 Panther® 50:1
4440-015 Lion™ 40:1

Hose Reel System

A - Airline shut-off valve

3230-010, 1/2"

3230-007, 3/4"

B - Solenoid Valve

Refer to FIC system for correct valve

C - Mounting Channel Plate

2230-014, 1 per reel

D - Mounting Channel

2230-003, 1 reels

2230-004, 2 reels

2230-005, 3 reels

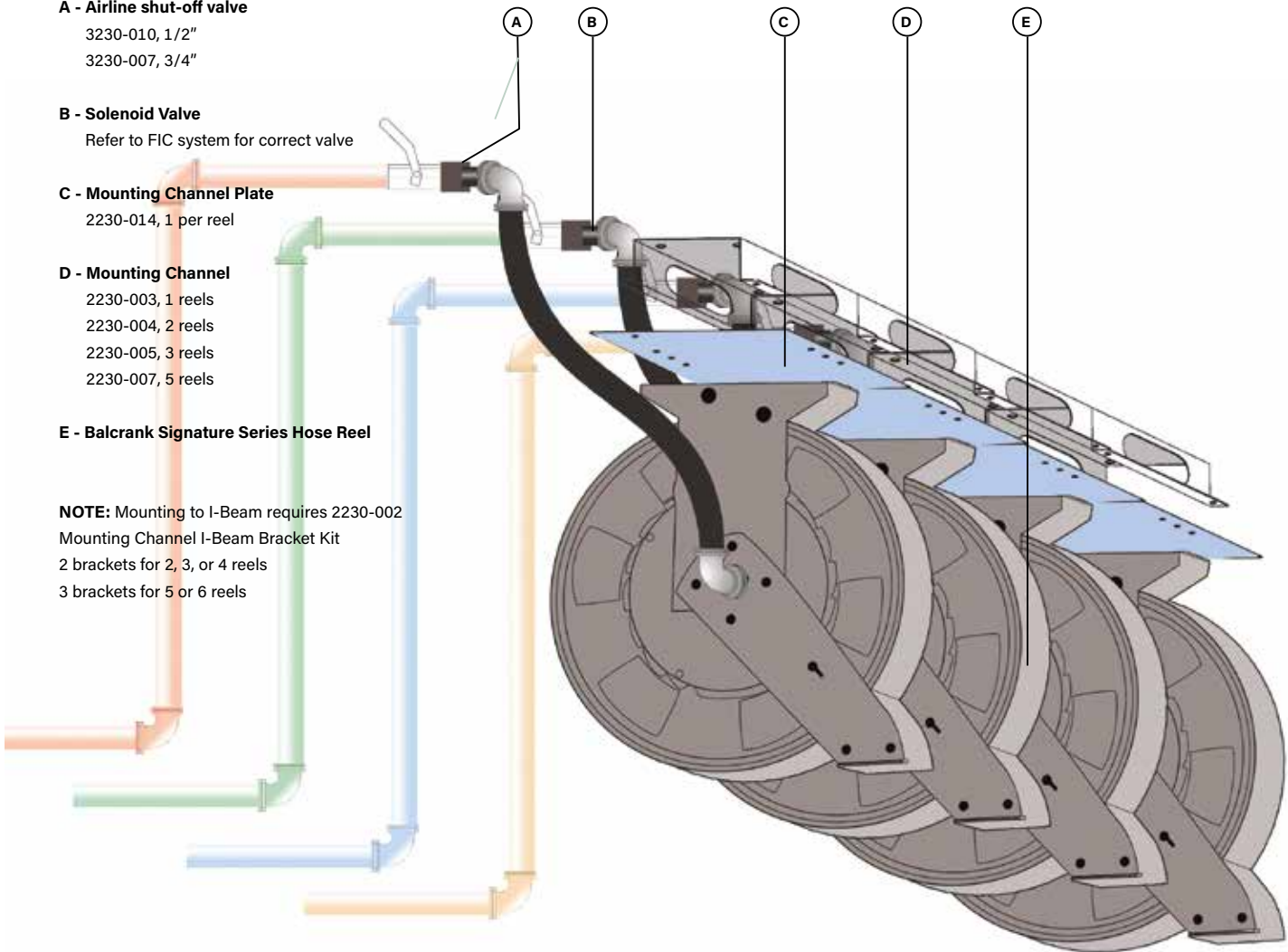
2230-007, 5 reels

E - Balcrank Signature Series Hose Reel**NOTE:** Mounting to I-Beam requires 2230-002

Mounting Channel I-Beam Bracket Kit

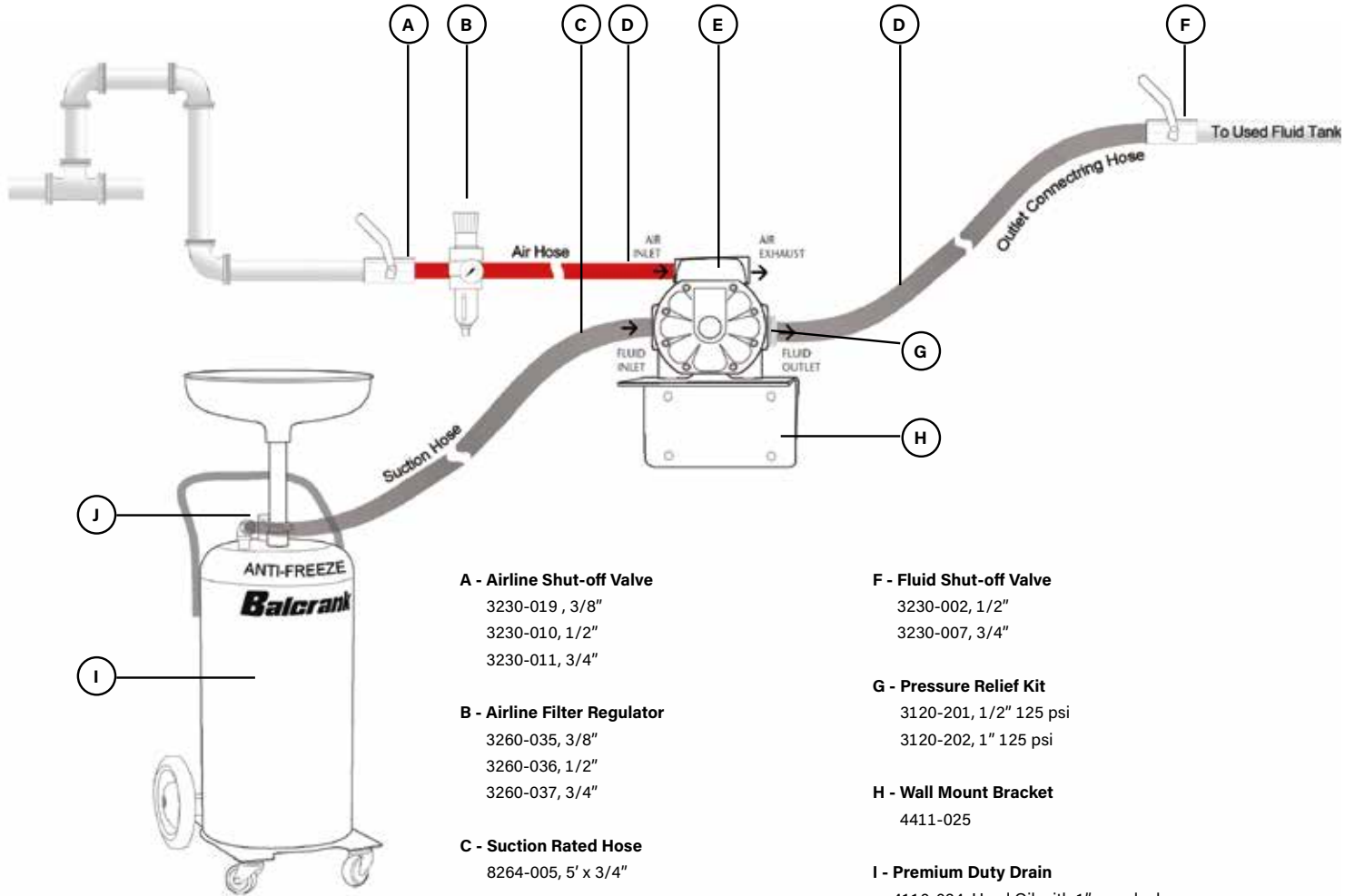
2 brackets for 2, 3, or 4 reels

3 brackets for 5 or 6 reels

**NOTE:**

Installation detail is based on one location and is intended to clarify the design intent. Adjust hose reel installation as required to suit specific location(s). Number of reels shown on drawing and installation shall comply with Balcrank's reel installation requirements.

Used Fluid Evacuation Systems



- A - Airline Shut-off Valve**
3230-019, 3/8"
3230-010, 1/2"
3230-011, 3/4"

- B - Airline Filter Regulator**
3260-035, 3/8"
3260-036, 1/2"
3260-037, 3/4"

- C - Suction Rated Hose**
8264-005, 5' x 3/4"

- D - Air Connection Hose**
8134-005, 5' X 3/8"

- E - CenterFlo**
1120-040, CF30 Buna-N, Hytrel® AODD

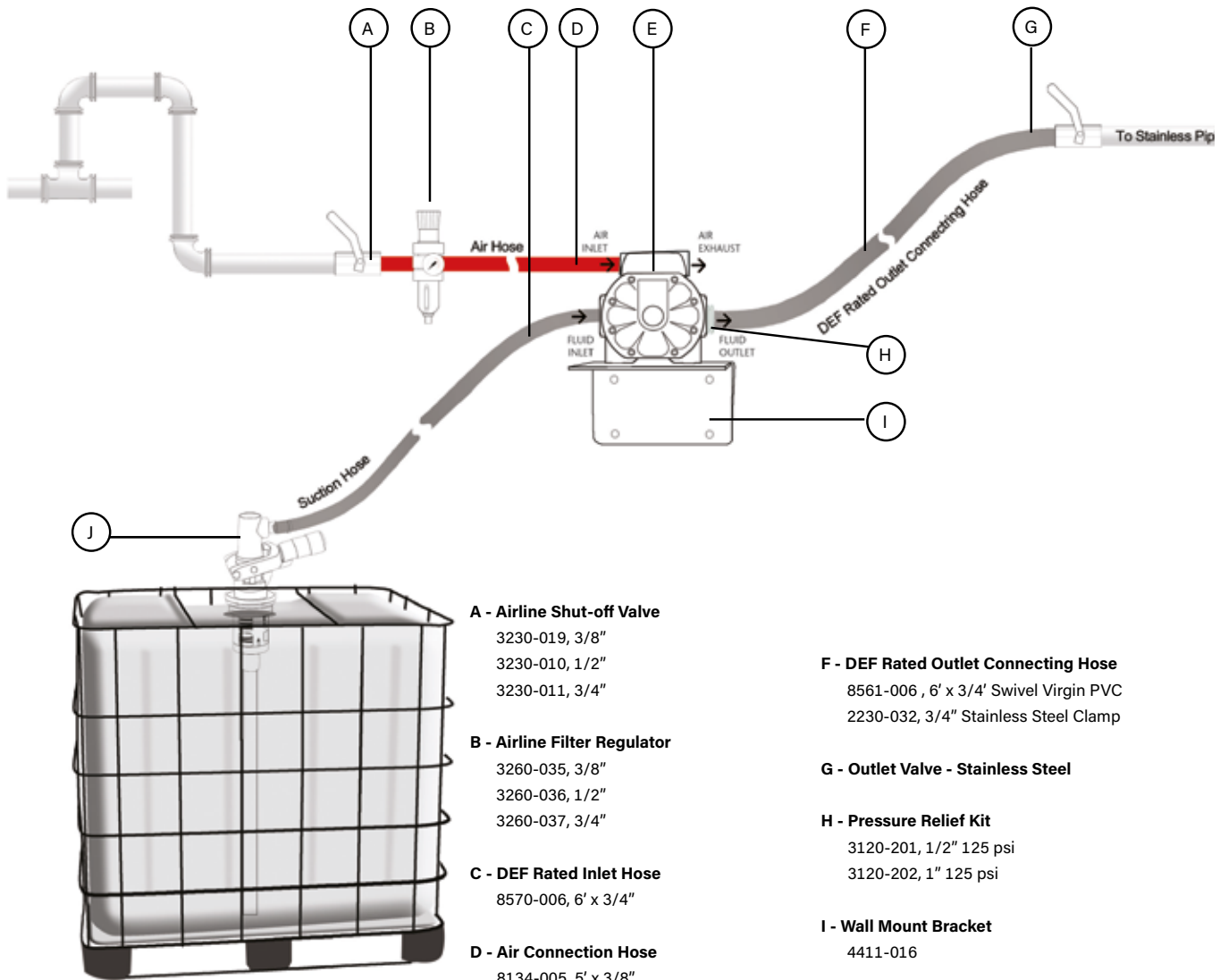
- F - Fluid Shut-off Valve**
3230-002, 1/2"
3230-007, 3/4"

- G - Pressure Relief Kit**
3120-201, 1/2" 125 psi
3120-202, 1" 125 psi

- H - Wall Mount Bracket**
4411-025

- I - Premium Duty Drain**
4110-024, Used Oil with 1" cam-lock
4110-025, Used Anti-freeze with 3/4" cam-lock

- J - Connection Options**
4140-023 Dry Break Nipple 3/4"
4140-051 Dry Break Nipple 1"
4140-054 Cam Lock Nipple 3/4"
4140-055 Cam Lock Nipple 1"

DEF Pumping Systems**A - Airline Shut-off Valve**

3230-019, 3/8"

3230-010, 1/2"

3230-011, 3/4"

B - Airline Filter Regulator

3260-035, 3/8"

3260-036, 1/2"

3260-037, 3/4"

C - DEF Rated Inlet Hose

8570-006, 6' x 3/4"

D - Air Connection Hose

8134-005, 5' x 3/8"

E - CenterFlo

1120-025A, CF15 Poly/BSPP AODD

1120-031A, CF30 Poly/BSPP AODD

F - DEF Rated Outlet Connecting Hose

8561-006, 6' x 3/4' Swivel Virgin PVC

2230-032, 3/4" Stainless Steel Clamp

G - Outlet Valve - Stainless Steel**H - Pressure Relief Kit**

3120-201, 1/2" 125 psi

3120-202, 1" 125 psi

I - Wall Mount Bracket

4411-016

J - Suction Kit includes; RSV series

coupler, insert and dip tube

4530-045, 275 gal tote

4530-046, 330 gal

Index

808966	91, 92
809396	91, 92
826175	91, 92
826728	91, 92
828070	35
831315	91
831612N	34
831613	34
831614	34, 56
831615N	34
831616	56
831617	56
831618	56
831619	56
831671	35
831672N	35
833029	91
833030	91, 92
833031	91, 92
833032	91
833033	91
833038	56
833039	56
833040	56
833041	56
833059	56
833109	34
833110	34
833111	34
833145	92
833146	92
833147	92
833207	72, 73, 156
833208	72, 156
833209	72
833210	72, 156
833211	72, 156
833212	73
833213	73
833214	73
833233	73, 156
833234	73
833235	156
833236	72
833261	92
833262	92
833263	92
833264	92
833265	92
833266	92
833267	92
833292	91
833306	108
833306	108
833307	108
833308	108
833309	108
833310	108
833312	91
833313	91
833314	91
833315	92
833316	92
833330	72
833331	72
833332	72, 156
833333	72
833334	73
833335	73, 156
833336	72
833337	72
833338	72, 156
833339	73, 156
833341	72, 156
833342	73, 156
833346	34
833372	156
833376	109
833377	109
833379	109
833380	109
833381	108, 109
833385	108
833386	108
833387	108
833388	108
833389	108
833390	108
833391	108, 109
833392	108
833393	108, 109
833409	57
833410	57
833411	57
833412	35, 57
833413	35, 57
833414	35, 57
833416	156
833417	156
833418	156
833419	156
833431	74
833432	74
833433	74
833434	74
833435	74
833436	73, 74
833437	34
833438	34
833439	34
833440	34
833452	163
833460	163
833461	163
833462	163
833463	163
833464	163
833465	163
833466	163
833507	109
833508	109
833509	35
833510	35, 57
833511	35, 57
833512	35, 57
833513	35
833525	34
833580	109
833581	109
833582	109
833583	109
833584	109
833585	109
833586	109
833587	109
833588	109
833589	109
833591	109
833592	109
833593	109
833594	109
833598	57
833599	57
833600	35
833603	35
833604	35
833605	57
833606	57
833607	57
833650	57
833687	109
833692	73
833693	73
833694	73
833695	73
833696	73
833697	73
833698	73
833699	73
833700	73
833709	74
833710	74
833732	72, 156
833733	156
833735	72, 156
833738	156
833873	108, 109
833886	74
833888	74
833889	74
833890	74
833891	74
833892	74
833893	74
833894	74
833895	74
833896	74
833897	74
833898	74
833903	92
833904	92
833905	92
833917	108, 109
833924	108
833925	108
833926	108

Index

900019	34, 56	1132-016.....	139	1135-025T.....	142
900020	34, 35	1132-017.....	139	1135-026.....	140
900021	34	1132-018.....	139	1135-026T.....	142
900022	56	1132-019.....	139	1135-027.....	140
900027.....	35	1132-020.....	139	1135-027T.....	142
900028.....	35	1132-021.....	139	1135-028.....	140
900031	34	1132-022.....	139	1135-028T.....	142
1110-007.....	12	1132-023.....	139	1135-029.....	140
1110-009.....	9	1134-007.....	138	1135-029T.....	142
1110-010.....	9	1134-009.....	138	1135-030.....	140
1110-012.....	15	1134-017.....	138	1135-030T.....	142
1111-027.....	10	1134-018.....	138	1135-031.....	140
1111-028.....	10	1134-028.....	138	1135-031T.....	142
1111-029.....	10	1134-030.....	138	1135-032.....	140
1111-030.....	10	1135-001.....	140	1135-032T.....	142
1111-031.....	13	1135-001T.....	142	1135-033.....	140
1111-032.....	13	1135-002.....	140	1135-033T.....	142
1111-033.....	13	1135-002T.....	142	1135-034.....	140
1111-034.....	13	1135-003.....	140	1135-034T.....	142
1111-035.....	10	1135-003T.....	142	1135-035.....	140
1120-015S.....	67	1135-004.....	140	1135-035T.....	142
1120-023A.....	61	1135-004T.....	142	1135-036.....	140
1120-025A.....	61, 150	1135-005.....	140	1135-036T.....	142
1120-026A.....	63	1135-005T.....	142	1135-037.....	141
1120-027.....	61	1135-006.....	140	1135-037T.....	141
1120-028A.....	62	1135-006T.....	142	1135-038.....	141
1120-029A.....	60	1135-007.....	140	1135-038T.....	141
1120-031A.....	63, 150	1135-007T.....	142	1135-039.....	141
1120-033.....	65	1135-008.....	140	1135-039T.....	141
1120-034A.....	60, 150	1135-008T.....	142	1135-040.....	141
1120-037.....	64	1135-009.....	140	1135-040T.....	141
1120-038.....	64	1135-009T.....	142	1136-001.....	144
1120-039.....	65	1135-010.....	140	1136-002.....	144
1120-040.....	63	1135-010T.....	142	1136-003.....	144
1120-041.....	66	1135-011.....	140	1136-004.....	144
1121-001.....	165	1135-011T.....	142	1136-213.....	143
1121-023.....	166	1135-012.....	140	1136-215.....	143
1121-024.....	165	1135-012T.....	142	1136-223.....	143
1121-025.....	166	1135-013.....	140	1136-225.....	143
1121-026.....	165	1135-013T.....	142	1136-233.....	143
1121-027.....	70	1135-014.....	140	1136-235.....	143
1121-028.....	69	1135-014T.....	142	1136-243.....	143
1121-029.....	69	1135-015.....	140	1136-245.....	143
1121-030.....	69	1135-015T.....	142	1136-253.....	143
1130-015.....	16	1135-016.....	140	1136-255.....	143
1130-016.....	19	1135-016T.....	142	1136-263.....	143
1130-017.....	16	1135-017.....	140	1136-265.....	143
1130-018.....	19	1135-017T.....	142	1136-273.....	143
1130-019.....	22	1135-018.....	140	1136-275.....	143
1130-020.....	16	1135-018T.....	142	1136-313.....	143
1130-021.....	19	1135-019.....	140	1136-315.....	143
1130-025.....	22	1135-019T.....	142	1136-323.....	143
1130-026.....	22	1135-020.....	140	1136-325.....	143
1131-059.....	17	1135-020T.....	142	1136-333.....	143
1131-060.....	17	1135-021.....	140	1136-335.....	143
1131-061.....	17	1135-021T.....	142	1136-343.....	143
1131-063.....	20	1135-022.....	140	1136-345.....	143
1131-064.....	20	1135-022T.....	142	1136-353.....	143
1131-065.....	20	1135-023.....	140	1136-355.....	143
1131-066.....	20	1135-023T.....	142	1136-363.....	143
1131-067.....	23	1135-024.....	140	1136-365.....	143
1131-068.....	23	1135-024T.....	142	1136-373.....	143
1131-069.....	14	1135-025.....	140	1136-375.....	143

Index

1137-213.....	143	1300-021.....	174	2140-003	80
1137-215.....	143	1300-022.....	175	2140-005	80
1137-223.....	143	1300-026.....	177	2140-007	80
1137-225.....	143	1300-028.....	154	2140-008	80
1137-233.....	143	1300-029.....	176	2140-010.....	80
1137-235.....	143	1300-030.....	176	2140-011.....	80
1137-313	143	1300-031.....	178	2140-013.....	80
1137-315	143	1300-032.....	178	2140-014.....	80
1137-323.....	143	1300-033.....	175	2140-019.....	80
1137-325.....	143	1300-034.....	178	2140-020.....	80
1137-333	143	1300-035.....	178	2140-021	80
1137-335	143	1300-036.....	178	2230-002.....	86, 88
1150-009.....	40	1300-039.....	175	2230-003.....	86, 88
1150-010	40	1430-001	25	2230-004.....	86, 88
1150-011.....	40	1430-002.....	26	2230-005.....	86, 88
1150-022.....	38	1430-003.....	27	2230-007.....	86, 88
1150-023.....	38	1430-004	27	2230-009.....	89
1150-024.....	38	1430-005.....	28	2230-010.....	89
1151-003.....	41	1430-006.....	29	2230-011.....	89
1151-005.....	41	1450-001.....	47	2230-012.....	89
1151-006.....	41	1450-002.....	48	2230-013.....	88
1151-034.....	39	1450-003.....	48	2230-014.....	88
1151-035.....	39	1450-004	48	2230-015.....	89
1151-036.....	39	1450-005	49	2230-016.....	88
1151-038.....	44	1450-006.....	49	2230-018.....	89
1151-039.....	44	1450-007.....	49	2230-024.....	88
1151-041.....	44	1450-008	51	2230-025	89
1151-042.....	44, 55	1450-009.....	51	2230-026.....	88, 144
1160-007.....	22	1450-010	50	2230-027.....	87
1160-008	9	1450-011	43	2230-028.....	87
1200-020.....	68	1450-012.....	43	2230-029.....	87
1200-020.....	68, 150	1450-013.....	43	2230-030.....	87
1200-021.....	68, 68	1451-001.....	53	2230-031.....	87
1200-021.....	150	1451-002.....	53	2230-032.....	154
1200-022.....	174	1451-003.....	53	2230-033.....	154
1200-023.....	174	1451-004	52	2230-035.....	87
1210-046	147	1451-005	52	2230-036.....	11, 14, 21, 24, 33, 46
1210-046P	146	1451-006.....	52	2230-039.....	89
1210-047.....	147	1451-007.....	53	2230-040.....	124
1210-048	147	2120-001.....	81	2250-001.....	86
1210-048P	146	2120-002.....	81	2250-002.....	86
1210-049.....	147	2120-003.....	81	2250-003.....	86
1210-049P	146	2120-004.....	81	2250-004.....	86
1210-050	147	2120-005.....	81	2250-005.....	86
1210-052.....	147	2120-006.....	81	2250-006.....	86
1210-053.....	147	2120-007.....	81	2250-007.....	86
1210-053P	146	2120-011.....	81	2250-011.....	86
1210-054.....	149	2120-012.....	81	2250-012.....	86
1210-054P	148	2120-013.....	81	2250-013.....	86
1210-055.....	149	2120-014.....	81	2250-014.....	86
1210-055P	148	2120-015.....	81	2250-015.....	86
1210-056.....	149	2120-016.....	81	2250-016.....	86
1210-056P	148	2120-017.....	81	2250-017.....	86
1210-057.....	149	2120-018.....	81	2251-312.....	86
1210-057P.....	148	2120-019.....	81	2251-338.....	86
1300-001	175	2120-020.....	81	2251-512	86
1300-009.....	178	2120-021.....	81	2251-538.....	86
1300-010	174	2120-022.....	81	2252-312	86
1300-011	174	2120-025.....	81	2252-512.....	86
1300-017	174	2120-026.....	81	2253-314.....	86
1300-018	174	2130-002.....	79	2253-538.....	86
1300-019.....	175	2140-002	80	2254-316.....	86

Index

2254-518.....	86	3110-136.....	124	3120-227.....	122
2254-518D.....	86	3110-137.....	114, 127	3120-228.....	122
2310-027.....	83	3110-138.....	114, 127	3128-050.....	132
2310-028.....	83	3110-139.....	118	3128-100.....	132
2310-029.....	83	3110-140.....	124	3128-150.....	132
2310-031.....	83	3110-141.....	124	3128-250.....	132
2310-032.....	83	3110-143.....	124	3129-050.....	132
2310-033.....	83	3110-145.....	124	3129-100.....	132
2310-034.....	84	3110-146.....	124	3129-150.....	132
2310-035.....	84	3120-007.....	131	3129-250.....	132
2310-036.....	84	3120-013.....	103, 122, 131	3130-001.....	127
2310-037.....	84	3120-014.....	103, 122, 131	3130-100.....	124
2310-038.....	84	3120-029.....	124, 136	3130-110.....	124
2310-039.....	84	3120-031.....	131, 135	3130-500.....	124
2310-040.....	84	3120-033.....	124, 135, 136	3230-001.....	173
2310-041.....	84	3120-068.....	127	3230-002.....	32, 173
2310-042.....	84	3120-069.....	132	3230-006.....	32, 173
2310-043.....	84	3120-070.....	132	3230-007.....	32, 173
2310-045.....	84	3120-072.....	132	3230-009.....	55, 71, 132, 173
2310-046.....	83	3120-074.....	131	3230-010.....	55, 71, 132, 173
2310-047.....	85	3120-075.....	131	3230-011.....	55, 71, 132, 173
2400-010.....	83, 151	3120-077.....	131	3230-012.....	173
2400-011.....	83, 151	3120-078.....	131	3230-013.....	173
2510-011.....	90	3120-079.....	124	3230-014.....	30, 173
2510-013.....	90	3120-079.....	132	3230-015.....	32, 55, 173
2510-016.....	90	3120-080.....	132	3230-016.....	32, 55, 173
2510-017.....	90	3120-081.....	132	3230-017.....	32, 55, 173
3110-016.....	127	3120-082.....	132	3230-018.....	32, 71, 173
3110-017.....	127	3120-083.....	132	3230-019.....	32, 71, 173
3110-018.....	128	3120-084.....	124, 132	3230-020.....	32, 71, 173
3110-019.....	128	3120-085.....	32	3230-021.....	32, 71, 173
3110-020.....	129	3120-086.....	9, 12, 32	3230-022.....	32, 71, 173
3110-021.....	129	3120-087.....	32	3230-023.....	32, 55, 173
3110-023.....	132	3120-091.....	103	3241-001.....	32, 54, 173
3110-030.....	127	3120-092.....	132, 136	3241-002.....	32, 54, 173
3110-031.....	134	3120-093.....	132, 136	3250-001.....	155
3110-033.....	136	3120-094.....	132, 136	3250-002.....	153, 155
3110-034.....	130	3120-114.....	122, 135	3260-028.....	171
3110-100.....	115	3120-116.....	152	3260-030.....	171
3110-101.....	120	3120-117.....	131	3260-031.....	171
3110-102.....	121	3120-119.....	152	3260-033.....	18, 21, 171
3110-103.....	120	3120-120.....	103	3260-034.....	171
3110-104.....	115	3120-201.....	60, 61, 62, 63, 71, 167	3260-035.....	24, 46, 171
3110-105.....	123	3120-202.....	64, 65, 71, 167	3260-036.....	31, 54, 171
3110-106.....	124	3120-204.....	131	3260-037.....	171
3110-108.....	124	3120-205.....	131	3260-038.....	171
3110-109.....	124	3120-206.....	152	3260-040.....	171
3110-110.....	114	3120-207.....	152	3260-041.....	171
3110-112.....	116	3120-208.....	131	3260-042.....	171
3110-113.....	116	3120-209.....	131	3260-043.....	171
3110-114.....	117	3120-210.....	131	3260-048.....	171
3110-115.....	117	3120-211.....	32, 71, 132, 135, 167	3260-049.....	171
3110-117.....	118	3120-212.....	32, 71, 132, 135, 167	3260-050.....	171
3110-118.....	118	3120-213.....	32, 71, 132, 135, 167	3260-051.....	171
3110-119.....	118	3120-214.....	32	3260-053.....	171
3110-120.....	118	3120-215.....	32	3260-054.....	171
3110-121.....	118	3120-217.....	124, 135	3260-055.....	171
3110-122.....	118	3120-218.....	124, 135	3260-056.....	171
3110-123.....	118	3120-219.....	71, 167	3260-057.....	171
3110-133.....	114	3120-220.....	135	3260-058.....	170
3110-134.....	119	3120-225.....	124, 135	3260-059.....	171
3110-135.....	119	3120-226.....	124	3260-060.....	171

Index

3260-061.....	171	3270-084.....	182	3270-172.....	155
3260-065.....	171	3270-085.....	182	3270-173.....	155
3260-066.....	171	3270-086.....	182	3270-174.....	155
3260-067.....	170	3270-087.....	182	3270-175.....	155
3260-068.....	170	3270-088.....	182	3270-176.....	155
3260-069.....	170	3270-089.....	182	3270-177.....	155
3261-005.....	170	3270-090.....	182	3310-007.....	54, 106
3261-006.....	170	3270-091.....	183	3310-008.....	54, 106
3261-007.....	170	3270-092.....	183	3310-009.....	54, 106
3261-008.....	170	3270-093.....	182	3310-010.....	54, 106
3261-009.....	170	3270-094.....	182	3310-020.....	54, 106
3261-010.....	170	3270-095.....	183	3310-025.....	54, 106
3261-011.....	170	3270-096.....	183	3310-030.....	42, 46, 54, 106
3261-013.....	170	3270-097.....	183	3310-031.....	42, 46, 54, 106
3261-014.....	170	3270-098.....	183	3310-032.....	42, 46, 54, 106
3270-003.....	33	3270-099.....	184	3320-022.....	95
3270-004.....	33	3270-100.....	184	3320-023.....	95
3270-005.....	33	3270-101.....	184	3320-024.....	95
3270-007.....	182	3270-102.....	184	3320-026.....	95
3270-009.....	182	3270-103.....	184	3320-032.....	95
3270-016.....	182	3270-104.....	184	3320-051.....	31, 100
3270-021.....	182	3270-105.....	184	3320-052.....	31, 100
3270-025.....	183	3270-106.....	184	3320-053.....	31, 100
3270-027.....	184	3270-107.....	184	3320-054.....	31, 100
3270-028.....	183	3270-108.....	184	3320-055.....	101
3270-033.....	182	3270-109.....	184	3320-056.....	95
3270-041.....	182	3270-110.....	184	3330-157.....	96
3270-042.....	182	3270-111.....	184	3330-158.....	96
3270-043.....	183	3270-113.....	184	3330-159.....	11, 14, 18, 21, 24, 31, 96
3270-044.....	183	3270-114.....	184	3330-161.....	96
3270-045.....	183	3270-115.....	184	3330-166.....	96
3270-046.....	183	3270-116.....	184	3330-169.....	96
3270-047.....	184	3270-117.....	184	3330-172.....	96
3270-048.....	184	3270-118.....	184	3330-177.....	98
3270-050.....	183	3270-119.....	33	3330-180.....	98
3270-050.....	184	3270-120.....	33	3330-184.....	98
3270-051.....	184	3270-121.....	33	3330-189.....	98
3270-052.....	182	3270-122.....	33	3330-192.....	11, 14, 18, 21, 24, 31, 98
3270-053.....	182	3270-123.....	33	3330-196.....	98
3270-054.....	161, 162, 182	3270-132.....	33	3330-197.....	100
3270-055.....	184	3270-133.....	33	3330-197.....	31
3270-056.....	184	3270-142.....	33	3330-198.....	31, 100
3270-057.....	184	3270-143.....	33	3330-199.....	31, 100
3270-058.....	184	3270-150.....	183	3330-200.....	31, 100
3270-059.....	184	3270-151.....	183	3330-201.....	101
3270-060.....	184	3270-152.....	183	3330-202.....	98
3270-061.....	183	3270-153.....	183	3330-203.....	98
3270-062.....	183	3270-154.....	183	3330-204.....	97
3270-065.....	184	3270-155.....	183	3330-205.....	11, 14, 18, 21, 24, 31, 97
3270-066.....	183	3270-156.....	183	3330-206.....	97
3270-070.....	182	3270-157.....	183	3330-207.....	97
3270-071.....	182	3270-158.....	183	3330-208.....	97
3270-072.....	182	3270-159.....	183	3330-209.....	103
3270-073.....	182	3270-162.....	155	3330-210.....	103
3270-074.....	182	3270-163.....	155	3330-211.....	97
3270-075.....	182	3270-164.....	155	3330-212.....	97
3270-076.....	182	3270-165.....	155	3330-213.....	97
3270-077.....	182	3270-166.....	155	3330-214.....	97
3270-078.....	182	3270-167.....	155	3330-215.....	97
3270-081.....	182	3270-168.....	155	3331-023.....	99
3270-082.....	182	3270-169.....	155	3331-024.....	99
3270-083.....	183	3270-171.....	155	3331-025.....	99

Index

3331-031.....	102	4140-061.....	164	4412-034.....	31
3331-032.....	102	4140-062.....	166	4412-035.....	14, 33
3331-033.....	102	4140-063.....	166	4412-036.....	14, 33
3332-090.....	107	4140-064.....	160, 161, 162A	4412-037.....	14, 33
3332-091.....	104	4140-067.....	164	4412-038.....	14, 33
3332-092.....	104	4140-068.....	141	4412-039.....	14, 33
3332-093.....	104	4140-069.....	141	4412-040.....	14, 33
3332-094.....	104	4140-071.....	141	4412-041.....	14, 33
3332-095.....	104	4140-072.....	141	4412-042.....	14, 33
3332-096.....	107	4200-011.....	105	4412-043.....	14, 33
3332-097.....	107	4200-012.....	105	4412-044.....	11, 18, 21, 24, 33, 71, 167
3332-098.....	104	4200-013.....	105	4412-045.....	11, 18, 21, 24, 33, 71, 167
3332-099.....	104	4200-014.....	105	4412-046.....	11, 18, 21, 24, 33, 71, 167
3332-100.....	104	4310-001.....	11, 14, 21, 24, 33, 42, 55	4412-047.....	11, 18, 21, 24, 33, 71, 167
3332-101.....	104	4310-003.....	11, 14, 21, 24, 33, 42, 55	4412-048.....	11, 18, 21, 24, 33, 71, 167
3332-102.....	104	4310-004.....	11, 14, 21, 24, 33, 42, 55, 155	4412-049.....	11, 18, 21, 24, 33, 71, 167
3332-103.....	104	4310-005.....	42, 55	4412-050.....	11, 18, 21, 24, 33, 71, 167
3332-104.....	104	4320-010.....	11, 14, 21, 24, 33, 42, 55	4412-051.....	11, 18, 21, 24, 33, 71, 167
3332-105.....	107	4320-011.....	42	4412-052.....	11, 18, 21, 24, 33, 71, 167
3332-107.....	107	4320-012.....	42, 55	4412-053.....	71
3340-006.....	89	4320-013.....	11, 14, 21, 24, 33, 42, 55	4420-003.....	54
3340-009.....	89	4320-014.....	11, 14, 21, 24, 33, 46, 55, 155	4420-004.....	42
3340-010.....	89	4410-022.....	18, 21	4420-004.....	54
3340-011.....	152	4410-030.....	46, 54	4420-005.....	33
3340-012.....	152	4410-035.....	54	4420-007.....	54
3340-014.....	89	4410-036.....	54	4420-008.....	42, 54
3340-015.....	152	4410-054.....	14, 18, 21	4420-009.....	42, 54
3340-017.....	152	4410-058.....	11, 14	4420-010.....	33, 46, 54
3340-018.....	152	4410-062.....	31	4420-011.....	33, 46, 54
4110-022.....	160	4410-063.....	70	4420-012.....	42, 46, 54
4110-023.....	160	4410-064.....	31	4420-013.....	30, 33, 54
4110-024.....	161	4410-065.....	24	4420-014.....	30, 33, 54
4110-025.....	161	4410-066.....	24	4420-015.....	46, 54
4110-026.....	162	4411-005.....	32	4430-004.....	54
4110-027.....	162	4411-007N.....	32	4440-007.....	42, 54
4110-028.....	162	4411-008.....	11, 14, 21, 24, 33	4440-008.....	42, 54
4110-029.....	162	4411-009N.....	32, 144	4440-009.....	42, 54
4120-003.....	164	4411-009QX.....	32, 144	4440-012.....	54
4120-004.....	164	4411-010.....	32	4440-013.....	46, 54
4120-006.....	164	4411-012.....	32	4440-014.....	46, 54
4140-013.....	164	4411-014.....	32, 173	4440-015.....	54
4140-016.....	71, 161, 162, 167	4411-015.....	32, 173	4440-017.....	54
4140-017.....	71, 161, 162, 167	4411-016.....	71, 155, 167	4440-018.....	46, 54
4140-018.....	71, 161, 162, 164, 167	4411-018N.....	18, 21, 24, 32, 144	4450-002.....	55
4140-019.....	71, 161, 162, 167	4411-021.....	32, 54, 144	4450-003.....	52
4140-020.....	164	4411-022.....	32, 54, 144	4450-004.....	53
4140-023.....	71, 161, 162, 167	4411-024.....	32, 144	4450-005.....	52, 55
4140-044.....	71, 161, 162, 164, 167	4411-025.....	71, 167	4520-006.....	144
4140-045.....	71, 161, 162, 164, 167	4411-029.....	173	4520-007.....	144
4140-046.....	71, 161, 162, 164, 167	4411-030.....	31, 33	4520-014.....	144
4140-050.....	71, 161, 162, 164, 167	4411-031.....	31	4520-018.....	144
4140-051.....	71, 161, 162, 167	4411-032.....	32	4520-019.....	144
4140-052.....	71, 161, 162, 164, 167	4411-033.....	144	4520-020.....	144
4140-053.....	71, 161, 162, 164, 167	4411-034.....	144	4520-023.....	167
4140-054.....	71, 161, 162, 164, 167	4411-035.....	144	4520-067.....	144
4140-055.....	71, 161, 162, 164, 167	4411-036.....	71, 167	4530-001.....	153
4140-056.....	163	4411-038.....	32, 173	4530-002.....	153
4140-057.....	163	4412-019.....	71	4530-005.....	153
4140-058.....	54	4412-031.....	31	4530-006.....	153
4140-059.....	54	4412-032.....	31	4530-007.....	153
4140-060.....	164	4412-033.....	31	4530-008.....	153

Index

4530-009.....	153	6111-008.....	172
4530-036.....	153	6111-009.....	172
4530-037.....	153	6210-001.....	153
4530-038.....	153	6210-027.....	172
4530-039.....	153	6210-028.....	172
4530-040.....	153	6210-029.....	172
4530-041.....	153	6330-005.....	172
4530-042.....	153	6420-006.....	172
4530-043.....	153	6420-007.....	172
4530-044.....	153	6420-008.....	172
4530-045.....	153	6420-009.....	172
4530-046.....	153	7120-012.....	30
4530-048.....	153	7120-015.....	55
4530-054.....	152	7120-016.....	41, 55
4530-057.....	153	7120-017.....	30
4530-058.....	153	7120-018.....	30
4530-059.....	153	7120-019.....	30
4530-060.....	153	7120-024.....	30, 55
4530-061.....	153	7120-025.....	30, 55
4530-063.....	153	8137-030.....	89
4530-064.....	155	8137-125.....	89
4530-066.....	144, 153	8249-005.....	18, 21, 24
4530-067.....	144	8263-010.....	14, 18, 21, 24
4530-068.....	144	8263-016.....	14, 18, 21, 24
4530-069.....	144	8340-010.....	54
4610-001.....	153	8340-020.....	54
4610-003.....	153	8390-002.....	42, 46, 54, 107, 179
5200-006.....	176	8390-003.....	42, 46, 54, 107, 179
5200-010.....	177	8390-004.....	42, 46, 54, 107, 177
5200-013.....	177	8551-006.....	154
5200-014.....	176	8560-003.....	154
5200-015.....	177	8560-012.....	154
5200-016.....	176	8561-003.....	154
5200-017.....	54, 107, 179	8561-006.....	154
5310-018.....	42, 46, 54, 107, 179	8561-012.....	154
5310-024.....	42, 46, 54, 107, 179	8561-020.....	154
5310-025.....	179	8561-030.....	154
5310-026.....	179	8562-003.....	154
5310-027.....	179	8569-016.....	154
5310-028.....	179	8569-020.....	154
5310-029.....	179	8569-030.....	154
5310-030.....	179	8569-050.....	154
5310-031.....	179	8570-003.....	154
5310-032.....	179	8570-006.....	154
5310-033.....	179	8572-006.....	154
5310-034.....	179		
5310-035.....	179		
5310-036.....	179		
5310-037.....	179		
5400-003.....	54, 179		
6110-010.....	172		
6110-017.....	172		
6110-025.....	172		
6110-026.....	172		
6110-027.....	172		
6110-028.....	172		
6111-002.....	172		
6111-003.....	172		
6111-004.....	172		
6111-005.....	172		
6111-006.....	172		
6111-007.....	172		

