

Reciprocating Piston Pumps: Grease Product Selection Matrix

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 (7.25 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

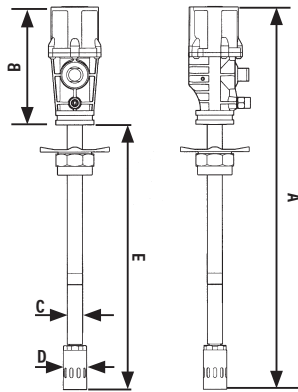
Pump performance is predicated on viscosity (temperature), pumping distance, pipe diameter and dispense volume requirements. Contact Balcrank for system design assistance and technical data.

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

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

LYNX HP 55:1

Pumps
Piston



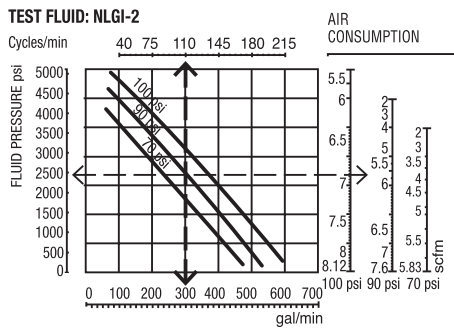
DIMENSIONS INCHES (MM)				
1150-022				
A	B	C	D	E
24.40" (620 mm)	8" (202 mm)	1" (26 mm)	1.56" (40 mm)	16.5" (418 mm)
1150-023				
36.62" (930 mm)	8" (202 mm)	1" (26 mm)	1.56" (40 mm)	28.65" (728 mm)
1150-024				
44.12" (1120 mm)	8" (202 mm)	1" (26 mm)	1.56" (40 mm)	36.14" (918 mm)

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



Overview

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. per minute.

MODELS AVAILABLE	DESCRIPTION
<input type="checkbox"/> 1150-022	55:1 LYNX Grease 25-35 lbs
<input type="checkbox"/> 1150-023	55:1 LYNX Grease 120 lbs
<input type="checkbox"/> 1150-024	55:1 LYNX Grease 400 lbs

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	1.2 lb/min (0.5 kg/min)
Operating air pressure range	20-140 psi (1.5-10 bar)
Max fluid stall pressure @ 140 psi (10 bar) air	7700 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
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.

Panther HP 55:1 Pump Description

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. per minute.

Panther HP 55:1 Pump Models Available

- 1150-022** 55:1 LYNX Grease 25-35 lbs
- 1150-023** 55:1 LYNX Grease 120 lbs
- 1150-024** 55:1 LYNX Grease 400 lbs

Panther HP 55:1 Pump Specifications

- 3.1. Pump will have a 55:1 ratio
- 3.2. Pump will have a 2.75" (70 mm) effective diameter displacement air motor valve-in-piston design
- 3.3. Pump will have an air inlet port of 1/4" NPT(F)
- 3.4. Pump will have a fluid outlet port of 1/4" NPT(F)
- 3.5. Pump will have a free flow of 1.2 lb/min (0.5 kg/min) based on 100 psi (7 bar)
- 3.6. Pump will have an operating air pressure of 20-140 psi (1.5-10 bar)
- 3.7. Pump will have an air consumption pressure at 90 psi (6 bar) & 110 cycles per minute for 5.8 SCFM
- 3.8. Pump will have a maximum fluid stall pressure of 7,700 psi (550 bar) at 140 psi (10 bar) air
- 3.9. Pump will not exceed 318 cycles per pound
- 3.10. Pump will have an air motor stroke of 1.5" (38 mm)
- 3.11. Pump will have a continuous duty free flow of 7 lb/min

Materials

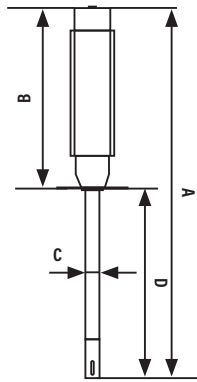
- 4.1. The wetted materials will consist of Steel, Zinc, Aluminum, Buna-N™, PTFE

Warranty

- 5.1. The LYNX HP Series 55:1 pump will have a 1-year standard warranty on defects in materials and workmanship only.

Panther® HP 50:1

Pumps
Piston



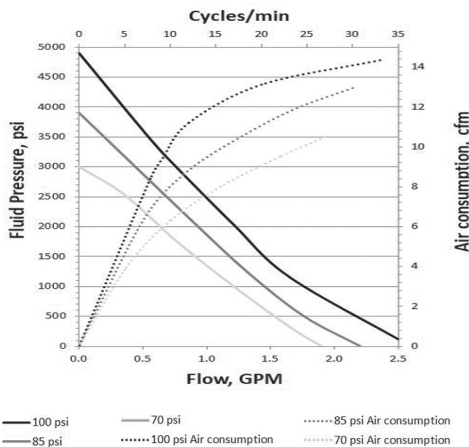
DIMENSIONS INCHES (MM)			
1150-009			
A	B	C	D
36.75" (933 mm)	18.75" (476 mm)	1.25" (31.75 mm)	18" (457 mm)
1150-010			
46.75" (1187 mm)	18.75" (476 mm)	1.25" (31.75 mm)	28" (711 mm)
1150-011			
52.75" (1340 mm)	18.75" (476 mm)	1.25" (31.75 mm)	34" (834 mm)

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



Overview

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. per minute.

MODELS AVAILABLE	DESCRIPTION
<input type="checkbox"/> 1150-009	50:1 Panther® HP bare 25-35 lbs
<input type="checkbox"/> 1150-010	50:1 Panther® HP bare 120 lbs
<input type="checkbox"/> 1150-011	50:1 Panther® HP bare 400 lbs

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	7,500 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.

Panther® HP 50:1 Pump Description

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. per minute.

Panther® HP 50:1 Pump Models Available

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

Panther® HP 50:1 Pump Specifications

- 3.1. Pump will have a 50:1 ratio
- 3.2. Pump will have a 2 1/2" (63.5 mm) effective diameter displacement air motor
- 3.3. Pump will have an air inlet port of 1/4" NPT(F)
- 3.4. Pump will have a fluid outlet port of 1/4" NPT(F)
- 3.5. Pump will have a free flow of 3.4 lb/min (1.54 kg/min) based on 100 psi (7 bar)
- 3.6. Pump will have an operating air pressure of 40-150 psi (2.8-10 bar)
- 3.7. Pump will have an air consumption pressure of 14.5 SCFM at 100 psi (7 bar) & 1.5 lb/min (.68 kg/min)
- 3.8. Pump will have a maximum fluid stall pressure of 7,500 psi (517 bar)
- 3.9. Pump will not exceed 70 cycles per pound
- 3.11. Pump will have an air motor stroke of 3.25" (83 mm)
- 3.12. Pump will have a continuous duty free flow of 2 lbs/min

Materials

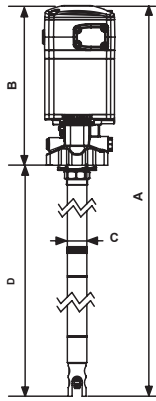
- 4.1. The wetted materials will consist of Stainless Steel, Carbon Steel, Brass, Aluminum, Delrin®, Ultrathane®, and Buna-N™

Warranty

- 5.1. The Panther™ HP 50:1 pump will have a 1-year standard warranty on defects in materials and workmanship only.

Lion™ 350 60:1

Pumps
Piston



DIMENSIONS INCHES (MM)			
1450-013			
A	B	C	D
31.5" (803 mm)	11.25" (287 mm)	1.66" (35 mm)	20.25" (516 mm)
1450-012			
40" (1,017 mm)	11.25" (287 mm)	1.66" (35 mm)	28.75" (730 mm)
1450-011			
47.75" (1,212 mm)	11.25" (287 mm)	1.66" (35 mm)	36.5" (925 mm)

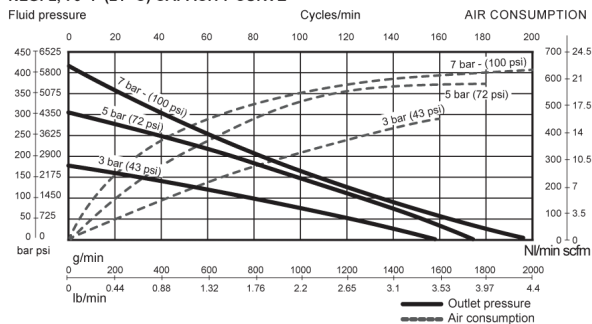
Fluids

- Grease up to NLGI-2

Applications

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

NLGI-2, 70 °F (21 °C) CAPACITY CURVE



Overview

Designed for 35, 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/min (2 kg/min).

MODELS AVAILABLE	DESCRIPTION
<input type="checkbox"/> 1450-013	Lion™ 60:1 Grease 25-35 lbs
<input type="checkbox"/> 1450-012	Lion™ 60:1 Grease 120 lbs
<input type="checkbox"/> 1450-011	Lion™ 60:1 Grease 400 lbs

TECHNICAL DATA	
Pump ratio	60:1
Cycles per lb/min @ 100 psi (7 bar)	50
Operating air pressure range	20-145 psi (1.5-10 bar)
Max pump delivery @ 100 psi (7 bar)	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.

Lion™ 350 60:1 Pump Description

Designed for 35, 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/min (2 kg/min).

Lion™ 350 60:1 Pump Models Available

- 1450-013** 60:1 Lion™ 350 bare 25-35 lbs
- 1450-012** 60:1 Lion™ 350 bare 120 lbs
- 1450-011** 60:1 Lion™ 350 bare 400 lbs

Panther® HP 50:1 Pump Specifications

- 3.1. Pump will have a 60:1 ratio
- 3.2. Pump will have a 3.15" (80 mm) effective diameter displacement air motor
- 3.3. Pump will have an air inlet port of 3/8" NPT(F)
- 3.4. Pump will have a fluid outlet port of 3/8" NPT(F)
- 3.5. Pump will have a pump delivery of 4.4 lb/min (2 kg/min) based on 100 psi (7 bar)
- 3.6. Pump will have an operating air pressure of 20-145 psi (1.5-10 bar)
- 3.7. Pump will have a maximum fluid stall pressure of 8,700 psi (600 bar)
- 3.8. Pump will not exceed 50 cycles per pound
- 3.9. Pump will a delivery of 1.1 lbs/min (500 g/min) @ 70 psi (5 bar) and 80 cpm

Materials

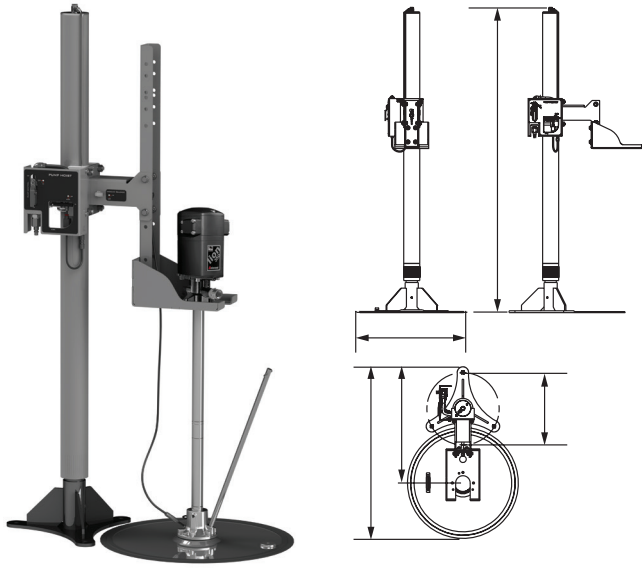
- 4.1. The wetted materials will consist of Cast iron, Hard chromed steel, Steel, UHMWPE, NBR, PTFE, Viton®

Warranty

- 5.1. The Lion™ 350 60:1 pump will have a 1-year standard warranty on defects in materials and workmanship only.

Grease Inductor - Lion™ 350 60:1 Inductor

Pumps
Piston



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

- Grease up to NLGI-2

Applications

- Agriculture/farm implements
- Small auto/truck shops
- Tire & transmission shops
- In-plant low volume use
- Truck fleets
- Lube trucks
- Marine

Overview

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 channeling and air pockets, keeping grease free from contaminants, minimizing waste and aiding pump priming.

MODELS AVAILABLE	DESCRIPTION
<input type="checkbox"/> 1451-009	Package, Lion™ 350, 60:1 Inductor Includes: 1450-012 Lion™ 350, 60:1 Grease 120 lbs 4450-003 Inductor, Gravity, Pump Lift & follower plate
<input type="checkbox"/> 1451-008	Package, Lion™ 350, 60:1 Inductor Includes: 1450-011 Lion™ 350, 60:1 Grease 400 lbs 4450-003 Inductor, Gravity, Pump Lift & follower plate

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.

Lion™ 350 Inductor Package Description

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 channeling and air pockets, keeping grease free from contaminants, minimizing waste and aiding pump priming.

Lion™ Inductor Package Models Available

- ❑ **1451-009** Package, Lion™ 350, 60:1 Inductor Includes:
1450-012 Lion™ 350, 60:1 Grease 120 lbs
4450-003 Inductor, Gravity, Pump Lift & follower plate
- ❑ **1451-008** Package, Lion™ 350, 60:1 Inductor Includes:
1450-011 Lion™ 350, 60:1 Grease 400 lbs
4450-003 Inductor, Gravity, Pump Lift & follower plate

Lion™ Inductor Package Specifications

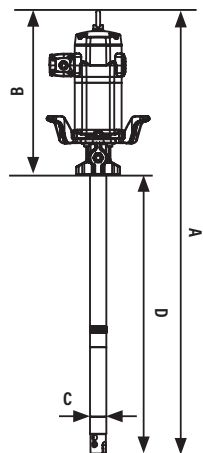
- 3.1. Inductor package will have a 3" (75 mm) diameter of the pneumatic cylinder
- 3.2. Inductor package will have an air inlet of 1/2" NPT(M)
- 3.3. Inductor package will have an equipment height of 58" (1,470 mm) minimum to 94.5" maximum (2,400 mm)
- 3.4. Inductor package will have a stroke of 36.6" (930 mm) of the pneumatic cylinder

Warranty

- 4.1. The Lion™ 350 60:1 Inductor will have a 1-year standard warranty on defects in materials and workmanship only.

Lion™ 450 - 25:1

Pumps
Piston



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

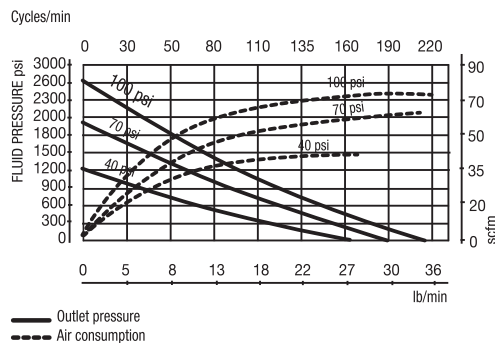
Fluids

- Grease up to NLGI-2
- High viscosity oil

Applications

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

TEST FLUID: NLGI-0



Overview

Lion™ 450 - 25:1. 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.

MODELS AVAILABLE	DESCRIPTION
<input type="checkbox"/> 1450-001	Lion™ 450 25:1 Grease 400 lb drum pump

TECHNICAL DATA	
Pump ratio	25:1
Continuous duty flow rate	13 lb/min (6 kg/min)
Cycles per lb	6
Maximum free flow @ 100 psi (7 bar)	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, UHMW-PE, 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.

Lion™ 450 25:1 Pump Description

Lion™ 450 - 25:1. 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.

Lion™ 450 25:1 Pump Models Available

- ☐ **1450-001** Lion™ 450 25:1 grease 400 lb drum pump

Lion™ 450 25:1 Pump Specifications

- 3.1. Pump will have a 25:1 ratio
- 3.2. Pump will have a 4.5" (115 mm) effective diameter displacement air motor
- 3.3. Pump will have an air inlet port of 1/2" NPT(F)
- 3.4. Pump will have a fluid outlet port of 1/2" NPT(F)
- 3.5. Pump will have a free flow of 35 lb/min (16 kg/min) based on 100 psi (7 bar)
- 3.6. Pump will have an operating air pressure of 30 - 200 psi (1.38 - 14 bar)
- 3.7. Pump will have an air consumption pressure at 47 cfm (1.340 NI/min)
- 3.8. Pump will not exceed 6 cycles per pound
- 3.9. Pump will have a continuous duty flow rate of 13 lb/min (16 kg/min)
- 3.10. Pump will have a max fluid stall pressure of 5,000 psi (350 bar)
- 3.11. Pump will have an air motor stroke of 4" (100 mm)

Materials

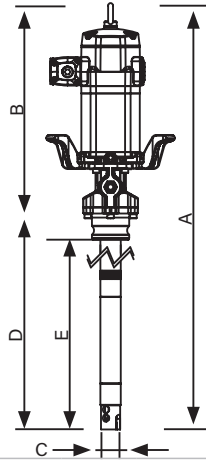
- 4.1. The wetted materials will consist of Cast Iron, Steel, Hard Chromed Steel, UHMWPE, and Buna-N™

Warranty

- 5.1. The Lion™ 450 25:1 pump will have a 1-year standard warranty on defects in materials and workmanship only.

Lion™ 450 - 40:1

Pumps
Piston



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)

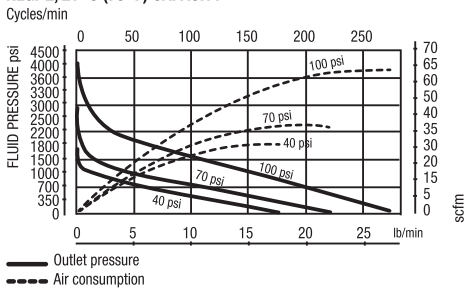
Fluids

- 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
- Marine

NLGI-2, 21 °C (70 °F) CAPACITY



Overview

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.

MODELS AVAILABLE	DESCRIPTION
<input type="checkbox"/> 1450-003	Lion™ 450 40:1 grease 120 lb drum pump
<input type="checkbox"/> 1450-002	Lion™ 450 40:1 grease 400 lb drum pump
<input type="checkbox"/> 1450-004	Lion™ 450 40:1 grease bulk tote pump

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

Lion™ 450 40:1 Pump Description

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.

Lion™ 450 40:1 Pump Models Available

- 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

Lion™ 450 40:1 Pump Specifications

- 3.1. Pump will have a 40:1 ratio
- 3.2. Pump will have a 4.5" (115 mm) effective diameter displacement air motor
- 3.3. Pump will have an air inlet port of 1/2" NPT(F)
- 3.4. Pump will have a fluid outlet port of 1/2" NPT(F)
- 3.5. Pump will have a free flow of 24 lb/min (11 kg/min) based on 100 psi (7 bar)
- 3.6. Pump will have an operating air pressure of 30 - 200 psi (1.38- 14 bar)
- 3.7. Pump will have an air consumption pressure of 26.5 cfm (750 NI/min)
- 3.8. Pump will not exceed 10 cycles per pound
- 3.9. Pump will have a continuous duty flow rate of 8 lb/min (3.5 kg/min)
- 3.10. Pump will have a max fluid stall pressure of 8,000 psi (560 bar)
- 3.11. Pump will have an air motor stroke of 4" (100 mm)

Materials

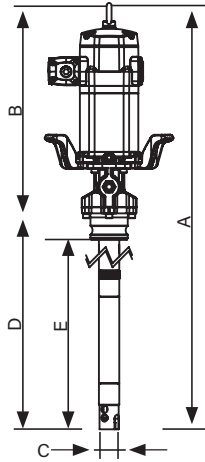
- 4.1. The wetted materials will consist of Cast Iron, Steel, Hard Chromed Steel, UHMWPE, Buna-N™ and PTFE

Warranty

- 5.1. The Lion™ 450 40:1 pump will have a 1-year standard warranty on defects in materials and workmanship only.

Lion™ 450 - 70:1

Pumps
Piston



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)

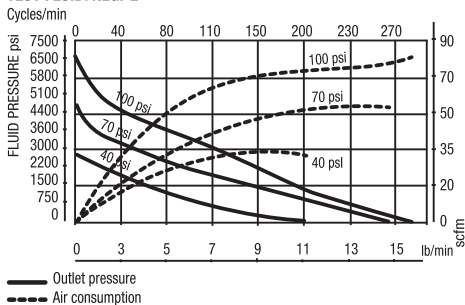
Fluids

- Grease up to NLGI-2

Applications

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

TEST FLUID: NLGI-2



Overview

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.

MODELS AVAILABLE	DESCRIPTION
<input type="checkbox"/> 1450-006	Lion™ 450 70:1 grease 120 lb drum pump
<input type="checkbox"/> 1450-005	Lion™ 450 70:1 grease 400 lb drum pump
<input type="checkbox"/> 1450-007	Lion™ 450 70:1 grease bulk tote pump

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	7,000 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.

Lion™ 450 70:1 Pump Description

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.

Lion™ 450 70:1 Pump Models Available

- 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

Lion™ 450 70:1 Pump Specifications

- 3.1. Pump will have a 70:1 ratio
- 3.2. Pump will have a 4.5" (115 mm) effective diameter displacement air motor
- 3.3. Pump will have an air inlet port of 1/2" NPT(F)
- 3.4. Pump will have a fluid outlet port of 1/2" NPT(F)
- 3.5. Pump will have a free flow of 16 lb/min (7.25 kg/min) based on 100 psi (7 bar)
- 3.6. Pump will have an operating air pressure of 30 - 100 psi (1.38 - 7 bar)
- 3.7. Pump will have an air consumption pressure of 32.6 cfm (925 NI/min)
- 3.8. Pump will not exceed 17 cycles per pound
- 3.9. Pump will have a continuous duty flow rate of 5 lb/min (2 kg/min)
- 3.10. Pump will have a max fluid stall pressure of 7,000 psi (490 bar)
- 3.11. Pump will have an air motor stroke of 4" (100 mm)

Materials

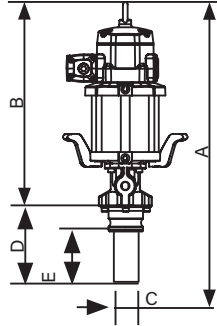
- 4.1. The wetted materials will consist of Cast Iron, Steel, Hard Chromed Steel, UHMWPE, Buna-N™ and PTFE

Warranty

- 5.1. The Lion™ 450 70:1 pump will have a 1-year standard warranty on defects in materials and workmanship only.

Lion™ 600 12:1

Pumps
Piston



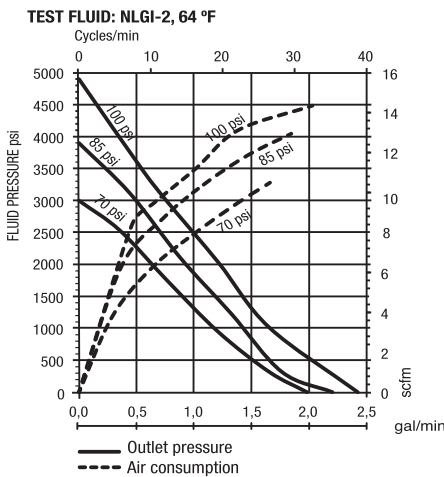
DIMENSIONS INCHES (MM)				
A	B	C	D	E
29" (742 mm)	20" (516 mm)	2.75" (70 mm)	9" (226 mm)	5.75" (146 mm)

Fluids

- Grease up to NLGI-2

Applications

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



Overview

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.

MODELS AVAILABLE	DESCRIPTION
<input type="checkbox"/> 1450-010	Lion™ 600 12:1 grease bulk tote pump

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, UHMW-PE, 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.

Lion™ 600 12:1 Pump Description

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.

Lion™ 600 12:1 Pump Models Available

- ❑ **1450-010** Lion™ 600 12:1 grease bulk tote pump

Lion™ 600 12:1 Pump Specifications

- 3.1. Pump will have a 12:1 ratio
- 3.2. Pump will have a 6" (150 mm) effective diameter displacement air motor
- 3.3. Pump will have an air inlet port of 1/2" NPT(F)
- 3.4. Pump will have a fluid outlet port of 1" NPT(F)
- 3.5. Pump will have a free flow of 88 lb/min (40 kg/min) based on 100 psi (7 bar)
- 3.6. Pump will have an operating air pressure of 30 - 100 psi (1.38 - 7 bar)
- 3.7. Pump will have an air consumption pressure of 39 cfm (1,100 NI/min)
- 3.8. Pump will have a continuous duty flow rate of 33 lb/min (15 kg/min)
- 3.9. Pump will have a max fluid stall pressure of 1,200 psi (84 bar)
- 3.10. Pump will have an air motor stroke of 4" (100 mm)
- 3.11. Pump will have cycles per lb of 2

Materials

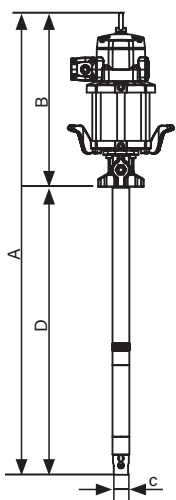
- 4.1. The wetted materials will consist of Cast Iron, Steel, Hard Chromed Steel, UHMWPE, Buna-N™, PTFE and Polyurethane

Warranty

- 5.1. The Lion™ 600 12:1 pump will have a 1-year standard warranty on defects in materials and workmanship only.

Lion™ 600 80:1

Pumps
Piston



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)

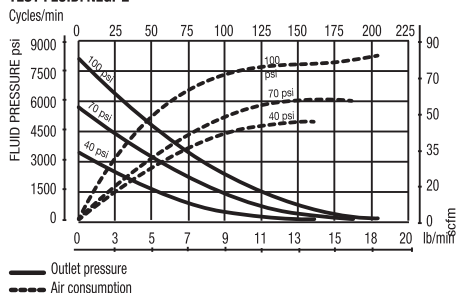
Fluids

- Grease up to NLGI-2

Applications

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

TEST FLUID: NLGI-2



Overview

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. Similar to the Lion™ 450 70:1 pump but operates at lower cycle rates for severe environments

MODELS AVAILABLE	DESCRIPTION
<input type="checkbox"/> 1450-009	Lion™ 600 80:1 grease 120 lb drum pump
<input type="checkbox"/> 1450-008	Lion™ 600 80:1 grease 400 lb drum pump

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, UHMW-PE, 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.

Lion™ 600 80:1 Pump Description

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. Similar to the Lion™ 450 70:1 pump but operates at lower cycle rates for severe environments

Lion™ 600 80:1 Pump Models Available

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

Lion™ 600 80:1 Pump Specifications

- 3.1. Pump will have a 80:1 ratio
- 3.2. Pump will have a 6" (150 mm) effective diameter displacement air motor
- 3.3. Pump will have an air inlet port of 1/2" NPT(F)
- 3.4. Pump will have a fluid outlet port of 1/2" NPT(F)
- 3.5. Pump will have a free flow of 18 lb/min (8 kg/min) based on 100 psi (7 bar)
- 3.6. Pump will have an operating air pressure of 30 - 100 psi (1.38 - 7 bar)
- 3.7. Pump will have an air consumption pressure of 39 cfm (1,100 NI/min)
- 3.8. Pump will not exceed 11 cycles per pound
- 3.9. Pump will have a continuous duty flow rate of 6 lb/min (2.5 kg/min)
- 3.10. Pump will have a max fluid stall pressure of 8,000 psi (560 bar)
- 3.11. Pump will have an air motor stroke of 4" (100 mm)

Materials

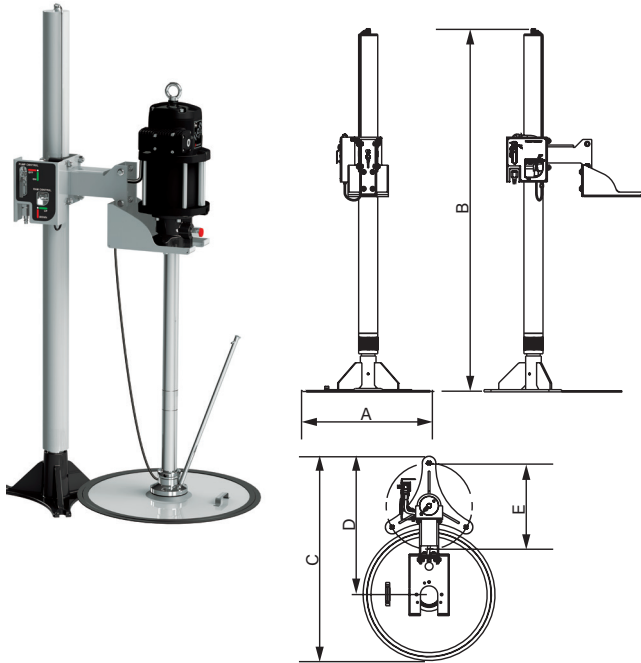
- 4.1. The wetted materials will consist of Cast Iron, Steel, Hard Chromed Steel, UHMWPE, Buna-N™ and PTFE

Warranty

- 5.1. The Lion™ 600 80:1 pump will have a 1-year standard warranty on defects in materials and workmanship only.

Grease Inductor - Lion™ Inductor

Pumps
Piston



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

- NLGI #2 Grease

Applications

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

Overview

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 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 channeling and air pockets, keeping grease free from contaminants, minimizing waste and aiding pump priming.

MODELS AVAILABLE	DESCRIPTION
<input type="checkbox"/> 1451-004	Package, Lion™ 450, 40:1 Inductor Includes: 1450-002 Lion™ 450, 40:1 pump 4450-003 Inductor, Gravity, Pump Lift & follower plate
<input type="checkbox"/> 1451-005	Package, Lion™ 450, 70:1 Inductor Includes: 1450-005 Lion™ 450, 70:1 pump 4450-003 Inductor, Gravity, Pump Lift & follower plate
<input type="checkbox"/> 1451-006	Package, Lion™ 600, 80:1 Inductor Includes: 1450-008 Lion™ 600, 80:1 pump 4450-003 Inductor, Gravity, Pump Lift & follower plate

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.

Lion™ Inductor Description

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 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 channeling and air pockets, keeping grease free from contaminants, minimizing waste and aiding pump priming. Packages include specific pump, as noted, 4450-003 Inductor, Gravity Pump Lift & follower plate.

Lion™ Inductor Models Available

- ❑ **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

Lion™ Inductor Specifications

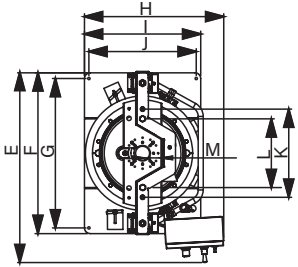
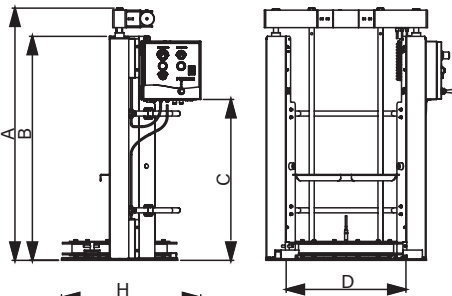
- 3.1. Inductor will have a 3" (75 mm) diameter of the pneumatic cylinder
- 3.2. Inductor will have an air inlet of 1/2" NPT(M)
- 3.3. Inductor will have a minimum of 58" (1,470 mm) and maximum of 94.5" (2,400 mm) height of equipment
- 3.4. Inductor will have a stroke of 36.6" (930 mm) of the pneumatic cylinder
- 3.5. Inductor will have a max air pressure of 116 psi (8 bar)

Warranty

- 4.1. The Lion™ Inductor will have a 1-year standard warranty on defects in materials and workmanship only.

Grease Inductor - Lion™ Inductor Double Post RAM

Pumps
Piston



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

- NLGI #2 Grease
- NLGI #3 Grease

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 transfer
- Grease transfer

Overview

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.

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

MODELS AVAILABLE	DESCRIPTION
<input type="checkbox"/> 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
<input type="checkbox"/> 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
<input type="checkbox"/> 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
<input type="checkbox"/> 1451-007*	Package, Lion™ 600, 12:1 pump. Double Post Inductor. Includes: 1450-010 Lion™ 600, 12:1 pump, 4450-004 Double Post Inductor, 3" Cam-lock for mounting pump to inductor plate

*When using this RAM with the 12:1, contact Balcrank customer service for additional needed components

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.

Lion™ Inductor Description

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.

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

Packages include specific pump, as noted, 4450-004 Double Post Inductor, collar & follower plate.

Lion™ Inductor Double Post RAM Models Available

- ❑ **1451-001** Package, Lion™ 450, 40:1 Inductor Includes:
1450-003 Lion™ 450, 40:1 pump
4450-004 Double Post Inductor, Collar & Follower plate
833650 Kit
- ❑ **1451-002** Package, Lion™ 450, 70:1 Inductor Includes:
1450-006 Lion™ 450, 70:1 pump
4450-004 Double Post Inductor, Collar & Follower plate
833650 Kit
- ❑ **1451-003** Package, Lion™ 450, 80:1 Inductor Includes:
1450-009 Lion™ 450, 80:1 pump
4450-004 Double Post Inductor, Collar & Follower plate
833650 Kit
- ❑ **1451-007** Package, Lion™ 450, 12:1 Inductor Includes:
1450-010 Lion™ 450, 12:1 pump
4450-004 Double Post Inductor, 3" Camlock for mounting pump to inductor plate

Warranty

- 3.1. The Lion™ Inductor Double Post RAM will have a 1-year standard warranty on defects in materials and workmanship only.