

Balcrank®

MO Control Handles

See page 3 for list of available models



Thoroughly read and understand this manual before installing, operating or servicing this equipment.

Operation, Installation, Maintenance and Repair Guide

GENERAL SAFETY



! IMPORTANT

Read these safety warnings and instructions in this manual completely, before installation and start up of the control handle. It is the responsibility

of the purchaser to retain this manual for reference. Failure to comply with the recommendations stated in this manual will damage the control handle and void factory warranty.



CAUTION

- 1) Always read and follow the fluid manufacturers's recommendations regarding the use of protective eye wear, clothing, gloves, and other personal equipment.
- 2) Never alter or modify any parts of this product; doing so may cause damage and/or personal injury.



! WARNING

DANGER: Not for use with fluids that have a flash point below 100°F (38°C, examples: gasoline, alcohol). Sparking could result in an explosion which could result in death.



! WARNING

Always use the following Pressure Relief Procedure whenever shutting off, cleaning, or

in any way checking or servicing the control handle:

- 1) Disconnect compressed air line or turn off power supply at the fluid pump.
- 2) Point the control handle outlet into a waste container and open trigger to relieve pressure.
- 3) Open any bleed-type supply air valves and fluid drain valves in the system.
- 4) Leave the drain valves open until you are ready to re-pressurize the system.



! WARNING

Do not place your hand or fingers over the dispensing nozzle and/or aim the nozzle at a person at any time. Personal injury may result.



CALIFORNIA PROPOSITION 65

This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm. Wash hands after handling



! WARNING

Airborne particles and loud noise hazards.

Wear ear and eye protection.



CAUTION

Maximum Fluid Pressure 1015 PSI (70 bar). Under no circumstances should the control handle be aimed at any person or your own body at anytime. Personal injury may result.

TABLE OF CONTENTS

Cover.....	1
General Safety.....	2
Technical Specifications & Models.....	3
Operation.....	4
Calibration.....	5
Troubleshooting.....	5
Maintenance.....	6 - 7
Parts List.....	8
Repair Kits.....	9
Dimensions.....	9
Warranty Information.....	Back Cover

TECHNICAL SPECIFICATIONS

Type	Oval gear with mechanical registration meter
Functions	Total recorder and partial resettable recorder
Moist part materials	Aluminum, acetal, NBR, Stainless Steel
Inlet connection	½" NPT and flange
Outlet connection	½" NPT and flange with seating for O-ring
Maximum working pressure	70 bar (1015 psi)
Compatible fluids	Mineral and synthetic oil
Flow	1 to 30 l/min (0.25 to 8 gal/min) (depending on the viscosity of the fluid and temp)
Viscosity range	8 to 2000 cSt.
Operating temperature	-10 °C to 60 °C (14 to 140 °F)
Precision	+ - 1% (SAE 10-40W 20°C 5 l/min)
Recorders	Total recorder with 6 digits and partial recorder with 4 digits, both with 2 decimal positions.
Measurement units	Litres/ litres, gallons/quarts (depending on the version)
Weight	647g (1,42 lb.)
Dimensions	99 x 95 x 94 mm (3,89 x 3,74 x 3,70")

MODELS

Metered

Model	Extension - Tip Type	U/M	Extension Part No.	Nozzle/Tip Part No.
3330-205	Flex-memory 1/4 turn	Q	3332-093	3332-096
3330-206	Flex 90 1/4 turn	Q	3332-104	3332-105
3330-207	Rigid 1/4 turn	Q	3332-091	3332-096
3330-208	Flex 90 1/4 turn	Q	3332-092	3332-096
3330-212	Flex-memory 1/4 turn	L	3332-093	3332-096
3330-213	Flex 90 1/4 turn	L	3332-104	3332-105
3330-214	Rigid 1/4 turn	L	3332-091	3332-096
3330-215	Flex 90 1/4 turn	L	3332-092	3332-096
3330-204	Bare	Q	-	
3330-211	Bare	L	-	

In-line meter

Model	Extension - Tip Type	U/M	Extension Part No.	Nozzle/Tip Part No.
3330-209	N/A	L	N/A	N/A
3330-210	N/A	Q	N/A	N/A

INTRODUCTION



WARNING: This unit is intended for professional use. Read all the instructions in this manual prior to use.

- The 3330-209 and 3330-210 meters are an oval gear with mechanical register models.
 - Only use the unit for the purposes for which is intended.
 - This device has not been approved to be used in commercial transactions.
 - Do not alter or modify the unit.
 - Do not exceed the maximum unit working pressure. See page 6, technical specifications.
- Use the unit with fluids and solutions which are compatible with the moist parts of the unit. See the relevant section of the technical specifications.
 - Observe the manufacturer's safety warnings for the fluids used.
 - The 3330-209 model shows liters in the total recorder and liters in the resettable partial recorder.
 - The 3330-210 model shows gallons in the total recorder and quarts in the resettable partial recorder.

INSTALLATION

The meter can be connected to a control gun or installed directly in the distribution line pipe. It's recommended to install a cut-off valve before the meter to facilitate maintenance or repair.

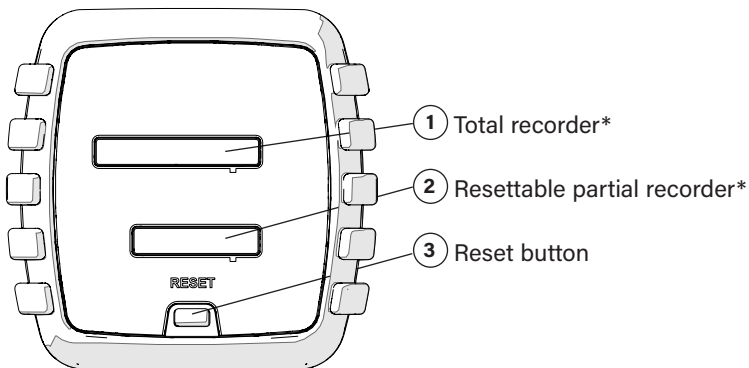
The meter has a ½" NPT(F) connection at the inlet and outlet. It also includes an inlet flange and a flange at the outlet with seating for an O-ring seal, which enables

connection for the range of Balrank handles and extensions.

The solid particles entering in the measuring chamber may lead to malfunction, it's highly recommended to install a filter before the meter (400 microns).

OPERATING MODE

IMPORTANT: Always read the instructions prior to using for the first time.



*Depending on the version the units displayed are gallons-quarts or litres-litres.

HANDLING

The meter has two registers, the upper register shows the total lifetime meter count and the lower register shows the resettable batch count. Each unit of dispensed volume increases both the batch and the total register.

Both the total and the partial recorders are reset when they reach the value of 99999.9 and 999.9 respectively.

Do not exceed the maximum unit working pressure detailed in the technical specifications

The total recorder shows the dispensed total fluid volume dispensed since the meter was put into operation for first time. The total recorder can't be resettable. To reset the partial recorder, press the reset button.

Due to the single verification during the manufacturing process, it's normal that the total recorder is not set to zero.

CALIBRATION

The meter does not allow calibration. If an error in the measure is detected, check that the operating flow is within the operating range. Also, check that the fluid dispensed is one of those indicated as compatible with the meter.

TROUBLE-SHOOTING

Symptom	Possible cause	Solution
The meter is inaccurate	A fluid with very high or very low viscosity is being used.	The meter does not allow calibration; try adjusting the operating conditions within the operating range of the meter.
	Very high or low fluid temperature	
	The meter is working outside its field of application (see technical specifications).	
Reduced flow	Dirt in the measuring chamber.	Inform technical support.
	Blocked or dirty filter.	Clean the filter.
The meter does not count	Faulty register.	Inform technical support.

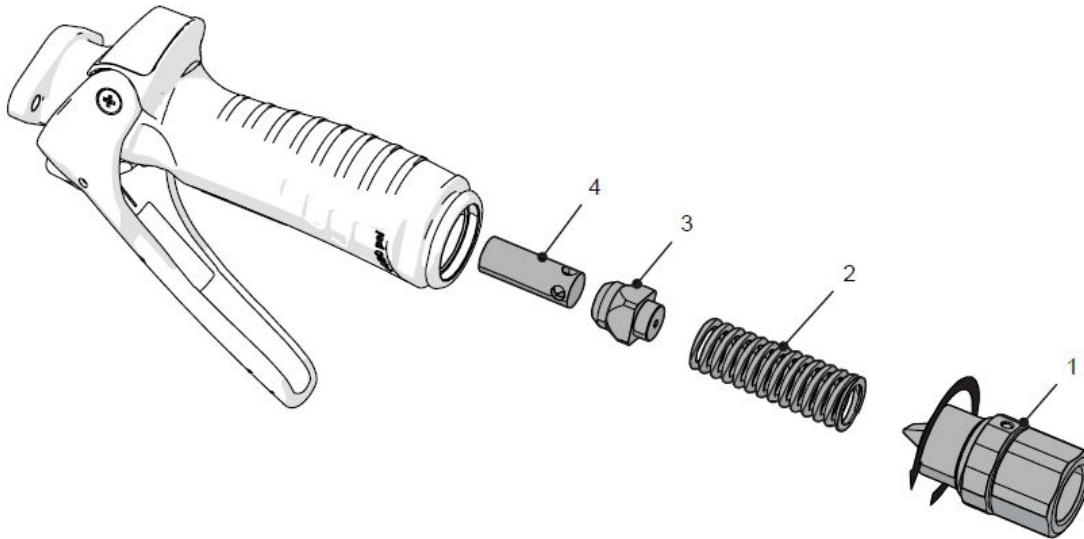
INFORMATION ON WASTE PRODUCTS



The symbol above means that according to local laws and regulations your product and/or its battery must be disposed of separately from household waste. If you dispose of the meter, take it to a collection point designated by local authorities. The separate collection and recycling of your product and/or its battery at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

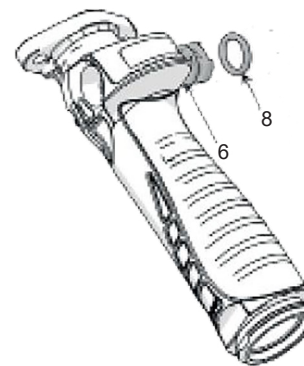
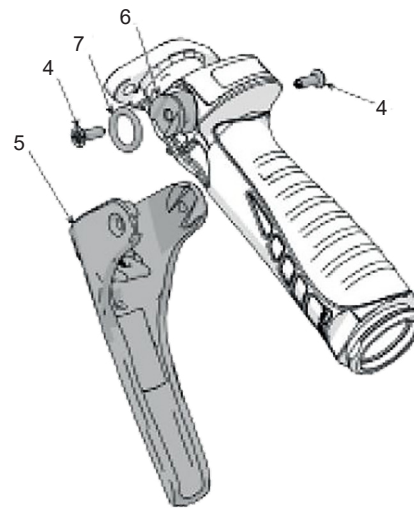
REPLACING THE VALVE ASSEMBLY

1. Loosen and remove the swivel (1), then remove the spring (2), the valve (3) and the rod (4).
2. Reassemble in reverse order.



REPLACING THE CAM O-RINGS

1. Disassemble the valve as described in REPLACING THE VALVE ASSEMBLY on page 6.
2. Remove the #2 phillips screws (4) from the cam (6) and remove the trigger (5).
3. To avoid damaging the o-rings, push the cam (6) out on one side until only the o-ring (7) of that side is exposed.
4. Remove, replace, and lubricate the the o-ring (7). Carefully push the cam (6) through to the other side just until the o-ring (8) is exposed, remove, replace, and lubricate the o-ring (8), then carefully push the cam (6) back into its original position.
5. Re-install the trigger and screws.
6. Re-install the valve assembly.

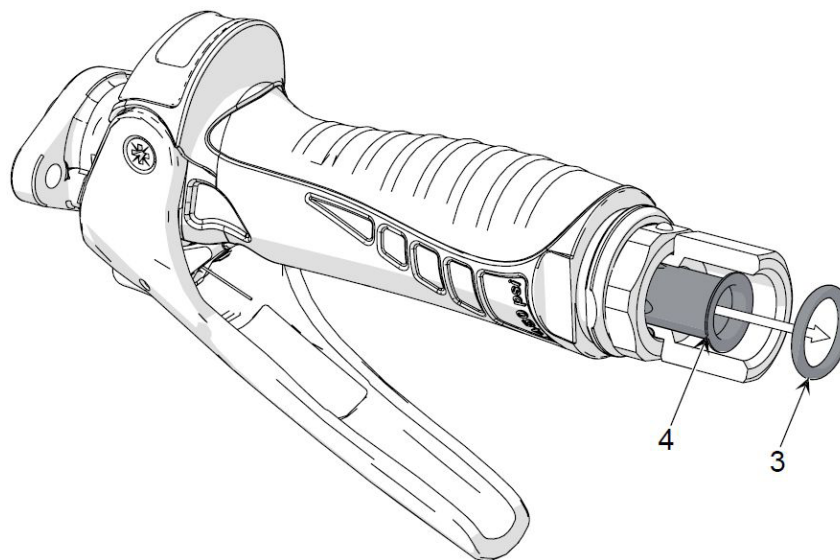


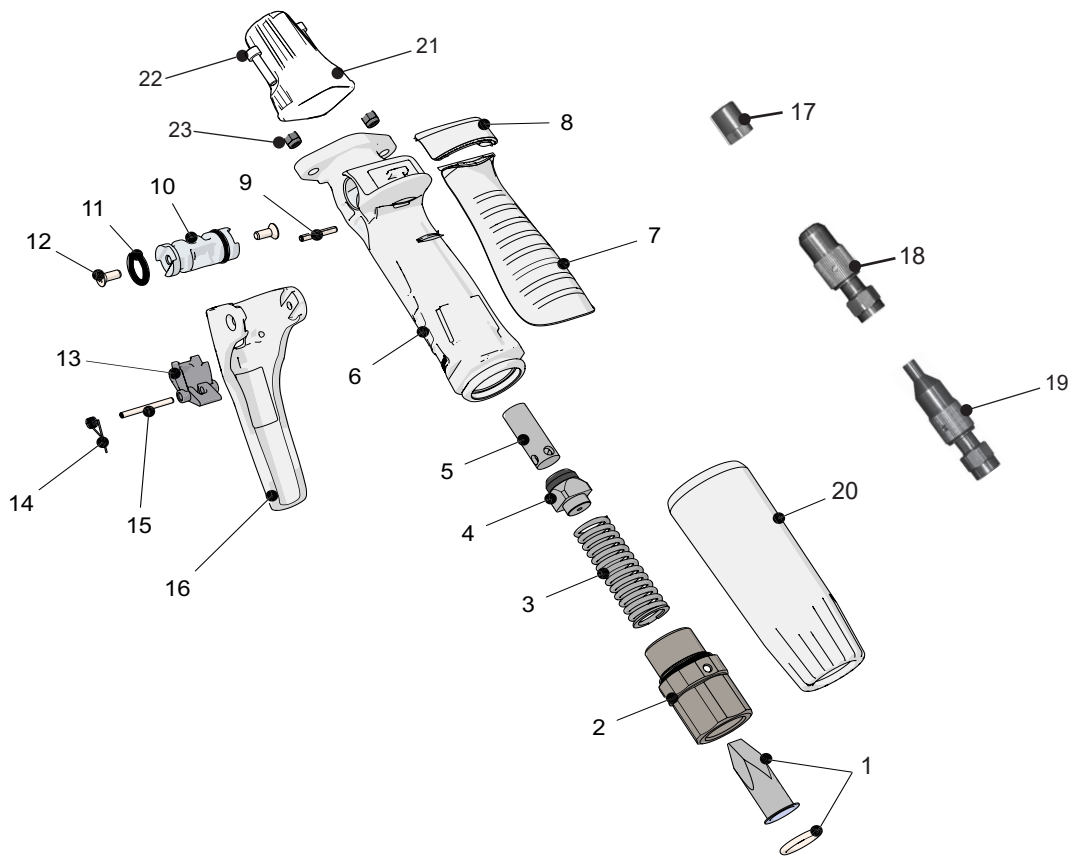
NOTE

Do not remove cam completely. The o-rings must be changed one at a time by pushing the cam to one side, replace and lubricate the o-ring then push through the handle to the other side and repeat the operation. If you remove the cam completely, when reinstalled, the o-ring that was installed first will be cut.

REPLACING THE FILTER SCREEN

1. Remove the o-ring (3) fixing the filter screen (4) and then remove the filter screen.
2. Inspect the filter and clean or replace it as necessary.
3. Replace the filter screen with the o-ring, install the swivel cover (optional), and re-connect the hose.





PARTS LIST (Non-Metered Control Handle)

Item	Description	Qty.
1	O-ring Strainer	1 1
2	Swivel	1
3	Spring	1
4	Valve	1
5	Rod	1
6	Body	1
7	Grip	1
8	Cover	1
9	Pin	1
10	Cam	1
11	O-ring	2

Item	Description	Qty.
12	Self tapping screw	2
13	Lock/unlock button	1
14	Trigger spring	1
15	Pin	1
16	Trigger	1
17	Automatic non-drip tip*	1
18	1/4 Turn Manual non-drip tip*	1
19	1/4 Turn Manual non-drip tip (narrow)*	1
20	Swivel cover	1
21	Shroud	1
22	Screw (M5 x 14)	2
23	Lock nut**	2

*Tip type depends on control handle model number (see Models on page 3)

**Lock nuts only Included on non-metered control handles

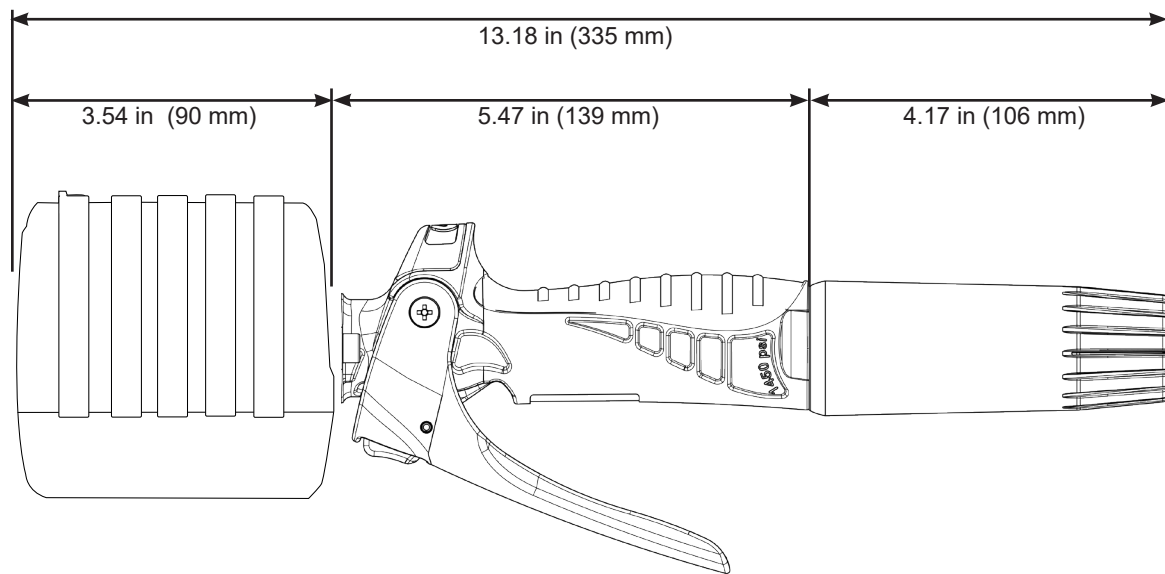
REPAIR KITS / PARTS

Description	Part Number	Included Items
Inlet swivel kit	833306	1 & 2
Trigger kit	833307	9 & 13 - 16
Valve kit	833308	3 - 5
Cam kit	833309	10 - 12
Swivel Cover	833354	20
O-ring	833381	23
Shroud (black)	833398BK	21

OPTIONAL COLORED SHROUDS

Description	Part Number
Multi-color kit (one of each of the above)	833398

CONTROL HANDLE WITH METER DIMENSIONS



CONTROL HANDLE DIMENSIONS



**For Warranty Information Visit
www.balcrank.com**

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