

# Model 22665

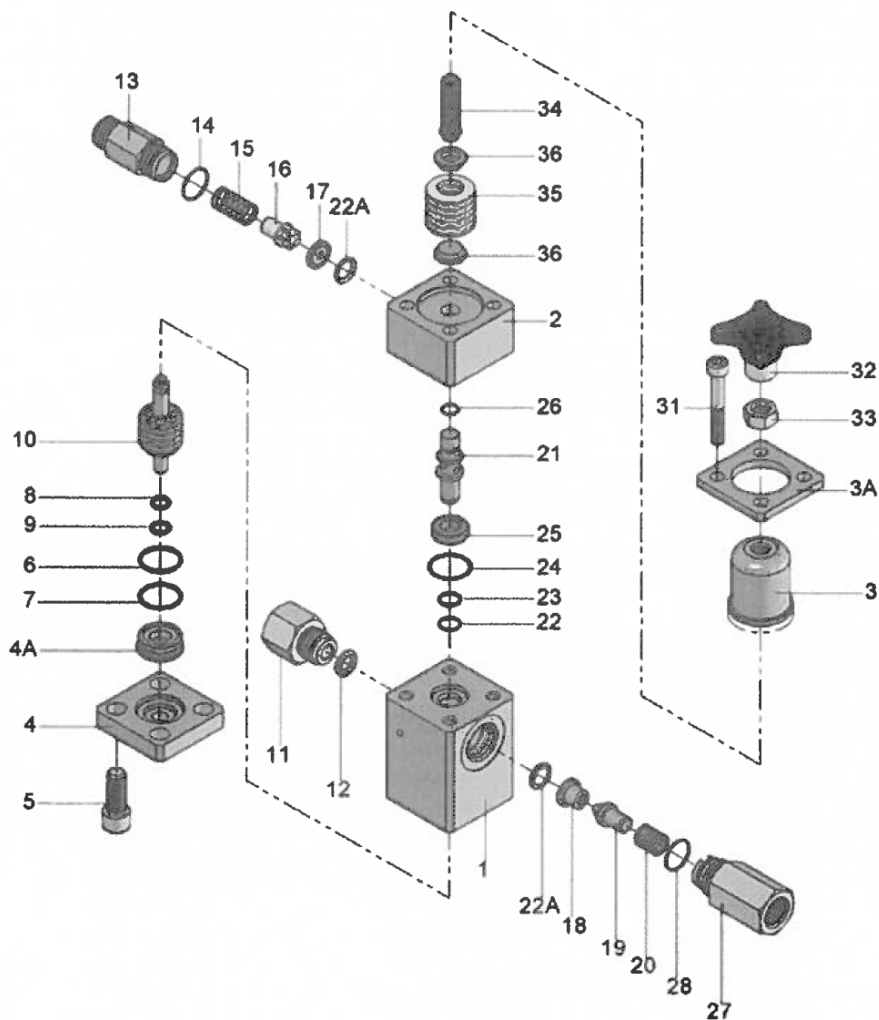
## Industrial Flow Actuated Unloader



### Operating Specifications

	US	Metric
Flow Range: .....	1.3-13.2 GPM	5-50 L/min
Pressure Range:.....	725-7250 PSI	50-500 Bar
Max. Water Temp:.....	140° F	60° C
Inlet Port .....	1/2" FBSP	
Discharge Port.....	1/2" FBSP	
Bypass Port .....	1/2" MBSP	

## 22665 Exploded View, Parts List, and Kits



ITEM	PART	DESCRIPTION	QTY.	ITEM	PART	DESCRIPTION	QTY.
1	04063	Casing	1	22	22727	O-Ring	1
2	06787	Bypass Casing	1	22A	04261	Seal Edge Ring	2
3	22702	Spring Guide	1	23	04077	Support Ring	1
3A	06778	Flange	1	24	07212	O-Ring	1
4	04065	Cover	1	25	06784	Centering Disc	1
4A	04066	Centering Sleeve	1	26	12017	O-Ring	1
5	05642	Inner Hexagon Screw	4	27	04262	Discharge Fitting 1/2" FBSP	1
6	07035	O-Ring	1	28	06487	O-Ring	1
7	04067	Support Ring	1	31	08339	Inner Hexagon Screw	4
8	22704	O-Ring	1	32	22721	Hand Wheel	1
9	04068	Support Ring	1	33	07158	Hexagon Nut	1
10	04069	Piston Rod	1	34	06786	Threaded Stud	1
11	04260	Inlet Fitting	1	35	22719	Plate Spring	12
12	04230	Seal Edge Ring	1	36	22720	Bearing Part	2
13	04072	Bypass Valve Plug	1				
14	07913	O-Ring	1				
15	04073	Bypass Valve Spring	1				
16	22711	Valve Cone	1				
17	22726	Restrictor	1				
18	04074	Restrictor	1				
19	04075	Valve Cone	1				
20	04076	Pressure Spring	1				
21	22716	Bypass Valve Body	1				

### Valve Cone Repair Kit #09757

includes 14, 15, 16, 17, 18, 19, 20, 22, 22A, 28

### Seal Repair Kit #09500A

includes 6, 7, 8, 9, 12, 22, 22A, 23, 24, 26

# 22665 Operation and Repair Instructions

## Operation of 22665 Unloader Valve

- The valve functions both as a relief (unloader) and proportional pressure control valve.
- Variable operating pressure is set via the handwheel (32).
- The valve switches to bypass when the spray gun is closed. At the same time, it holds pressure of approximately 217 PSI (15 Bar) in the discharge line.
- When the gun is opened, the adjusted operating pressure is built up almost instantly; this fraction of a delay increases safety and the comfort for the operator.
- If the adjusted operating pressure is exceeded, the valve works as a proportional pressure relief valve by releasing excess water build-up over the bypass.

## Service and Adjustment

Reservicing and adjusting work is only to be carried out by skilled technician. The valves are detensioned for transport and storage purposes. The operating pressure within the scope of zero to max. pressure is set at our plant via the handwheel and is secured by locking nut (33) against the handwheel (32). Both parts are sealed against readjustment.

### Assembly Into the Unit

The connecting branches (inlet 11, outlet 27) are screwed into the valve casing at 100 ft.lbs. (135 Nm). To avoid these branches being over tensioned, the hexagon nuts be counter held when fitting the respective hose to its connecting branch (11,27). The hexagon nuts must also be counter held when fitting the bypass line to the bypass valve plug (13).

### Repair and Service Instructions

Remove hexagon socket screws (31), pull flange (3A), spring guide (3) together with handwheel (32) and threaded screw (34) along with bearing parts (36) and plate spring pack (35) up and off. Lift bypass casing (2) together with bypass valve body (21) up and off. Take centring disc (25) and seals out of casing (1). Pull bypass valve body (21) out of the bypass casing (2). Check the bore surface in the bypass casing and on the bypass valve body (21) for damage. The sealing edge on the opening of the bypass valve body (towards the piston) must be free of all damage. Replace o-rings (22, 24, 26).

Coat the new ones lightly with grease before fitting.

Remove hexagon socket screws (5), take off cover (4) and pull centring sleeve (4A) out of the casing. Take piston (10) out of the casing. Examine piston surface, particularly the seal contact areas and the top sealing area (towards the bypass valve body). Also examine surfaces in the casing and carefully remove any deposits (old emery cloth grain). Check that bores in the piston and casing are clean and unobstructed. Replace o-rings (6, 8) and support rings (7, 9). Coat new ones lightly with grease before fitting.

**Important!** The restrictors (18, 17) in the connecting branch (27) and bypass valve plug (13) are tensioned by springs (20, 15) and can suddenly jump out. Beware of this danger.

Screw out connecting branch (27). Using a screwdriver, lever out restrictor (18) over the side slits in the connecting branch (27). Examine surfaces of valve cone (19) and restrictor (18) and replace if necessary. Press the parts into the connecting branch. Position the seal edge ring (22A) in groove (18) using silicon grease. Grease the new o-ring (28) lightly. Tighten connecting branch (27) at 100 ft.-lbs. (135 Nm).

Screw out bypass valve plug (13). Using a small bolt max Ø8mm, press restrictor (17) and valve cone (16) out of the bypass valve plug from the outlet side. Examine surfaces. Continue as described for 27.

### To Adjust Pressure

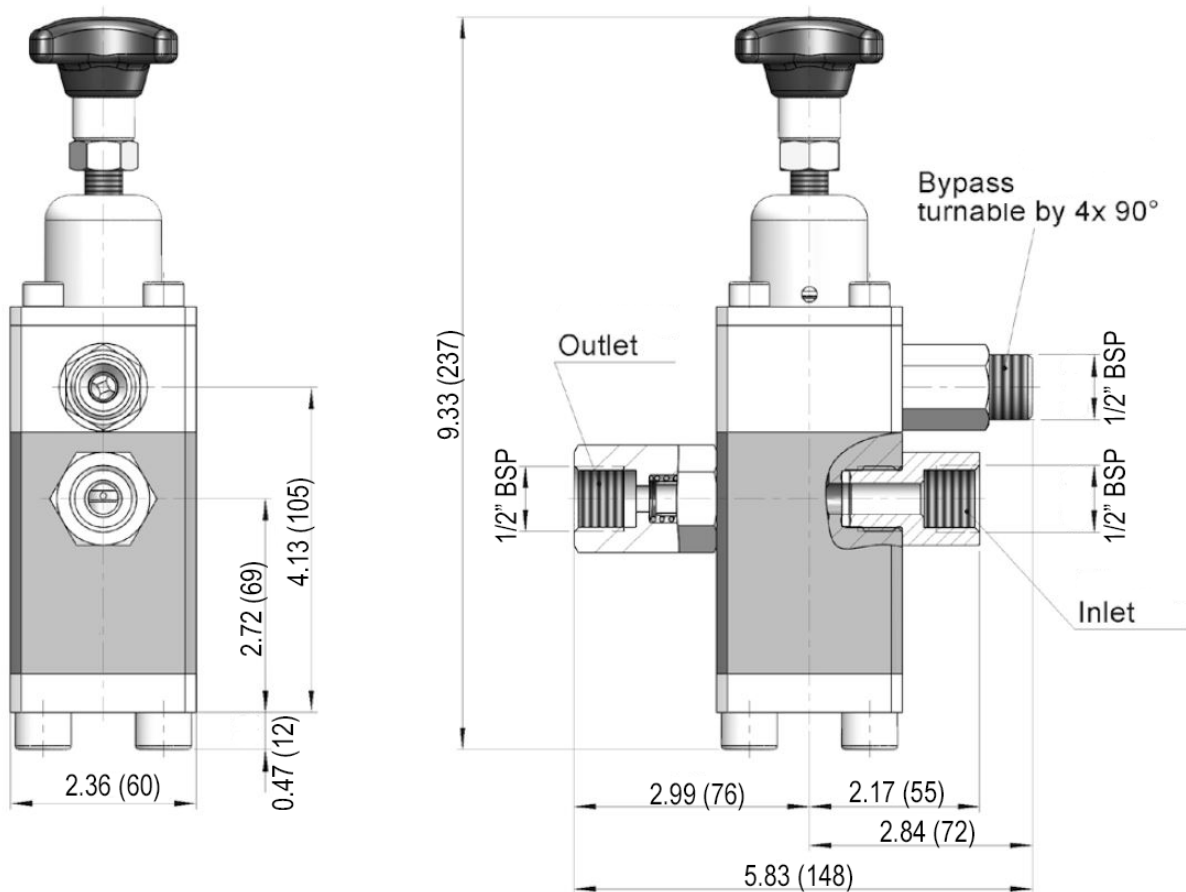
If the UL is to be set at a low operating pressure, proceed as follows:

With the pump running and the spray gun open (if more than one gun is used, all guns must be open), the spring pack is tensioned by turning the handwheel (32) until the required pressure is reached or until no more water flows through the bypass. Screw nut (33) to spring guide (3). Then screw down handwheel and lock in position with hexagon nut (33). If the nozzle hole corresponds exactly to the flow rate and pressure of the pump, no water should run through the bypass after full operating pressure has been reached.

**Important!** If, after reaching max. pump pressure, the complete flow cannot go through the nozzle because the hole is too small, on no account is the unloader valve to be adjusted above the max. pump operating pressure. The bypass must then remain partially open. In such cases, however, it is always best to use correctly sized nozzles.

The additionally required safety valve between the pump and unloader valve must always be set higher than the unloader valve. Pressure peaks from the pump must not activate the safety valve. Safety valve activation will cause the unloader to switch irregularly.

## 22665 Dimensions - in [mm]



**WARNING:** This product might contain a chemical known to the State of California to cause cancer, and birth defects or other reproductive harm.  
For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

# GIANT

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