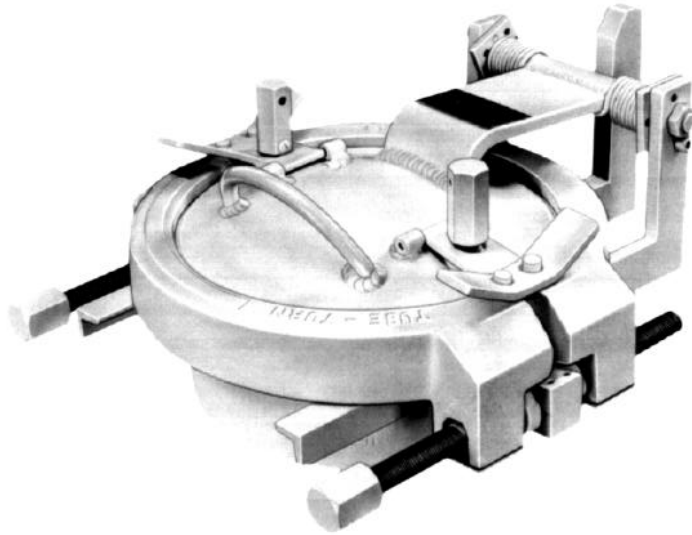


DOUBLE-BOLT VERTICAL



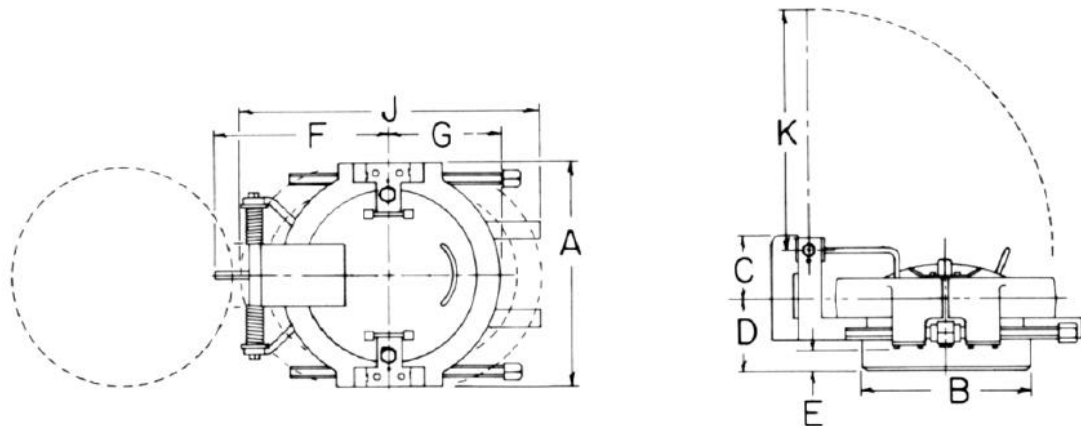
For ASME/ANSI 150-Lb, 300-Lb, 600-Lb and 900-Lb Services
Class 150-V, 300-V, 600-V, 900-V

U.S. Pat. No. 3,077,360

	Nominal Size	Over-all A	O.D. at Welding Bevel B	Back to Face Max. C	Hub Length D	Clear Hub Length E	Center to Head Stop F	Center to Free End G	Yoke Clearance J	Opening Clearance K	Approx. Weight Lbs.
Class 150-V Double-Bolt Vertical	8	12 ¹¹ / ₁₆	8 ⁵ / ₈	4 ³ / ₁₆	4	5 ⁵ / ₈	9 ⁹ / ₁₆	5 ¹ / ₂	15 ¹ / ₈	12 ¹ / ₁₆	60
	10	14 ⁷ / ₈	10 ³ / ₄	4 ⁹ / ₁₆	4 ¹ / ₄	7 ⁷ / ₈	11 ¹ / ₄	6 ³ / ₄	18 ¹ / ₈	14 ¹⁵ / ₁₆	80
	12	16 ⁷ / ₈	12 ³ / ₄	4 ³ / ₈	4 ¹ / ₄	1 ³ / ₁₆	12 ⁹ / ₁₆	7 ³ / ₄	20 ⁷ / ₁₆	17 ¹ / ₄	110
	14	18 ¹ / ₈	14	4 ⁵ / ₁₆	4 ¹ / ₄	3 ¹ / ₄	13 ¹ / ₂	8 ⁷ / ₁₆	22	18 ³ / ₁₆	130
	16	20 ⁷ / ₈	16	4 ¹³ / ₁₆	4 ⁵ / ₈	1 ¹ / ₁₆	14 ¹ / ₄	9 ¹ / ₂	24 ¹⁵ / ₁₆	19 ⁹ / ₈	170
	18	22 ⁷ / ₈	18	5 ¹ / ₁₆	4 ⁵ / ₈	1 ¹ / ₁₆	15 ⁵ / ₈	10 ¹ / ₂	27 ³ / ₁₆	22 ¹ / ₄	200
	20	24 ⁷ / ₈	20	6	4 ⁵ / ₈	5 ⁵ / ₈	16 ³ / ₄	11 ¹ / ₂	29 ⁷ / ₁₆	24 ¹ / ₁₆	230
	22	26 ⁷ / ₈	22	6 ¹ / ₄	4 ⁵ / ₈	5 ⁵ / ₈	18 ⁷ / ₁₆	12 ⁹ / ₁₆	32 ¹ / ₄	26 ⁵ / ₁₆	270
	24	28 ⁷ / ₈	24	6	4 ⁵ / ₈	5 ⁵ / ₈	19 ⁵ / ₈	13 ⁵ / ₈	34 ⁵ / ₈	28 ¹ / ₁₆	320
	26	30 ⁷ / ₈	26	5 ⁹ / ₁₆	5	1 ¹ / ₂	21 ¹ / ₄	14 ¹¹ / ₁₆	37 ¹ / ₂	31	380
	28	32 ⁷ / ₈	28	6 ⁵ / ₈	5	7 ¹ / ₁₆	23 ⁷ / ₁₆	15 ³ / ₄	40	32 ³ / ₄	450
	30	34 ⁷ / ₈	30	7 ¹ / ₂	5 ¹ / ₂	1 ³ / ₁₆	25 ¹ / ₈	16 ¹⁵ / ₁₆	43 ¹ / ₈	35 ³ / ₈	540
32	37 ⁵ / ₈	32	9 ¹ / ₂	5 ¹ / ₂	1 ¹ / ₂	29 ¹ / ₈	18	45 ⁹ / ₁₆	37 ¹ / ₈	620	
34	39 ⁵ / ₈	34	9 ¹ / ₂	5 ¹ / ₂	1 ¹ / ₂	29 ¹³ / ₁₆	19	47 ¹³ / ₁₆	39 ³ / ₈	700	
36	41 ⁵ / ₈	36	9 ³ / ₈	6	1 ³ / ₁₆	28 ¹ / ₂	20 ¹ / ₁₆	50 ¹ / ₄	39 ⁵ / ₈	810	
38	44 ¹ / ₈	38	9 ³ / ₈	6	3 ¹ / ₄	29 ³ / ₄	21 ¹ / ₈	52 ⁹ / ₁₆	42 ¹ / ₈	910	
40	46 ¹ / ₈	40	9 ¹ / ₄	6	5 ⁵ / ₈	31 ¹ / ₄	22 ⁵ / ₁₆	55 ¹³ / ₁₆	44 ⁹ / ₁₆	1030	
42	48 ¹ / ₈	42	9 ⁵ / ₈	6 ¹ / ₈	5 ⁵ / ₈	32 ¹ / ₂	23 ⁵ / ₁₆	58 ³ / ₁₆	46 ³ / ₁₆	1200	
Class 300-V Double-Bolt Vertical	8	12 ¹¹ / ₁₆	8 ⁵ / ₈	4 ³ / ₁₆	4	5 ⁵ / ₈	9 ⁹ / ₁₆	5 ¹ / ₂	15 ¹ / ₈	12 ¹ / ₁₆	60
	10	14 ¹³ / ₁₆	10 ³ / ₄	4 ⁹ / ₁₆	4 ¹ / ₄	7 ⁷ / ₈	11 ¹ / ₄	6 ³ / ₄	18 ¹ / ₈	14 ¹⁵ / ₁₆	80
	12	16 ¹³ / ₁₆	12 ³ / ₄	4 ¹ / ₂	4 ¹ / ₄	1 ⁵ / ₁₆	12 ⁹ / ₁₆	7 ³ / ₄	20 ¹³ / ₁₆	17 ¹ / ₄	120
	14	18 ³ / ₁₆	14	4 ¹ / ₂	4 ¹ / ₄	1 ⁵ / ₁₆	13 ⁹ / ₁₆	8 ⁷ / ₁₆	22 ¹³ / ₁₆	18 ¹⁵ / ₁₆	150
	16	20 ¹⁵ / ₁₆	16	7 ¹³ / ₁₆	5	1	15 ¹ / ₁₆	9 ¹ / ₂	25 ⁷ / ₈	19 ¹³ / ₁₆	180
	18	23 ¹ / ₈	18	8 ¹³ / ₁₆	5 ¹ / ₄	7 ⁷ / ₈	17 ⁷ / ₈	11 ³ / ₁₆	30 ⁷ / ₁₆	23 ¹ / ₂	240

See notes on page 13.

DOUBLE-BOLT VERTICAL



	Nominal Size	Over-all A	O.D. at Welding Bevel B	Back to Face Max. C	Hub Length D	Clear Hub Length E	Center to Head Step F	Center to Free End G	Yoke Clearance J	Opening Clearance K	Approx. Weight Lbs.
Class 300-V Double-Bolt Vertical	20	25 ¹ / ₄	20	8 ¹ / ₄	5 ³ / ₁₆	1 ¹ / ₁₆	18 ¹ / ₁₆	12 ⁵ / ₁₆	33 ¹ / ₁₆	25	320
	22	27 ³ / ₄	22	8 ¹ / ₁₆	6 ¹ / ₄	1 ⁵ / ₁₆	20	13 ¹ / ₁₆	35 ⁷ / ₁₆	27 ³ / ₁₆	390
	24	30 ⁹ / ₁₆	24	8 ¹ / ₂	6 ¹ / ₂	7 ¹ / ₁₆	22 ⁹ / ₁₆	14 ¹ / ₁₆	38 ⁹ / ₁₆	29 ⁷ / ₁₆	490
	26	32 ¹ / ₂	26	9 ³ / ₁₆	6 ³ / ₄	1 ¹ / ₄	24 ³ / ₁₆	15 ⁷ / ₁₆	42 ³ / ₁₆	32 ¹ / ₁₆	610
	28	34 ³ / ₄	28	10 ¹ / ₁₆	7 ¹ / ₂	1 ⁵ / ₁₆	25 ⁹ / ₁₆	16 ¹ / ₂	44 ³ / ₁₆	34 ³ / ₁₆	740
30	36 ⁷ / ₈	30	10 ¹ / ₂	7 ³ / ₄	1 ⁷ / ₁₆	27	17 ¹ / ₁₆	47 ¹ / ₁₆	36 ¹ / ₄	890	
Class 600-V Double-Bolt Vertical	8	12 ³ / ₄	8 ⁵ / ₁₆	4 ¹ / ₂	4 ³ / ₁₆	5 ¹ / ₁₆	10 ³ / ₁₆	5 ¹ / ₁₆	16 ⁷ / ₁₆	12 ¹⁵ / ₁₆	90
	10	14 ⁷ / ₈	10 ³ / ₄	5 ¹ / ₈	4 ⁷ / ₁₆	5 ¹ / ₁₆	12 ¹ / ₄	7 ³ / ₁₆	20 ¹ / ₄	16	160
	12	17 ⁵ / ₈	12 ³ / ₄	5 ¹ / ₂	5 ³ / ₁₆	5 ³ / ₁₆	13 ³ / ₁₆	8 ¹ / ₄	22 ⁵ / ₁₆	16 ¹ / ₁₆	190
	14	19	14	6 ¹ / ₁₆	5 ¹ / ₄	5 ¹ / ₁₆	14 ⁵ / ₁₆	9	25 ¹ / ₁₆	18 ¹ / ₁₆	230
	16	21 ⁷ / ₈	16	7	6 ¹ / ₁₆	9 ¹ / ₁₆	17 ¹ / ₁₆	10 ¹ / ₁₆	29 ³ / ₁₆	21 ³ / ₄	360
	18	24 ⁷ / ₈	18	7 ³ / ₁₆	6 ¹ / ₄	1 ¹ / ₂	19 ⁹ / ₁₆	12 ¹ / ₄	34	24 ¹ / ₁₆	500
	20	27 ¹ / ₈	20	11 ¹ / ₁₆	7	3 ¹ / ₁₆	21 ⁷ / ₈	13 ¹ / ₂	37 ¹ / ₄	28	640
	22	29 ¹ / ₈	22	13 ⁷ / ₈	8	1 ³ / ₁₆	23 ¹ / ₈	14 ¹ / ₂	40	29 ³ / ₁₆	780
	24	32 ¹ / ₈	24	12 ¹ / ₄	8 ³ / ₁₆	1 ³ / ₁₆	23 ³ / ₄	15 ³ / ₈	42 ³ / ₄	31 ¹ / ₄	930
	26	34 ³ / ₈	26	12 ¹ / ₈	8 ⁹ / ₁₆	1 ¹ / ₄	25 ⁷ / ₈	16 ¹ / ₁₆	46 ¹ / ₂	32 ⁵ / ₈	1160
28	36 ¹ / ₁₆	28	12 ³ / ₄	8 ³ / ₄	1 ⁵ / ₁₆	27 ³ / ₄	17 ⁷ / ₈	49 ⁷ / ₈	35 ⁹ / ₁₆	1420	
30	38 ⁹ / ₁₆	30	13 ³ / ₈	9 ¹ / ₂	1 ³ / ₈	29 ³ / ₄	19	52 ³ / ₄	35 ³ / ₄	1750	
Class 900-V Double-Bolt Vertical	8	12 ¹ / ₁₆	8 ⁵ / ₁₆	4 ¹ / ₁₆	4 ⁹ / ₁₆	9 ¹ / ₁₆	11 ¹ / ₈	6 ¹ / ₄	18 ⁷ / ₁₆	14 ¹ / ₁₆	150
	10	15 ¹ / ₁₆	10 ³ / ₄	7 ¹ / ₁₆	5 ³ / ₁₆	3 ¹ / ₄	12 ¹ / ₁₆	7 ³ / ₄	22 ¹ / ₄	16 ⁵ / ₁₆	230
	12	18 ¹ / ₁₆	12 ³ / ₄	7 ⁷ / ₁₆	6 ³ / ₁₆	1 ¹ / ₁₆	15 ³ / ₈	9 ³ / ₁₆	25 ⁷ / ₁₆	19 ¹ / ₂	370
	14	20 ¹ / ₂	14	8 ¹ / ₈	6 ⁵ / ₈	1 ³ / ₁₆	16 ¹ / ₈	9 ¹⁵ / ₁₆	28 ¹ / ₁₆	20 ¹ / ₈	470
	16	23	16	8 ⁵ / ₁₆	7 ¹ / ₂	1 ¹ / ₁₆	17 ⁷ / ₈	11 ¹ / ₄	31 ¹ / ₄	22 ¹ / ₁₆	630
	18	25 ¹ / ₁₆	18	9 ¹ / ₂	7 ¹³ / ₁₆	1	20 ¹ / ₂	12 ¹ / ₄	35	25 ¹ / ₁₆	930
	20	28 ³ / ₈	20	9 ¹ / ₁₆	8 ¹ / ₂	1 ¹ / ₈	22 ⁵ / ₁₆	13 ¹ / ₂	37 ⁵ / ₈	27 ¹ / ₈	1230
	22	30 ¹ / ₂	22	10 ⁷ / ₈	8 ³ / ₄	1 ³ / ₁₆	23 ⁵ / ₈	14 ¹ / ₁₆	40 ⁷ / ₈	29 ¹ / ₂	1620
	24	33 ¹ / ₈	24	13 ¹ / ₂	9 ¹ / ₂	1 ¹ / ₄	25 ¹ / ₄	16 ¹ / ₈	44 ¹ / ₂	32 ³ / ₄	2040

All dimensions are in inches.

When ordering, please specify type, nominal size, bore, material and service conditions.

Tube Turns Hinged Closures are regularly furnished in carbon steel; however, closures are also available in other metals and alloys and in other sizes and pressure classes on special order.

Lifting Eyes are provided on Vertical types when specified.

Vertical Hinged Closures (except Type 1500-V) are furnished with spring-loaded heads. The use of counter-balance weights is recommended for large-size or heavy-series Closures. They can be provided by Tube Turns on special orders.

Chain-and-Sprocket Drives are available at extra cost (see page 8 & 9).

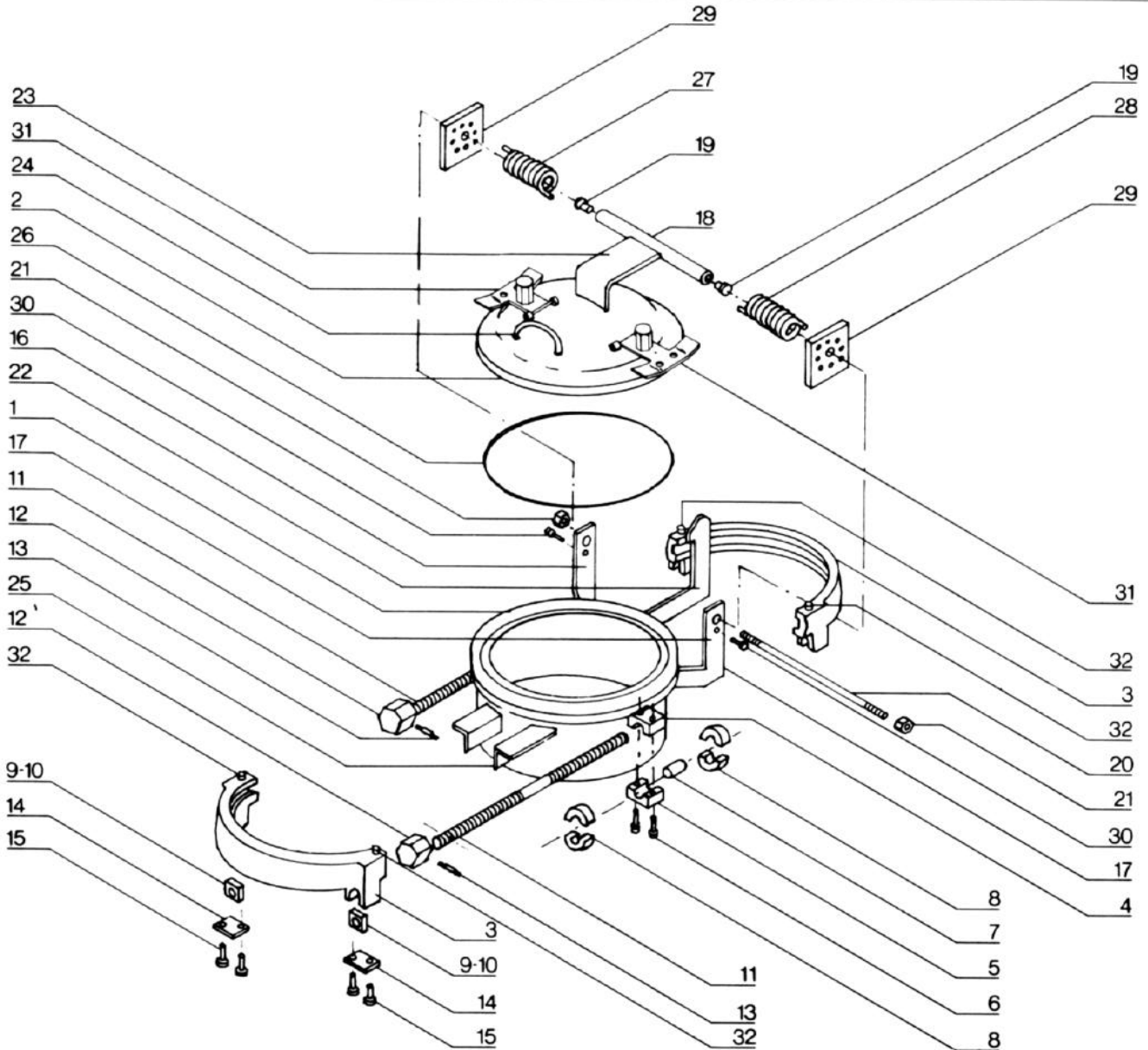
Attached Break-Over Wrenches are available at extra cost (see page 25).

For Pressure-Temperature Ratings, see page 8.

DOUBLE-BOLT VERTICAL

Class V Double-Bolt Vertical Parts List

- | | | | |
|----------------------|------------------------|--------------------|--|
| 1. Hub | 10. Nut (LH) | 19. Hinge Bearing | 28. Spring (LH) |
| 2. Head | 11. Yoke Bolt | 20. Hinge Rod | 29. Adjusting Plate |
| 3. Yoke | 12. Wrench Lug | 21. Hinge Bolt Nut | 30. Lock Screw |
| 4. Bolt Holder (W) | 13. Wrench Lug Pin | 22. Stop Arm | 31. Pressure Warning Device
and Positioning Plate |
| 5. Bolt Holder (L) | 14. Cover Plate | 23. Head Hinge Arm | 32. Positioning Lugs |
| 6. Cap Screws | 15. Cap Screws | 24. Head Handle | |
| 7. Yoke Bolt Bushing | 16. Hub Hinge Arm (RH) | 25. Support Arm | |
| 8. Collar | 17. Hub Hinge Arm (LH) | 26. O-Ring | |
| 9. Nut (RH) | 18. Hinge Tube | 27. Spring (RH) | |



Spare Parts—It is suggested that the following spare parts be stocked for each closure:

Four O-Rings Part No. 26
 Two Yoke Bolt Units consisting of:
 Parts No's. 7, 8, 9, 10, 11, 12 & 13

When ordering spare parts, give amount, description, part number and size, pressure class and serial number of closure (located on front of yoke or ASME nameplate).

Example: (1) O-ring - Part Number 26 - 8" CL 600 - S/N 13845

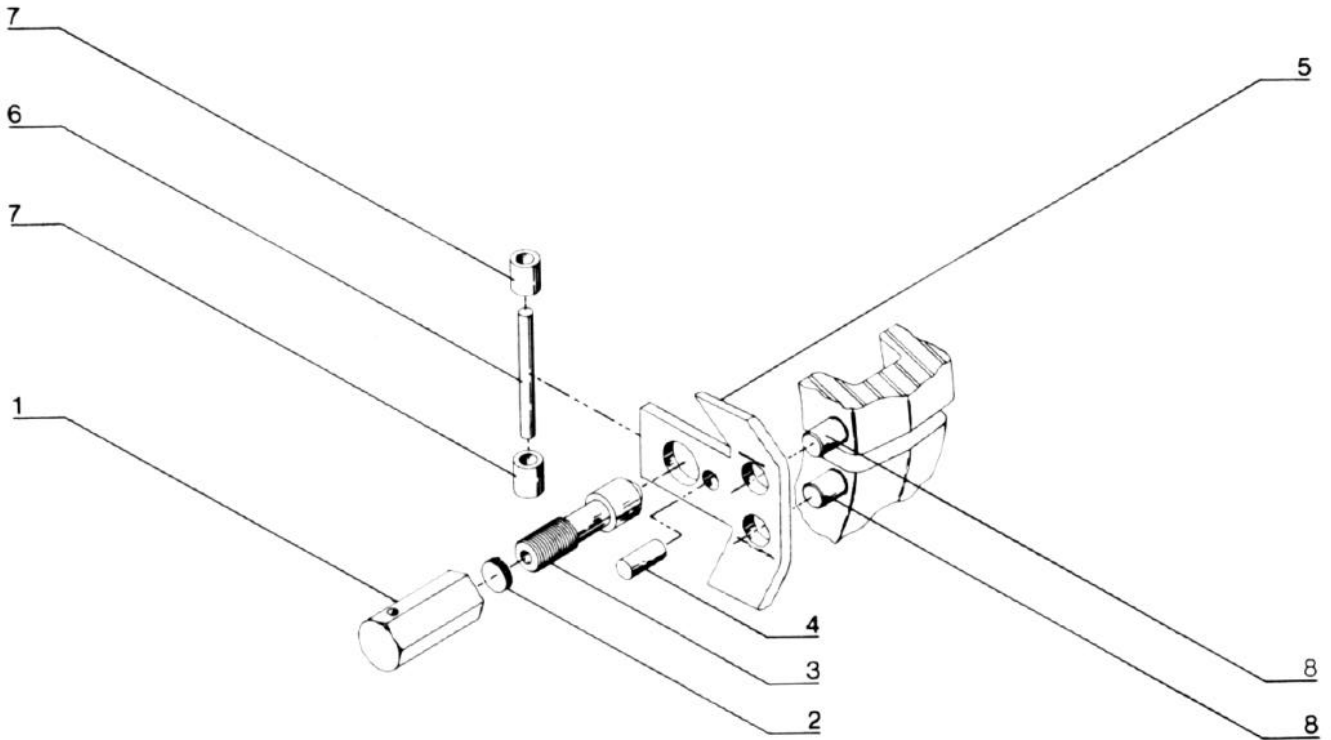
PRESSURE WARNING

Pressure Warning Device Parts List

1. Holding Nut
2. Gasket
3. Nipple

4. Plate Stop
5. Positioning Plate
6. Hinge Pin

7. Hinge
8. Positioning Lugs



See page 8 for further details.