



STOPPLE[®] Plugging Machine

Sizes: 4-inch and Larger



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Bulletin No: 1030.001.05

Version: 11.2023

Supersedes: 1030.001.04 (05.2023)



■ STOPPLE[®] Plugging Machine

Description

TDW STOPPLE[®] Plugging Machines serve as temporary block valves installed anywhere in a piping system. They are used to isolate a section of line for repairs or additions without interruption of service.

The STOPPLE Plugging Machine consists of three major sections: a hydraulic cylinder or jackscrew, a plugging head housing, and a plugging head.

Features

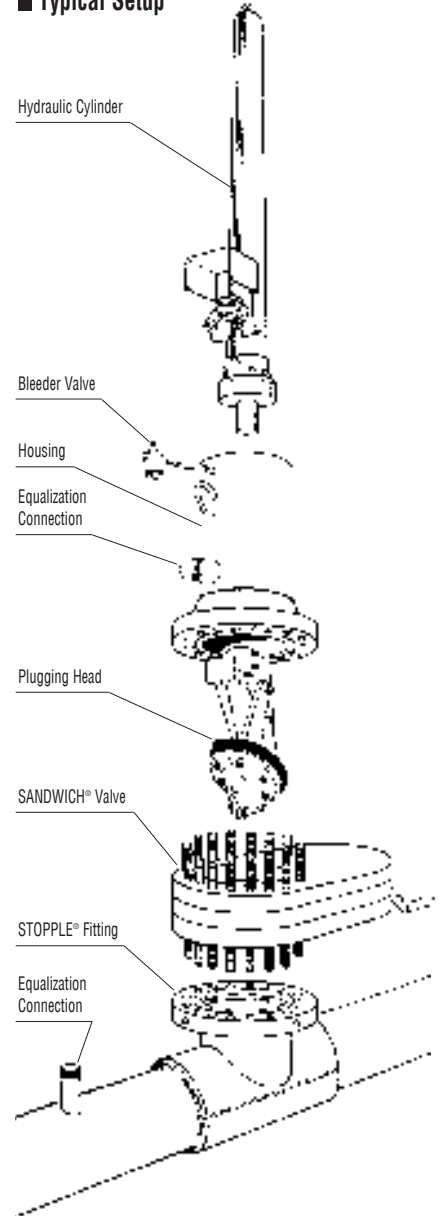
Operation of the hydraulic STOPPLE Plugging Machine is easy due to the location of the control valve, which is positioned at the lower end of the hydraulic cylinder. The hydraulically operated control bar has a direct reading scale visible to the operator, enabling him to know the plugging head position at all times.

- The TDW STOPPLE Plugging Machine is available for pipe sizes 4-inch (DN 100) and larger.

Its maximum operating temperature is 180°F (82°C).

* For design code options not listed and additional sizes, consult your sales representative.

Typical Setup





STOPPLE® Plugging Machine

Cylinder Operation

| Hydraulic Operated Cylinders | Lbs. | Kg. | Part Number |
|--|------|-----|--------------|
| 4" (DN100), 6" (DN 150), 8" (DN 200), 10" (DN 250), 12" (DN 300) | 235 | 107 | 08-2116-0000 |
| 14" (DN 350), 16" (DN 400), 18" (DN 450), 20" (DN 500) | 862 | 391 | 08-2117-0000 |
| 22" (DN 550), 24" (DN 600), 26" (DN 650), 30" (DN 750), 36" (DN 900) | 1800 | 816 | 08-2118-0000 |

STOPPLE® Housings, Plugging Heads & Sealing Elements (For use with hydraulic cylinders)

Class 150

Size

| Inches | DN | Housings | Plugging Heads | Sealing Elements |
|--------|-----|--------------|----------------|------------------|
| 4 | 100 | | 08-2578-0000* | 08-0036-0005 |
| 6 | 150 | 08-0270-0000 | 08-2579-0000* | 08-0040-0005 |
| 8 | 200 | 08-0202-0000 | 08-2580-0000* | 08-0246-0005 |
| 10 | 250 | 08-0203-0000 | 08-2581-0000* | 08-0247-0005 |
| 12 | 300 | 08-0204-0000 | 08-2582-0000* | 08-0248-0005 |
| 14 | 350 | | 08-1892-0000 | 08-0249-0005 |
| 16 | 400 | 08-0206-0000 | 08-1893-0000 | 08-0250-0005 |
| 18 | 450 | 08-0207-0000 | 08-1894-0000 | 08-0251-0005 |
| 20 | 500 | 08-0208-0000 | 08-1895-0000 | 08-0252-0005 |
| 24 | 600 | 08-0210-0000 | 08-1897-0000 | 08-0254-0005 |
| 26 | 650 | 08-0211-0000 | 08-1898-0000 | 08-1863-0005 |
| 30 | 750 | 08-0212-0000 | 08-1900-0000 | 08-1623-0005 |
| 36 | 900 | 08-0423-0000 | 08-2048-0000 | 08-2046-0005 |

*This plugging head is furnished with 2 nose pieces.

Note: Housings are equipped with flanges which are drilled, faced and pressure-rated to match ANSI Class 150, 300 or 600 flanges.

When ordering sealing elements specify pipe ID, pressure, and material of sealing element desired. Factory recommends two elements be purchased with each plugging head, one to be used as a spare. STD Machines are designed for STD weight pipe. If used in heavy or thin wall pipe, special components may be required.



STOPPLE® Plugging Machine

STOPPLE® Housings, Plugging Heads & Sealing Elements (For use with hydraulic cylinders)

Class 300

Size

| Inches | DN | Housings | Plugging Heads | Sealing Elements |
|--------|-----|--------------|----------------|------------------|
| 4 | 100 | | 08-2578-0000* | 08-0036-0005 |
| 6 | 150 | 08-0276-0000 | 08-2579-0000* | 08-0040-0005 |
| 8 | 200 | 08-0213-0000 | 08-2580-0000* | 08-0246-0005 |
| 10 | 250 | 08-0214-0000 | 08-2581-0000* | 08-0247-0005 |
| 12 | 300 | 08-0215-0000 | 08-2582-0000* | 08-0248-0005 |
| 14 | 350 | 08-0216-0000 | 08-1892-0000 | 08-0249-0005 |
| 16 | 400 | 08-0217-0000 | 08-1893-0000 | 08-0250-0005 |
| 18 | 450 | 08-0218-0000 | 08-1894-0000 | 08-0251-0005 |
| 20 | 500 | 08-0219-0000 | 08-1895-0000 | 08-0252-0005 |
| 24 | 600 | 08-0221-0000 | 08-1897-0000 | 08-0254-0005 |
| 26 | 650 | 08-0222-0000 | 08-1898-0000 | 08-1863-0005 |
| 30 | 750 | 08-0223-0000 | 08-1900-0000 | 08-1623-0005 |
| 36 | 900 | 08-0360-0000 | 08-2048-0000 | 08-2046-0005 |

*This plugging head is furnished with 2 nose pieces.

Note: Housings are equipped with flanges which are drilled, faced and pressure-rated to match ANSI Class 150, 300 or 600 flanges.

When ordering sealing elements specify pipe ID, pressure, and material of sealing element desired. Factory recommends two elements be purchased with each plugging head, one to be used as a spare. STD Machines are designed for STD weight pipe. If used in heavy or thin wall pipe, special components may be required.



STOPPLE® Plugging Machine

STOPPLE® Housings, Plugging Heads & Sealing Elements (For use with hydraulic cylinders)

Class 600

Size

| Inches | DN | Housings | Plugging Heads | Sealing Elements |
|--------|-------|--------------|----------------|--------------------|
| 4 | 100 | 08-2412-0000 | 08-2692-0000 | 08-2692-CHART-SUFF |
| 6 | 150 | 08-1715-0000 | 08-2690-0000 | 08-2690-CHART-SUFF |
| 8 | 200 | 08-2414-0000 | 08-2684-0000 | 08-2684-CHART-SUFF |
| 10 | 250 | 08-2415-0000 | 08-2703-0000 | 08-2703-CHART-SUFF |
| 12 | 300 | 08-2902-0000 | 08-2839-0000 | 08-2839-CHART-SUFF |
| 14 | 350 | 12335406 | 08-2840-0000 | 08-2840-CHART-SUFF |
| 16 | 400 | 08-2762-0000 | 08-2761-0000 | 08-2701-CHART-SUFF |
| 18 | 450 | 08-2759-0000 | 08-2841-0000 | 08-2841-CHART-SUFF |
| 20 | 500 | 08-2760-0000 | 08-2670-0000 | 08-2670-CHART-SUFF |
| 24 | 600 | 08-2849-0000 | 08-2671-0000 | 08-2377-CHART-SUFF |
| 26 | 650 | 08-2699-0000 | 08-2698-0000 | 08-2698-CHART-SUFF |
| 28 | 700 | 08-2724-0000 | 08-2723-0000 | 08-2723-CHART-SUFF |
| 30 | 750 | 12337355 | 08-2697-0000 | 08-2468-CHART-SUFF |
| 32 | 800 | 12316520 | 08-2777-0000 | 08-2777-CHART-SUFF |
| 34 | 850 | 12305074 | 08-2745-0000 | 08-2745-CHART-SUFF |
| 36 | 900 | 08-2816-0000 | 08-2815-0000 | 08-2815-CHART-SUFF |
| 40 | 1,000 | 08-2908-0000 | 08-2907-0000 | 08-2907-CHART-SUFF |
| 42 | 1,050 | 08-2917-0000 | 08-2915-0000 | 08-2694-CHART-SUFF |
| 48 | 1,200 | 08-2742-0000 | 08-2741-0000 | 08-2741-CHART-SUFF |

Note: Housings are equipped with flanges which are drilled, faced and pressure-rated to match ANSI Class 150, 300 or 600 flanges.

When ordering sealing elements specify pipe ID, pressure, and material of sealing element desired. Factory recommends two elements be purchased with each plugging head, one to be used as a spare. STD Machines are designed for STD weight pipe. If used in heavy or thin wall pipe, special components may be required.

Jackscrew Configuration (900 PSI MAOP)

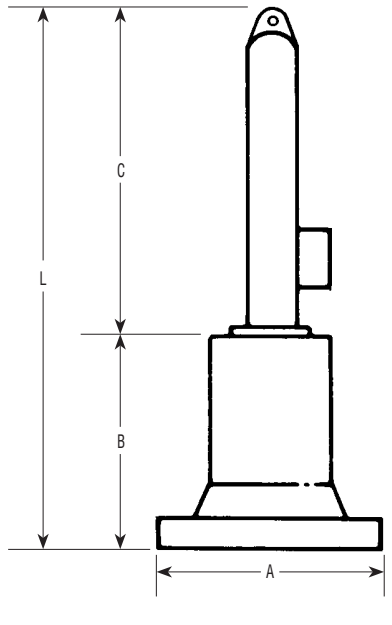
| Inches | DN | Class | Housing | Actuator | Plugging Head | Sealing Element |
|--------|-----|-------|--------------|--------------|---------------|--------------------|
| 4 | 100 | 150# | 08-0319-0000 | 08-0299-0000 | 08-2578-0000 | 08-0036-CHART-SUFF |
| 6 | 150 | 150# | 08-0322-0000 | 08-0299-0000 | 08-2579-0000 | 08-0040-CHART-SUFF |
| 4 | 100 | 300# | 08-0320-0000 | 08-0299-0000 | 08-2578-0000 | 08-0036-CHART-SUFF |
| 6 | 150 | 300# | 08-0323-0000 | 08-0299-0000 | 08-2579-0000 | 08-0040-CHART-SUFF |
| 4 | 100 | 600# | 08-0300-0000 | 08-0299-0000 | 08-2578-0000 | 08-0036-CHART-SUFF |
| 6 | 150 | 600# | 08-0302-0000 | 08-0299-0000 | 08-2579-0000 | 08-0040-CHART-SUFF |

Note: Control Bar Travel is 48 inches (1219 mm).



STOPPLE® Plugging Machine

Approximate Dimensions for Determining Machine Clearances



| Size | | A* | | B* | | C | | L | |
|--------|-----|--------|------|--------|------|--------|------|--------|------|
| Inches | DN | Inches | mm | Inches | mm | Inches | mm | Inches | mm |
| 4 | 100 | 11 | 280 | 14 | 356 | 58 | 1473 | 72 | 1829 |
| 6 | 150 | 14 | 356 | 17 | 432 | 58 | 1473 | 75 | 1905 |
| 8 | 200 | 17 | 432 | 19 | 483 | 85 | 2159 | 104 | 2642 |
| 10 | 250 | 20 | 508 | 23 | 533 | 85 | 2159 | 108 | 2743 |
| 12 | 300 | 22 | 559 | 25 | 610 | 85 | 2159 | 110 | 2794 |
| 14 | 350 | 24 | 610 | 32 | 787 | 124 | 3150 | 156 | 3962 |
| 16 | 400 | 27 | 686 | 35 | 889 | 124 | 3150 | 159 | 4039 |
| 18 | 450 | 30 | 762 | 39 | 991 | 124 | 3150 | 163 | 4140 |
| 20 | 500 | 32 | 813 | 42 | 1041 | 124 | 3150 | 166 | 4216 |
| 22 | 550 | 35 | 889 | 46 | 1168 | 166 | 4216 | 212 | 5385 |
| 24 | 600 | 37 | 940 | 52 | 1321 | 166 | 4216 | 218 | 5537 |
| 26 | 650 | 40 | 1015 | 52 | 1321 | 166 | 4216 | 218 | 5537 |
| 30 | 750 | 45 | 1143 | 60 | 1524 | 166 | 4216 | 226 | 5740 |
| 36 | 900 | 52 | 1321 | 67 | 1803 | 166 | 4216 | 233 | 5918 |

*Maximum with 600 Class Flange.

*The TDW 660/760 Tapping Machine power unit normally operates 4" (DN 100) through 12" (DN 300) plugging machines. The power unit for the 1200 Tapping Machines operates 14" (DN 350) and larger.

Hydraulic cylinder (08-2116-0000) is furnished with hydraulic couplings for 660/760 Tapping Machine power unit.

Hydraulic cylinders (08-2117-0000, 08-2118-0000, and 08-2119-0000) are furnished with hydraulic couplings for 1200 Tapping Machine power units.

Hydraulic cylinder (08-2117-0000) can be used with the 660/760 power unit with the purchase of a conversion kit (08-0384-0000).

If other power unit to hydraulic cylinder combinations are to be used, be sure to specify so that proper couplings can be furnished.

Plugging Head Specifications

| Control Bar Travel | Max. Operating Pressure | | |
|---|-------------------------|-------------|-----------|
| | | inches / mm | PSI / Bar |
| with Hydraulic Cylinders | | | |
| *4" (DN100), 6" (DN 150), 8" (DN 200), 10" (DN 250), 12" (DN 300) | | 72 1829 | 1480 102 |
| 14" (DN 350), 16" (DN 400), 18" (DN 450), 20" (DN 500) | | 102 2604 | 1480 102 |
| 22" (DN 550), 24" (DN 600), 26" (DN 650), 30" (DN 750) | | 140 3556 | 1480 102 |
| 36" (DN 900) | | 140 3556 | 1480 102 |

Safety Harness Assembly

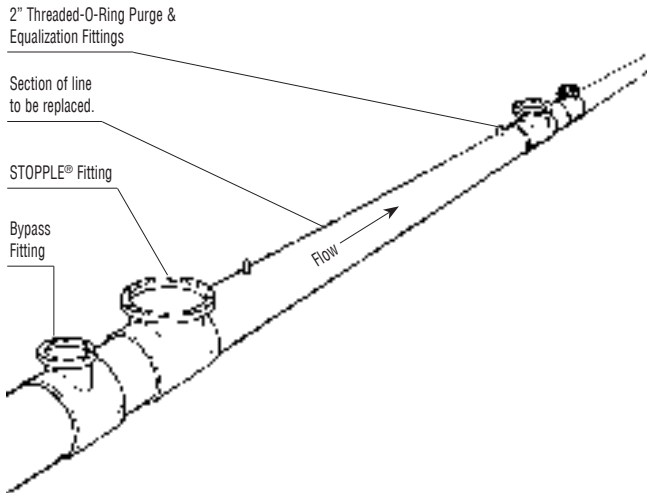
| Cylinder | Fall Protection Assembly |
|--------------|--------------------------|
| 08-2116-0000 | 08-2546-0000 |
| 08-2117-0000 | 08-2547-0000 |
| 08-2118-0000 | 08-2548-0000 |
| 08-2119-0000 | 08-2549-0000 |

Fall Protection Assembly



Plugging Without Shutdown - Typical Procedure

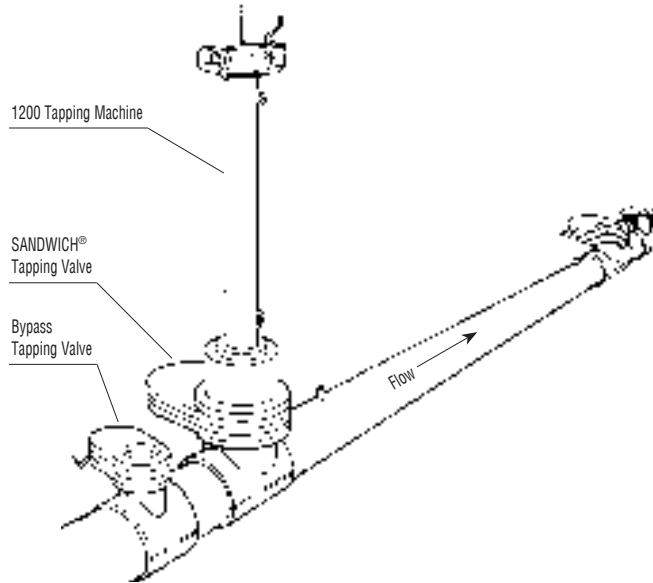
1. Weld Fittings



STOPPLE® Fittings with LOCK-O-RING® Flanges* are welded on each end of the section to be isolated. Bypass fittings with LOCK-O-RING Flanges and equalization fittings are welded to the line.

*See LOCK-O-RING Flanges, Bulletin 1120.001.

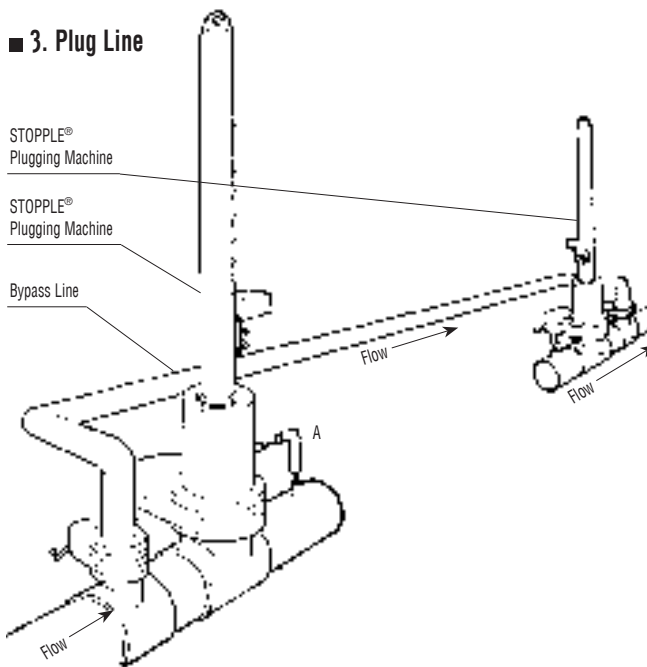
2. Make Taps



A Tapping Valve* is mounted on each fitting and taps are made through the valves into the pipeline. The cutter is withdrawn after each tap, the valve closed, and tapping machine removed.

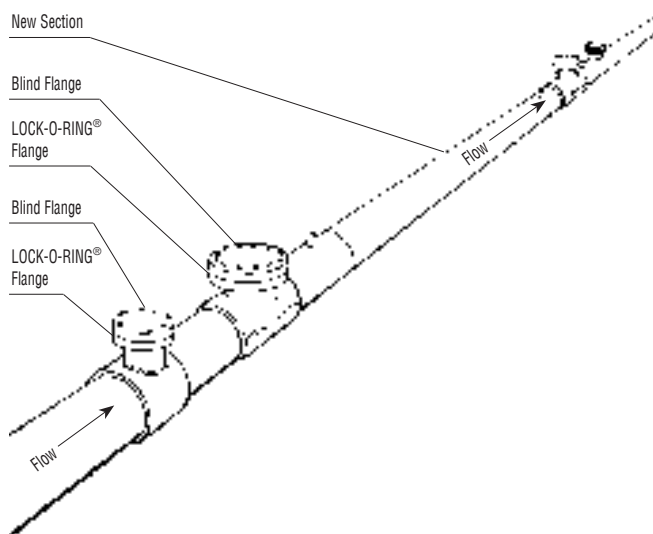
*See SANDWICH® Valve, Bulletin 1020.001.

3. Plug Line



Bypass connections are made and the bypass valves are opened. STOPPLE Plugging Machines are mounted and the plugging heads are lowered through valves into sealing position. After the new section is tied in, pressure is equalized by connection from the STOPPLE Housing to the pipeline (See A).

4. Recover Valves



Tapping machine cutters are replaced with LOCK-O-RING Plugs, and tapping machines (or machine) are mounted on valves. The LOCK-O-RING Plugs are lowered into position inside LOCK-O-RING Flanges. Tapping machines are removed, valves recovered, and blind flanges installed.