

Series 1000 Divider Valve Manifold

Progressive Systems



General

The Series 1000 progressive divider valve manifold distributes and proportions incoming oil or grease to bearing points. A typical divider valve manifold consists of an inlet section, three to nine valves and an end section. One assembly can serve up to a maximum of 18 lubrication points. Location of valve blocks within the manifold is not critical – however, it is recommended that the largest block be located next to the inlet block.

Individual divider valve blocks have a sliding discharge piston and built-in outlet check valves. Blocks are offered in three output sizes. The discharge capacity of a block is determined by varying the piston diameter in the valve block. Valve blocks have two outlets located at each end of the assembly (double outlet blocks) and supply rated discharge outputs from each of the two outlets during one complete valve cycle.

Single outlet blocks have one end outlet plugged (right side, inlet at top) and supply twice the rated output to the open outlet (left side, inlet at top). For a right sided open outlet, simply remove plug and insert in the left outlet. External crossporting of adjacent valves can be achieved with a special tubing kit to combine outputs.

Operation

Individual valve blocks operate in a pre-arranged “progressive” sequence. During operation, the piston within the block must complete a full discharge cycle before another piston begins operation. As long as lubricant is supplied under pressure to the inlet section of the divider, manifold valve blocks will continue to operate in a progressive manner.

When lubricant flow is interrupted to the inlet block, piston movement stops. When flow resumes, piston movement commences at the same point in the discharge cycle. Feed lines deliver lubricant from the valve block to individual lube points. Should a discharge line become blocked, it will stop all the valves operating. Indicators are available to alert a blockage.

Technical Data

| | |
|----------------------------|-----------------------|
| Material | Steel (zinc plated) |
| Maximum Operating Pressure | 138 bar (2,000 psi) |
| Lubricant | Oil, up to NLGI No. 2 |

Approximate Weight of Complete Divider Valve Grease Assembly

| | |
|-------------------|-----------------------|
| 3 Section Divider | 0.88 kg (1 lb, 15 oz) |
| 4 Section Divider | 1.04 kg (2 lb, 5 oz) |
| 5 Section Divider | 1.21 kg (2 lb, 11 oz) |
| 6 Section Divider | 1.38 kg (3 lb, 1 oz) |
| 7 Section Divider | 1.55 kg (3 lb, 7 oz) |
| 8 Section Divider | 1.72 kg (3 lb, 13 oz) |
| 9 Section Divider | 1.90 kg (4 lb, 3 oz) |



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Output Displacement

| Valve Sizes | Cu. in. (cc) per Outlet |
|---------------------|-------------------------|
| 05T (Twin Outlets) | 0.005 (0.082) |
| 10T (Twin Outlets) | 0.010 (0.164) |
| 15T (Twin Outlets) | 0.015 (0.246) |
| 05S (Single Outlet) | 0.010 (0.164) |
| 10S (Single Outlet) | 0.020 (0.328) |
| 15S (Single Outlet) | 0.030 (0.492) |

Note: Single outlet blocks discharge double their rated capacity during one complete valve cycle.

Accessories

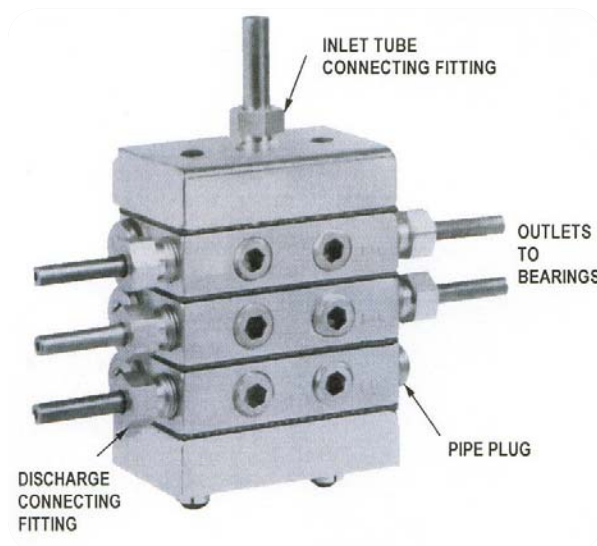
Cycle Indicators

An optional cycle indicator in the valve block assembly monitors lubricant flows through the assembly. Pin cycles in and out with piston movement. An electrical mechanical device can be mounted on valve block to monitor normal operation of the divider. Cycle indicators not available in .005 and .010 cu. in. capacities. Refer to assembly ordering codes on page 4.

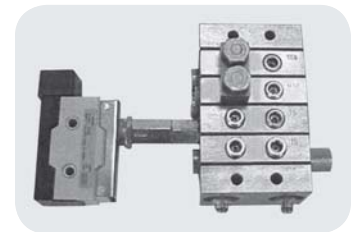
"C" Porting Kit

For front mounted crossporting, remove plugs from face of adjacent valves and install "C" port assembly (see picture at right). **Note:** One of the removed plugs must be used to close upper side outlet of crossported valves. An optional arrangement to front face mounting is to interconnect discharge ports of two valves.

Tube Connection Fittings



Cycle Indicator



"C" Porting on face of valve section

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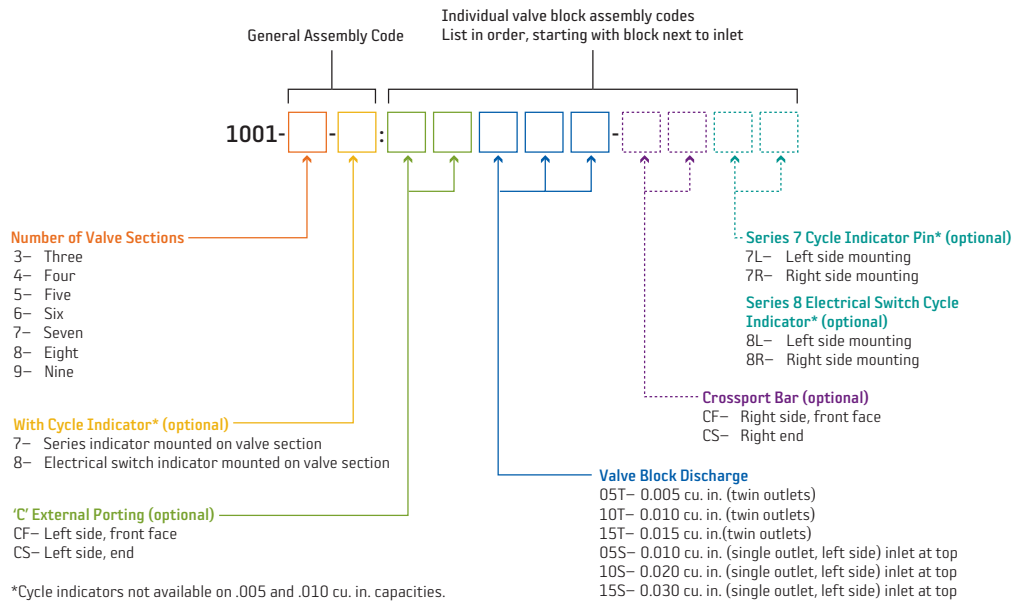
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How to Order

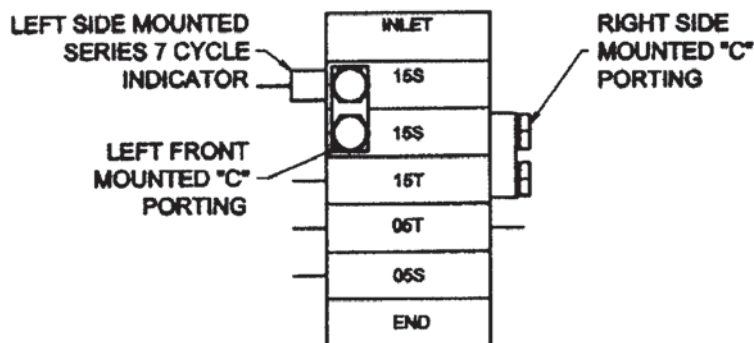
Assembly Ordering Codes



Example: Ordering Code for 1/8" NPT Assembly 1001-5-7: CF15S-7L, 15SCS, 15T, 05T, 05S.

Sketch

When ordering, a sketched example is also recommended. See example below:



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How to Order

Individual Valve Block Sections

| Options | Discharge Port Thread | Part # | |
|----------------------------|-----------------------|-------------------------|---------------|
| | | Single Outlet* | Twin Outlet |
| | 1/8" NPT | 1000-05AS | 1000-05AT |
| | 1/8" BSP | 1000-05ASBSP | 1000-05ATBSP |
| | 1/8" NPT | 1000-10AS | 1000-10AT |
| | 1/8" BSP | 1000-10ASBSP | 1000-10ATBSP |
| | 1/8" NPT | 1000-15AS | 1000-15AT |
| | 1/8" BSP | 1000-15ASBSP | 1000-15ATBSP |
| Cycle Indicator | 1/8" NPT | 1000-157LS (left side) | 1000-157LT |
| | 1/8" BSP | 1000-157LSBSP | 1000-157LTBSP |
| | 1/8" NPT | 1000-157RS (right side) | 1000-157RT |
| | 1/8" BSP | 1000-157RSBSP | 1000-157RTBSP |
| Cycle Indicator and Switch | 1/8" NPT | 1000-158LS (left side) | 1000-158LT |
| | 1/8" BSP | 1000-158LSBSP | 1000-158LTBSP |
| | 1/8" NPT | 1000-158RS (right side) | 1000-158RT |
| | 1/8" BSP | 1000-158RSBSP | 1000-158RTBSP |

*Open outlet on left side.

Divider Block Components

| Description | Part # |
|------------------------|-----------|
| Inlet Section 1/8" NPT | 1006-1 |
| Inlet Section 1/8" BSP | 1006-1BSP |
| End Block | 1007-1 |
| Gaskets | 1009 |
| Tie Rod Kit, 3 Valves | 1017-3K |
| Tie Rod Kit, 4 Valves | 1017-4K |
| Tie Rod Kit, 5 Valves | 1017-5K |
| Tie Rod Kit, 6 Valves | 1017-6K |
| Tie Rod Kit, 7 Valves | 1017-7K |
| Tie Rod Kit, 8 Valves | 1017-8K |
| Tie Rod Kit, 9 Valves | 1017-9K |

Note: Kit includes 2 tie rods and 2 nuts.

Accessories

| Name | Description | Pipe Thread | Tube Diameter | Part # |
|-------------------------|--------------------|-------------|---------------|---------|
| Tube Connection Fitting | For Inlet Port | 1/8" NPT | 1/4" | U-81B1 |
| | | 1/8" BSP | 6mm | AR 154 |
| | For Discharge Port | 1/8" NPT | 3/16" | U-81AA1 |
| | | 1/8" BSP | 4mm | AR 974 |
| Crossport Bar | Tube Jumper Kit | 1/8" NPSF | 3/16" | 32265-2 |
| | | 1/8" BSPP | 4mm | 32265-1 |
| Closure Plugs | | 1/8" NPT | --- | 28528-2 |
| | | 1/8" BSP | --- | 28516-2 |

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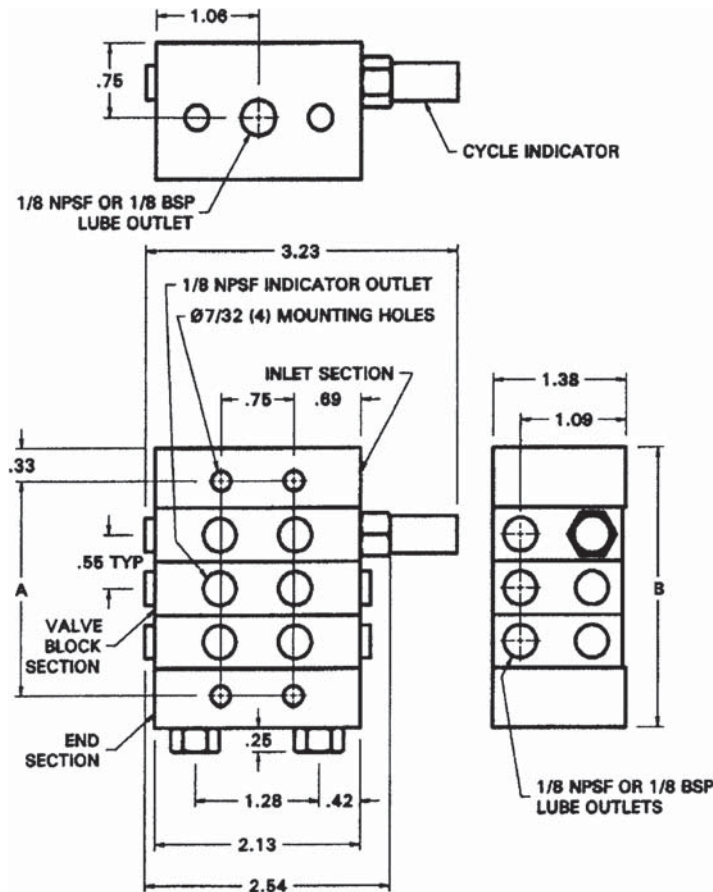
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Dimensional Schematic

Valve Manifolds Assemblies

Measurements shown in inches.



| Valve Blocks (#) | A (approximate) | B (approximate) |
|------------------|-----------------|-----------------|
| 3 | 59.4mm (2.34") | 73.1mm (2.87") |
| 4 | 74.2mm (2.92") | 87.9mm (3.46") |
| 5 | 89.0mm (3.50") | 102.6mm (4.04") |
| 6 | 103.7mm (4.08") | 117.4mm (4.62") |
| 7 | 118.5mm (4.66") | 132.2mm (5.20") |
| 8 | 133.3mm (5.25") | 147.0mm (5.78") |
| 9 | 148.1mm (5.83") | 161.8mm (6.37") |

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