



MiniMax

Adjustable Disc Throttling Valve



MINIMUM FOOTPRINT! MAXIMUM PERFORMANCE!

*****Patent Pending***

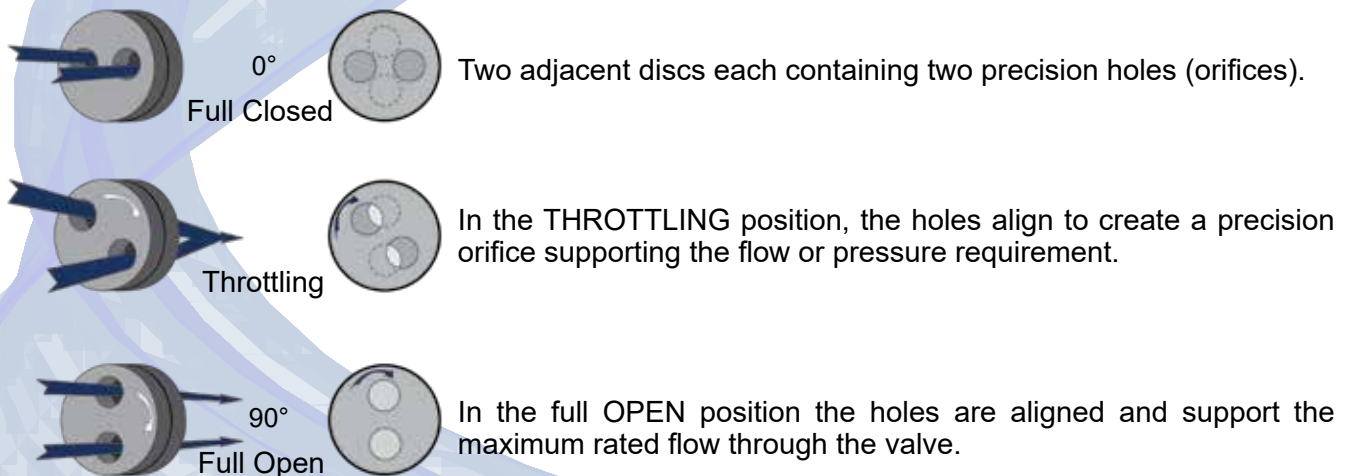
HydraMini

Adjustable Disc Throttling Valve

Hydroplex valves are quarter-turn twin disc throttling valves consisting of two diamond-polished concentric discs, each with two matching orifices. One disc is stationary in the valve and the other rotates to adjust the flow path. This unique trim is specifically designed for precision control of liquids and gases in severe service applications. The valve consists of minimal wear components and meets ANSI class IV shut off. These features result in an extremely durable design with easy field maintenance, increased service life, and reduced operational costs. The design flexibility allows field conversions from manual to automated under pressurized conditions. The patented multistage option allows this valve to handle extreme pressure drops and minimize freezing and/or cavitation. The twin discs and optional wear sleeve are abrasion resistant and direct the flow to the centerline of the piping which greatly extends the service life of the throttling valve.

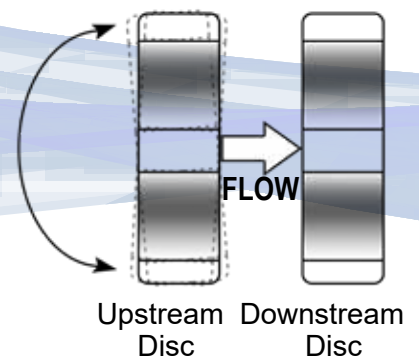
PRINCIPLE OF OPERATION

Seal leakage classification for this product is an ANSI FCI 70-2 (ANSI B16.104) Class IV shutoff seal. The unique property of the twin disc format separates sealing surface from control surface and maintains a more reliable longer lasting seal.



- The front disc floats against the back disc creating a mated interface and assures a positive seal.
- Differential pressure across the upstream disc promotes sealing, and stabilizes control surfaces.
- Discs are lapped to within two light-bands of flatness (.00002) to achieve a positive shut-off and maintain precise control.

Upstream disc floats allowing face to face alignment.



APPLICATIONS

- Liquid & Gas Pressure or Flow Control
- Water & Gas Injection
- Gas Lift/Plunger Lift
- Manifold Pressure Control
- Gas & Condensate Production
- Separator Letdown / Dump
- Pump Start-up Bypass
- ESP / H-Pump Back-pressure Control
- Disposal Wells
- Reverse Osmosis

STANDARD MATERIALS OF CONSTRUCTION

- Body & Hubs - WCB Carbon Steel
- Seals - Peroxide Cured Buna N 90D
- Disc - Tungsten Carbide with Nickel Binder
- Internals or Rotators - ANSI Type S17400 PH

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TUNGSTEN CARBIDE TRIM OPTIONS

Orifices	Cv	64th inch Equiv. Dia.	Hole Geometry
2 ea. - 1/8"	0.74	11.3	Round
2 ea. - 3/16"	1.66	16.97	Round
2 ea. - 1/4"	2.95	22.6	Round
2 ea. - 3/8"	6.63	33.9	Round
2 ea. - 1/2"	11.78	45.3	Round
2 ea. - 3/4"	22.31	62.3	Pie

*See HydraMax on pg.5

Note: Generally, under high pressure drops, the valves would be set at:

Not less than 40% open for liquids.

Not less than 30% open for gas.

TORQUE RATINGS

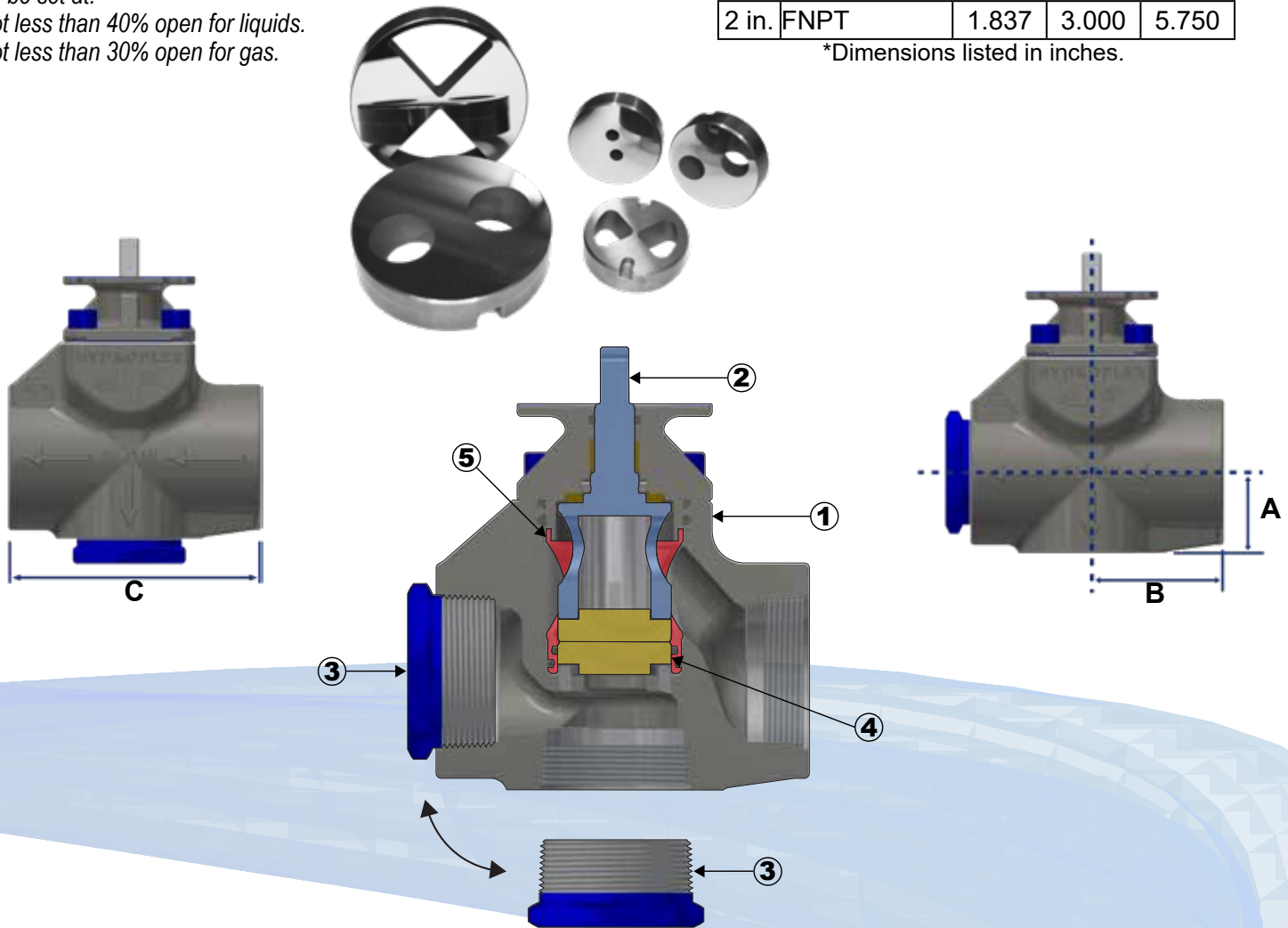
Differential Pressure	Operating Torque
1,000 lbs.	160 in.-lb
2,000 lbs.	210 in.-lb
3,000 lbs.	270 in.-lb

END TO END DIMENSIONS

Consult factory for further information.

Size	Connection	A	B	C
1 in.	FNPT	2.657	3.820	7.450
2 in.	FNPT	1.837	3.000	5.750

*Dimensions listed in inches.



1. VALVE BODY: Durable carbon steel body.

2. STEM ASSEMBLY: The smaller shaft diameter reduces operating torque, requiring smaller and less expensive actuators.

3. CONVERTIBLE CONFIGURATION: With Hex Plug placement, choose to plumb in-line or 90° right angle to fit your configuration.

4. TUNGSTEN CONTROL DISCS: All valves come standard with Tungsten carbide Trim available in sizes up to 3/4".

5. ASSEMBLY CAGE: Allows for easy assembly and disassembly of all internal valve components.

6. DIRECT ACTUATOR MOUNTING (NOT SHOWN): Design allows for direct mounting of several common valve actuators without the need for couplings or brackets.

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MINIMAX CONVERTIBLE DUMP VALVE

Minimum footprint. Maximum performance.

The Hydroplex MiniMax Convertible Dump Valve is an excellent valve for use on all discharge ports of 2 and 3 phase separators as a quick dump or throttling valve for oil, gas, or water. The recommended maximum pressure drop (or differential pressure) in liquid service is 1500 psi for 90° angle configurations and 500 psi for in-line.



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