

PDI - Utility Valves

Product Overview

PneuDrualics, Inc. (PDI) provides a comprehensive suite of **aerospace hydraulic utility valves** engineered to elevate system safety, reliability, and performance. From protective hydraulic fuses to redundant shuttle valves and critical-flow priority valves, PDI solutions safeguard **essential aircraft functions** and maintain consistent **hydraulic availability** under demanding operating conditions. Designed for **seamless compatibility** with PDI manifolds, reservoirs, and other hydraulic assemblies, our customizable valves deliver the **versatility** and **precision** required for virtually any **aerospace hydraulic system**.

- **Priority Valves:** High-pressure flow-regulating valves that ensure critical subsystems receive priority flow regardless of downstream conditions.
- **Shuttle Valves:** Hydromechanical valves enabling two independent pressure sources to supply a shared circuit while maintaining source separation and redundancy.
- **Relief Valves:** Pressure-limiting valves that protect systems from over-pressure by diverting flow when operating limits are exceeded.
- **Fuses:** Automatic shutoff devices that isolate failed hydraulic lines to protect essential functions and reduce pressure-loss and fire-risk hazards.
- **Additional Valves:** PDI also offers aerospace hand pump valves, check valves, pressure reducing valves, balanced relief valves, heat-exchange valves, and other custom solutions.

Product Examples



Priority Valve



Shuttle Valve



Relief Valve



Hydraulic Fuse



Thermal Relief Valve



Balanced Relief Valve



Pressure Maintaining Valve



Cartridge Relief Valve

Features

✓ Aerospace-Grade

Built for demanding environments

✓ Versatile Catalog

Wide range of available products

✓ Customizable Designs

Tailored to specific platform requirements

✓ Custom Flow Rates

Ranges between 1 and 40+ GPM

✓ Lasting Durability

Designed for platform lifespans

✓ Modular

Compatible with other PDI product lines

Contact Us

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PDI - Utility Valve Configurations

Priority Valve Examples

Flow	Fluid	Mount	System Pressure	Reseat Pressure	Reverse
37 GPM	Phosphate Ester	In-Line	5076 PSIG	3481 PSIG	Yes
31 GPM	Phosphate Ester	In-Line	5000 PSIG	4000 PSIG	No
28 GPM	MIL-PRF-83282	In-Line	3000 PSIG	1400 PSIG	Yes
16 GPM	Phosphate Ester	In-Line	3000 PSIG	2000 PSIG	Yes
10 GPM	MIL-PRF-5606	In-Line	3000 PSIG	1500 PSIG	No
8.4 GPM	MIL-PRF-87257	In-Line	3000 PSIG	2000 PSIG	Yes
7 GPM	Phosphate Ester	In-Line	1500 PSIG	1250 PSIG	No
6 GPM	MIL-PRF-83282	In-Line	3000 PSIG	2050 PSIG	Yes
4 GPM	MIL-H-5606	In-Line	3000 PSIG	1900 PSIG	No
3.7 GPM	Phosphate Ester	In-Line	3000 PSIG	1400-1600 PSIG	No
2.5 GPM	MIL-H-5606	In-Line	3000 PSIG	900-1530 PSIG	Yes
1.7 GPM	MIL-PRF-83282	In-Line	3000 PSIG	1500 PSIG	No
1 GPM	Phosphate Ester	In-Line	1250 PSIG	105 PSIG	Yes
0.5 GPM	Phosphate Ester	In-Line	3000 PSIG	1980 PSIG	Yes

Shuttle Valves Examples

Flow	Fluid	Mount	System Pressure	Pressure Drop	Shuttle Pressure
6 GPM	MIL-H-5606	In-Line	3000 PSIG	25 PSID	80-130 PSIG
6 GPM	MIL-PRF-87257	In-Line	3000 PSIG	100 PSID	300-500 PSIG
3.5 GPM	Phosphate Ester	Manifold	3030 PSIG	100 PSID	35-85 PSIG
2 GPM	MIL-H-5606	In-Line	3000 PSIG	75 PSID	85 PSIG (MAX)
2 GPM	Phosphate Ester	Manifold	3000 PSIG	75 PSID	85 PSIG (MAX)
1.2 GPM	MIL-H-83282	In-Line	3000 PSIG	10 PSID	1300 PSIG
1.2 GPM	Phosphate Ester	Surface	3000 PSIG	35 PSID	90-200 PSIG
1.2 GPM	Phosphate Ester	In-Line	3000 PSIG	35 PSID	40-150 PSIG
1.0 GPM	Phosphate Ester	In-Line	3000 PSIG	25 PSID	135-300 PSIG

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PDI - Utility Valve Configurations

Relief Valve Examples

Flow	Fluid	Mount	Pressure	Reseat Pressure	Crack Pressure	Pressure Drop
45 GPM	MIL-PRF-5606	Cartridge	3000 PSIG	3200 PSIG	N/A	3000 PSID
40 GPM	MIL-PRF-5606	Cartridge	3850 PSIG	3400 PSIG	3600 PSIG	N/A
32 GPM	Phosphate Ester	In-Line	3000 PSIG	3600 PSIG	3800 PSIG	N/A
7 GPM	Phosphate Ester	Cartridge	3000 PSIG	3500 PSIG	3750 PSIG	3850 PSID
6 GPM	MIL-PRF-5606	Cartridge	1300 PSIG	1080 PSIG	1140 PSIG	1300 PSID
3.5 GPM	MIL-PRF-87257	Cartridge	1800 PSIG	1500 PSIG	1700 PSIG	N/A
1.5 GPM	Phosphate Ester	In-Line	3000 PSIG	3400 PSIG	N/A	3850 PSID
1 GPM	MIL-PRF-83282	Cartridge	1500 PSIG	1300 PSIG	1500 PSIG	1600 PSID
0.5 GPM	MIL-PRF-5606	In-Line	3000 PSIG	3150 PSIG	3300 PSIG	N/A

Hydraulic Fuse Examples

Flow	Fluid	Manual Bypass	Mount	Pressure Drop (High)	Pressure Drop (Low)	Volume
60 GPM	Phosphate Ester	Yes	In-Line	3000 PSID	200 PSID	200 in ³
24 GPM	MIL-H-5606	No	In-Line	3000 PSID	25 PSID	10 in ³
15 GPM	Phosphate Ester	No	Cartridge	3000 PSID	75 PSID	300 in ³
10 GPM	MIL-H-5606	No	Surface	4000 PSID	50 PSID	60 in ³
8.5 GPM	MIL-H-5606	No	In-Line	3000 PSID	25 PSID	40 in ³
6 GPM	MIL-H-83282	Yes	Flange	3000 PSID	45 PSID	95 in ³
5 GPM	MIL-H-5606	Yes	In-Line	3000 PSID	25 PSID	12 in ³
4 GPM	Phosphate Ester	No	Flange	3000 PSID	25 PSID	5 in ³
3 GPM	MIL-H-5606	Yes	Flange	3000 PSID	25 PSID	8 in ³
2.5 GPM	Phosphate Ester	No	Surface	3000 PSID	25 PSID	200 in ³
1.6 GPM	MIL-PRF-87257	No	In-Line	3000 PSID	72.5 PSID	8 in ³
1.3 GPM	MIL-H-5606	Yes	In-Line	3000 PSID	25 PSID	8 in ³
1.2 GPM	MIL-H-83282	No	Cartridge	3000 PSID	25 PSID	100 in ³
1 GPM	Phosphate Ester	No	Flange	3000 PSID	250 PSID	50 in ³

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