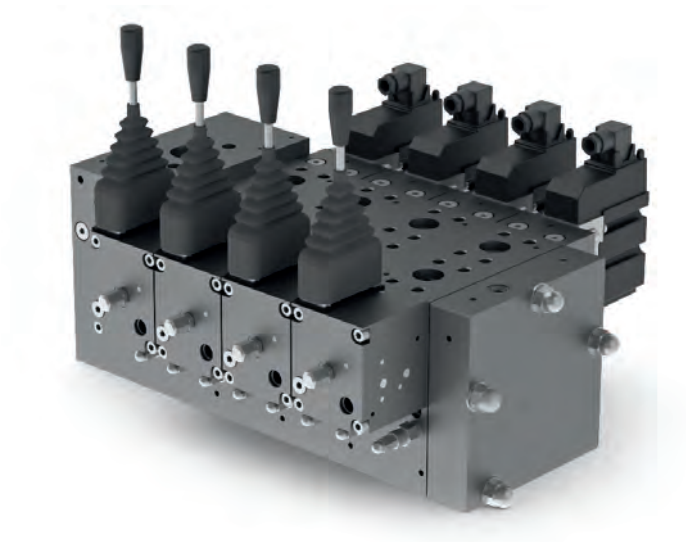
# Technical data



**General features**

- Pressure compensated flow control;
- Excellent flow control;
- High repeatibility accuracy;
- Low hysteresis:
- Built in general pilot oil supply;
- Energy saving
- Built in pump overflow system (working in progress, not available yet);
- Different spool interchangeable variants;
- Open loop PWM electrical activation;
- Closed loop electrical actuation (0÷10 V - 0÷20 mA - 0.5 Udc signal , working in progress, not available yet);
- Manual / hydraulic spool control;
- Flow control spool;
- Motion control spool (working in progress, not available yet);
- Up to 5 working sections;
- Hybrid composition with HPV group valves.

**Hydraulic features**

The hydraulic features reported below were measured using a mineral based hydraulic oil according to DIN 51524 or ISO 6743/4 with a viscosity of 25 mm²/s [130 SUS] at a temperature of 50 °C [122 °F].

| | | | | |
|---|---|---|---|---|
| Rated flow | HSE inlet section, P port | | 600 l/min | 159 US gpm |
| | Mid inlet section, HFLS | | | |
| | A, B ports | | 550 l/min | 145 US gpm |
| Max. working pressure | Connection P / P port | Pressure relief valve setting | 400 bar | 5800 psi |
| | | Working pressure | 370 bar | 5370 psi |
| | Ports A, B | | 370 bar | 5370 psi |
| | Connection Y | | to tank | |
| | Connection T | Static | 25 bar | 363 psi |
| | | Dynamic | 35 bar | 508 psi |
| Max. pilot pressure oil supply | | | up to 30 bar | up to 428 psi |
| Oil temperature | Recommended | | -30 ÷ 60 °C | -22 ÷ +140 °F |
| | Min. | | -25 °C | -13 °F |
| | Max. | | +80 °C | +176 °F |
| Ambient temperature | | | -30 ÷ 60 °C | -22 ÷ +140 °F |
| Viscosiy | Recommended | | 12 ÷ 80 mm²/s (cSt) | |
| | Min. | | 4 mm²/s (cSt) | |
| | Max. | | 460 mm²/s (cSt) | |
| Filtering | Max. contamination: class 9 according to NAS 1638 (20/18/15 according to ISO 4406) | | | |
| Stroke | Spool stroke | | ± 9 mm | ± 0.354 in |
| | Proportional | | ± 7.5 mm | ± 0.295 in |
| Dead band | | | ± 1.5 mm | ± 0.059 in |
| Nominal internal leakage | A, B → T | Without anti-shock valves | 98 cm³/min | 5.98 in³/min |
| | | With anti-shock valves | 115 cm³/min | 7.02 in³/min |

HPV 310 internal (easy replacement) filters, mesh 100 µm.
Mineral oil hydraulic fluid: according to DIN 51524 and 51525 or ISO 6743/4. HPV 310 can also be used with phosphorous esters (HFDR), water-glycol /HFC) or water-oil (HFB) mixes, subject to our Technical Dept. approval.

| Hydraulic control - MHPH module | | | |
|---|---|---|---|
| Pilot pressure | Start | 5 bar | 72 psi |
| | End stroke | 19 bar | 275 psi |
| Max. pilot pressure | | 30 bar | 436 psi |