

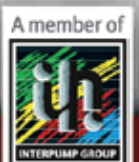
NEW

DPM050

Directional Monoblock Valves
for Forklift applications

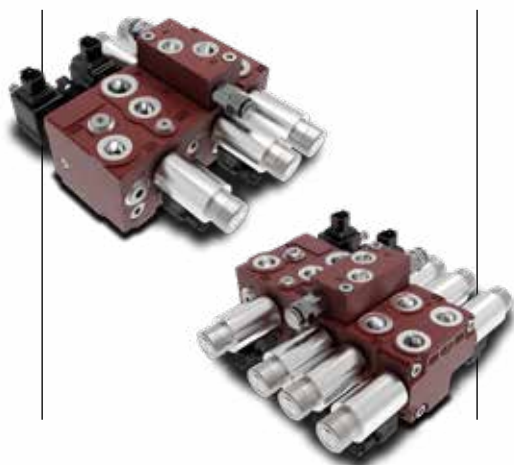


**Higher controllability for
Forklifts through
Walvoil technologies**



DPM050

Directional Monoblock Valves
for Forklift applications



In recent years the forklift market has quickly evolved towards more and more sophisticated technological solutions, driven by specific needs such as compliance with international safety regulations, energy optimization to maximize operations and the need for high performance and functionality.

Wahlvoil's new DPM050 has been specially designed to meet all these requirements.

It is a Load Sensing Open Center monoblock valve with 3 working sections, extendable up to 4, where each section is dedicated to a specific machine function: Lift, Tilt, Side shift, Auxiliary (with additional flangeable section).

The DPM050 is equipped with main inlet compensator for energy optimization, a specific compensator for descent control on Lift function, a dedicated compensator for Tilt function, zero leakage load check valves, electric operated check valves and overcenter valves for ride-on signal to operations enabling.

- Load Sensing Open Center**
- Local compensator on tilt function (section 2)**
- Zero leakage valve on tilt port**
- 2 (+1) shuttle valves for Load Sensing signal management**

WORKING CONDITIONS

| | | | |
|--|--------------------------------|------------------------|--------------------|
| Nominal flow rating | on inlet port | 55 l/min | 14.5 US gpm |
| Max. continuous pressure (P inlet, A/B working ports) | | 280 bar | 4060 psi |
| | inlet | 8 bar | 116 psi |
| Compensator stand-by | on lowering (load independent) | 6.8 bar | 98.6 psi |
| | on tilt function | 6.8 bar | 98.6 psi |
| Fluid | | Mineral based oil | |
| Fluid temperature range | with FPM (VITON) seals | from -20°C to 120°C | from -4°F to 248°F |
| | min. | 12 mm ² /s | 12 cSt |
| Viscosity | max. | 400 mm ² /s | 400 cSt |
| | Max. contamination level | 18/16/13 - ISO 4406 | NAS 1638 - class 7 |
| Ambient temperature for working conditions | | from -20°C to 80°C | from -4°F to 176°F |
| Spool stroke | | +/- 3 mm | +/- 0.11 in |

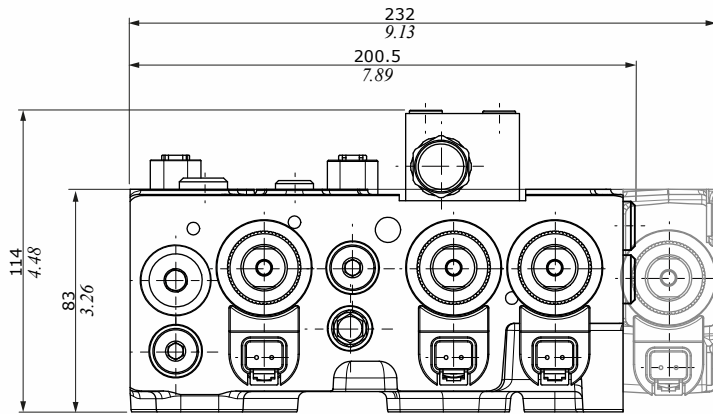
COIL TYPE

| | BH | BER |
|-----------------|-----------------------|-----------------------|
| Nominal voltage | 12 VDC - 24 VDC ± 10% | 12 VDC - 24 VDC ± 10% |
| Nominal power | 33 W | 19 W |

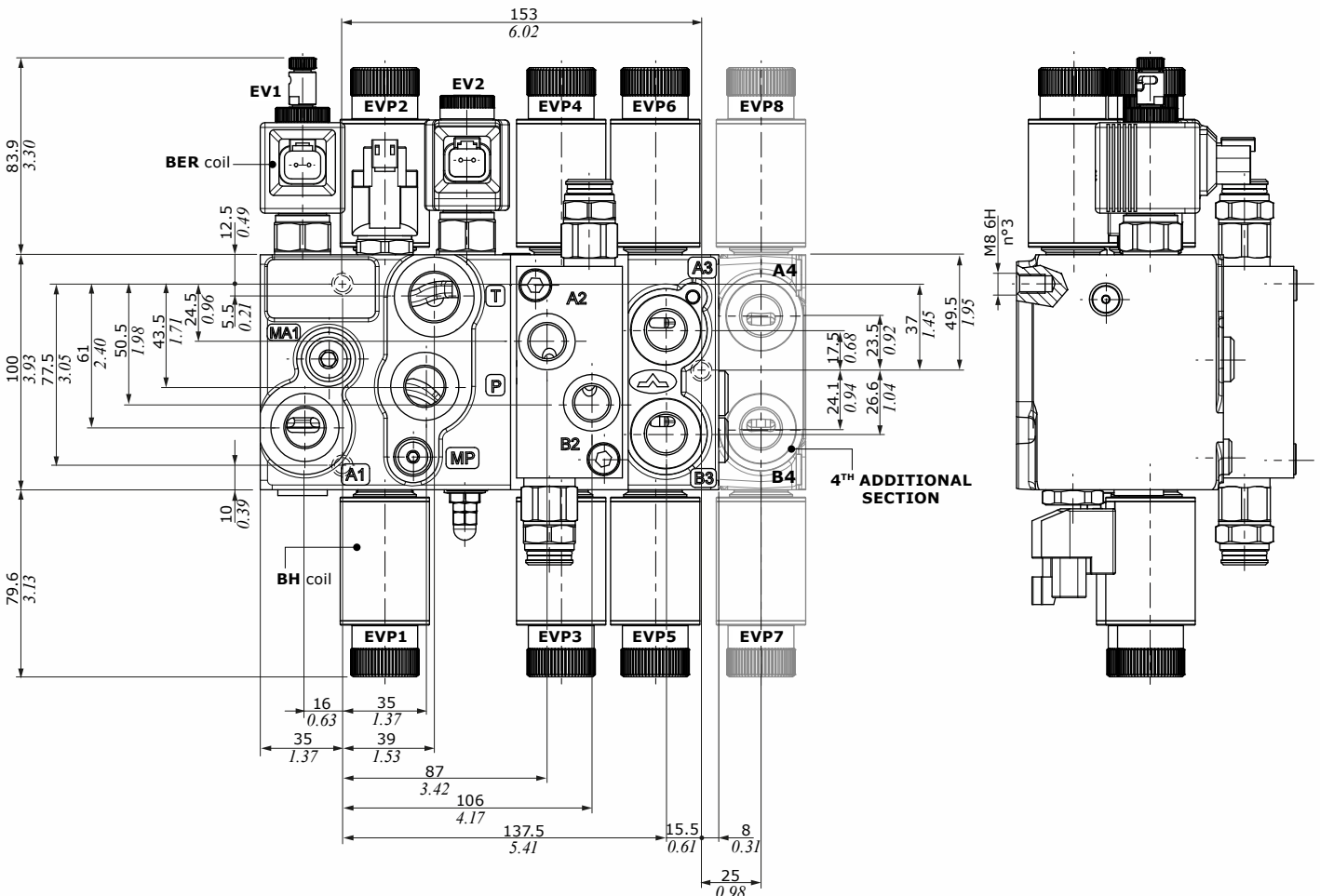
Technical specifications and diagrams measured with mineral oil of 46 mm²/s (46 cSt) viscosity at 40°C - (104°F) temperature.

NEW

Dimensions



| PORT THREADING * | | |
|---------------------------------------|--------|------------------|
| MAIN PORTS | BSP | METRIC (ISO 262) |
| P inlet | G 3/8" | M18x1,5 |
| T outlet | G 1/2" | M22x1,5 |
| A1, A3/B3, A4/B4 working ports | G 3/8" | M18x1,5 |
| A2/B2 working ports | G 3/8" | M16x1,5 |
| MA port | G 1/4" | M14x1,5 |
| MP port | G 1/8" | M10x1 M12x1,5 |



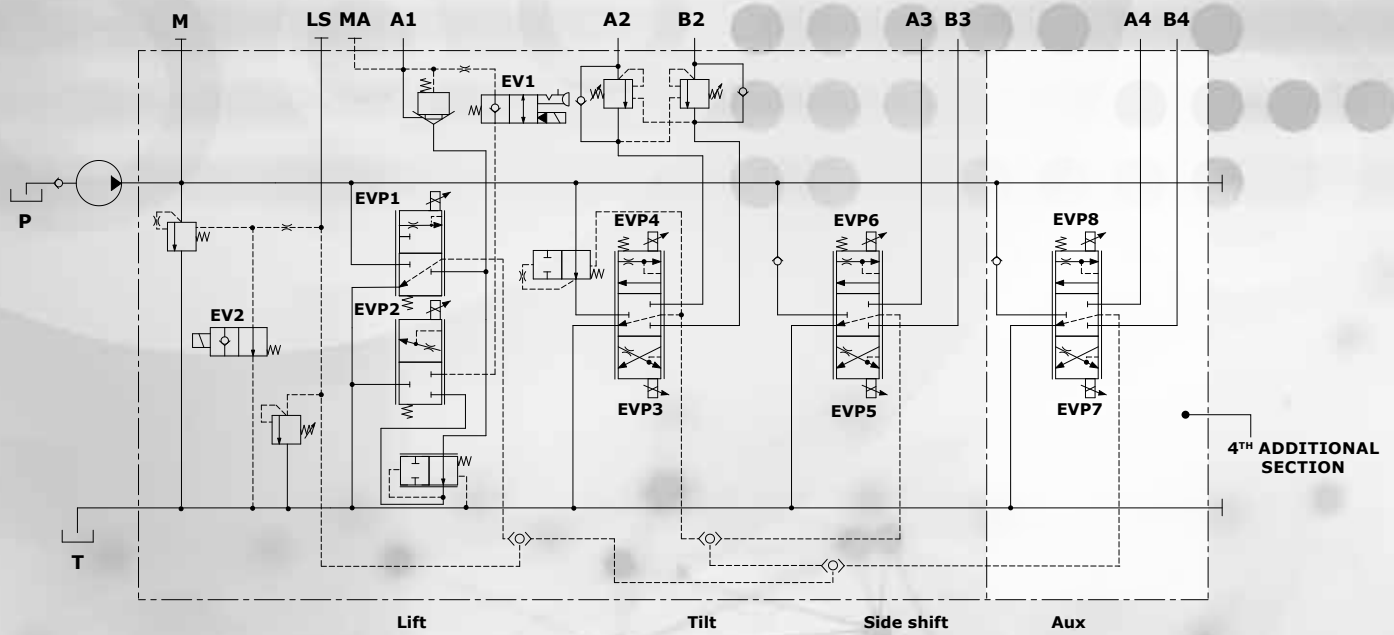
(*): Connection for fittings is available on request.

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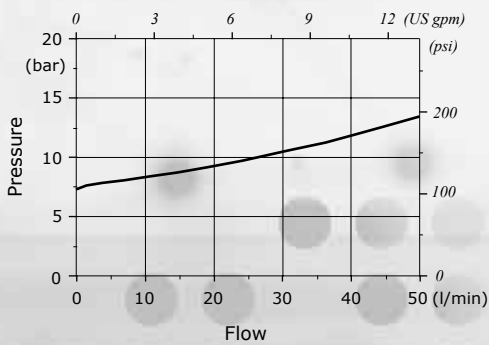
Hydraulic circuits

DPM050/3 - DPM050/3+1



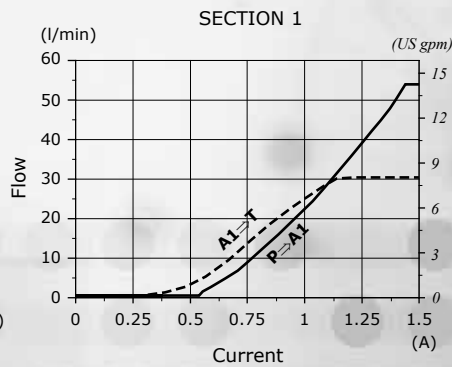
Performance curves

P→T Pressure drop inlet compensator (margin pressure)



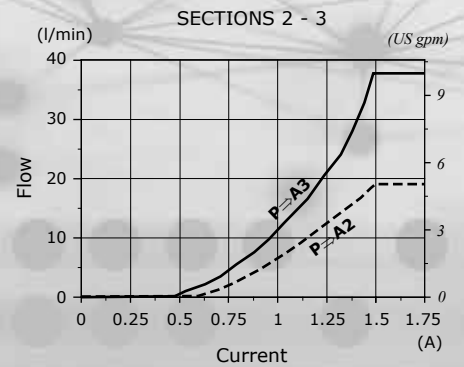
Flow vs. Current diagram

(P→A1 - Lift) (A1→T - Descent)



Flow vs. Current diagram

(P→A2 - Tilt) (P→A3 - Side shift)



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