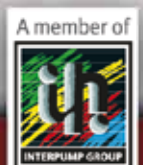


# EK10X

Proportional solenoid valve  
5 ways / 3 positions



# EK10X

Proportional solenoid valve  
5 ways / 3 positions



- **External zinc-plated and corrosion-proof components**
- **Hardened precision spool and cage to ensure minimal wear, minimum leakage and long life**
- **Flow path optimized through CFD analysis**
- **Industry common cavities**
- **Heavy duty polyurethane seals**
- **Several types of coil connectors and voltages**
- **Manual override options**
- **All ports can be fully pressurized**
- **Minimum current threshold/dead band**
- **Optimized linearity and hysteresis**

## DESCRIPTION:

Walvoil launches the new EK10X cartridge valve, proportional solenoid operated, 5-way, 3-position, spool-type, with integrated Load Sensing port.

Load Sensing signal is connected to port 5 when spool shifts in working position.

## OPERATION:

The EK10X valve is available with different spools and manual override options, which increase the versatility of the product and ensure high flow capacity with reduced space requirements.

Optimized through CFD analysis to reduce the pressure drop through the main paths, the new EK valve series ensure excellent switching performance using the same coils of the new EK10L valve.

This spool-type valve is available in SAE 10 size and it is particularly suitable for precise and controlled lifting and lowering movements, where an actuator must be proportionally operated in both directions and stopped in any position.

The best controllability is obtained when the valve is used together with a pressure compensator to manage the flow rate.

EK10X valve is assembled with the Walvoil crimping solution, that ensures, at the same time, more robustness while mounting them on HICs (Hydraulic Integrated Circuits) and a reduction of of leakage due to spool clearance.

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

### **Working condition**

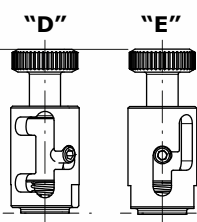
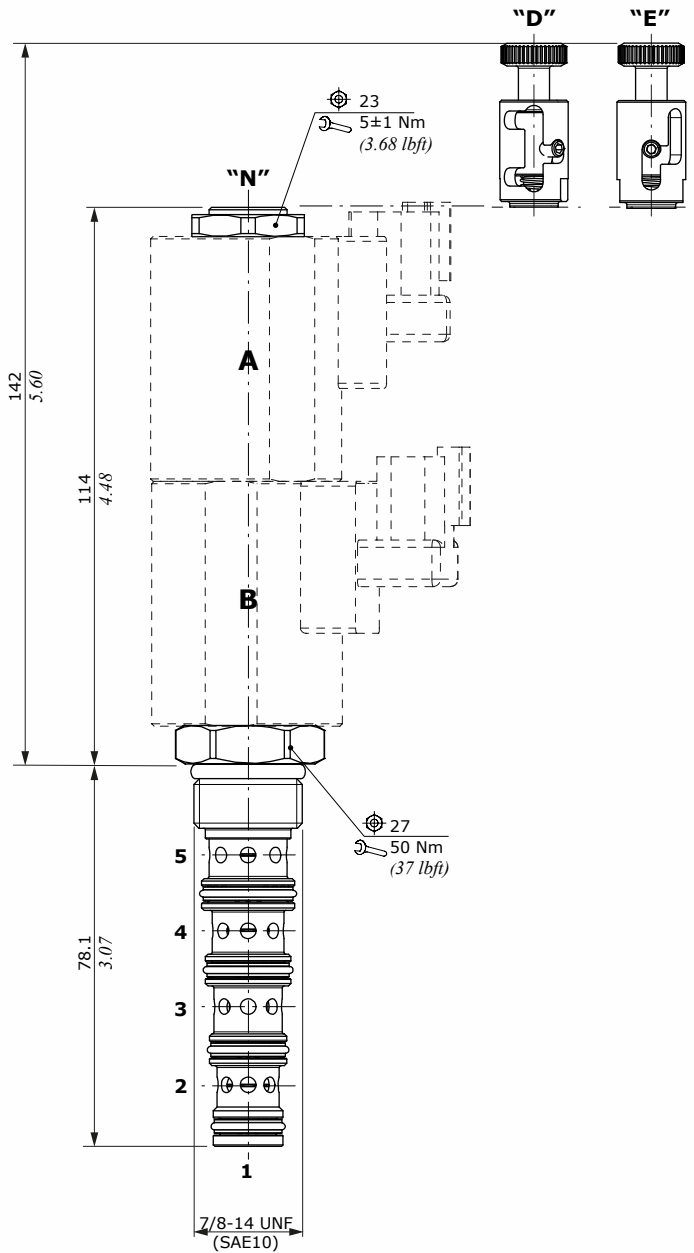
|  |  |  |
|--|--|--|
| Nominal flow                               | 22 l/min (5.8 US gpm)                          |  |
| Max. pressure                              | 250 bar (3600 psi)                             |  |
| Oil leakage                                | at 210 bar<br>(3050 psi)                       | 200 cm <sup>3</sup> /min (12.2 in <sup>3</sup> /min) |
| Fluid                                      | mineral based oil                              |  |
| Viscosity                                  | 10-200 cSt                                     |  |
| Max level of contamination                 | 18/16/13 ISO4406                               |  |
| Fluid temperature                          | with NBR seals                                 | from -20°C (-4°F) to 80°C (176°F)                    |
|  | with FPM seals                                 | from -20°C (-4°F) to 100°C (212°F)                   |
| Environmental temp. for working conditions | from -20°C (-4°F) to 60°C (140°F)              |  |
| Cavity                                     | SAE 10/5                                       |  |
| Coils type                                 | (BC)   |  |
| Power rating                               | 26 W (12/24 VDC)                               |  |
| Connector types                            | ISO4400 - Deutsch DT<br>AMP-JPT - Flying leads |  |

**Note** - For different conditions, please contact Walvoil Sales Department.

# NEW

## Dimensions and hydraulic circuits

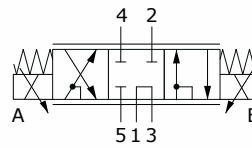
### Emergency types



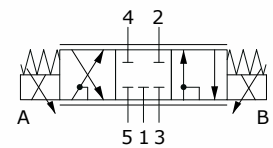
### Emergency types

|          |   |
|----------|---|
| <b>N</b> | ET..L/NB<br>Without emergency             |
| <b>D</b> | ET..L/DB<br>Push/pull type with detent    |
| <b>E</b> | ET..L/EB<br>Push/Pull type without detent |

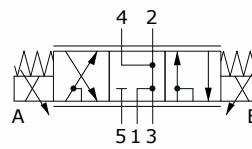
### Spool 21



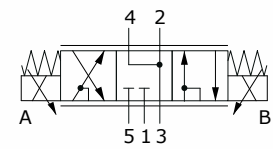
### Spool 22



### Spool 41

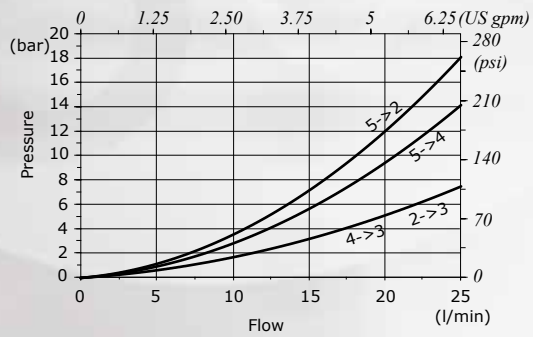


### Spool 42

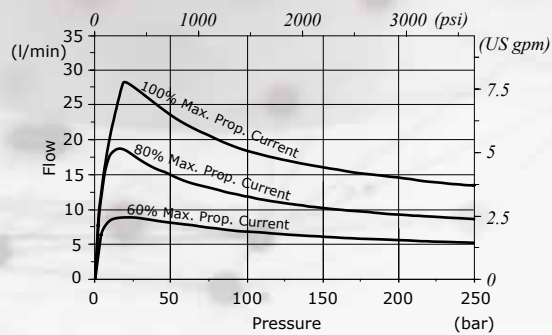


## Performance data

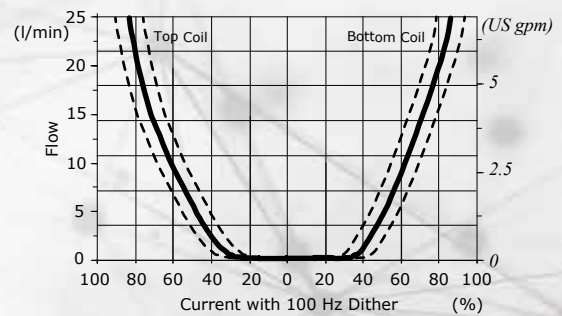
**Pressure drop vs. flow  
(spool 42 type)**



**Pressure compensator  
(inlet to work port - spool 42 type)**



**Flow vs. current  
(with 10,5 bar / 152 psi inline compensator - spool 42 type)**



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