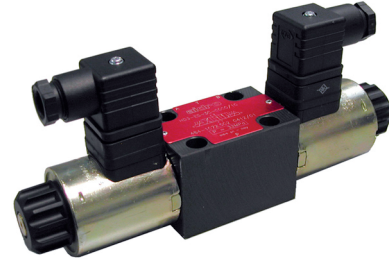


ISO 03 HYDRAULIC VALVES type HD3-ES/10 DIRECTIONAL CONTROL - SOLENOID OPERATED

- 4-way solenoid operated directional valves
- ISO 03 interface
- Oil immersed solenoids for AC and DC current
- Emergency pin for manual override
- Maximum flow rate: 80 l/min
- Maximum pressure (port P-A-B): 350 bar
- Maximum pressure (port T): 160 bar
- 100% duty cycle
- Suitable for mineral oil according to ISO 18/16/14 filtration class or better.
- Recommended viscosity range: 10 to 60cSt



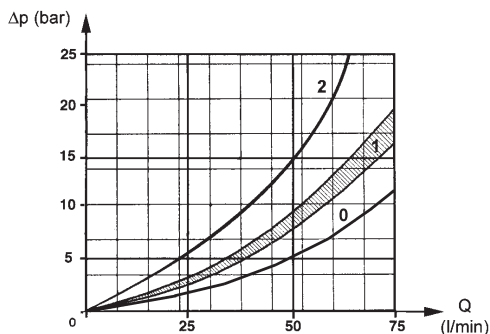
SPOOL TYPE **	
0	
1	
3	
4	

DRIVE ARRANGEMENT	
C	
N	
LL	
ML	

ORDERING CODE	
HD3 – ES – 4 C – *	
HD3	ISO 03 4-way directional control valve
ES	Electrically controlled
4	Spool type (see table)
C	Drive arrangement (see table)
*	b: only for versions LL, ML, LM solenoid "b"
B03 – *	
B03	Coil for HD3-ES valves (plugs according to ISO 4400) Admissible voltage variation: -10% +5%
012C	12V DC – 2,8A
024C	24V DC – 1,4A
-115A	115V 50/60Hz AC – 0,35A
-230A	230V 50/60Hz AC – 0.17A

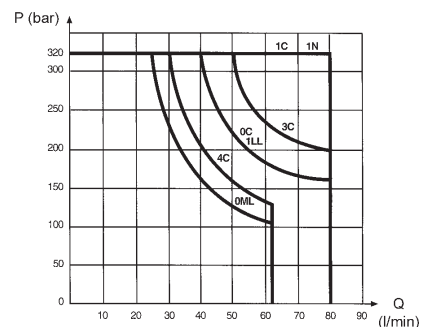
TYPICAL DIAGRAMS

Typical Δp -Q curves for valves HD3-ES in standard configuration, with mineral oil at 36cSt and 50°C for flow P→A,B, A,B→T and P→T



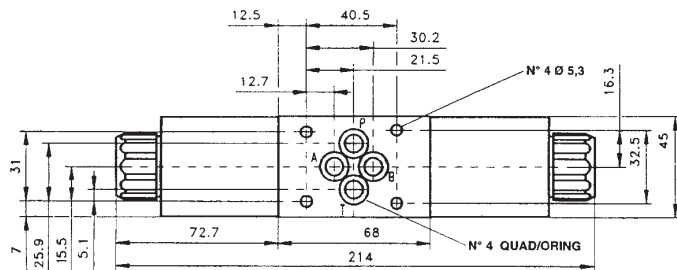
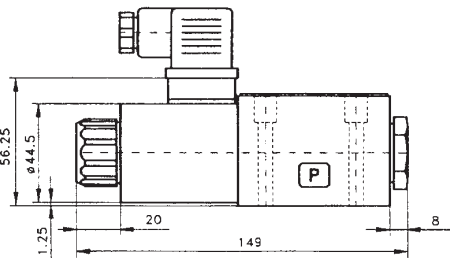
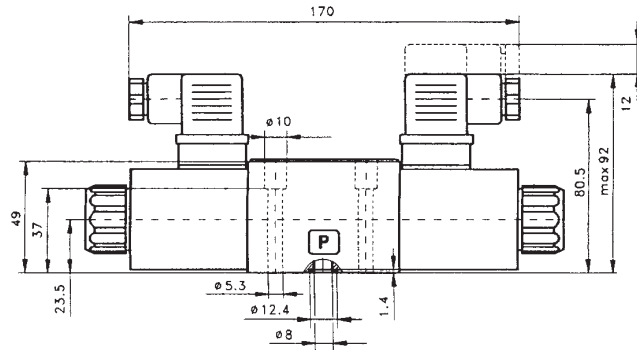
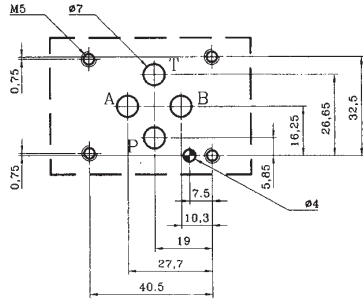
0) Spool 0 P→A,B and A,B→T 1) All spools P→A,B and A,B→T. Spool 4 P→T.
2) Spool 4 P→A,B and A,B→T

Typical p-Q curves of operating limits for maximum hydraulic power transferred by valves HD3-ES



Input voltage 5% less than nominal rate

ISO 03 Interface



Fixing bolts: n.4 M5 x 45 (not included) – Tightening torque 8Nm
Valve mass: 1,60 kg (with 1 coil) – 2,10 kg (with 2 coils)

Subject to technical and dimensional changes without notice

1-2	Solenoid	7	Protection muff (on request)
3-4	ISO 4400 plugs (not included)	8	Ring nut
5	Emergency pin	9	Body
6	Extended emergency pin (on request)	10	Spool

