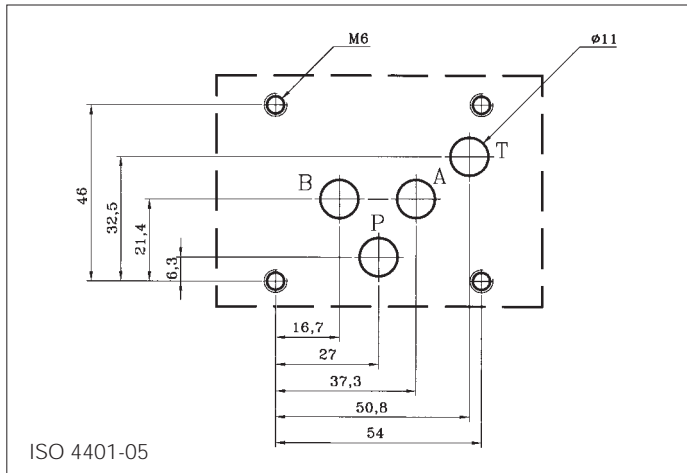
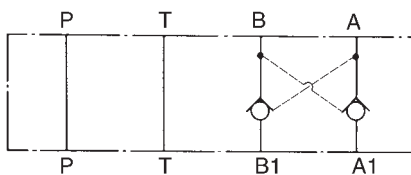


Stackable valves cetop 05 pilot operated check valves type AM5 - CP - *

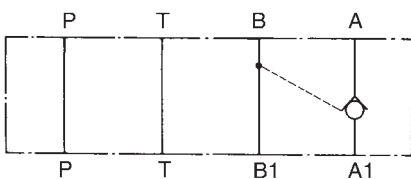


2 FUNCTIONAL SYMBOLS

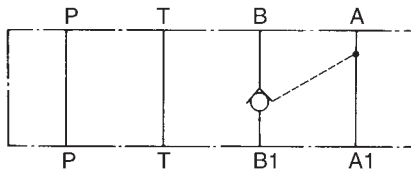
AM5-CP-AB



AM5-CP-A



AM5-CP-B



1 HOW TO READ THE MODEL CODE FOR VALVES AM5 - *

AM5 - CP - (AB) - * - ** / 10
① ② ③ ④ ⑤ ⑥

① AM5 : stackable valve CETOP 05 - Pressure 32 MPa (320 bar)

② CP : check valve, pilot operated (hydraulically)

③ (AB) : service lines where the control(s) operate(s);

see also functional symbols 2

AB : p.o. checks on A and B. Fluid flows A → A1 and B → B1 and flow A1 → A (or B1 → B) is permitted only when B (or A) is pressurized

A : p.o. check on A; flow A1 → A is permitted only when B is pressurized

B : p.o. check on B; flow B1 → B is permitted only when A is pressurized

④ check valve opening (cracking) pressure (Pm) for free flow A → A1 and B → B1:
- (standard) : Pm approx 0.2 MPa (2 bar)

⑤ code reserved for special variants (materials, seals, surface treatments etc.)

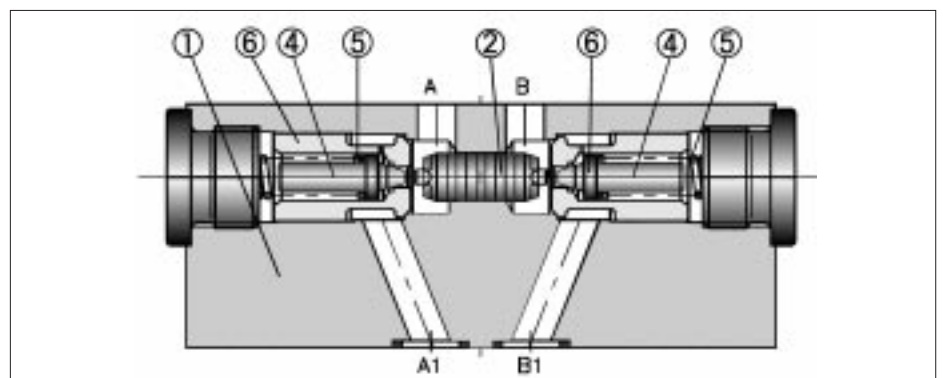
⑥ design number (progressive) of the valves

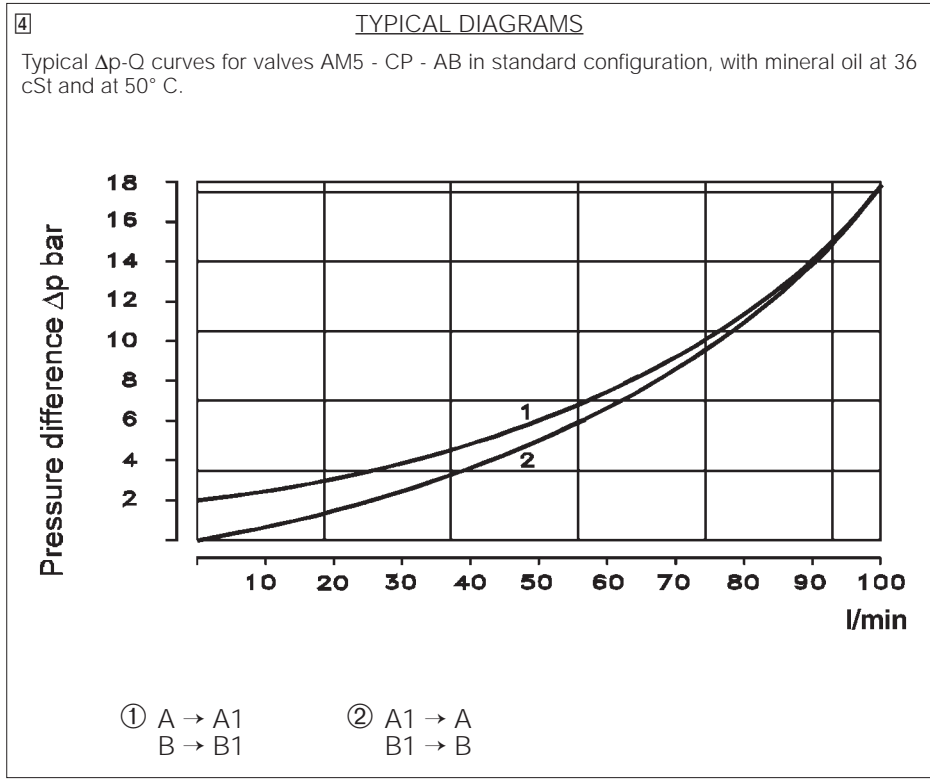
3 DESCRIPTION

Fluid flows freely on P and T lines;

on service lines A and /or B with p.o. check, fluid flows from A → A1 (and/or B → B1) overcoming the force of spring ⑤ acting on poppet ④, and fluid is blocked from A1 → A (and/or B1 → B).

When, by switching the solenoid operated 4-way directional valve, pressure is made available at, for instance, port B fluid flows B → B1 and the pilot piston ②, shifting from its central position, forces poppet ④, on service line A, to open and permit flow A1 → A by opening main poppet ⑥.





5 DATA AND OPERATING LIMITS

maximum rec. flow rate	100 l/min
maximum nominal pressure	32 MPa (320 bar)
pressure drops	see 4
pilot area ratio piston/poppet	approx 5,6
piloting pressure	see 6
dimensions	see 7
installation	see 8
mass	approx 3 kg

6 PILOTING PRESSURE

To shift the pilot piston and to open the check in A the piloting pressure must be, at B:

$$P_p = P_b = \frac{P_{a1} + P_m - P_a}{5,6} + P_a$$

where: P_p = piloting pressure;
 P_b = pressure in B;
 P_a = pressure in A;
 P_{a1} = pressure in A1;
 P_m = check valve opening pressure (spring)

or to open the check in B:

$$P_p = P_a = \frac{P_{b1} + P_m - P_b}{5,6} + P_b$$

8 INSTALLATION

All stackable valves AM5 - CP - * conform with ISO and CETOP specifications for mounting surface dimensions (see also front page) and for valves height (50 mm).

Leakage between valve and mounting surface is prevented by the positive compression on their seats of seals (of OR type or Quading type).

9 HYDRAULIC FLUIDS

Seals and materials used on standard valves AM5 - * are fully compatible with hydraulic fluids of mineral oil base, upgraded with antifoaming and antioxidizing agents.

The hydraulic fluid must be kept clean and filtered to ISO 4406 class 19/17/14, or better, and used in a recommended viscosity range from 10 cSt to 60 cSt.

