

Multiple electrohydraulic controls type MC

on-off & proportionals

1 MODEL CODE

***** MC H - V / 3E - 2Z / AL 12**

Design number

MC = Multiple control

Size:
H = ISO/Cetop 03
K = ISO/Cetop 05 (one stage at least)

Options:
F = for fixed displacement pumps
V = for variable displacement pumps (load-sensing)
H = venting valve

Supply voltage:
 - = 24 VDC
12 = 12 VDC

Options:
AL = with aluminium plate

Number of proportional stations (F)

Number of on-off stations (E)

Load-sensing blocks giving the maximum flexibility to electrohydraulic systems for multiple controls.

They are realized with customized multi-station subplates (up to 10 stations max), in cast iron or aluminium, with integral cartridges and Cetop subplate mounting valves.

Characteristics:

- 2...10 stations, each one to drive an actuator; for on-off or proportional control in open or closed loop;
- optional auxiliary hand-lever control;
- optional auxiliary hand-lever control;
- for each station the regulation of flow is compensated, i.e. the oil flow to the actuator is independent of load;
- with or without electronic driver integral on the valve;
- interfaceable to fixed and variable displacement pumps;
- modular assembly;
- simplified maintenance;
- power saving;
- reduced weight.

2 GENERAL CHARACTERISTICS

| Size | ISO/Cetop 03 | ISO/Cetop 05 |
|------------------------|---|--|
| Maximum flow [l/min] | 60 | 100 |
| Maximum pressure [bar] | 350 | 315 |
| Number of stations | 1 ÷ 10 (max) | |
| Material | Cast iron Aluminium (for maximum pressure 210 bar) | |
| Ports (1) | P, A, B = G 1/2" T = G 3/4" M, LS = G 1/4" | P, A, B = G 3/4" T = G 1" M, LS = G 1/4" |
| Supply voltage [VDC] | 12, 24 | |

(1) On request, different threads and flange attachments for ports P, T

3 CHARACTERISTICS OF INLET STAGE

| | |
|---|--|
| F | For fixed displacement pump: the block includes a 3-way pressure compensator to regulate the pump pressure to the maximum load |
| V | For variable displacement pump (load-sensing) |
| H | Directional valve for venting, on line LS (load-sensing) |

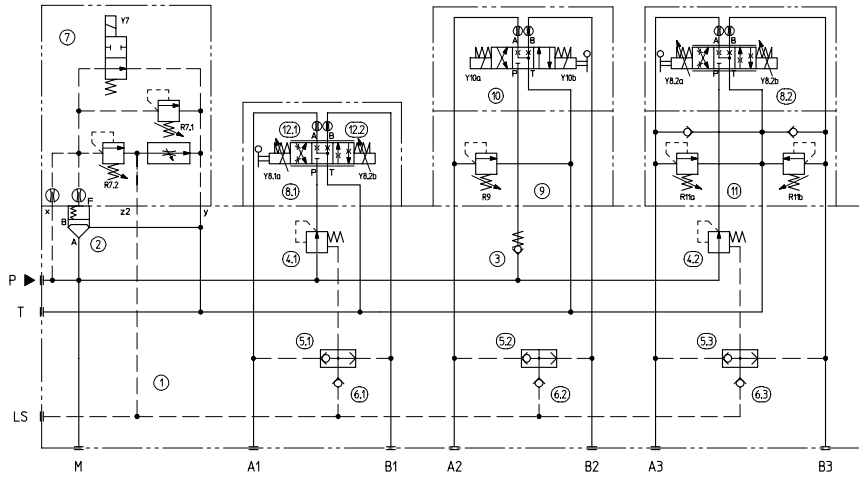
Note: for all the options a protection pressure relief valve is foreseen on port P

4 CHARACTERISTICS OF THE INTERMEDIATE STAGE

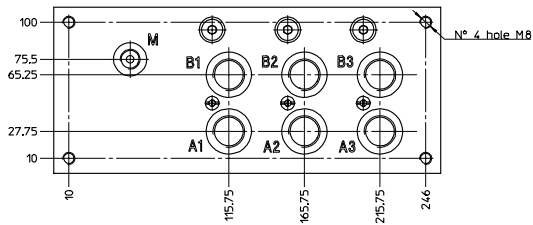
| Two-way pressure compensator on port P to regulate the flow of each station independently of the load | | | |
|---|----------------------------------|-------------------------------------|------------------------------|
| Check valve on port P for not compensated stations | | | |
| Piloted check valves to hold the load without over-center valves | | | |
| Modular pressure relief valve to limit the pressure on ports A, B | | | |
| Modular antishock and anticavitation valve | | | |
| Modular directional valve for floating position type HF-0613, see tab. A700839-1 (TAK-5/E) | | | |
| ON-OFF | | PROPORTIONAL | |
| Electric operated | see tab. E010, E020 | Directional control | see tab. F160 |
| Lever operated | see tab. E150, A900678 (TAK-5/E) | Electronics (integrated, open loop) | E-MI-AC-01F/7; see tab. G010 |
| Manual override | see tab. K150 (TAK-5/E) | | |

5 DIMENSIONS [mm]

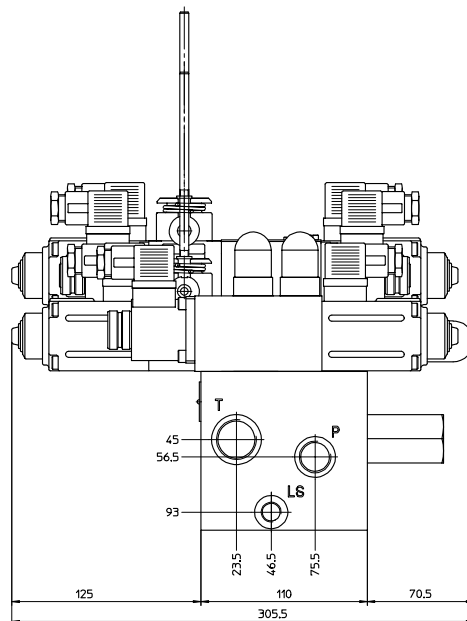
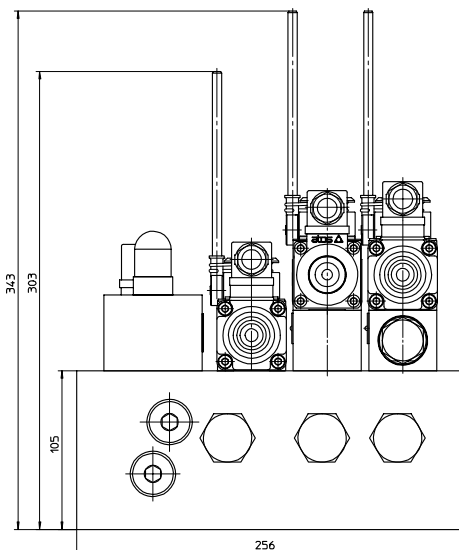
Multiple control type
***** MCH-FH/1E-2Z



| Pos | Code | Description | Pos | Code | Description |
|-----|-------------------|--|-----|-------------------|--|
| 1 | *****-01 | Subplate | 7 | 000106 LIMHC-1/** | Pilot pressure relief with venting |
| 2 | SC LI-16313 | Compensation cartridge | 8 | DHZO-A-073-*/BMV | Proportional control |
| 3 | SP-CART D-20 | Check valve on P for not compensated station | 9 | HMP-013/** | Modular pressure relief valve |
| 4 | SP-CART MC-011/15 | Two-way compensator | 10 | DHI-0713/1-*/AMV | On-off control |
| 5 | SP-CART B-5 | Shuttle valve for load-sensing selection among different ports | 11 | HMS-012/** | Modular antishock and anticavitation valve |
| 6 | SP-CART D-5 | Check valve for load-sensing selection among different ports | | | |

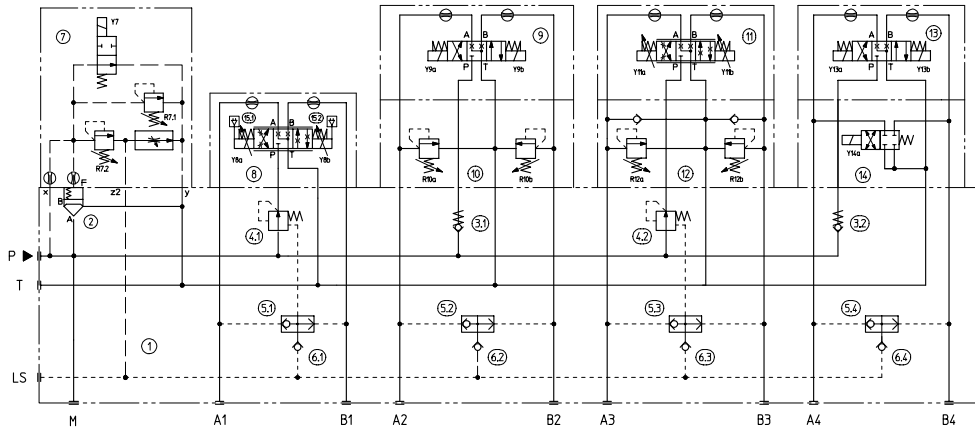


Ports according to [2]:
P = from the pump
T = to tank
LS = load sensing
A, B = to actuators
M = manometer port

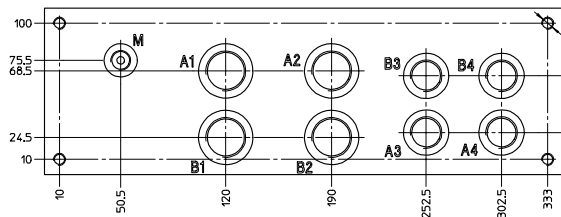


6 DIMENSIONS [mm]

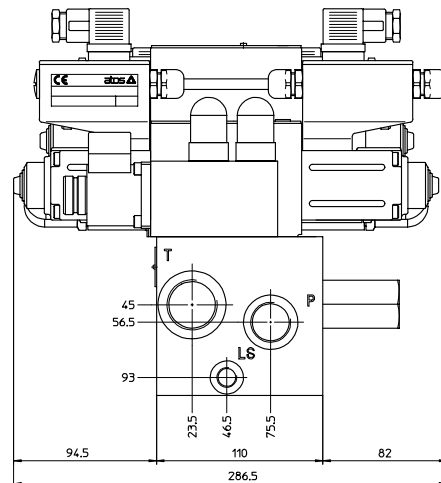
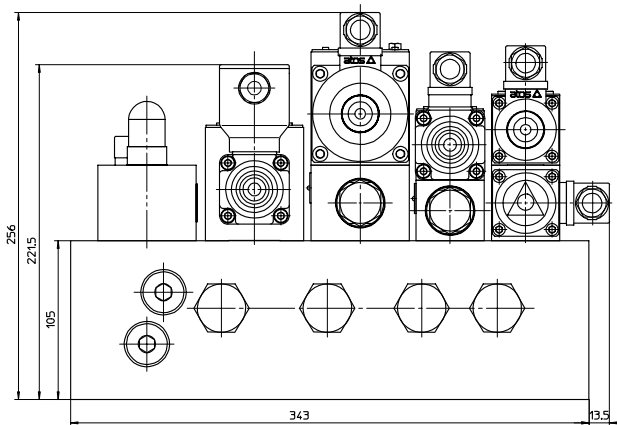
Multiple control type
***** MCK-V/2E-2Z/AL/12



| Pos | Code | Description | Pos | Code | Description |
|-----|--------------------|--|-----|-------------------|--|
| 1 | *****-01 | Subplate | 9 | DKI-1713/1-*** | On-off control |
| 2 | SC LI-16313 | Compensation cartridge | 10 | KM-012/*** | Modular pressure relief valve |
| 3 | SP-CART D-20 | Check valve on P for not compensated station | 11 | DHZO-A-073-***/ML | Proportional control |
| 4 | SP-CART MC-011/15 | Two-way compensator | 12 | HMS-012/*** | Modular antishock and anticavitation valve |
| 5 | SP-CART B-5 | Shuttle valve for load-sensing selection among different ports | 13 | DHI-0713/1-***/ML | On-off control |
| 6 | SP-CART D-5 | Check valve for load-sensing selection among different ports | 14 | HF-0613-*** | On-off modular valve for floating position |
| 7 | 000106 LIMHC-1/*** | Pilot pressure relief | 15 | E-MI-AC-01F/7 | Open loop electronics |
| 8 | DKZO-A-173-*** | Proportional control | | | |



N° 4 hole M8
Ports according to [2]:
P = from the pump
T = to tank
LS = load sensing
A, B = to actuators
M = manometer port



MULTIPLE ELECTROHYDRAULIC CONTROLS

- ON/OFF AND PROPORTIONAL -

Customer / Application

Date _____

Customer: _____

Type of machine: _____ Year q.ty: _____

Current electrohydraulic control (supplier/model): _____

Type of control: joystick joystick with driver radio control

Available voltage: 12 V 24 V other _____

Enclosures: hydraulic scheme brochure other

Notes: _____

Technical generalities of Multiple control

Nr. of ON/OFF stations: Cetop 03 up to 60 l/min Cetop 05 up to 100 l/min

Nr. of proportional stations: Cetop 03 up to 60 l/min Cetop 05 up to 100 l/min

Fixed displacement pump Variable displacement pump

Supplier/model (pump): _____

Max flow [l/min]: _____

Max pressure [bar]: _____

| Ports: | size | attachment | position |
|----------|-------|------------|----------|
| P | _____ | _____ | _____ |
| T | _____ | _____ | _____ |
| A | _____ | _____ | _____ |
| B | _____ | _____ | _____ |

Three-way pressure compensator Δp value [bar] _____

Pressure relief valve setting pressure [bar] _____

Electric venting

Other: _____

Name and surname: _____ Initials _____ Enclosures _____

Code of multiple control: **90** **MC**