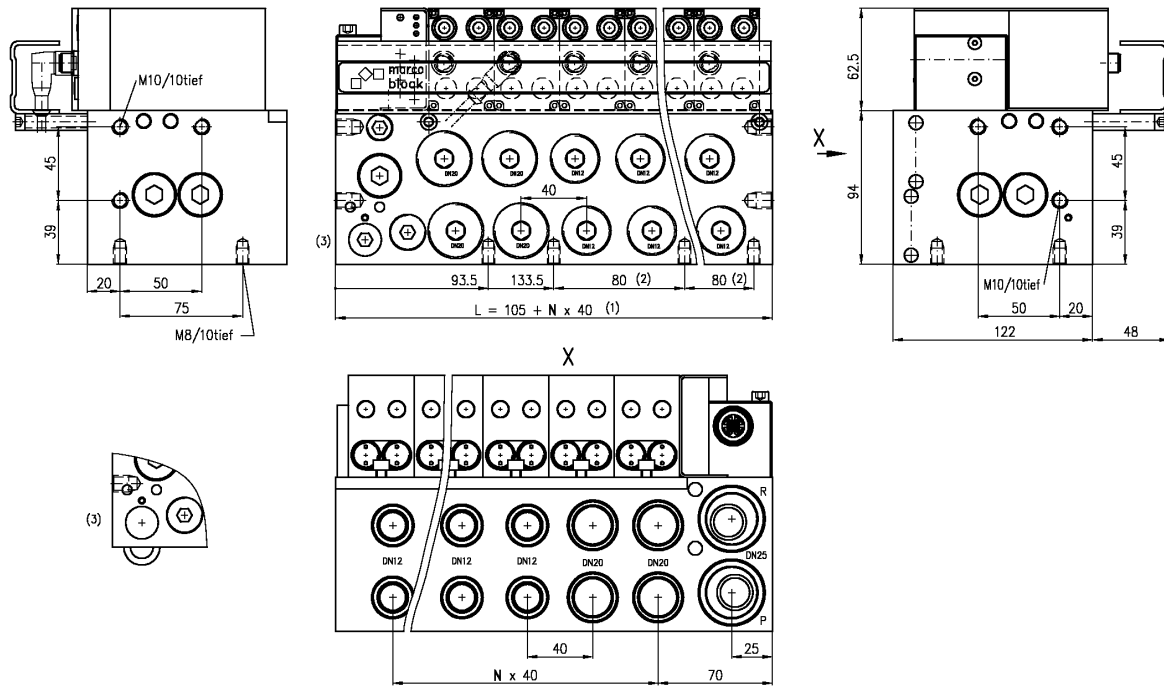
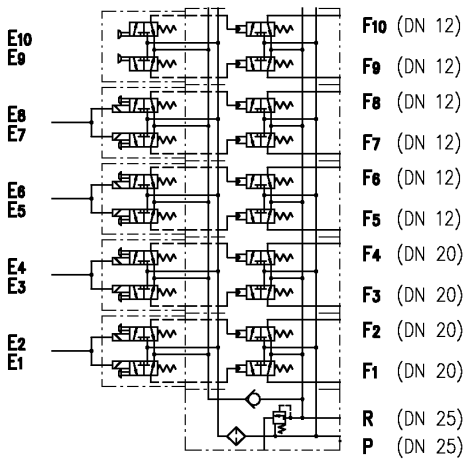


Hydraulic block



The compact marco control block for hydraulic functions provides a very high flow rate despite its small size.



It includes a dynamic pressure limitation valve as well as the required filters and pressure protection. The integrated dynamic pressure limitation valve opens the return flow to the outside if it exceeds 80 bar at an operating pressure of 350 bar. The patented valve reduces the pressure surge limit in the supply line if the pressure level should drop. If there is no supply pressure, this safety valve opens at 10 bar. Accidental opening of lockable functions is therefore not possible. Marco leg valves cannot be opened by dynamic pressure in the return line. Marco components can be operated with auxiliary valves from any manufacturer. The solenoid driver unit mcv/8/k, with digital outputs for pilot valves and pre-assembled connecting cables is mounted directly onto the block. The marco block is thus completely connected using just one cable. The connecting cables to the valves are behind a protective panel which also shows the marking for the various functions. The components are standardised.

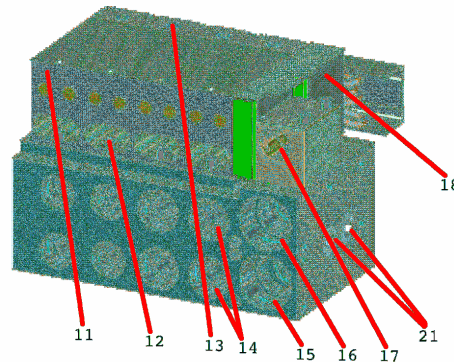
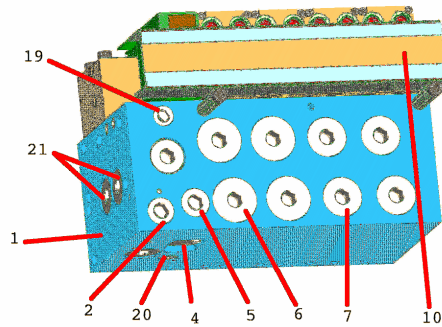
Each double function is 40 mm wide; the connections for P and R as well as for the dynamic pressure limitation valve are 105 mm wide. The flange area for the pilot control is also standardised. All block sizes have the same modules: the marco block is manufactured with versions for 2 to 22 functions. but always has the same design. The functions are available in DN6 to DN20 according to DIN 20043 or according to the relevant Chinese standard in all sizes of block. This has no effect on the diameter of the block as the design is modular.

The supply lines are produced in DN25. Supply (P) can also be produced in DN20. Applications requiring the return line in DN32 have a permanently connected adapter. This adapter can also be provided with an extra connection for a return line from the leg valve.

Versions where the legs are connected via two main cartridges with only one pilot valve, are also available. The total number of main cartridges and outlets is then uneven as the pilot valves provide the functions in pairs.

Features

Dimensions (N = number of functions)	105 (+ N x 40) x 179 x 156.5 mm	Number of functions	2 ...22
Weight	ca. 8 kg plus ca. 3 kg per 2 functions	Pilot valves	double pilot valve (a)
Operating pressure	350 bar	Cartridges	DN12 or DN20, a (red) or b (blue)
Medium	please contact marco	Filter	screw filter
Power consumption	70 mA at 9.5 V	Check valve	a or b
Power supply	12 V	Approval	MPA-NRW-HS-001-05
Connector	4-pole M12 connector, stainless steel	Outputs	1-4 DN20 all staples 5-12 DN12 standard DNx
Connections	P, R DN25		



1. Block, housing
2. Filter for pilot control
4. Outlet for pressure limitation
5. Pressure limiting valve
6. 3/2 way valve DN20
7. 3/2 way valve DN12/15
10. Cable protective covering and marking
11. Pilot valve

12. Screw for pilot valves at rear
13. Screw for pilot valves at front
14. Outputs – supply connection
15. Pressure supply P
16. Return line R
17. Connector for valve driver
18. Valve driver
19. Check valve
20. Sealing screw
21. Sealing screws

Spare parts' list

Pos.	Order number	Description
1	pm3/val/mbx/y-z	complete block (x= total no. of functions, y= no. of DN20 cartridges, z= no. of DN12 cartridges)
2	pm3/val/fi/b	screw filter
7	pm3/val/dn12/a	3/2 way valve DN12 / DN15, return flow P closed
7	pm3/val/dn12/b	3/2 way valve DN12 / DN15, return flow P open
7	di:o-23x2.sh90	4 sealing rings on the DN12 cartridge
7	di:o-st.23,9x27x1,4	1 thrust ring behind the last sealing ring (to outlet) DN12
6	pm3/val/dn20/a	3/2 way valve DN20, return flow P closed
6	pm3/val/dn20/b	3/2 way valve DN20, Rückfluss P open
6	di:o-27x2.sh90	4 sealing rings on the DN20 cartridge
6	di:o-st.27,9x31x1,4	1 thrust ring behind the last sealing ring (to outlet) DN20
11	pm3/val/evv/a	double solenoid valve NW2
11	di:o-3x1,5.au90	sealing ring between solenoid valve and block (P, R)
11	di:o-7x1,5.au90	sealing ring between solenoid valve and block (A, B)
13	din:7991.M6x70va	countersunk screw for solenoid valve fitting
12	din:912.M6x12va	cheese-head screw for solenoid valve fitting
5	pm3/val/rdb/a	return pressure limiting valve
5	di:o-16x1,5.sh90	back sealing ring for LPR
5	di:o-15x1,5.sh90	middle sealing ring for VLPR
5	di:o-14x1,5.sh90	front sealing ring for VLPR
19	pm3/val/cc/b	assembly set for check valve
20	din:908.M10x1.a2	small sealing screw
20	din:7603.A10x13,5-cu	sealing ring for small sealing screw
21	din:908.M20x1,5.a2	large sealing screw
21	din:7603.A21x26-cu	sealing ring for large sealing screw
18	mcv/8/k-x	solenoid driver (x number of valve cables – double valves)
10	pm3/val/lst*/b	protective cable covering and marking (* no. of functions)

Application

The marco block is used mainly in mining applications.