MONOBLOCK DIRECTIONAL CONTROL VALVE TYPE RM80

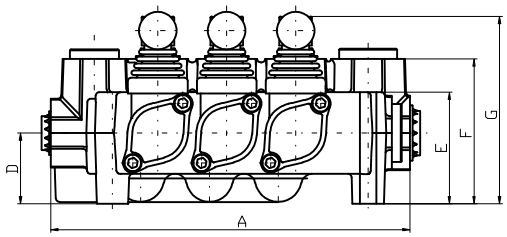
GENERAL DESCRIPTION

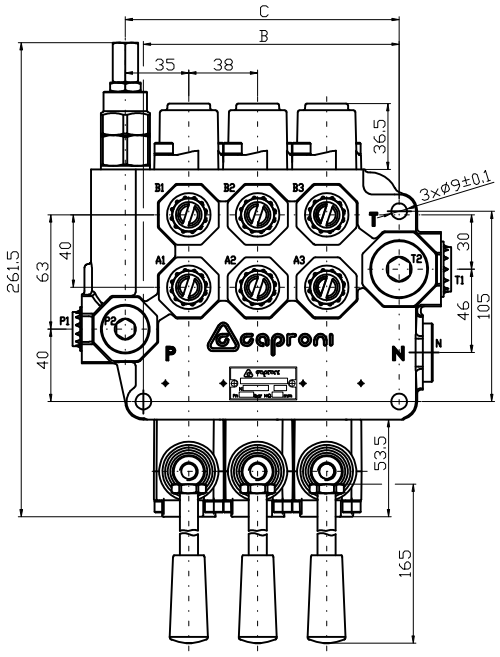
Hydraulic valve RM80 provides change of fluid flow direction , hydro-systems pressure restriction , pump unloading in neutral position of the spools. The valve RM80 is designed to be integrated in hydraulic systems of Mobile and Industrial Machines.
The valve assembly consists of:
A body with integrated relief and check valves, spools , control and spring-centering group of the spools. The valve RM80 provides parallel distribution of the working liquid and direct passing of the flow from the pump line to the tank at neutral position (open center). Options “closed centre” and “carry over” are possible with additional adapters. There are different control options: spring–centering in “neutral” position, detent, automatic kick-out, hydraulic and electro-hydraulic control.

TECHNICAL DATA

Rated flow	80 l/min
Max. pressure	P=250 bar; T=50 bar; A,B= 300 bar
Spool stroke	±7 mm
Working temperature range	-15...+80 °C
Working liquid	hydraulic oil HLP DIN51524
Liquid viscosity	15...300cSt
Nominal filtration	ISO4406: 19/16 (recommended filter element - 0,025mm mesh)
Internal leakage at 120 bar , t=40°C and viscosity 46cSt	max. 8cm³/min; max 2cm³/min (special version)
Actuating force	less than 280N

DIMENSIONS

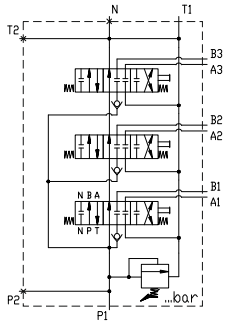




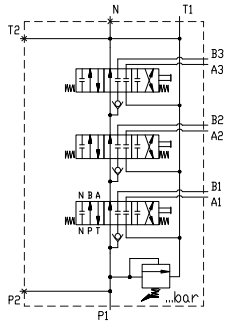
RM80P/3/Q/3x/1CLA1/R/P1T1/G/N

Type		A	B	C	D	E	F	G	Weight, kg
parallel	serial								
RM80		108	65	-	24	46.5	65	88.3	4.0
RM80P/2	RM80S/2	160	103	113					7.4
RM80P/3	RM80S/3	198	141	151					9.7
RM80P/4	RM80S/4	236	179	189	39	61.5	80	103.3	12.0
RM80P/5	RM80S/5	274	217	227					14.3
RM80P/6	RM80S/6	312	255	265					16.7

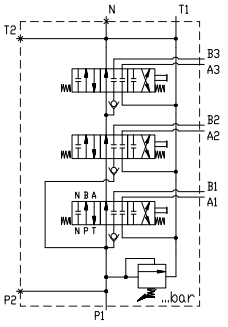
STANDARD PARALLEL CIRCUIT



STANDARD SERIES CIRCUIT



TANDEM CIRCUIT



ORDERING CODE

RM80PEHI / 3 / Q / 1 CL A 1 E1** / R / P1T1 / G / N

type of connection	Code
for RM80	*omit*
Parallel	P
Series*	S
Tandem (P+S)*	T

* The scheme (connection type S and T) needs special body.

type of control	Code
without control	omit
On-Off internal electro-hydraulic	EHI
On-Off external electro-hydraulic	EHE
On-Off electro-pneumatic	EPC
On-Off hydraulic	HC
On-Off pneumatic	PC

number of the spools *for RM80 - omit*

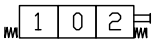
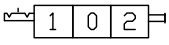
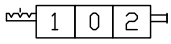
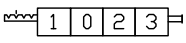
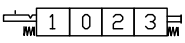
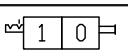
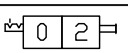
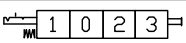
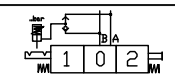
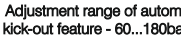
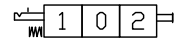
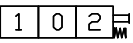
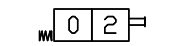
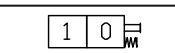
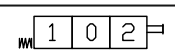
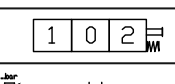
relief valve	Code
setting range 20...300bar (example of required settings 180bar)	Q Q180
shut-off plug installed	K

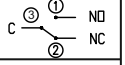
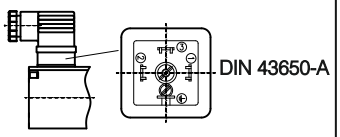
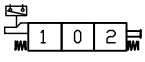
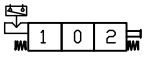
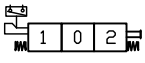
standard port threads		
Code	P1 , P2 , A , B	T1 , T2 , N
M	M22x1,5-6H	M26x1,5-6H
G	G1/2"-A	G3/4"-A
U	7/8-14UNF-2B	1 1/16-12UN-2B

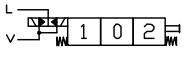
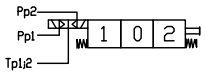
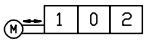
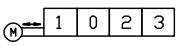
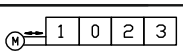
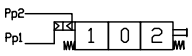
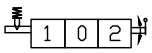
Code	application
N	normal
T	tropical

Code	hydraulic power output
R	open center (port N connected to T - short plug)
W	closed center (port N plugged - long plug)
C	carry over (port N - with power beyond sleeve)
CS	short carry over connection

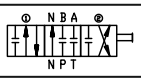
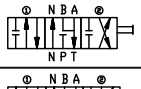
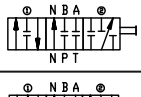
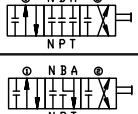
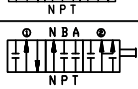
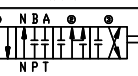
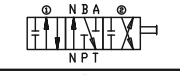
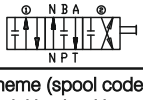
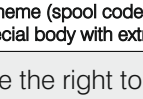
Code	used conn. ports
P1T1	P1 and T1
P1T2	P1 and T2
P2T1	P2 and T1
P2T2	P2 and T2

Code	spool control
1	
2	
3	
4	
5	
6	
7	
9	
11*	 Adjustment range of automatic kick-out feature - 60...180bar
12	
13	
14	
15	
16	
17	
19*	 Adjustment range of automatic kick-out feature - 60...180bar

Code	micro switch: max. current/voltage - 5A/250V AC protection - IP67 contact configuration 
Code	 DIN 43650-A
omit	without microswitch
E1	
E2	
E3	

Code	spool control	
20-12 20-24 20-11 20-22	12VDC 24VDC 110VRAC 220VRAC	ON-OFF EHI & EHE 
30-12 30-24 30-11 30-22	12VDC 24VDC 110VRAC 220VRAC	ON-OFF EPC 
SD1		
SD5		
SD10		
32		ON-OFF HC & PC 
R***		

* The kit (spool control code 11 and 19) need special spool.

spools	Code
	1
	2
	3
	4
	5
	6
	7
	8*
	9*
	10
	12
	13

* The scheme (spool code 8 and 9) needs special body with extra machining.

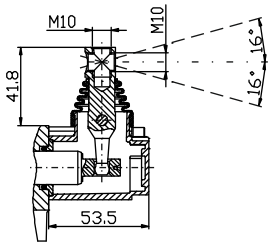
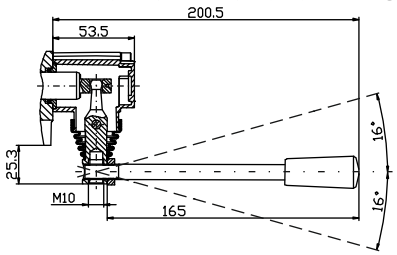
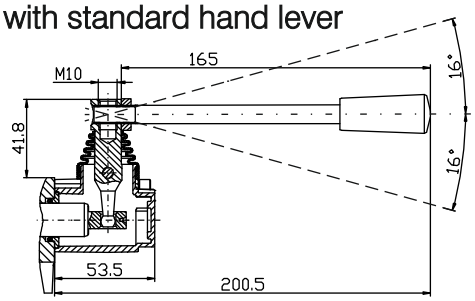
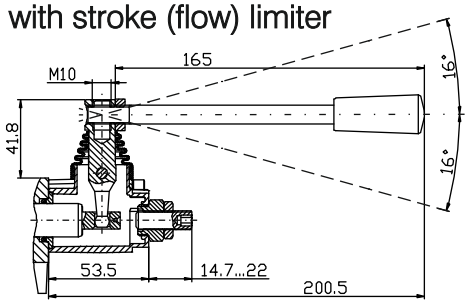
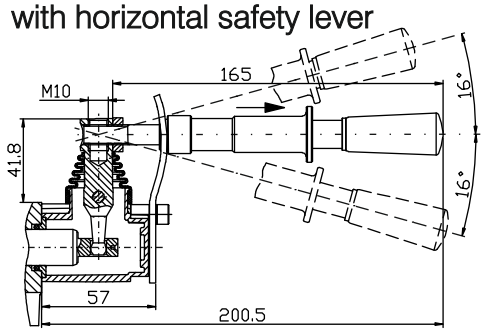
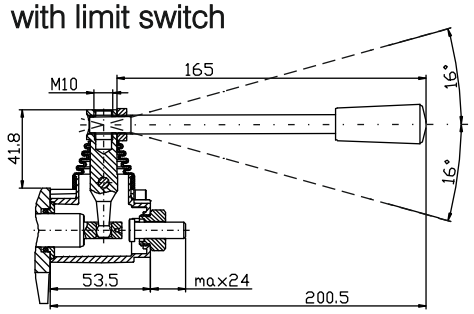
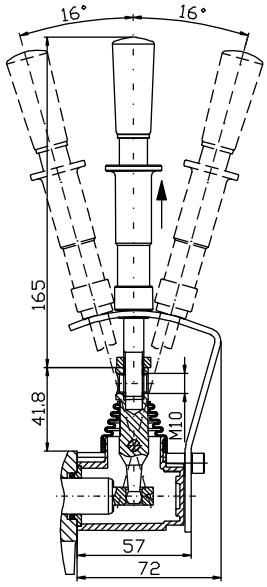
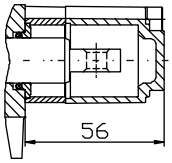
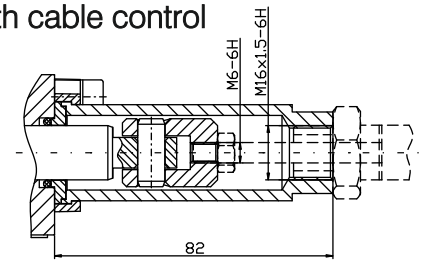
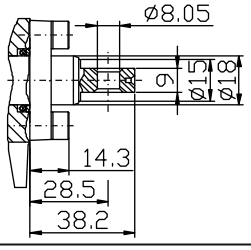
Code	operation control
C CL CLO CLR CLS CP H Z	see page 3/6
J...	see page 4/6

Code	lever position
A	at port side A (standard)
B	at port side B

** Repeat for each spool. In case of identical spools ordering code example is:
RM80P / 3 / Q / 3x / 1CL A1 / R / P1T1 / G / N

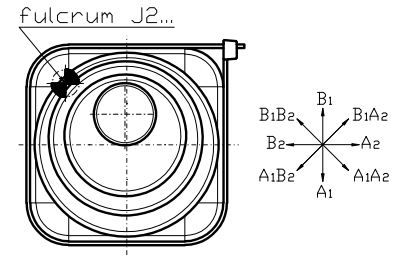
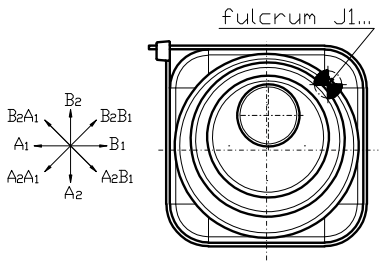
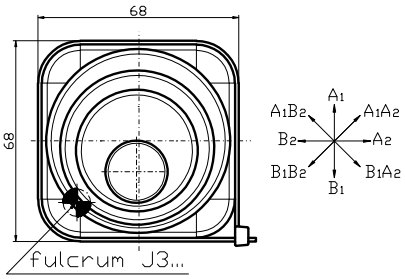
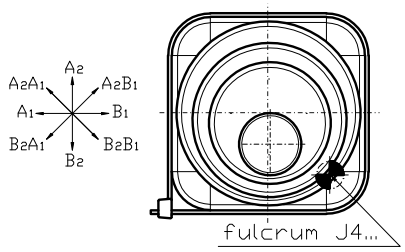
*** See page 6/6

OPERATION CONTROL

operation control	Code	operation control	Code
without standard hand lever 	C	with standard hand lever at 180° 	CLO
with standard hand lever 	CL	with stroke (flow) limiter 	CLR
with horizontal safety lever 	SHL	with limit switch 	CLS
with vertical safety lever 	SVL	with protection cap 	CP
		with cable control  Cables , single levers and joystick controls - on request	H
		without lever , with dust-proof plate 	Z

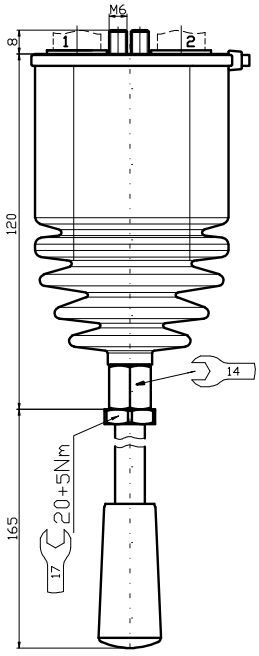
OPERATION CONTROL

Working scheme by assembly on the side of threaded ports A (standard)

	Code		Code
	J2...		J1...
	J3...		J4...

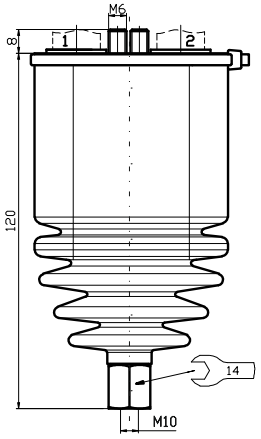
joystick with standard hand lever

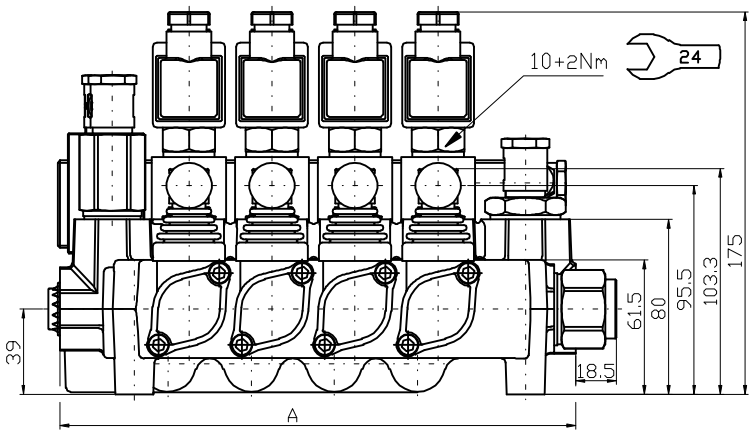
Code: J1L ; J2L ; J3L ; J4L



joystick without standard hand lever

Code: J1 ; J2 ; J3 ; J4

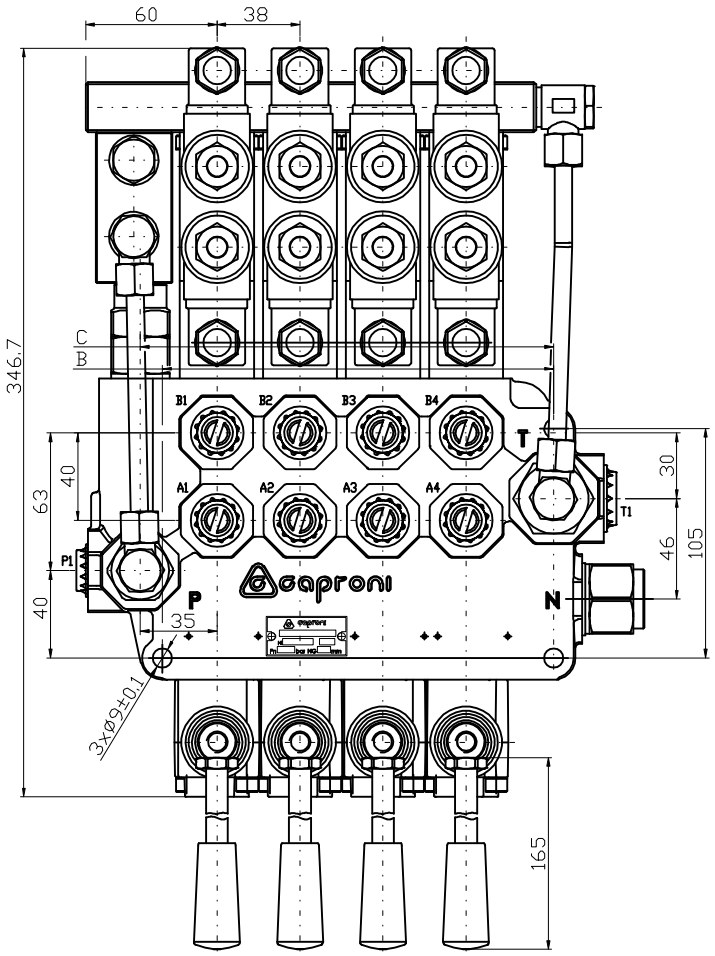




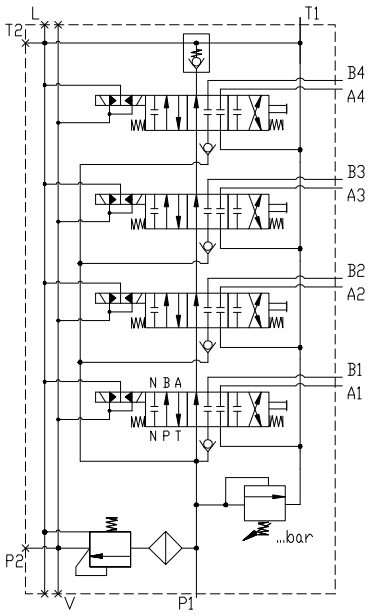
RM80PEHI/4/Q/4x/1CLA20-24/R/P1T1/G/N

On/Off electrohydraulic control (internal) operating features:

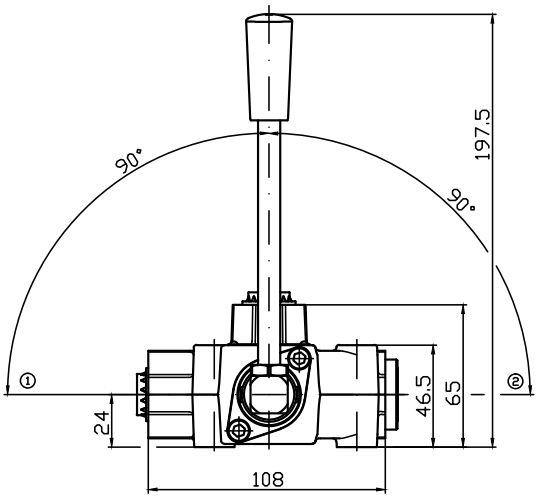
Pilot pressure - 10...50 bar
Max. pilot flow - 8 l/min
Filtration - 25 mm
Coil - 18W , duty cycle ED 100%
Voltage options - 12V DC , 24V DC , 110V RAC , 220V RAC
Integrated back pressure valve

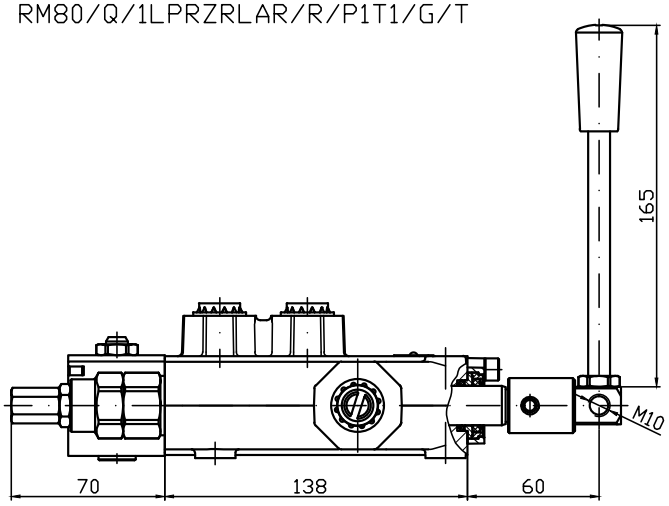


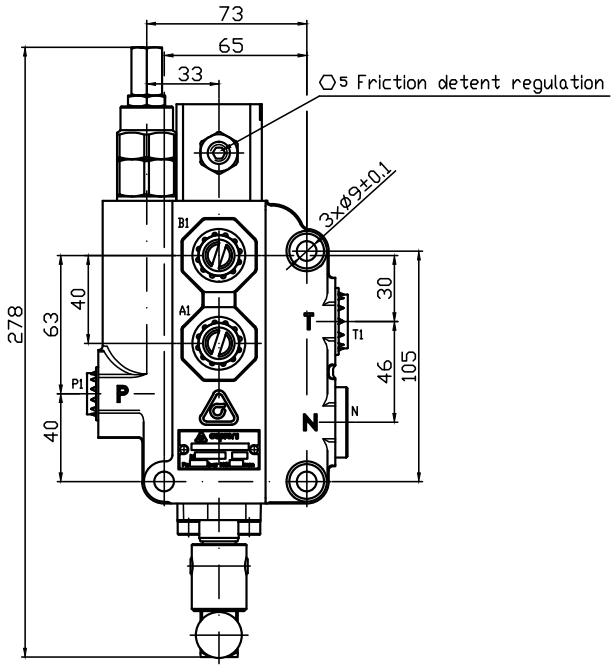
Scheme



RM80/Q/1LPRZRLAR/R/P1T1/G/T







Rotary control valve:
Smooth positioning the rotary lever in a set position by friction detent with notch in the neutral position
The rotary control valve provide good speed control for hydraulic motors (winch applications).
Available for marine applications – stainless steel spool and lever, all other parts – painted.

Scheme

