RCB Series

Hydraulic Remote Controls

Sectional hydraulic remote control 4 service ports, two control levers

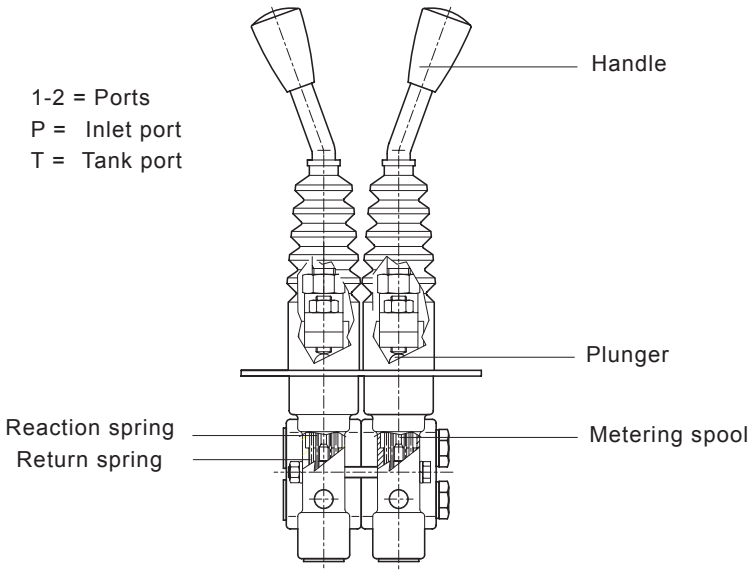
The hydraulic remote control RCB is capable of working with a maximum input pressure of 100 bar at a maximum oil input capacity of 16 l/min.

Low operating efforts, low energy consumption and low maintenance makes these hydraulic remote controls ideal for piloting remote control directional valves, variable displacement pumps and motors, auxiliary valves, frictions and hydraulic brakes.

Operating principle

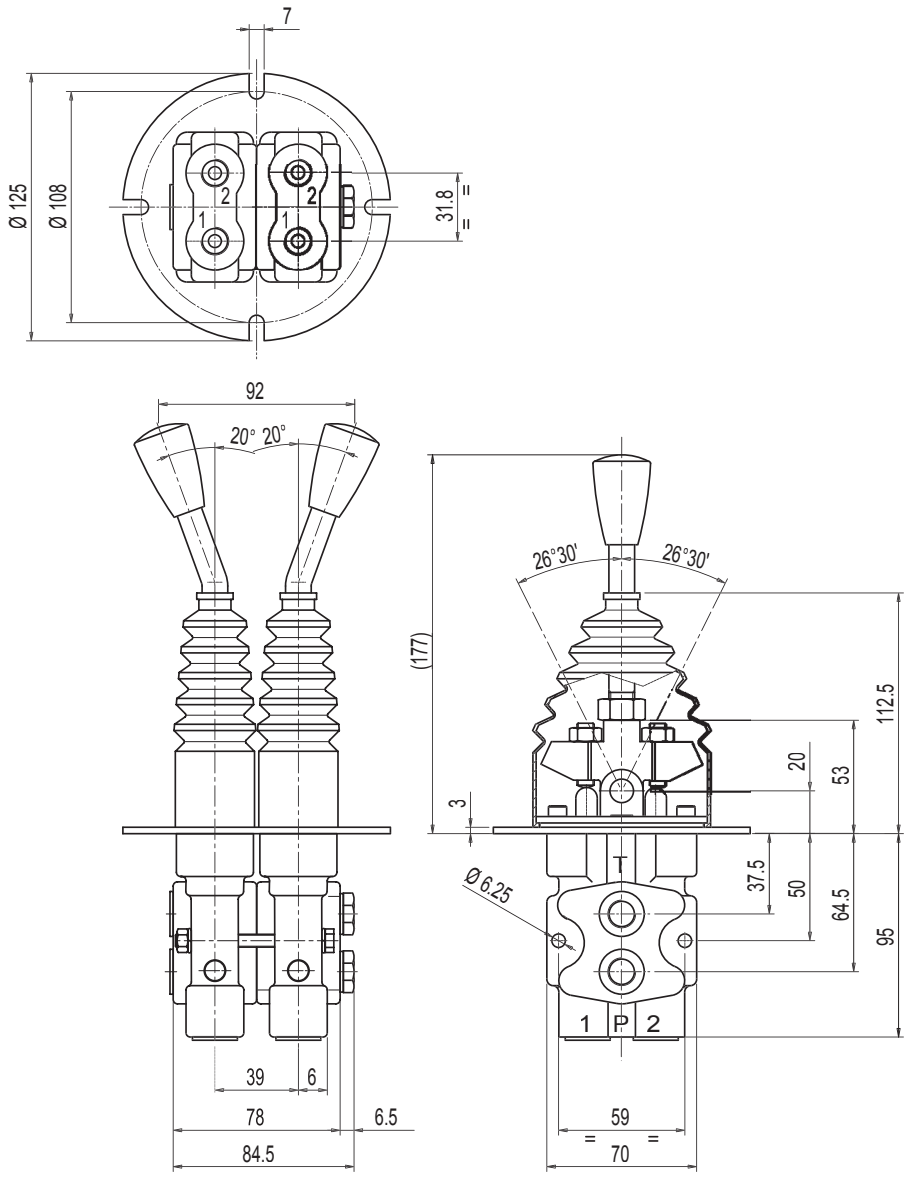
The hydraulic remote control RCB works according to the principle of direct-acting pressure reducing valves. In rest position, the joystick lever is held in neutral by the return spring; inlet port P is closed and ports are connected to tank port T. By selecting control lever, plunger compresses return spring and reaction spring through a cam mechanism; consequently it shifts the spool and opens the connection holes between inlet port P and service ports.

This causes a pressure increase on service ports that is proportional to the control lever stroke and the reaction spring.



Standard Working Conditions	
Maximum input pressure	1450 psi
Maximum back pressure on tank line	44 psi
Oil input capacity	4.2 gpm
Hysteresis	7.25 psi
Hydraulic fluid	Mineral oil
Fluid temperature range	-20°C - +80°C
Fluid viscosity range	10÷300 Cst
Recommended filtration	25 µ Absolute
Recommended operating pipes	8mm rigid, 1/4” BSP flexible
Leakage	3 cc/min (50 bar)
Technical Specifications	
Body	Cast iron
Surface coating	Zinc plated
Plunger	Stainless steel
Plunger guide	Brass

Dimensional drawing:

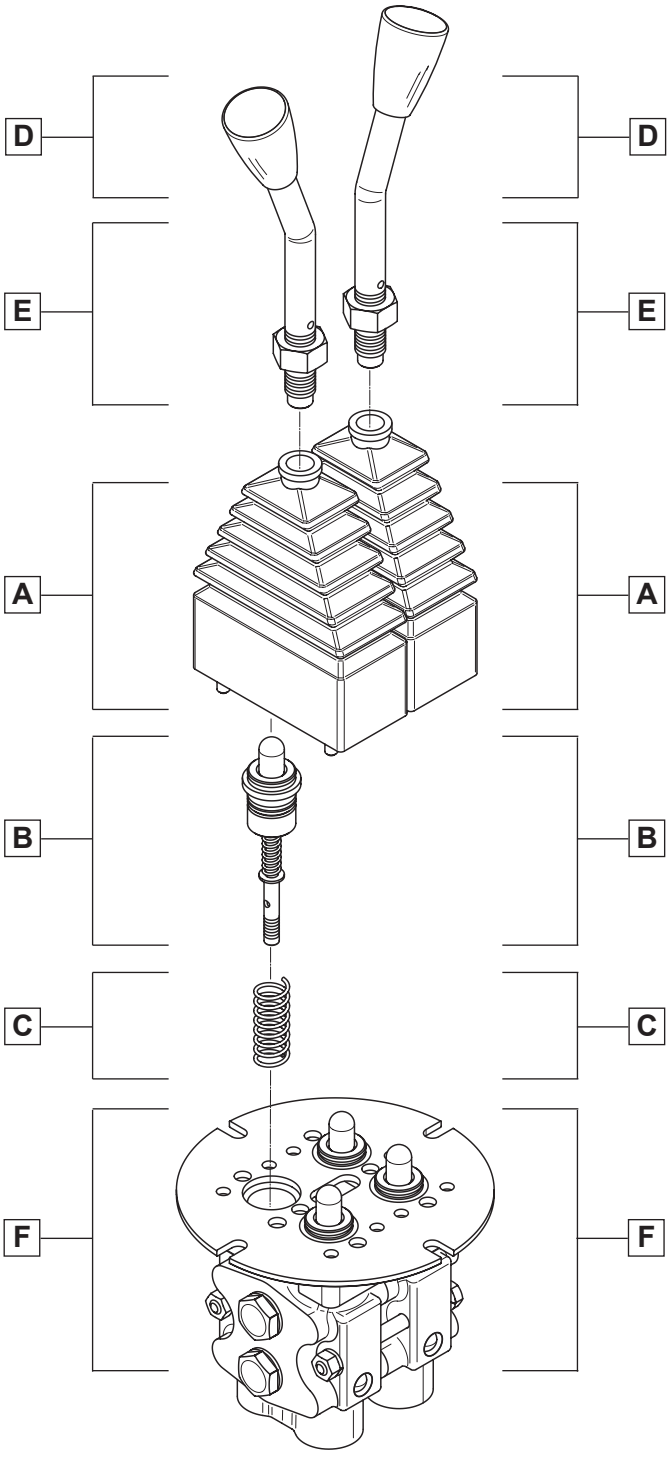


Weight	3.2 Kg
Tie-rod clamping torque	14 Nm

NOTE: *each hydraulic remote control is assembled with N° 2 tie rod kits including a tie rod, two nuts and two washers.*

How To Order

	Working section 1					Working section 2						
HC-RCB:	01	A01	MA	M	WP110	- 02	A01	MA	M	WP110	RA	G02
Product type	A	B	C	D	E	A	B	C	D	F	F	



A CONTROL

01 = control type

B METERING CURVE

A01 = curve type

C RETURN SPRING

MA = return spring type

NOTE: ordering row B and C, must be repeated for each port

D HANDLE

M = handle type

E LEVER ROD

WE = lever rod type

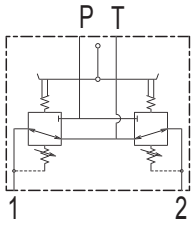
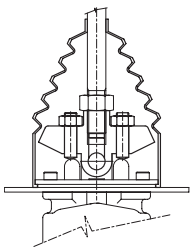
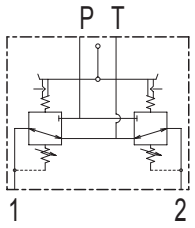
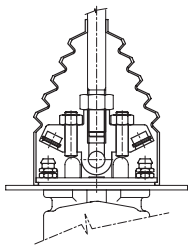
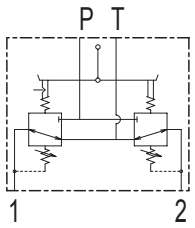
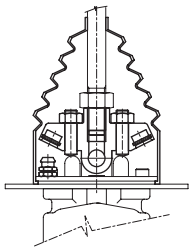
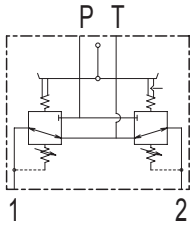
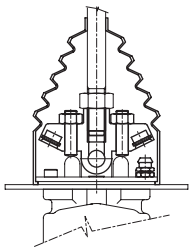
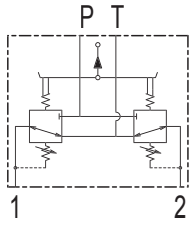
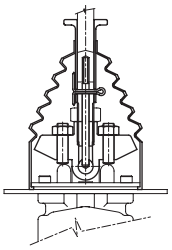
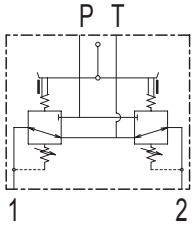
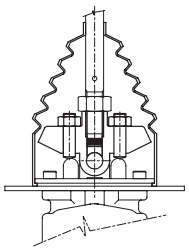
95 = lever rod length

F BODY ARRANGEMENT

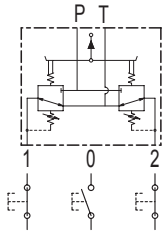
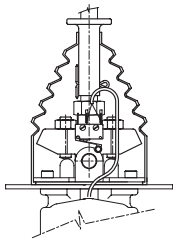
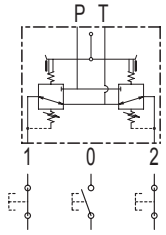
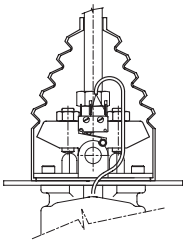
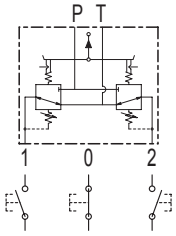
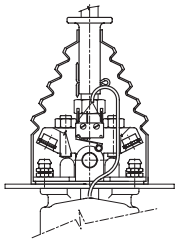
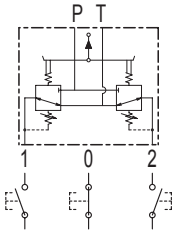
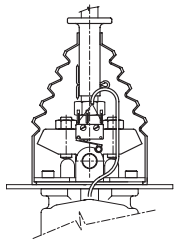
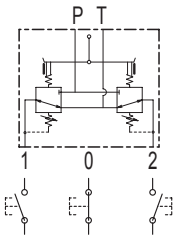
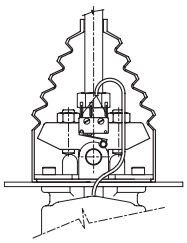
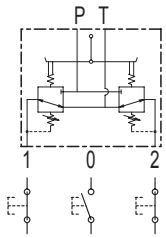
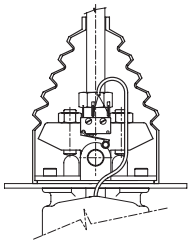
RA = body specification

G02 = threads

Controls

CODE	DIAGRAM	OVERALL DIMENSIONS	DESCRIPTION
01			Return spring in neutral position (standard)
02			Stroke end mechanical detent in position 1 and 2
03			Stroke end mechanical detent in position 1
04			Stroke end mechanical detent in position 2
05			Security handle in neutral position
06			Friction

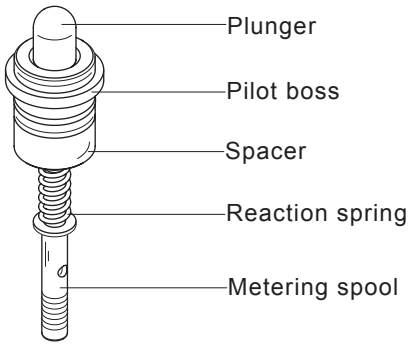
Metering Curve

CODE	DIAGRAM	OVERALL DIMENSIONS	DESCRIPTION
12			Security handle in neutral with micro-switch open in central position
13			Friction with micro-switch open in central position
14			Stroke end mechanical detent in position 1 and 2, security handle in neutral with micro-switch closed in central position
17			Security handle in neutral with micro-switch closed in central position
18			Friction with micro-switch closed in central position
19			Spring return in neutral with micro-switch open in central position

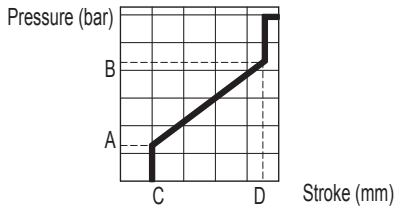
MICRO-SWITCHES SPECIFICATIONS CURRENT:

Direct current load resistive .....**5 A 30 VDC**
Direct current load inductive.....**3 A 250 VDC**
Alternating current load resistive .....**5 A 30 VAC**
Alternating current load inductive .....**2 A 250 VAC**

Metering curve



DIAGRAM



DESCRIPTION

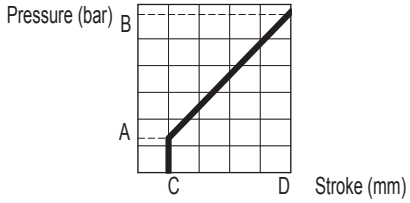
Linear metering curve with step

CURVE A

CODE		A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20
PRESSURE	A	5,8	5	2	6	0	4	5	2	5	2	4	11,5	10	7	7,5	6	0	4	6	8
	B	19,5	25	13	40	4	17	15	18	20	8	10	32	20	17	29	22	20	16	20,6	28
STROKE	C	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1	1,5	1,5	1,5
	D	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	6	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7	7	7,5

CODE		A21	A22	A23	A24	A25	A26	A27	A28	A29	A30	A31	A32	A33	A34	A35	A36				
PRESSURE	A	5	5,8	6,8	5,8	4,5	2,8	8	3	8	5,8	5,7	7	10,8	0	5,8	7,4				
	B	20,5	18,3	23,5	19,2	14,5	20,8	34	16,2	27,6	15,5	25,7	15,5	27,5	28	24	21				
STROKE	C	1,5	1,5	1	1,5	1	1,5	1,5	1,5	1,5	1,5	1,5	1,2	1	1,5	1,5	1,5				
	D	8	8	7,5	9,5	5	10	7,5	7,5	10	7,5	7,5	7,5	7,5	7,5	9,5	7,5				

DIAGRAM



DESCRIPTION

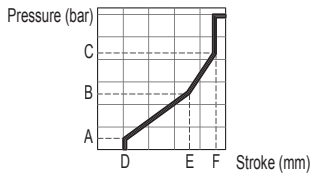
Linear metering curve without step

CURVE B

CODE		B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11	B12	B13	B14	B15	B16				
PRESSURE	A	5	5	5	2	7,5	5	4	3	6	2	7,2	8,3	8	6	10,4	6,5				
	B	22	19	16	16,5	32,5	20	10,5	14,5	24,3	19,3	21,3	22,4	22,8	23	25,5	12				
STROKE	C	1,5	1,5	1,5	1,5	1	1	1,5	1,5	1	1,5	1	1	1	1,5	1	1				
	D	8	8	8	8	8	8	8	8	8	8	7,5	7,5	7,5	8	7,5	8				

Metering curve

DIAGRAM



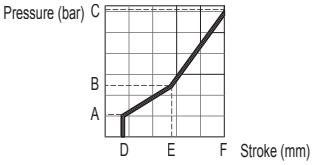
CODE		C01	C02	C03	C04	
PRESSURE	A	2	3	7	7	
	B	6	7	18	18	
	C	15	16	27	27	
STROKE	D	1,5	1,5	0,5	0,5	
	E	5	5	4,8	6,3	
	F	7,5	7,5	6,5	8	

DESCRIPTION

Broke line metering curve with step

CURVE C

DIAGRAM



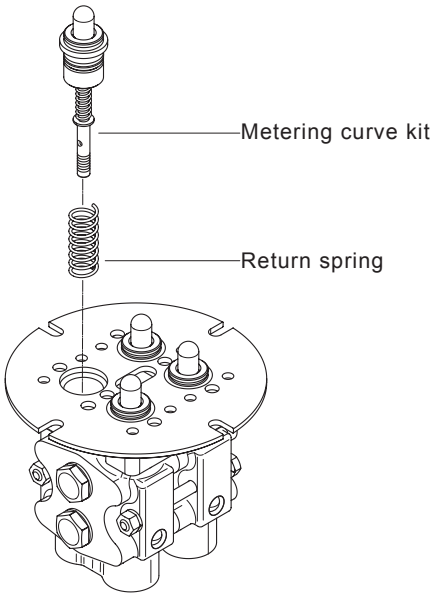
CODE		D01				
PRESSURE	A	2				
	B	6				
	C	15				
STROKE	D	1,5				
	E	5				
	F	8				

DESCRIPTION

Broke line metering curve without step

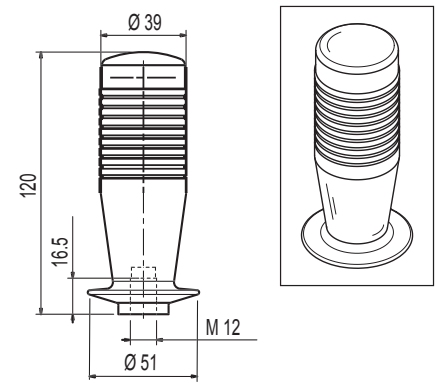
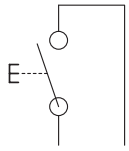
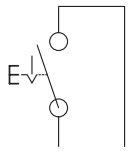
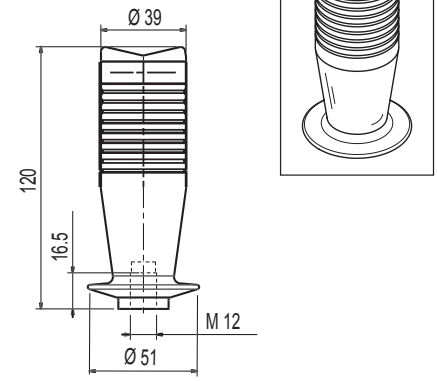
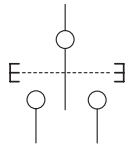
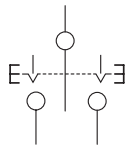
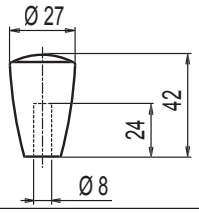
CURVE D

Return spring



CODE	MA	MB	MC	MD
Preload	29,5 N *3 kgf*	14,6 N *1,4 kgf*	73,5 N *7,5 kgf*	98 N *10 kgf*
End stroke load	44 N *4,5 kgf*	29,4 N *2,8 kgf*	135,5 N *13,8 kgf*	186 N *19 kgf*

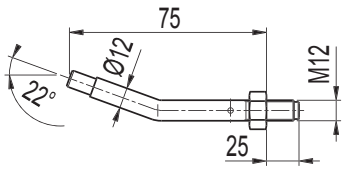
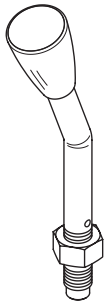
Handles

CODE	DIAGRAM	OVERALL DIMENSIONS	DESCRIPTION
A			Without micro-switch (standard)
B			With micro-swith to close
C			With micro-switch to close with detent
D			With dual micro-switch
E			With dual micro-switch to close with detent
M			Handle with lens

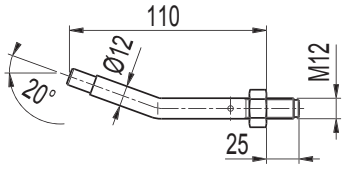
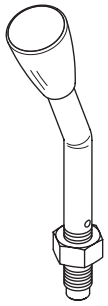
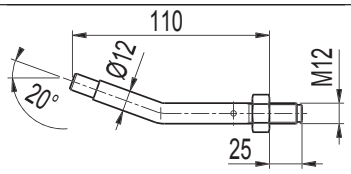
HANDLES MISCROSWITCH BREAKING BCDE

- DIRECT CURRENT. . . . . **load resistive 4.8A/30 VDC**
- ALTERNATING CURRRENT . . **load resistive 1.5A/250 VAC**
- PROTECTION . . . . . **IP 40**

Lever rods for handles type A-B-C-D-E

CODE	OVERALL DIMENSIONS	TO USE ONLY WITH FOLLOWING CONTROLS	
WV75	 	01 02 03	04 06 18

Lever rods for handles type M

CODE	OVERALL DIMENSIONS	TO USE ONLY WITH FOLLOWING CONTROLS		
WP110	 	01 02 03	04 06 13	18
WT110		05 12	14 17	19