REMOTE CONTROL

RANGE 2021

walvoil
MOTION BY PEOPLE

TECHNICAL CATALOGUE

A member of
INTERPUMP GROUP

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Additional information
This catalogue shows the product in the most standard configurations.
Please contact Sales Dpt. for more detailed information or special request.

WARNING!
All specifications of this catalogue refer to the standard product at this date.
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RC REMOTE CONTROL RANGE

GENERAL INDEX

HYDRAULIC REMOTE CONTROL

FOOT PEDAL

FEED UNIT

HYDRAULIC REMOTE CONTROL

Hydraulic remote controls that work by means of direct pressure reducing valve. They are especially suitable for remote controlling directional valves, pumps and motors, in small space thus ensuring high performances, quick and reliable responses both on mobile machinery and on industrial equipment. The range includes different hydraulic remote controls that are manufactured using proper material whose processing is carried out with technology methods, the most sophisticated tests and inspections, thus assuring a product at high reliability, suitable for strictest and exacting works.

QUICK REFERENCE GUIDE

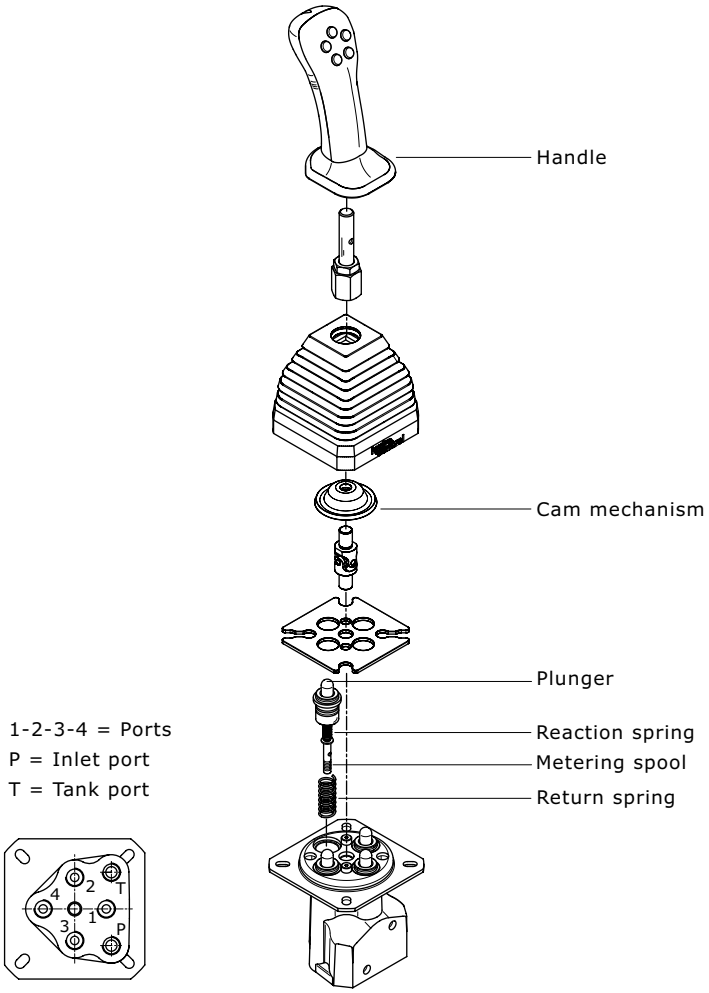
Type		Description	Number of ports	Inlet pressure bar (psi)	Weight kg (lb)	Standard threads
RCX		2 axis single lever remote control	4	100 (1450)	2.5 (5.5)	G 1/4 9/16”18 UNF
RCY		2 axis single lever remote control reduced operating force	4	100 (1450)	2.5 (5.5)	G 1/4 9/16”18 UNF
RCM		Stackable single axis levers remote control	2	60 (870)	1.5 (3.3)	G 1/4 9/16”18 UNF
RCB		Single axis levers two modules remote control	4	60 (870)	3.2 (7.1)	G 1/4 9/16”18 UNF

GENERAL SPECIFICATION

Description	Value
Maximum input pressure	100 bar (1450 psi)
Maximum back pressure on tank line	3 bar (43.5 psi)
Nominal flow rating	from 5 to 20 l/min (from 1.32 to 5.28 US gpm)
Hysteresis	< 1 bar (< 14.5 psi)
Hydraulic fluid	Mineral oil HL, HM (o HLP DIN 51524)
Fluid temperature range	from -20°C to 80°C (from -4°F to 176°F)
Fluid viscosity range	10 ÷ 300 cSt
Max contamination level	20/18/15 - ISO 4406:1999 (9 - NAS 1638)
Recommended filtration	β10 > 75 - ISO 16889:2008
Leakage (singol port)	3 cc/min @ 50 bar (725 psi)
Body material	Cast iron
Surface coating	Zin plated - international standards 2000/53/CE RoHS
Plunger material	Stainless steel
Plunger guide material	Brass

OPERATING PRINCIPLE

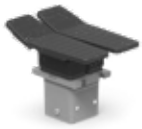
Hydraulic remote controls and foot pedals works according to the principle of direct-acting pressure reducing valves. In rest position, the Joystick lever or kit pedal is held in neutral by return spring; inlet port P is closed and the working ports are connected to tank port T. By operating the control lever or pedal, the plunger will compress the return spring and the reaction spring at the same time, with a cam motion; in this way the spool connected with the reaction spring will start to open the passage between the P line and the working port. The pressure in the working port increase and it's going to rise proportionally with the lever angle and the compression of the reaction spring.



FOOT PEDAL

The wide range of foot controls, available in a variety of configurations, allow the best choice of the controller in terms of functionality and overall dimensions. The different models offer many solutions of connections layout , in order to have simple and straightforward installation . The new RCS and RCT series also include different foot control types, with special care applied to their ergonomic and design features.

QUICK REFERENCE GUIDE

Type		Description	Number of ports	Inlet pressure (bar)	Weight (kg)	Standard threads
RCP		Foot pedal 2 working ports and low profile body	2	100 (1450)	3.4 (7.5)	G 1/4 9/16"18 UNF
RCF		Foot pedal lower ports	2	100 (1450)	4.1 (9.0)	G 1/4 9/16"18 UNF
RCD		Double foot pedal lower ports	2	60 (870)	3.2 (7.1)	G 1/4 9/16"18 UNF
RCS		Foot pedal lower ports	2	100 (1450)	4.1 (9.0)	G 1/4 9/16"18 UNF
RCT		Double foot pedal lower ports	4	100 (1450)	5.1 (11.2)	G 1/4 9/16"18 UNF
RCV		Hydraulic remote control one working port	1	100 (1450)	1 (2.2)	G 1/4 9/16"18 UNF

GENERAL SPECIFICATION

Description	Value
Maximum input pressure	100 bar (1450 psi)
Maximum back pressure on tank line	3 bar (43.5 psi)
Nominal flow rating	from 5 to 20 l/min (from 1.32 to 5.28 US gpm)
Hysteresis	< 1 bar (< 14.5 psi)
Hydraulic fluid	Mineral oil HL, HM (o HLP DIN 51524)
Fluid temperature range	from -20°C to 80°C (from -4°F to 176°F)
Fluid viscosity range	10 ÷ 300 cSt
Max contamination level	20/18/15 - ISO 4406:1999 (9 - NAS 1638)
Recommended filtration	β10 > 75 - ISO 16889:2008
Leakage (singol port)	3 cc/min @ 50 bar (725 psi)
Body material	Cast iron
Surface coating	Zin plated - international standards 2000/53/CE RoHS
Plunger material	Stainless steel
Plunger guide material	Brass

OPERATING PRINCIPLE

Hydraulic remote controls and foot pedals works according to the principle of direct-acting pressure reducing valves. In rest position, the Joystick lever or kit pedal is held in neutral by return spring; inlet port P is closed and the working ports are connected to tank port T. By operating the control lever or pedal , the plunger will compress the return spring and the reaction spring at the same time, with a cam motion; in this way the spool connected with the reaction spring will start to open the passage between the P line and the working port. The pressure in the working port increase and it’s going to rise proportionally with the lever angle and the compression of the reaction spring.

FEED UNIT

Feed unit range is used when oil is needed at a pressure that is lower than the pressure of primary circuit and without installing an auxiliary pump. It has been designed in order to feed remote control circuits or to adjust other devices , such as pumps and motors. It works by means of direct pressure reducing valves and it is usually equipped with an accumulator, in order to guaranty a certain number of operations, even if the machine is power off or in failure condition. The accumulator also increase the reaction time of the controller connected. In order to avoid to damage the accumulator and the secondary circuit, the feed unit is equipped with an adjustable relief valve, connected upstream to the check valve that prevent the total discharge of the accumulator as soon as the machine is power off.

QUICK REFERENCE GUIDE

Type		Description	Number inlets	Inlet pressure bar (psi)	Weight kg (lb)	Standard threads
SU2		Two lines feed unit at high pressure	2	350 (5100)	1.7 (3.7)	G 1/4 9/16"18 UNF
SU3		Three lines feed unit at high pressure	3	350 (5100)	2.0 (4.4)	G 1/4 9/16"18 UNF
SE2/1 VPE		Feed unit with 2 inlets at high pressure and 1 outlet with reduced pressure with dump valve	2	350 (5100)	2.6 (5.7)	G 1/4 9/16"18 UNF
SE3/1 VPE		Feed unit with 3 inlets at high pressure and 1 outlet with reduced pressure with dump valve	3	350 (5100)	2.9 (6.4)	G 1/4 9/16"18 UNF
SE3/2 VPE		Feed unit with 3 inlets at high pressure and 2 outlets with reduced pressure with dump valve on each outlet	3	350 (5100)	4.9 (10.8)	G 1/4 9/16"18 UNF
SE3/3 VPE		Feed unit with 3 inlets at high pressure and 3 outlets with reduced pressure with dump valve on each outlet	3	350 (5100)	6.0 (13.2)	G 1/4 9/16"18 UNF

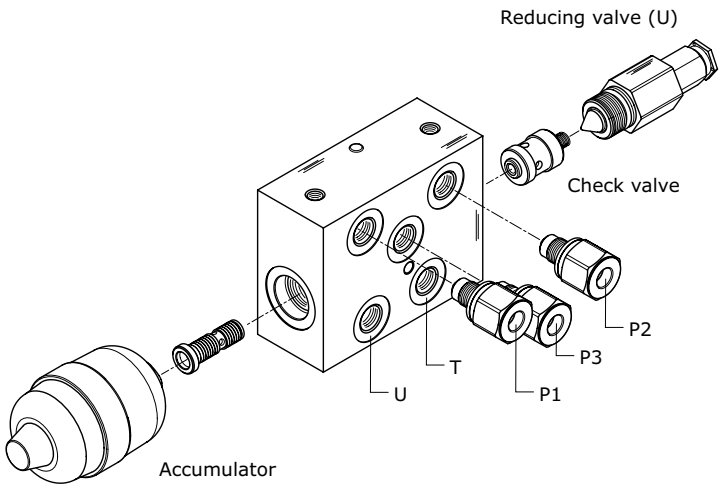
GENERAL SPECIFICATIONS

Description	Value
Maximum input pressure	350 bar (5100 psi)
Pressure on U port line	from 10 to 70 bar (from 145 to 1015 psi)
Maximum back pressure on tank line	3 bar (43.5 psi)
Minimum pressure in P1	< 1 bar (< 14.5 psi)
Nominal flow rating	from 5 to 20 l/min (from 2.32 to 5.28 US gpm)
Flow on service port U (without accumulator)	8 l/min (2 US gpm)
Hydraulic fluid	Mineral oil HL, HM (o HLP DIN 51524)
Fluid temperature range	from -20°C to 80°C (from -4°F to 176°F)
Fluid viscosity range	10 ÷ 300 cSt
Max contamination level	20/18/15 - ISO 4406:1999 (9 - NAS 1638)
Recommended filtration	β10 > 75 - ISO 16889:2008
Accumulator precharge pressure	10 bar (145 psi)
Maximum working pressure accumulator	210 bar (3050 psi)
Maximum allowed pressure ratio	≤ 6/1
Weight accumulator (0,35 l)	3 kg (6.6 lb)
Weight accumulator (0,75 l)	2.5 kg (5.5 lb)
Weight accumulator (1,50 l)	5.7 kg (12.6)
Body material	Cast iron
Surface coating	Zinc plated - International standards 2000/53/CE RoHS

Because of the small dimensions, the setting screw will adjust both the reduced pressure as well as the relief valve pressure. The relief valve setting pressure will be 10 bar (145 psi) higher than the reduced pressure setup; see the pressure setting diagram. Feed unit may be installed in any mounting position but the accumulator should be as far as possible from heat sources.

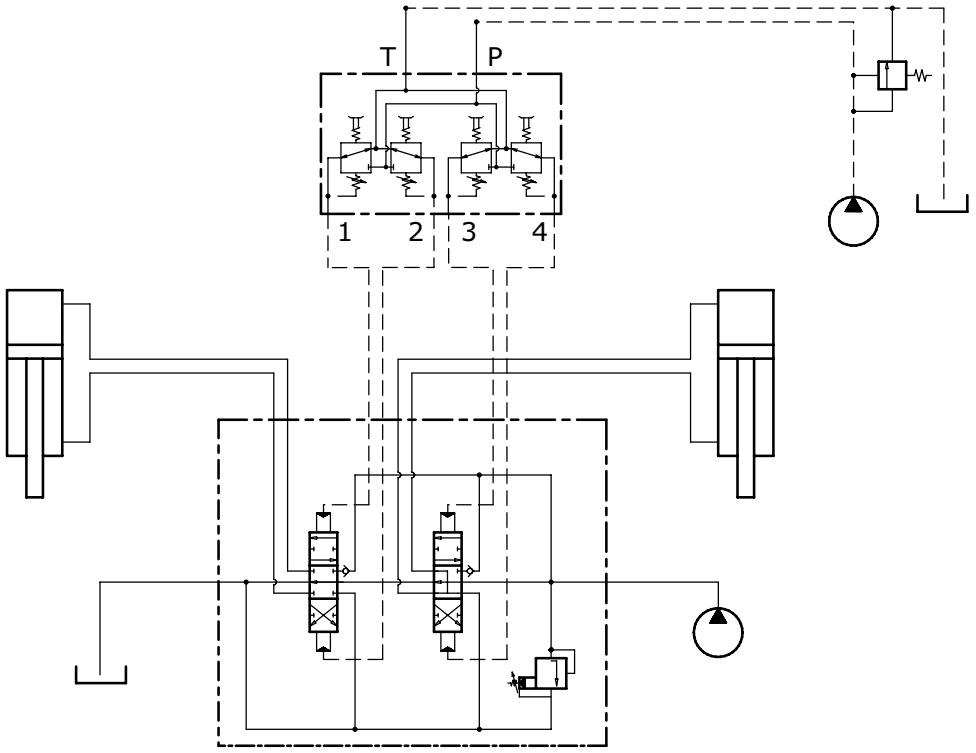
OPERATING PRINCIPLE

The purpose of feed unit SU and SE is to fit hydraulic remote controls in an hydraulic system working at high pressure with reduced flow at a low pressure. Operating principle is that of a direct acting pressure reducing valve. High pressure fluid from the main circuit is routed through ports P1, P2 and P3: pressure is decreased to the value required for feeding the hydraulic controls by means of a pressure reducing valve that directs the necessary fluid to the control via port (U). Feed units are fitted with an accumulator that satisfies short term peak power demands and is a source of emergency power should the main circuit pressure fail. To avoid the accumulator discharge, low pressure circuit is protected both by the adjustable main relief valve inside the cartridge of the pressure reducing valve and by the check valve. To start the hydraulic system, a backpressure of at least 10 bar on service port (P) has to be applied when the accumulator is discharged.

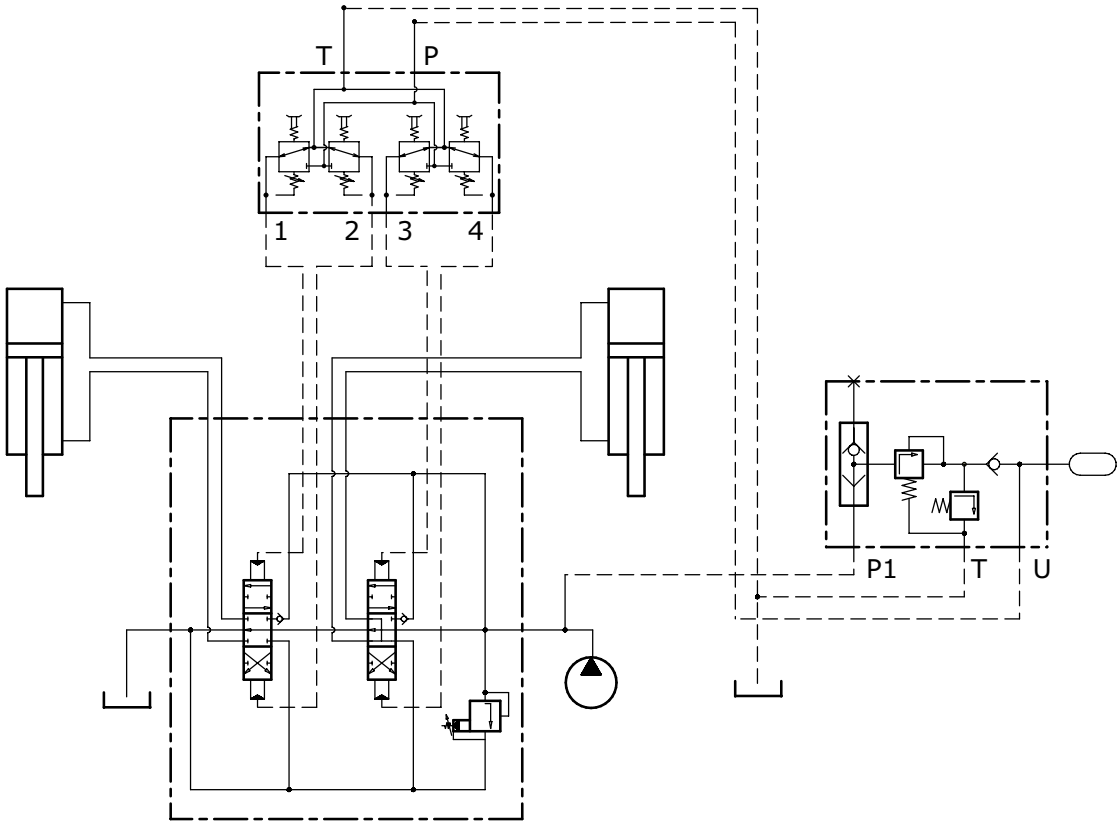


STANDARD LAYOUT DRAWINGS

HYDRAULIC REMOTE CONTROL INPUT WITH AUXILIARY PUMP



HYDRAULIC REMOTE CONTROL INPUT WITH FEED UNIT COMING FROM THE MAIN CIRCUIT



THREAD CODES

Ports dimensions are indicated by an ordering code, common throughout the range of remote controls. The following tables highlight the available threads.

BSP - THREAD		
G02	G 1/4	ISO 228-1 / ISO 1179-1

UN / UNF - THREAD		
U02	9/16 - 18 (SAE 6)	ISO 725 / ISO 11926-1

All information and diagrams in this catalogue refer to a mineral base oil VG46 at 50°C (122°F) temperature (32 cSt kinematic viscosity).

RCX 2 AXIS SINGLE LEVER REMOTE CONTROL

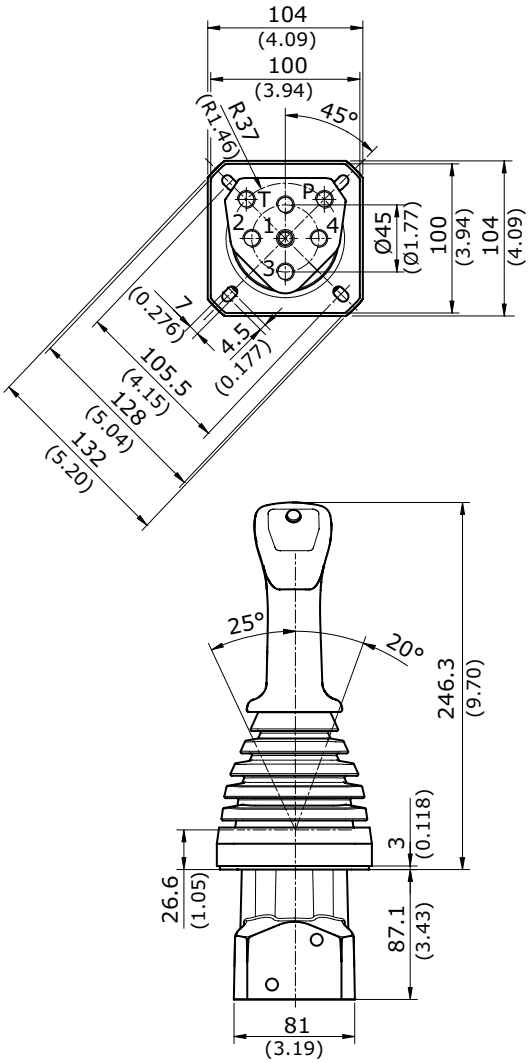
RCX lever conytrol belongs to wide range of hydraulic remote controls; the lever's anti-swaying system and the ergonomic handle provides great sensitivity while manoeuvring and makes his use very comfortable for the operator. Low operating efforts, low energy consumption and low maintenance make these hydraulic remote controls RCX ideal for piloting remote control directional valves, variable displacement pumps and motors, auxiliary valves, frictions and hydraulic brakes.

TECHNICAL SPECIFICATIONS	
Max pressure:	**100 bar (1450 psi)**
Nominal flow rating:	**from 5 to 20 l/min (from 1.32 to 5.28 US gpm)**
Weight:	**2.5 Kg (5.5 lb)**

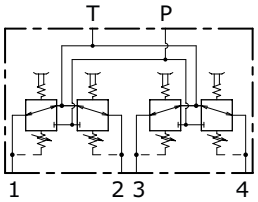
APPLICATIONS

Mini-excavators, Mini Steer Loaders, Backhoe Loaders, Wheel Loaders, Tractors, Boom Mower

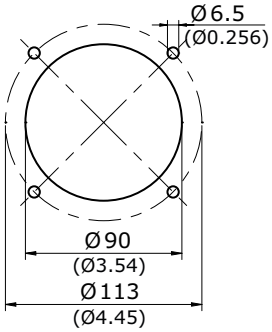
DIMENSIONS



HYDRAULIC SCHEME



HOLDER HOLE DIMENSION



2 AXIS SINGLE LEVER REMOTE CONTROL RCX

ORDER EXAMPLE = RCX-/ 03 - A01 MA - F05F00R2 - WF53 - RAG02

RCX: product type

1 CONTROL CLASSIFICATION:
- **03** control type

2 METERING CURVE:
- **A01** curve type

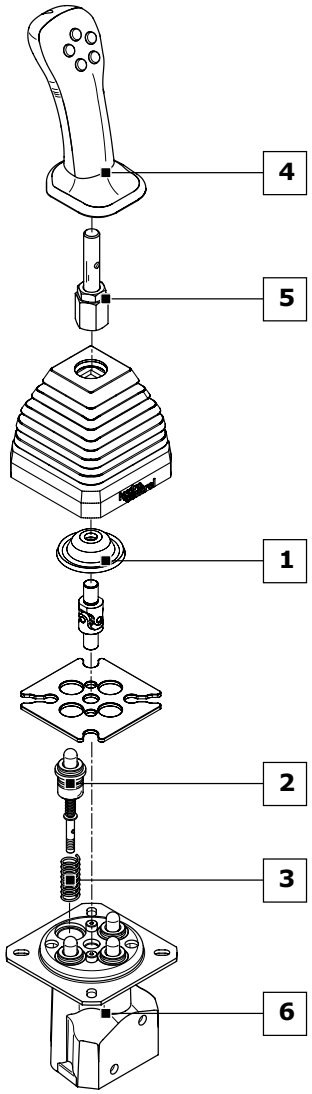
3 RETURN SPRING:
- **MA** spring return type

4 HANDLE CLASSIFICATION:
- **F** handle type
- **05F** front push-buttons arrangement
- **00R** rear push-buttons arrangement
- **2** handle position compared to ports

5 LEVER ROD CLASSIFICATION:
- **WF** lever rod type
- **53** lever rod length

6 BODY ARRANGEMENT:
- **RA** body specification
- **G02** body thread

Ordering row 2 and 3, must be repeated for each port
complete sample: **RCX-/03-A01MA-A01MA-A01MA-A01MA-F05F00R2-WF53-RAG02**

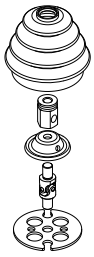
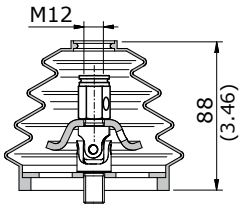
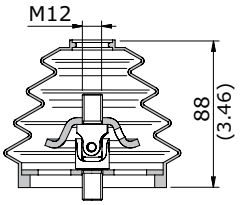
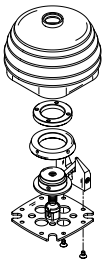
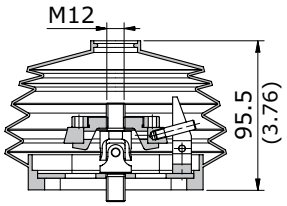
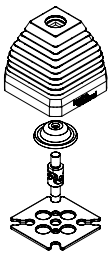
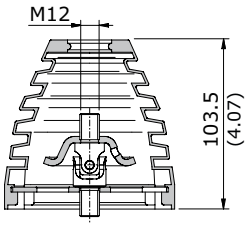
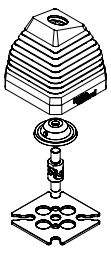
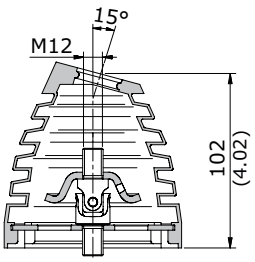
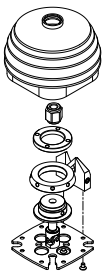
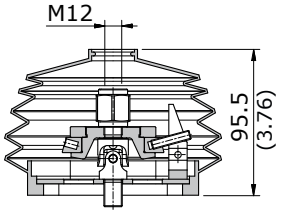


1	**CONTROL CLASSIFICATION:** (page 14)
00	Spring return in neutral pos.with external handle arrangement
01	Spring return in neutral position
02	Spring return in neutral pos.with detent in only one service port
03	Spring return in neutral pos.with square bellow for straight lever rod
04	Spring return in neutral pos.with square bellow for bent lever rod
2	**METERING CURVE:** (page 70)
A01	Linear metering curve with step
B01	Linear metering curve without step
C01	Broken line metering curve with step
D01	Broken line metering curve without step
3	**RETURN SPRING:** (page 78)
MA	Preload 25 N (5.6 lbf) - End stroke load 48 N (10.8 lbf)
MB	Preload 14 N (3.1 lbf)- End stroke load 27 N (6.1 lbf)
MC	Preload 73 N (16.4 lbf) - End stroke load 135 N (30.3 lbf)
MD	Preload 89 N (20.0 lbf)- End stroke load 169 N (38.0 lbf)
4	**HANDLE CLASSIFICATION:** (page 80)
A	Without micro-switch
B	With micro-switch to close
D	With dual micro-switch
F	Ergonomic handle
5	**LEVER ROD CLASSIFICATION:** (page 16)
WF53	Straight standard lever for "F" handle
WG51	Bented standard lever for "F" handle
6	**BODY ARRANGEMENT:** (page 17)
RAG02	Standard Body (G 1/4 ports)
RBG02	Body with shuttle valve for translation (G 1/4 ports)

RCX 2 AXIS SINGLE LEVER REMOTE CONTROL

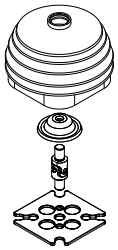
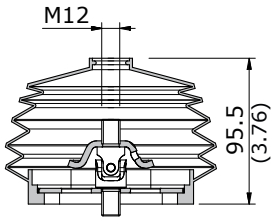
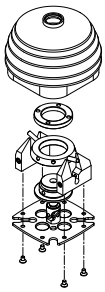
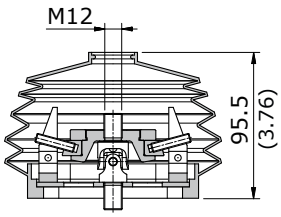
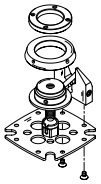
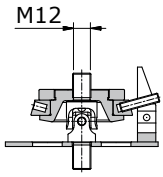
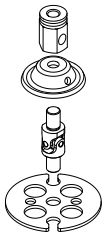
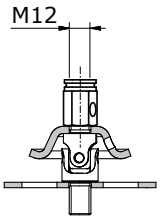
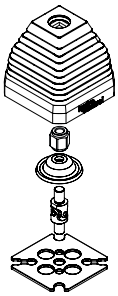
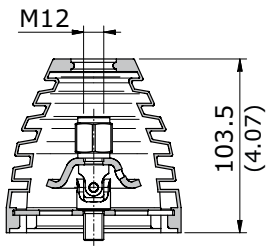
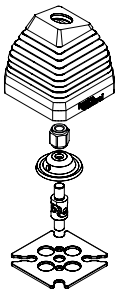
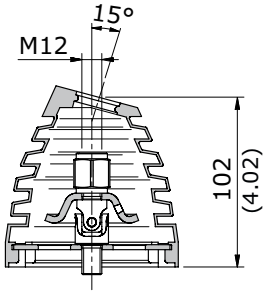
CONTROL KIT CLASSIFICATION

All controls installed on the remote control RCX are interchangeable. Lever rod type must be choosen according to different control kit (see quick reference guide pag.13-14). The controls shown correspond to standard configurations; for different applications contact our Sales Dept.

Code	Configuration	Dimensions	Description
00			Spring return in neutral position with round bellow and female adapter for external handle
01			Spring return in neutral position with round bellow
02			Spring return in neutral position with detent in one working port NOTE: port where to apply mechanical detent must be specified
03			Spring return in neutral position with square bellow for straight lever rod
04			Spring return in neutral position with square bellow for bent lever rod
20			Spring return in neutral position with detent in one working port and female adapter for external handles NOTE: port where to apply mechanical detent must be specified

2 AXIS SINGLE LEVER REMOTE CONTROL RCX

CONTROL KIT CLASSIFICATION

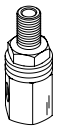
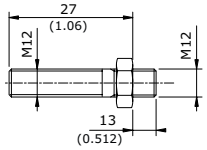
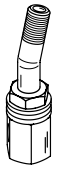
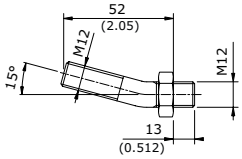
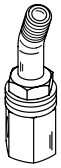
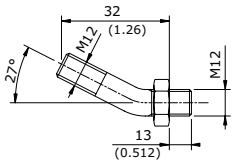
Code	Configuration	Dimensions	Description
21			Spring return in neutral position with oversized bellow (bellow is the same for detent control)
22			Spring return in neutral position with detent in two working port NOTE: ports where to apply mechanical detents must be specified
23			Spring return in neutral position with detent in one working port, without bellow NOTE: port where to apply mechanical detent must be specified
40			Spring return in neutral position with female adapter for external handle, without bellow
50			Spring return in neutral position with straight square bellow and female adapter for external handle
51			Spring return in neutral position with bent square bellow and female adapter for external handle

RCX 2 AXIS SINGLE LEVER REMOTE CONTROL

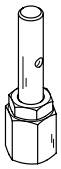
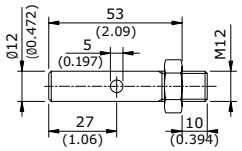
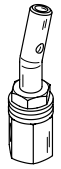
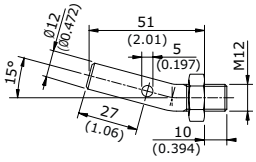
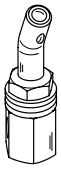
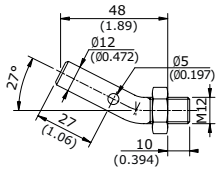
LEVER ROD CLASSIFICATION

The lever rod kits applied to all the RCX hydraulic remote controls change according to the type of control used and, above all, the type of handle. For improved clarity, all the possible lever rod configurations divided according to handle are listed here below. Straight and curved lever rods are available in several lengths and dimensions.

IDENTIFICATION ROD LEVER HANDLE "**A-B-D**" - QUICK REFERENCE GUIDE

Code		Dimensional drawing	Control type											
			00	01	02	03	04	20	21	22	23	40	50	51
WA27				•	•				•	•	•			
WB52				•	•				•	•	•			
WD32				•	•				•	•	•			

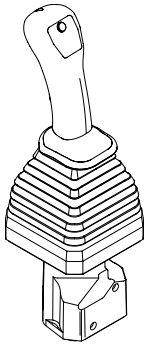
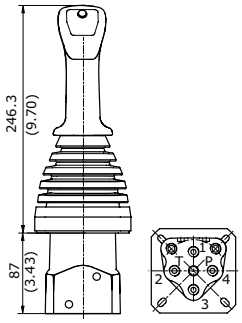
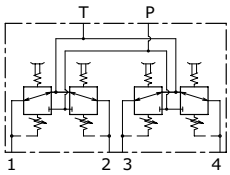
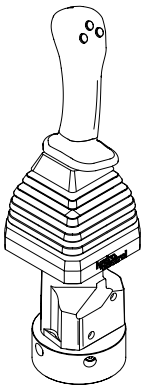
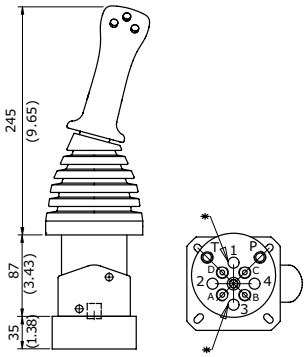
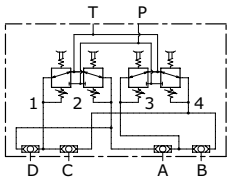
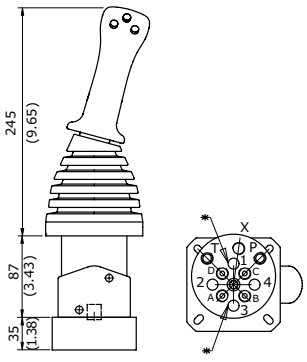
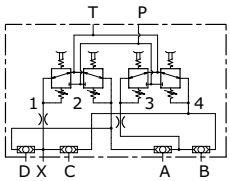
IDENTIFICATION ROD LEVER HANDLE "**F**" - QUICK REFERENCE GUIDE

Code		Dimensional drawing	Control type											
			00	01	02	03	04	20	21	22	23	40	50	51
WF53				•	•	•			•	•	•			
WG51				•	•		•		•	•	•			
WH48				•	•		•		•	•	•			

2 AXIS SINGLE LEVER REMOTE CONTROL RCX

BODY ARRANGEMENT

The remote hydraulic RCX body has two versions: standard body and body with shuttle valve for translation.
The set-up for translation applications (code: RB) includes a flanged plate with internal shuttle valves allowing a single working port control to be split between two ports. In this way, action on the lever will generate two separate pressure signals, allowing dedicated machine translation devices to be controlled.

Code	Configuration	Dimensions	Scheme	Description
RAG02				Standard body G 1/4 ports
RAU02				Standard body 9/16" - 18 UNF ports
RBG02				Body with shuttle valve for translation G 1/4 ports
RBU02				Body with shuttle valve for translation 9/16" - 18 UNF ports
RB01G02			 (*) Chokes Ø 2 mm on ports 1 - 3	Body with shuttle valve for translation with auxiliary port (X) for Alert G 1/4 ports
RB01U02				Body with shuttle valve for translation with auxiliary port (X) for Alert 9/16" - 18 UNF ports

As an alternative to the "RB01" version, other set-ups are available with different flow restrictor diameters and configurations on the working ports; for more information contact our Sales Dept.

RCY 2 AXIS SINGLE LEVER REMOTE CONTROL REDUCED OPERATING FORCE

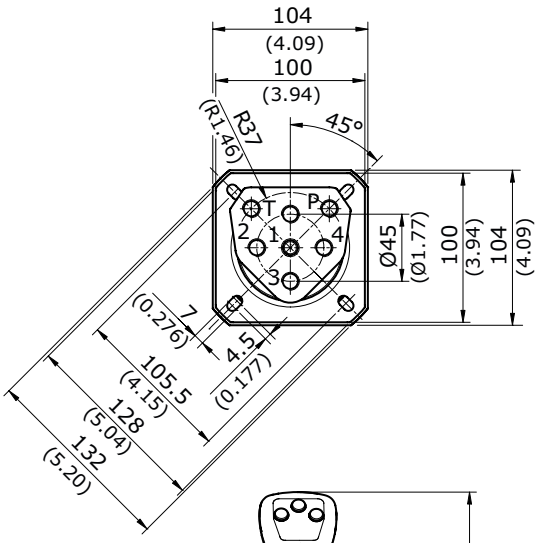
The new RCY hydraulic remote control is an evolution of the RCX model. It adds to the variety of options and solutions offered by RCX with an upgraded hydraulic control system, allowing the operating comfort to be improved; the reduced-diameter control spool allows the required operating effort to be reduced by approximately 30%, without affecting the control, hysteresis and accuracy characteristics of this device.

TECHNICAL SPECIFICATIONS	
Max pressure:	**100 bar (1450 psi)**
Nominal flow rating:	**from 5 to 20 l/min (from 1.32 to 5.28 US gpm)**
Weight:	**2.5 Kg (5.5 lb)**

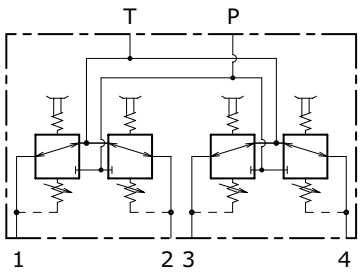
APPLICATIONS

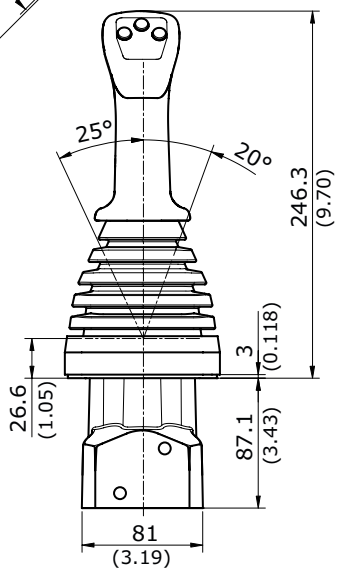
Mini-excavators, Mini Steer Loaders, Backhoe Loaders, Wheel Loaders, Tractors, Boom Mower

DIMENSIONS

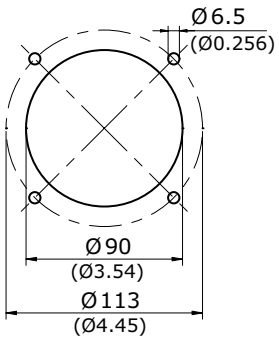


HYDRAULIC SCHEME





HOLDER HOLE DIMENSION



2 AXIS SINGLE LEVER REMOTE CONTROL REDUCED OPERATING FORCE RCY

ORDER EXAMPLE = RCY-/ 03 - A01 MB - F02F00R1 - WF53 - RAG02

RCY product type

1) CONTROL CLASSIFICATION:
- **03** control type

2) METERING CURVE:
- **A01** curve type

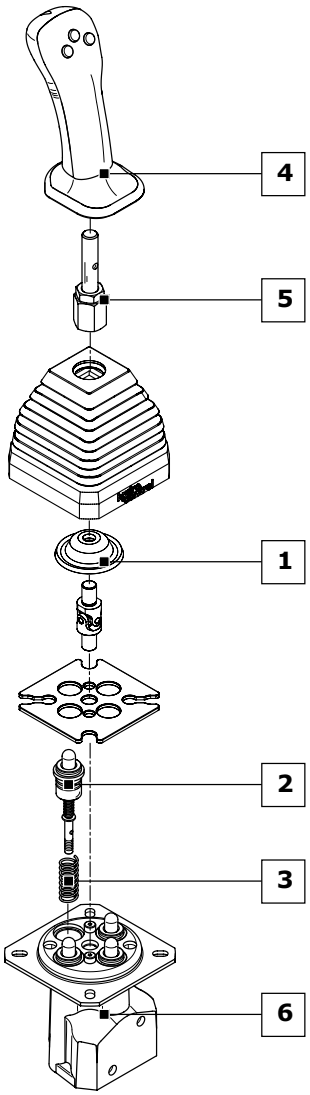
3) RETURN SPRING:
- **MB** spring return type

4) HANDLE CLASSIFICATION:
- **F** handle type
- **03F** front push-buttons arrangement
- **00R** rear push-buttons arrangement
- **(2)** handle position compared to ports

5) LEVER ROD CLASSIFICATION:
- **WF** lever rod type
- **53** lever rod length

6) BODY ARRANGEMENT:
- **RA** body specification
- **G02** body thread

Ordering row 2 and 3, must be repeated for each port
complete sample: **RCY-/03-A01MB-A01MB-A01MB-A01MB-F03F00R2-WF53-RAG02**



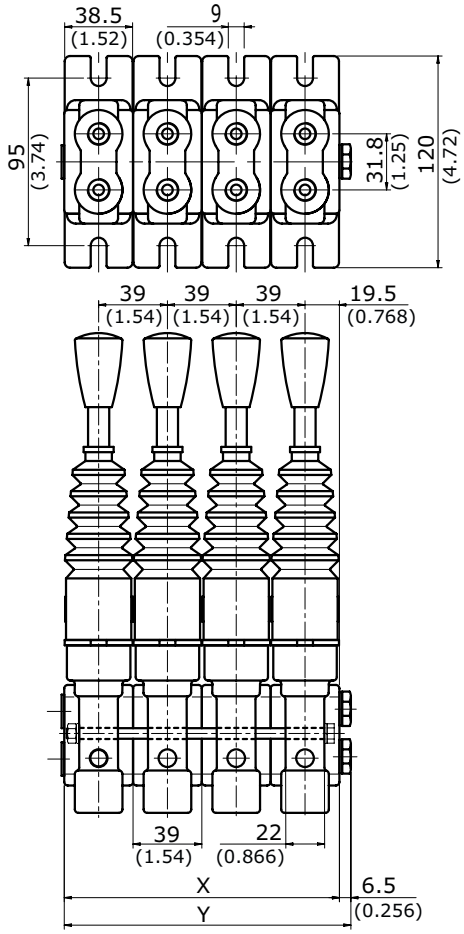
1	**CONTROL CLASSIFICATION:** (page 14)
00	Spring return in neutral pos.with external handle arrangement
01	Spring return in neutral position
02	Spring return in neutral pos.with detent in only one working port
03	Spring return in neutral pos.with square bellow for straight lever rod
04	Spring return in neutral pos.with square bellow for bent lever rod
2	**METERING CURVE:** (page 75)
A01	Linear metering curve with step
B01	Linear metering curve without step
C01	Broken line metering curve with step
D01	Broken line metering curve without step
3	**RETURN SPRING:** (page 78)
MA	Preload 25 N (5.6 lbf) - End stroke load 48 N (10.8 lbf)
MB	Preload 14 N (3.1 lbf)- End stroke load 27 N (6.1 lbf)
MC	Preload 73 N (16.4 lbf) - End stroke load 135 N (30.3 lbf)
MD	Preload 89 N (20.0 lbf)- End stroke load 169 N (38.0 lbf)
4	**HANDLE CLASSIFICATION:** (page 80)
A	Without micro-switch
B	With micro-switch to close
D	With dual micro-switch
F	Ergonomic handle
5	**LEVER ROD CLASSIFICATION:** (page 16)
WF53	Straight standard lever for "F" handle
WG51	Bented standard lever for "F" handle
6	**BODY ARRANGEMENT:** (page 17)
RAG02	Standard Body (G 1/4 ports)
RBG02	Body with shuttle valve for translation (G 1/4 ports)

RCM STACKABLE SINGLE AXIS LEVER REMOTE CONTROL

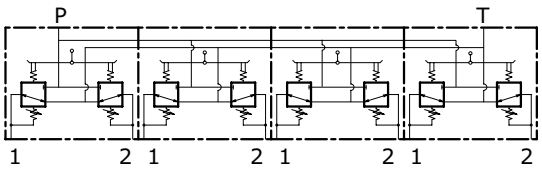
RCM lever control belongs to the wide range of hydraulic remote controls. Low operating efforts, low energy consumption and low maintenance make these hydraulic remote controls RCM ideal for piloting remote control directional valves, variable displacement pumps and motors, auxiliary valves, frictions and hydraulic brakes. Each hydraulic remote control is assembled with N.2 tie rod kits which include a tie rod, two nuts and two washers. It can be assemble up to 12 working sections.

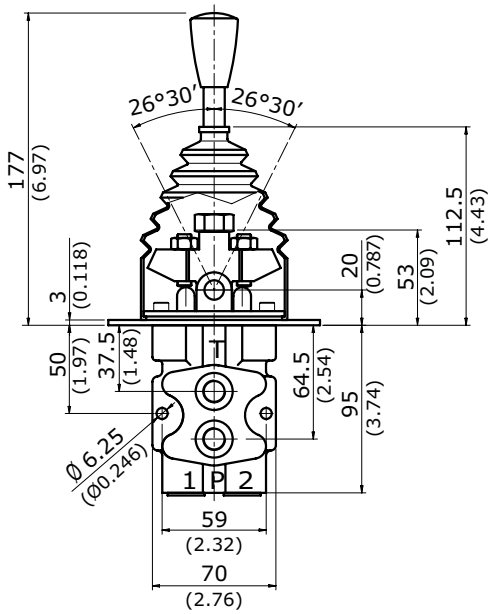
TECHNICAL SPECIFICATIONS	
Working section number:	**1 - 12**
Max pressure:	**60 bar (870 psi)**
Nominal flow rating:	**from 5 to 20 l/min (from 1.32 to 5.28 US gpm)**
Weight RCM/1:	**1.5 Kg (3.3 lb)**
Tie rod clamping torque:	**14 Nm (10.3 lbft)**
APPLICATIONS	
Mini Steer Loaders, Backhoe Loaders, Tractors	

DIMENSIONS



HYDRAULIC SCHEME





TYPE	/1	/2	/3	/4	/5	/6	/7	/8	/9	/10	/11	/12
X mm (in)	39 (1.54)	78 (3.07)	117 (4.61)	156 (6.14)	195 (7.68)	234 (9.21)	273 (10.75)	312 (12.28)	351 (13.82)	390 (16.35)	429 (16.89)	468 (18.43)
Y mm (in)	45.5 (1.79)	84.4 (3.32)	123.5 (4.86)	162.5 (6.40)	201.5 (7.93)	240.5 (9.47)	279.5 (11.00)	318.5 (12.54)	357.5 (14.07)	396.5 (15.61)	435.5 (17.15)	474.5 (18.68)
Weights kg (lb)	1.5 (3.3)	3 (6.6)	4.5 (9.9)	6 (13.2)	7.5 (16.5)	9 (19.8)	10.5 (23.1)	12 (26.5)	13.5 (29.8)	15 (33)	16.5 (36.4)	18 (39.7)

STACKABLE SINGLE AXIS LEVER REMOTE CONTROL RCM

ORDER EXAMPLE = RCM/1/ 01 - A01 MA - M WE95 - RAG02

RCM product type
/1 working section number

1 CONTROL CLASSIFICATION:
01 control type

2 METERING CURVE:
A01 curve type

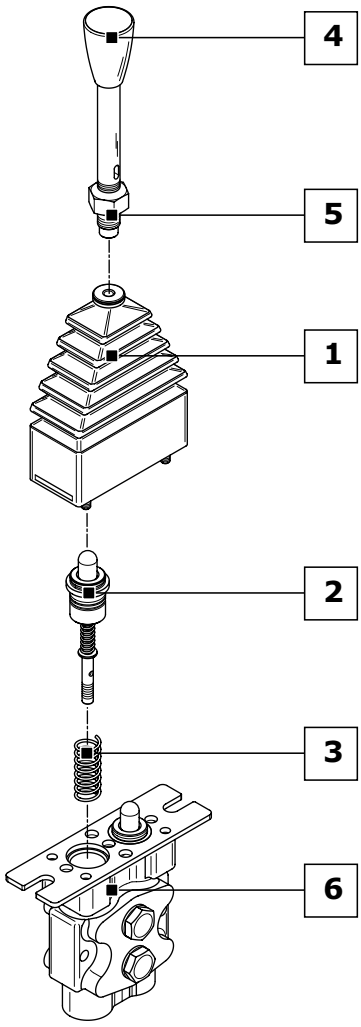
3 RETURN SPRING:
MA spring return type

4 HANDLE CLASSIFICATION:
M handle type

5 LEVER ROD CLASSIFICATION:
WE lever rod type
95 lever rod length

6 BODY ARRANGEMENT:
RA body specification
G02 body thread

Ordering row 2 and 3, must be repeated for each port
complete sample: **RCM/1/01-A01MA-A01MA-MWE95-RAG02**

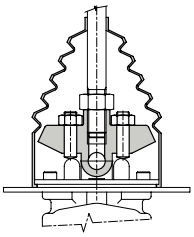
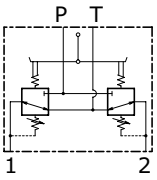
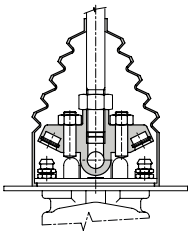
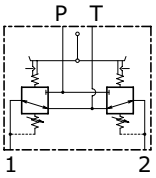
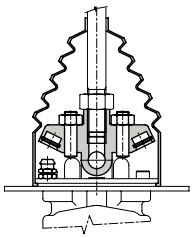
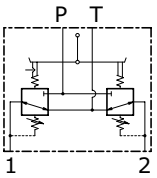
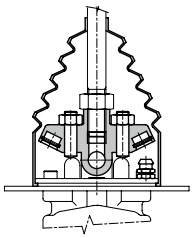
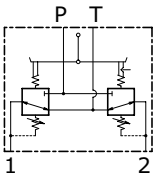
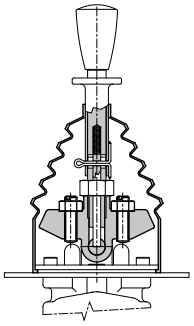
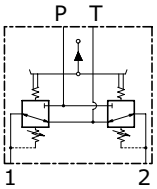
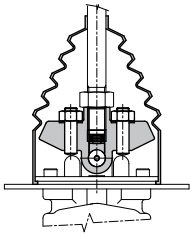
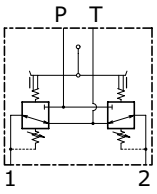


1	**CONTROL CLASSIFICATION:** (page 22)
01	Spring return in neutral position
02	Spring return in neutral pos. and mechanical detent in pos. 1-2
03	Spring return in neutral pos. and mechanical detent in pos. 1
04	Spring return in neutral pos. and mechanical detent in pos. 2
2	**METERING CURVE:** (page 70)
A01	Linear metering curve with step
B01	Linear metering curve without step
C01	Broken line metering curve with step
D01	Broken line metering curve without step
3	**RETURN SPRING:** (page 78)
MA	Preload 25 N (5.6 lbf) - End stroke load 48 N (10.8 lbf)
MB	Preload 14 N (3.1 lbf)- End stroke load 27 N (6.1 lbf)
MC	Preload 73 N (16.4 lbf) - End stroke load 135 N (30.3 lbf)
MD	Preload 89 N (20.0 lbf)- End stroke load 169 N (38.0 lbf)
4	**HANDLE CLASSIFICATION:** (page 80)
A	Without micro-switch
B	With micro-switch to close
D	With dual micro-switch
M	Standard handle
5	**LEVER ROD CLASSIFICATION:** (page 26)
WE95	Standard lever for "M" handle (95 mm)
WE165	Standard lever for "M" handle (165 mm)
6	**BODY ARRANGEMENT:** (page 27)
RAG02	Standard Body (G 1/4 ports)
RAU02	Standard Body (9/16"-18 UNF ports)

RCM STACKABLE SINGLE AXIS LEVER REMOTE CONTROL

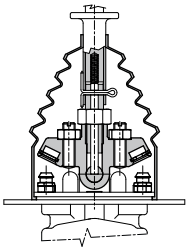
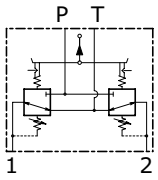
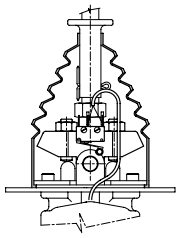
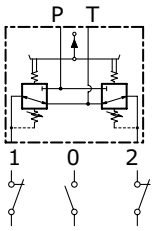
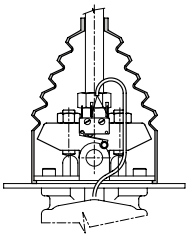
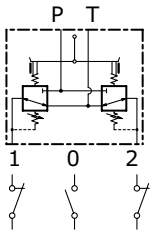
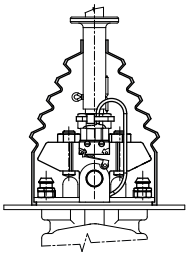
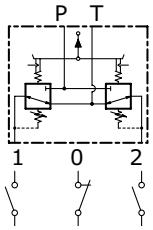
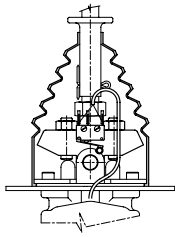
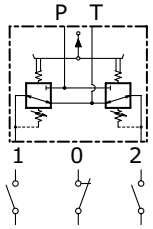
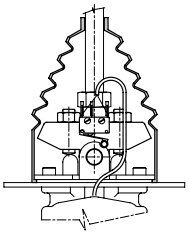
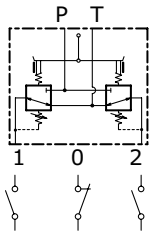
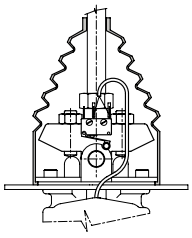
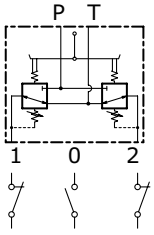
CONTROL KIT CLASSIFICATION

All controls installed on the remote control RCM are interchangeable. Lever rod type must be choosen according to different control kit (see quick reference guide pag. 27). The controls shown correspond to standard configurations; for different applications contact our Sales Dept.

Code	Configuration	Scheme	Description
01			Spring return in neutral position
02			Spring return in neutral position and mechanical detent in positions 1 and 2
03			Spring return in neutral position and mechanical detent in position 1
04			Spring return in neutral position and mechanical detent in position 2
05			Security handle in neutral position
06			Control with friction

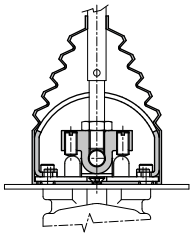
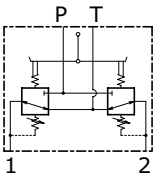
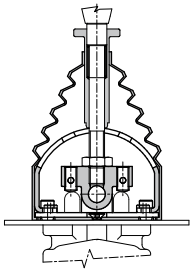
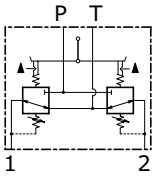
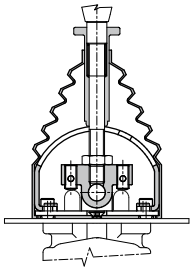
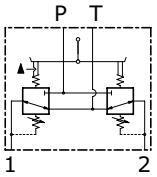
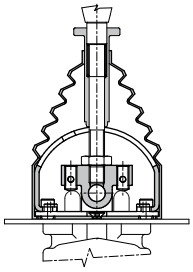
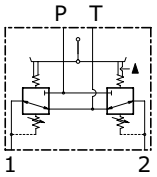
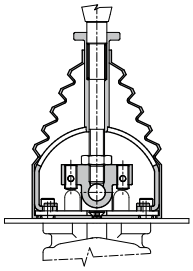
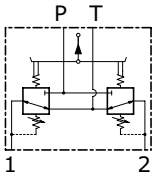
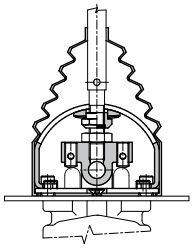
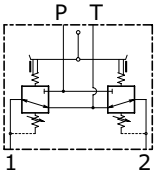
STACKABLE SINGLE AXIS LEVER REMOTE CONTROL RCM

CONTROL KIT CLASSIFICATION

Code	Configuration	Scheme	Description
08			Security handle in neutral position and mechanical detent in positions 1 and 2
12			Security handle in neutral position with micro-switch open in central position
13			Control with friction and micro-switch open in central position
14			Security handle in neutral position with micro-switch closed in central position and mechanical detent in positions 1 and 2
17			Security handle in neutral position with micro-switch closed in central position
18			Control with friction and micro-switch closed in central position
19			Spring return in neutral position with micro-switch open in central position

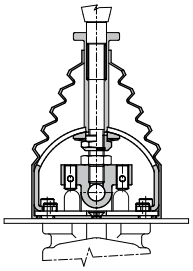
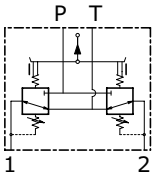
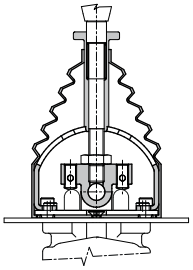
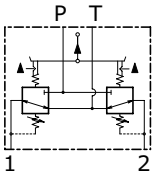
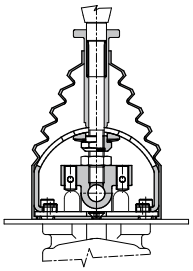
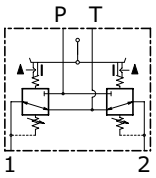
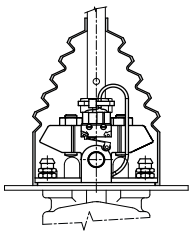
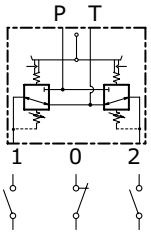
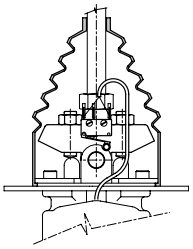
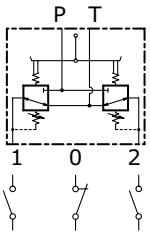
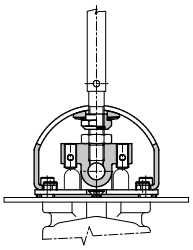
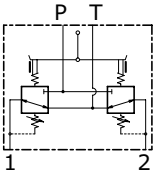
RCM STACKABLE SINGLE AXIS LEVER REMOTE CONTROL

CONTROL KIT CLASSIFICATION

Code	Configuration	Scheme	Description
21			Spring return in neutral position (ARC type)
22			Security handle with mechanical detent in postions 1 and 2 (ARC type)
23			Security handle with mechanical detent in postion 1 (ARC type)
24			Security handle with mechanical detent in postion 2 (ARC type)
25			Security handle with mechanical detent in neutral position (ARC type)
26			Control with friction (ARC type)

STACKABLE SINGLE AXIS LEVER REMOTE CONTROL RCM

CONTROL KIT CLASSIFICATION

Code	Configuration	Scheme	Description
27			Control with friction and security handle with mechanical detent in neutral position (ARC type)
28			Security handle with mechanical detent in postions 1, 2 and neutral (ARC type)
29			Control with friction and security handle with mechanical detent in positions 1 and 2 (ARC type)
30			Mechanical detent in positions 1 and 2 with micro-switch closed in central position
31			Return spring in neutral position with micro-switch closed in central position
32			Control with friction without bellow (ARC type)

RCM STACKABLE SINGLE AXIS LEVER REMOTE CONTROL

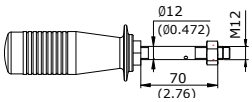
MICROSWITCHES SPECIFICATIONS

Description	Value
Direct current load resistive	5 A @ 30 Vdc
Direct current load inductive	3 A @ 250 Vac
Alternative current load resistive	5 A @ 30 Vdc
Alternative current load inductive	2 A @ 250 Vac

LEVER ROD CLASSIFICATION

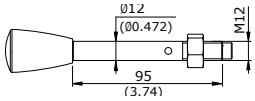
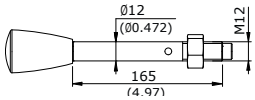
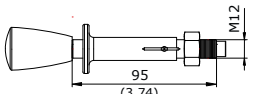
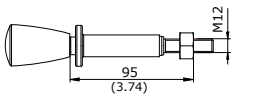
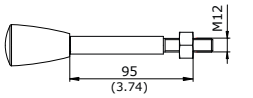
The lever rod kits applied to all the RCM hydraulic remote controls change according to the type of control used and, above all, the type of handle. For improved clarity, all the possible lever rod configurations divided according to handle are listed here below. Straight and curved lever rods are available in several lengths and dimensions.

IDENTIFICATION ROD LEVER HANDLE "A-B-D" - QUICK REFERENCE GUIDE

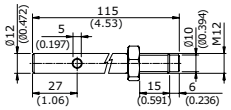
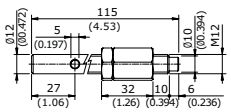
Code	Dimensional drawing	Control type 01	02	03	04	05	06	08	12	13	14	17	18	19	21	22	23	24	25	26	27	28	29	30	31	32
WA70		●	●	●	●		●			●			●	●											●	●

Handles type "A-B-D" are only available with RCM/1 or, with RP intermediate plate, any number of sections up to 12

IDENTIFICATION ROD LEVER HANDLE "M" - QUICK REFERENCE GUIDE

Code	Dimensional drawing	Control type 01	02	03	04	05	06	08	12	13	14	17	18	19	21	22	23	24	25	26	27	28	29	30	31	32
WE95		●	●	●	●		●			●			●	●											●	●
WE165		●	●	●	●		●			●			●	●											●	●
WM95						●		●	●		●	●														
WN95																●	●	●	●			●	●	●		
WR95															●					●						●

IDENTIFICATION ROD LEVER HANDLE "F" - QUICK REFERENCE GUIDE

Code	Dimensional drawing	Control type 01	02	03	04	05	06	08	12	13	14	17	18	19	21	22	23	24	25	26	27	28	29	30	31	32
WF90		●	●	●	●									●										●	●	
WF90F							●			●			●													

Handles type "F" are only available with RCM/1 or, with RP intermediate plate, any number of sections up to 12

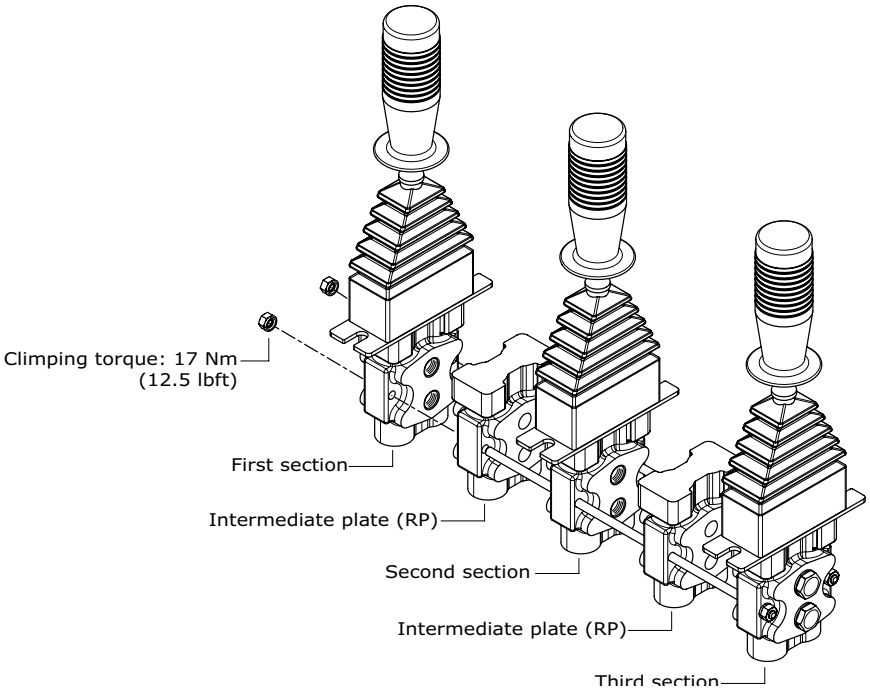
STACKABLE SINGLE AXIS LEVER REMOTE CONTROL RCM

ORDER EXAMPLE RCM/3 WITH "RP" INTERMEDIATE PLATE

To set up an RCM remote control with any number of sections between 2 and 12, an intermediate plate must be used identified by the order code RP.

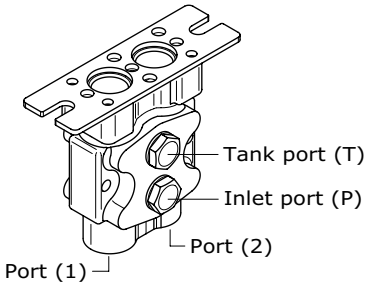
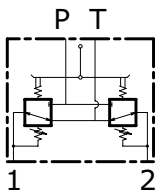
RCM/3/ 01-A01MA-A01MA-AWA70-RAG02 / **RP** / 01-A01MA-A01MA-AWA70-RAG02 / **RP** / 01-A01MA-A01MA-AWA70-RAG02

1) FIRST SECTION:
2) INTERMEDIATE PLATE:
3) SECOND SECTION:
4) INTERMEDIATE PLATE:
5) THIRD SECTION:



BODY ARRANGEMENT

The hydraulic remote control RCM has only one setting body, the only variable is represented by a different thread.

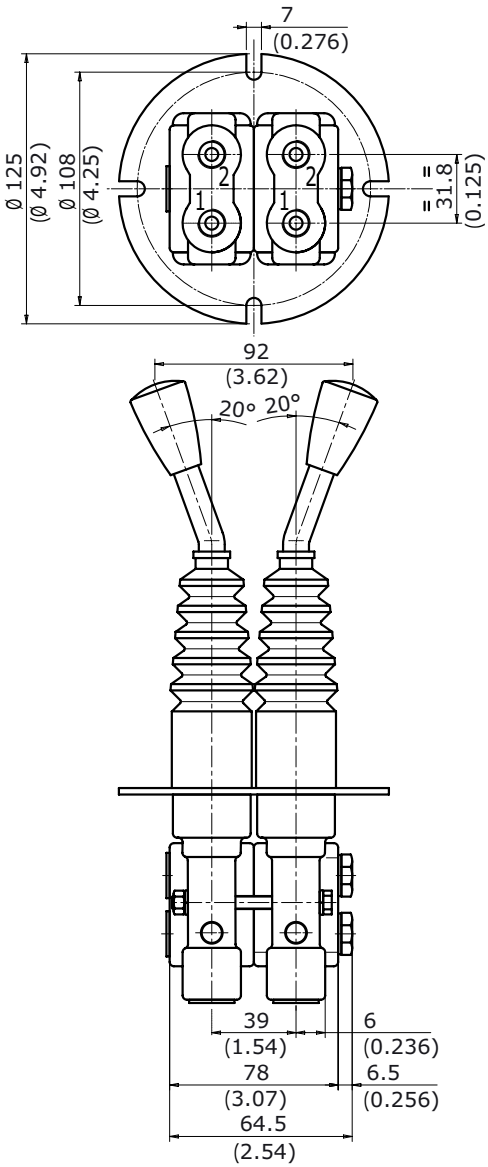
Code Code	Configuration	Scheme	Description
RAG02			Standard body G 1/4 ports
RAU02			Standard body 16"-18 UNF ports

RCB SINGLE AXIS LEVERS TWO MODULES REMOTE CONTROL

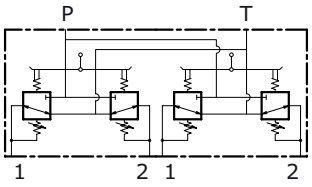
RCB lever control belongs to the wide range of hydraulic remote controls. Low operating efforts, low energy consumption and low maintenance makes these hydraulic remote controls RCB ideals for piloting remote control directional valves, variable displacement pumps and motors, auxiliary valves, frictions and hydraulic brakes. Each hydraulic remote control is assembled with N.2 tie rod kits including a tie rod, two nuts and two washers.

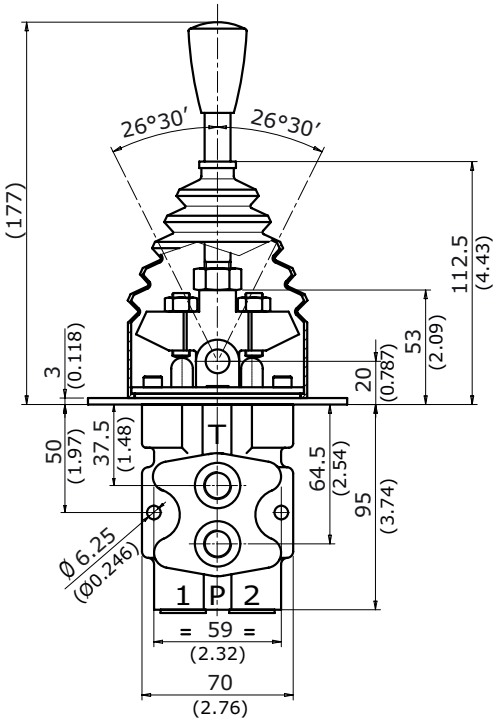
TECHNICAL SPECIFICATIONS	
Working section number:	**2**
Max pressure:	**60 bar (870 psi)**
Nominal flow rating:	**from 5 to 20 l/min (from 1.32 to 5.28 US gpm)**
Weight:	**3.2 Kg (7.1 lb)**
Tie rod clamping torque:	**14 Nm (10.3 lbft)**
APPLICATIONS	
Mini Skid Loaders, Backhoe Loaders, Tractors	

DIMENSIONS



HYDRAULIC SCHEME





SINGLE AXIS LEVERS TWO MODULES REMOTE CONTROL RCB

ORDER EXAMPLE = RCB-/ 01 - A01 MA - M WP110 / 01 - A01MA - MWP110 - RAG02

SECTION 1 | SECTION 2

RCB product type

1 CONTROL CLASSIFICATION:
- **01** control type

2 METERING CURVE:
- **A01** curve type

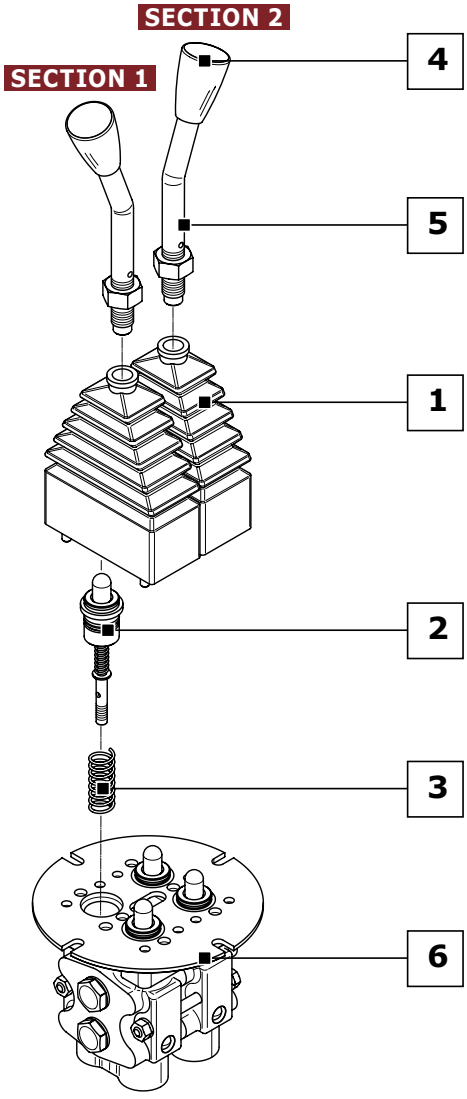
3 RETURN SPRING:
- **MA** spring return type

4 HANDLE CLASSIFICATION:
- **M** handle type

5 LEVER ROD CLASSIFICATION:
- **WP** lever rod type
- **110** lever rod length

6 BODY ARRANGEMENT:
- **RA** body specification
- **G02** body thread

Ordering row 1,2,3,4 and 5, must be repeated for each working section

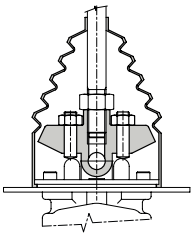
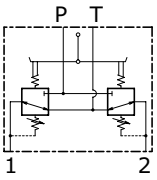
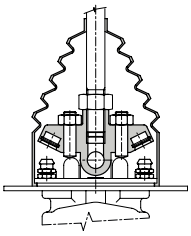
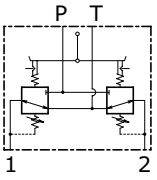
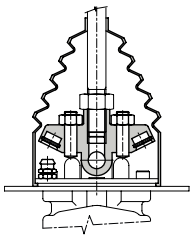
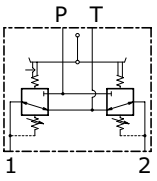
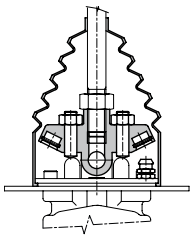
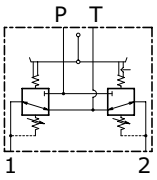
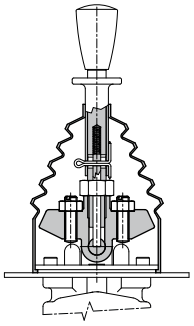
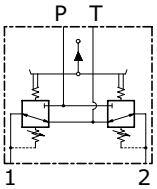
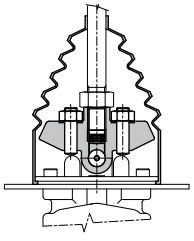
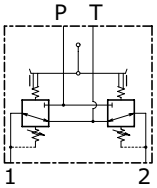


1	**CONTROL CLASSIFICATION:** (page 30)
01	Spring return in neutral position
02	Spring return in neutral pos. and mechanical detent in pos. 1-2
03	Spring return in neutral pos. and mechanical detent in pos. 1
04	Spring return in neutral pos. and mechanical detent in pos. 2
2	**METERING CURVE:** (page 70)
A01	Linear metering curve with step
B01	Linear metering curve without step
C01	Broken line metering curve with step
D01	Broken line metering curve without step
3	**RETURN SPRING:** (page 78)
MA	Preload 25 N (5.6 lbf) - End stroke load 48 N (10.8 lbf)
MB	Preload 14 N (3.1 lbf)- End stroke load 27 N (6.1 lbf)
MC	Preload 73 N (16.4 lbf) - End stroke load 135 N (30.3 lbf)
MD	Preload 89 N (20.0 lbf)- End stroke load 169 N (38.0 lbf)
4	**HANDLE CLASSIFICATION:** (page 80)
A	Without micro-switch
B	With micro-switch to close
D	With dual micro-switch
M	Standard handle
5	**LEVER ROD CLASSIFICATION:** (page 32)
WV75	Standard lever for handle type A-B-D (75 mm)
WP110	Standard lever for handle type M (110 mm)
6	**BODY ARRANGEMENT:** (page 33)
RAG02	Standard Body (G 1/4 ports)
RAU02	Standard Body (9/16"-18 UNF ports)

RCB SINGLE AXIS LEVERS TWO MODULES REMOTE CONTROL

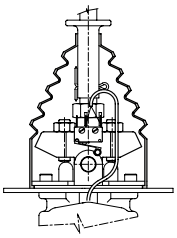
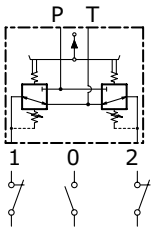
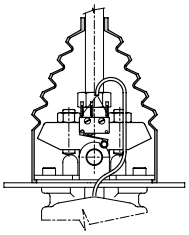
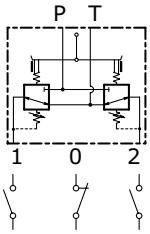
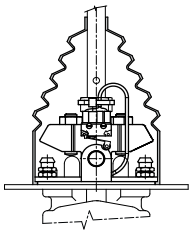
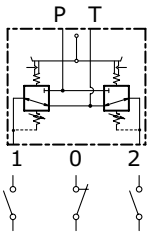
CONTROL KIT CLASSIFICATION

All controls installed on the remote control RCB are interchangeable. Lever rod type must be choosen according to different control kit (see quick reference guide pag. 32). The controls shown correspond to standard configurations; for different applications contact our Sales Dept.

Code	Configuration	Scheme	Description
01			Spring return in neutral position
02			Spring return in neutral position and mechanical detent in positions 1 and 2
03			Spring return in neutral position nd mechanical detent in position 1
04			Spring return in neutral position and mechanical detent in position 2
05			Security handle in neutral position
06			Control with friction

SINGLE AXIS LEVERS TWO MODULES REMOTE CONTROL RCB

CONTROL KIT CLASSIFICATION

Code	Configuration	Scheme	Description
12			Security handle in neutral position with micro-switch open in central position
18			Control with friction and micro-switch closed in central position
30			Mechanical detent in positions 1 and 2 with micro-switch closed in central position

MICROSWITCHES SPECIFICATIONS

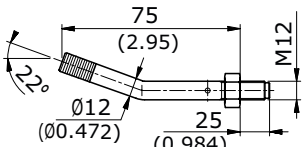
Description	Value
Direct current load resistive	5 A @ 30 Vdc
Direct current load inductive	3 A @ 250 Vac
Alternative current load resistive	5 A @ 30 Vdc
Alternative current load inductive	2 A @ 250 Vac

RCB SINGLE AXIS LEVERS TWO MODULES REMOTE CONTROL

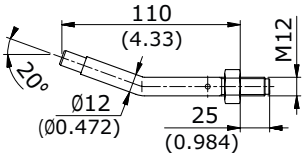
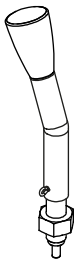
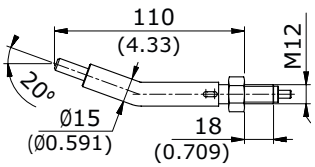
LEVER ROD CLASSIFICATION

The lever rod kits applied to all the RCB hydraulic remote controls change according to the type of control used and, above all, the type of handle. For improved clarity, all the possible lever rod configurations divided according to handle are listed here below. Straight and curved lever rods are available in several lengths and dimensions.

IDENTIFICATION ROD LEVER HANDLE "A-B" - QUICK REFERENCE GUIDE

Code	Dimensional drawing	Control type								
		01	02	03	04	05	06	12	18	30
WV75			•	•	•	•		•		•	•

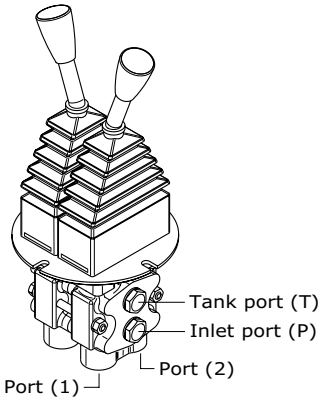
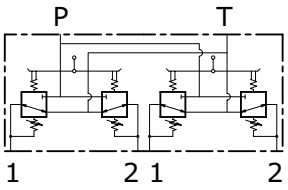
IDENTIFICATION ROD LEVER HANDLE "M" - QUICK REFERENCE GUIDE

Code	Dimensional drawing	Control type								
		01	02	03	04	05	06	12	18	30
WP110			•	•	•	•		•		•	•
WT110						•		•			

SINGLE AXIS LEVERS TWO MODULES REMOTE CONTROL RCB

BODY ARRANGEMENT

The hydraulic remote control RCB has only one setting body, the only variable is represented by a different thread.

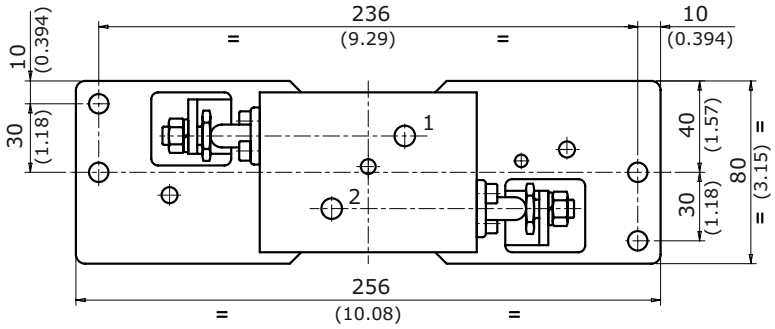
Code	Configuration	Schema	Description
RAG02			Standard body G 1/4 ports
RAU02			Standard body 9/16”-18 UNF ports

RCP FOOT PEDAL 2 WORKING PORTS AND REDUCED BODY PROFILE

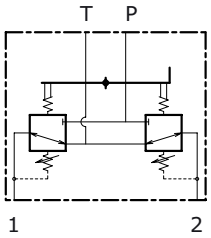
RCP foot pedal belongs to the wide range of hydraulic remote controls. This Pedal is characterized by reduced overall dimensions and several configurations. RCP works according to the principle of direct-acting pressure reducing valves. In rest position, the foot pedal is held in neutral by return spring; inlet port P is closed and ports are connected to tank port T.

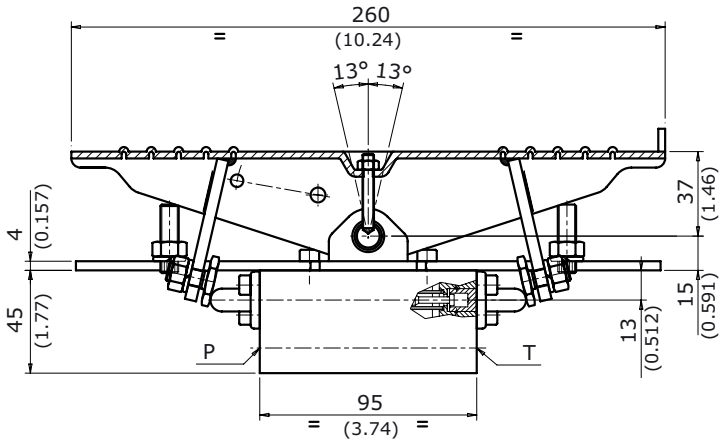
TECHNICAL SPECIFICATIONS	
Max pressure:	**100 bar (1450 psi)**
Nominal flow rating:	**from 5 to 20 l/min (from 1.32 to 5.28 US gpm)**
Weight:	**3.4 Kg (7.5 lb)**
APPLICATIONS	
Mini-excavators	

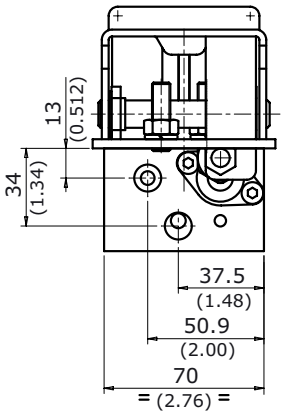
DIMENSIONS



HYDRAULIC SCHEME





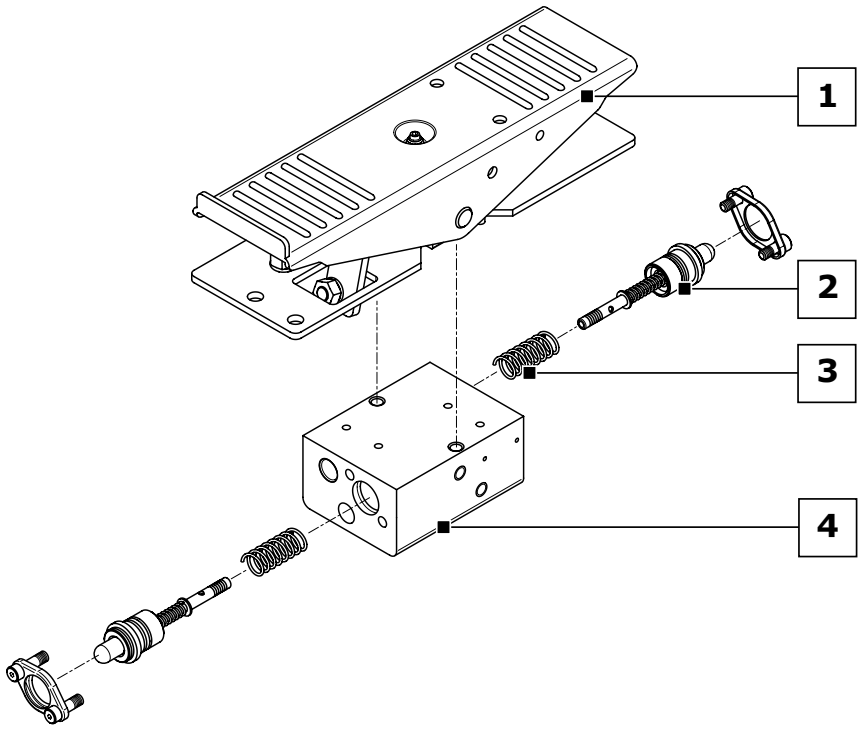


FOOT PEDAL 2 WORKING PORTS AND REDUCED BODY PROFILE RCP

ORDER EXAMPLE = RCP-/ 01S - A01 MA - RAG02

RCP product type
1 **CONTROL CLASSIFICATION:**
01S control type
2 **METERING CURVE:**
A01 curve type
3 **RETURN SPRING:**
MA spring return type
4 **BODY ARRANGEMENT:**
RA body specification
G02 body thread

Ordering row 2 and 3, must be repeated for each port
complete sample: **RCP-/01S-A01MA-A01MA-RAG02**



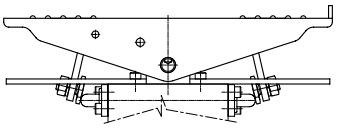
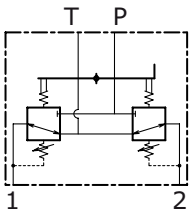
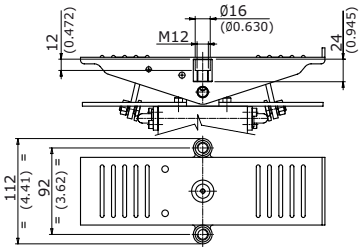
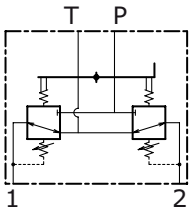
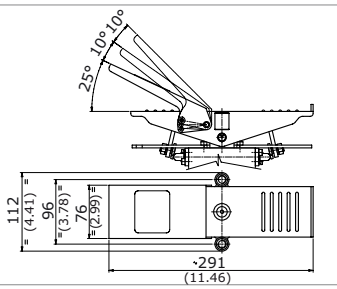
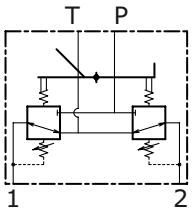
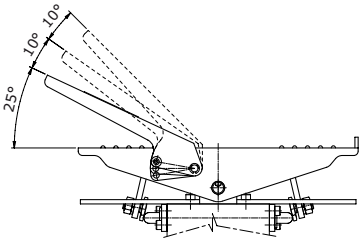
1	**CONTROL CLASSIFICATION:** (page 36)
01S	Foot pedal with spring return in neutral pos.
02S	Foot pedal with spring return in neutral position and handle arrangement
03S	Foot pedal with spring return in neutral pos., adjustable operation angle and handle arrangement
04S	Foot pedal with spring return in neutral position and adjustable operation angle
2	**METERING CURVE:** (page 70)
A01	Linear metering curve with step
B01	Linear metering curve without step
C01	Broken line metering curve with step
D01	Broken line metering curve without step

3	**RETURN SPRING:** (page 78)
MA	Preload 25 N (5.6 lbf) End stroke load 48 N (10.8 lbf)
MB	Preload 14 N (3.1 lbf) End stroke load 27 N (6.1 lbf)
MC	Preload 73 N (16.4 lbf) End stroke load 135 N (30.3 lbf)
MD	Preload 89 N (20.0 lbf) End stroke load 169 N (38.0 lbf)
4	**BODY ARRANGEMENT:** (page 37)
RAG02	Standard Body (G 1/4 ports)
RAU02	Standard Body (9/16”-18 UNF ports)

RCP FOOT PEDAL 2 WORKING PORTS AND REDUCED BODY PROFILE

CONTROL KIT CLASSIFICATION

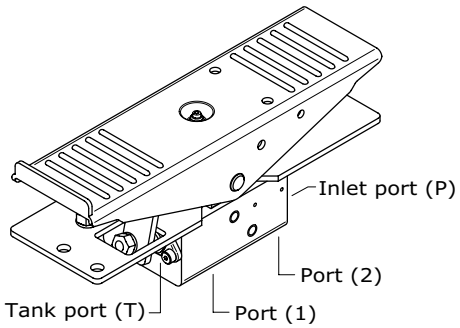
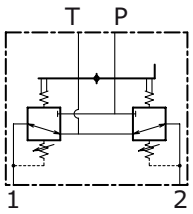
All controls installed on the foot pedal RCP are interchangeable. The controls shown correspond to standard configurations; for different applications contact our Sales Dept.

Code	Configuration	Schema	Description
01S			Foot pedal with spring return in neutral position
02S			Foot pedal with spring return in neutral position and handle arrangement
03S			Foot pedal with spring return in neutral position, adjustable operation angle and handle arrangement
04S			Foot pedal with spring return in neutral position and adjustable operation angle

FOOT PEDAL 2 WORKING PORTS AND REDUCED BODY PROFILE RCP

BODY ARRANGEMENT

The foot pedal RCP has only one setting body, the only variable is represented by a different thread.

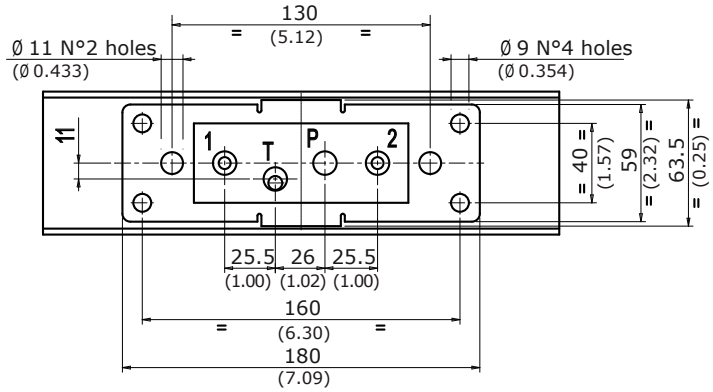
Code	Configuration	Schema	Description
RAG02			Standard body G 1/4 ports
RAU02			Standard body 9/16”-18 UNF ports

RCF FOOT PEDAL LOWER PORTS

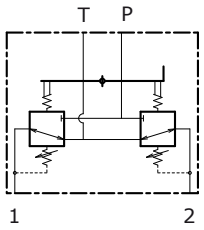
RCF foot pedal belongs to the wide range of hydraulic remote controls. This Pedal is characterized by reduced overall dimensions and several configurations. RCF works according to the principle of direct-acting pressure reducing valves. In rest position, the foot pedal is held in neutral by return spring; inlet port P is closed and ports are connected to tank port T. P, T and users ports are under the body, opposite to the pedal.

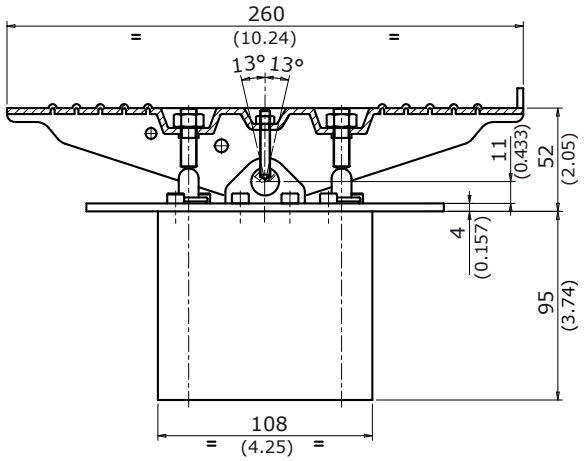
TECHNICAL SPECIFICATIONS	
Max pressure:	**100 bar (1450 psi)**
Nominal flow rating:	**from 5 to 20 l/min (from 1.32 to 5.28 US gpm)**
Weight:	**4.1 Kg (9.0 lb)**
APPLICATIONS	
Mini-excavators	

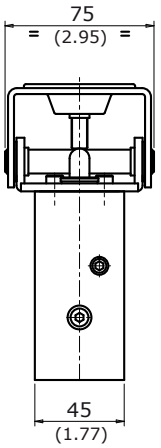
DIMENSIONS



HYDRAULIC SCHEME





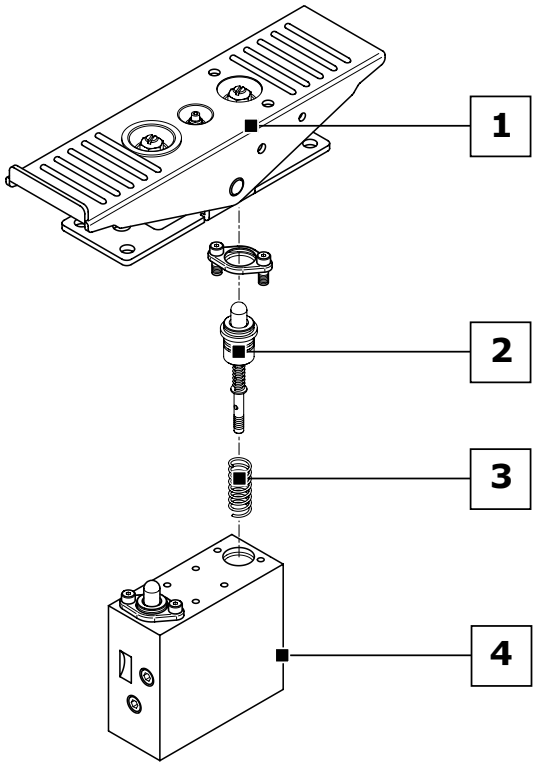


FOOT PEDAL LOWER PORTS RCF

ORDER EXAMPLE = RCF-/ 01S - A01 MA - RAG02

RCF product type
1 CONTROL CLASSIFICATION:
01S control type
2 METERING CURVE:
A01 curve type
3 RETURN SPRING:
MA spring return type
4 BODY ARRANGEMENT:
RA body specification
G02 body thread

Ordering row 2 and 3, must be repeated for each port
complete sample: **RCF-/01S-A01MA-A01MA-RAG02**



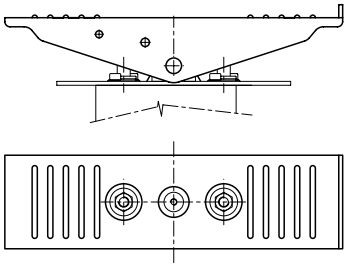
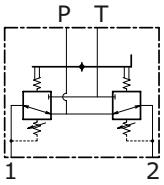
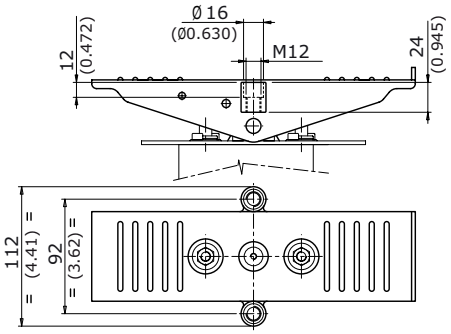
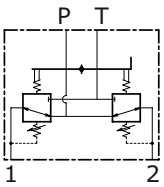
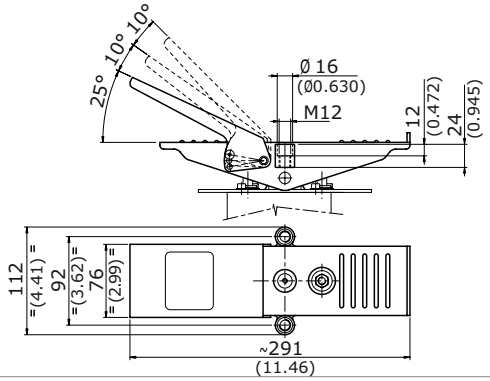
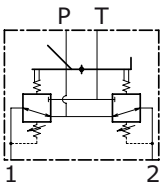
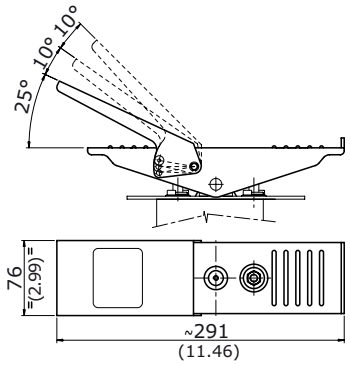
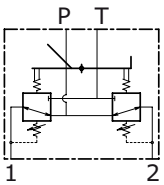
1	**CONTROL CLASSIFICATION:** (page 40)
01S	Foot pedal with spring return in neutral pos.
02S	Foot pedal with spring return in neutral position and handle arrangement
03S	Foot pedal with spring return in neutral pos., adjustable operation angle and handle arrangement
04S	Foot pedal with spring return in neutral position and adjustable operation angle
2	**METERING CURVE:** (page 70)
A01	Linear metering curve with step
B01	Linear metering curve without step
C01	Broken line metering curve with step
D01	Broken line metering curve without step

3	**RETURN SPRING:** (page 78)
MA	Preload 25 N (5.6 lbf) End stroke load 48 N (10.8 lbf)
MB	Preload 14 N (3.1 lbf) End stroke load 27 N (6.1 lbf)
MC	Preload 73 N (16.4 lbf) End stroke load 135 N (30.3 lbf)
MD	Preload 89 N (20.0 lbf) End stroke load 169 N (38.0 lbf)
4	**BODY ARRANGEMENT:** (page 41)
RAG02	Standard Body (G 1/4 ports)
RAU02	Standard Body (9/16"-18 UNF ports)

RCF FOOT PEDAL LOWER PORTS

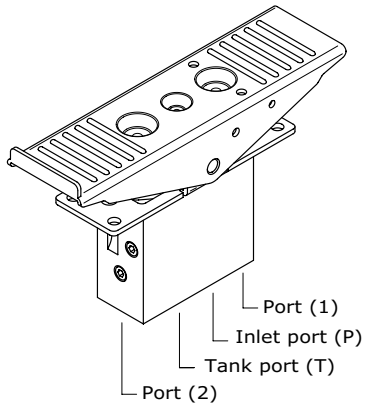
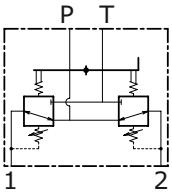
CONTROL KIT CLASSIFICATION

All controls installed on the foot pedal RCF are interchangeable. The controls shown correspond to standard configurations; for different applications contact our Sales Dept.

Code	Configuration	Schema	Description
01S			Foot pedal with spring return in neutral position
02S			Foot pedal with spring return in neutral position and handle arrangement
03S			Foot pedal with spring return in neutral position, adjustable operation angle and handle arrangement
04S			Foot pedal with spring return in neutral position and adjustable operation angle

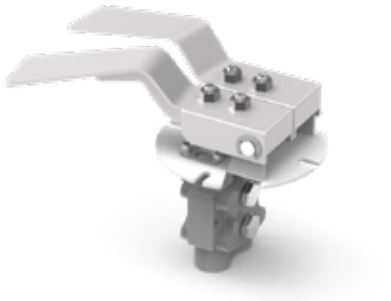
BODY ARRANGEMENT

The foot pedal RCF has only one setting body, the only variable is represented by a different thread.

Code	Configuration	Schema	Description
RAG02			Standard body G 1/4 ports
RAU02			Standard body 9/16”-18 UNF ports

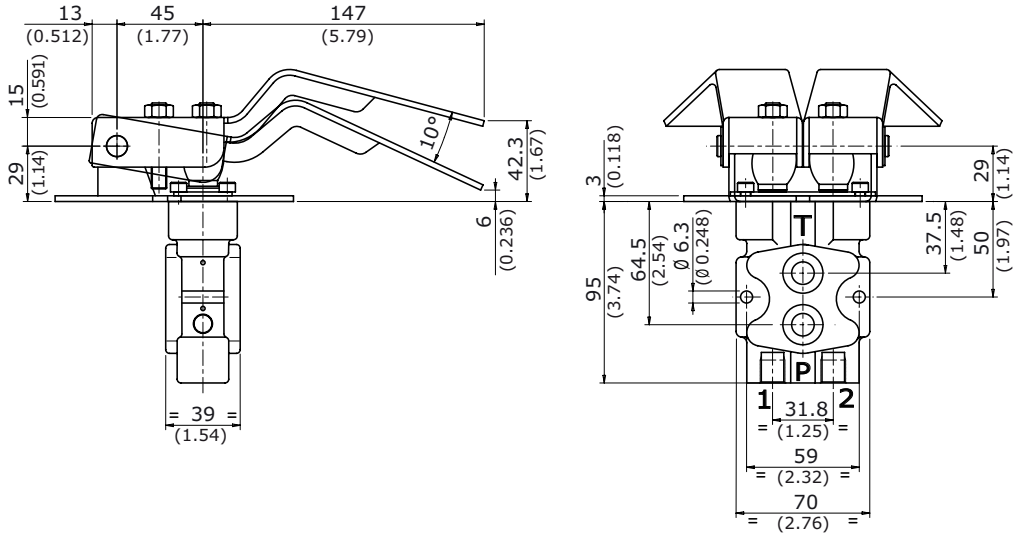
RCD DOUBLE FOOT PEDAL LOWER PORTS

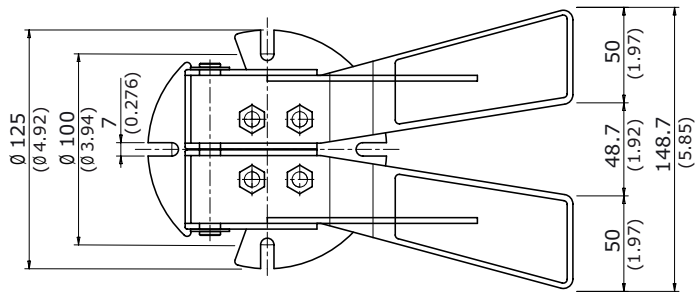
RCD is a double pedal version remote control and belongs to the wide range of hydraulic remote controls.
This pedal work according to the principle of direct-acting pressure reducing valves. In rest position, the foot pedal is held in neutral by return spring; inlet port P is closed and ports are connected to tank port T. Reduced overall dimensions and ergonomic design for a optimal control.



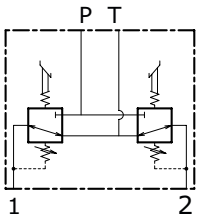
TECHNICAL SPECIFICATIONS	
Max pressure:	**60 bar (870 psi)**
Nominal flow rating:	**from 5 to 20 l/min (from 1.32 to 5.28 US gpm)**
Weight:	**3.2 Kg (7.1 lb)**
APPLICATIONS	
Mini Skid Loaders, Mini Dumper	

DIMENSIONS





HYDRAULIC SCHEME



DOUBLE FOOT PEDAL LOWER PORTS RCD

ORDER EXAMPLE = RCD-/ 01S - A01 MA - RAG02

RCD product type

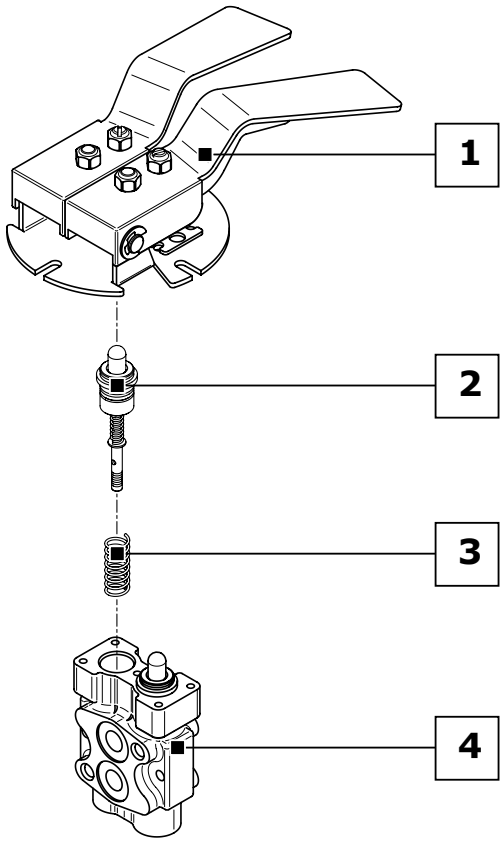
1 CONTROL CLASSIFICATION:
01S control type

2 METERING CURVE:
A01 curve type

3 RETURN SPRING:
MA spring return type

4 BODY ARRANGEMENT:
RA body specification
G02 body thread

Ordering row 2 and 3, must be repeated for each port
complete sample: **RCD-/01S-A01MA-A01MA-RAG02**



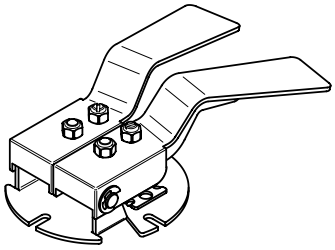
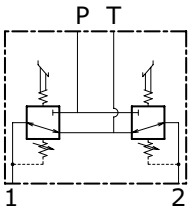
1	**CONTROL CLASSIFICATION:** (page 44)
01S	Foot pedal with spring return in neutral pos.
2	**METERING CURVE:** (page 70)
A01	Linear metering curve with step
B01	Linear metering curve without step
C01	Broken line metering curve with step
D01	Broken line metering curve without step

3	**RETURN SPRING:** (page 78)
MA	Preload 25 N (5.6 lbf) End stroke load 48 N (10.8 lbf)
MB	Preload 14 N (3.1 lbf) End stroke load 27 N (6.1 lbf)
MC	Preload 73 N (16.4 lbf) End stroke load 135 N (30.3 lbf)
MD	Preload 89 N (20.0 lbf) End stroke load 169 N (38.0 lbf)
4	**BODY ARRANGEMENT:** (page 45)
RAG02	Standard Body (G 1/4 ports)
RAU02	Standard Body (9/16”-18 UNF ports)

RCD DOUBLE FOOT PEDAL LOWER PORTS

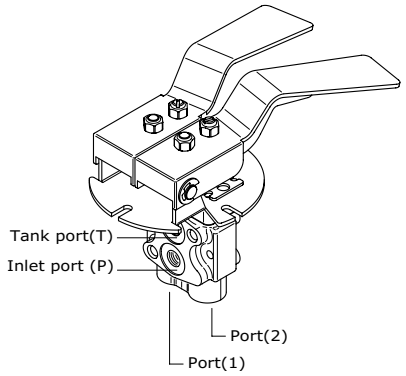
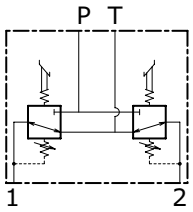
CONTROL KIT CLASSIFICATION

The pedal RCD has only one configuration; for different applications refer to our Sales Dept.

Code	Configuration	Schema	Description
01S			Foot pedal with spring return in neutral position

BODY ARRANGEMENT

The foot pedal RCD has only one setting body, the only variable is represented by a different thread.

Code	Configuration	Schema	Description
RAG02			Standard body G 1/4 ports
RAU02			Standard body 9/16”-18 UNF ports

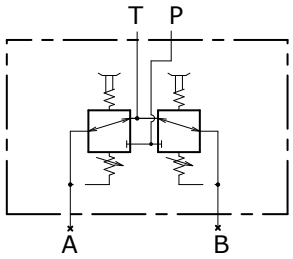
RCS FOOT PEDAL LOWER PORTS

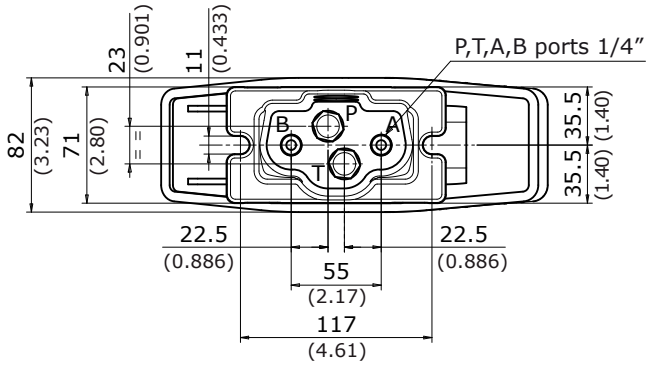
RCS is a single pedal version remote control. It's a new family completing the broad range of remote control. This pedal work according to the principle of direct-acting pressure reducing valves. In rest position, the foot pedal is held in neutral by return spring; inlet port P is closed and ports are connected to tank port T. Its ergonomic design provides optimum comfort for the operator.

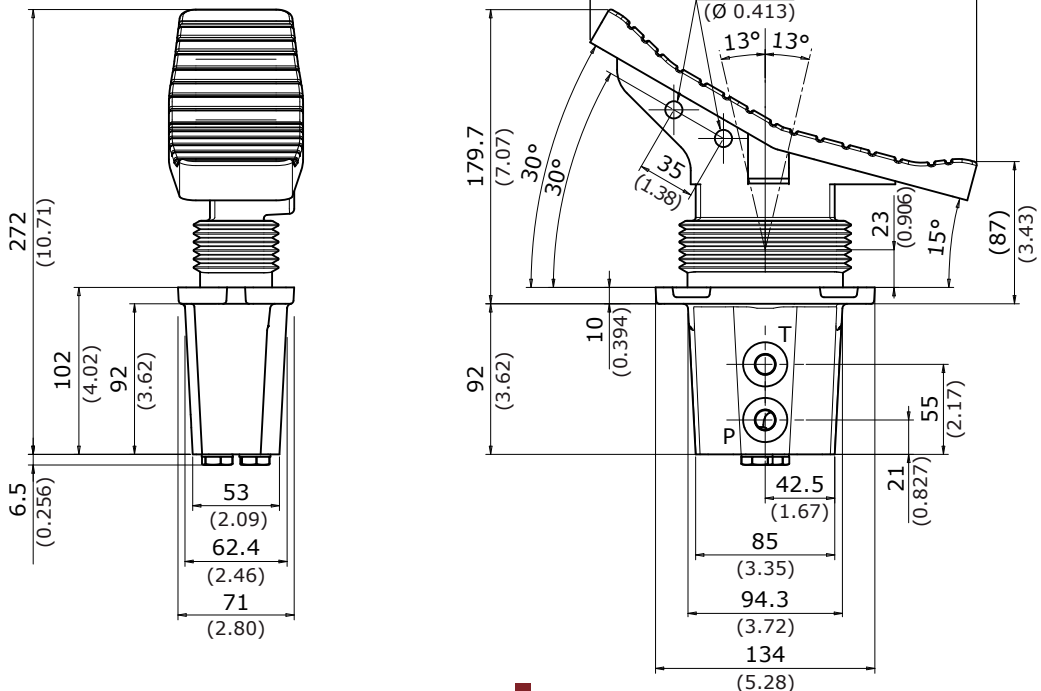
TECHNICAL SPECIFICATIONS	
Max pressure:	**100 bar (1450 psi)**
Nominal flow rating:	**from 5 to 20 l/min (from 1.32 to 5.28 US gpm)**
Weight:	**4.1 Kg (9.0 lb)**
APPLICATIONS	
Mini-excavators	

RCS DIMENSIONS STANDARD

HYDRAULIC SCHEME



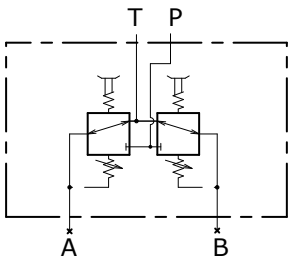


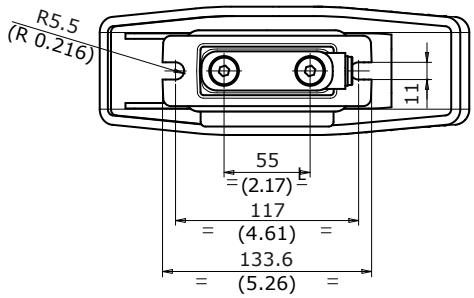


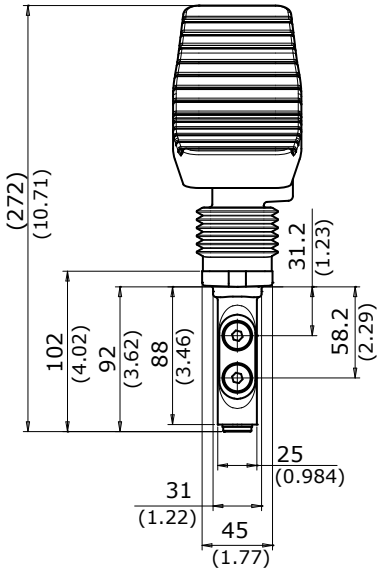
RCS DIMENSIONS WITH NARROW BODY

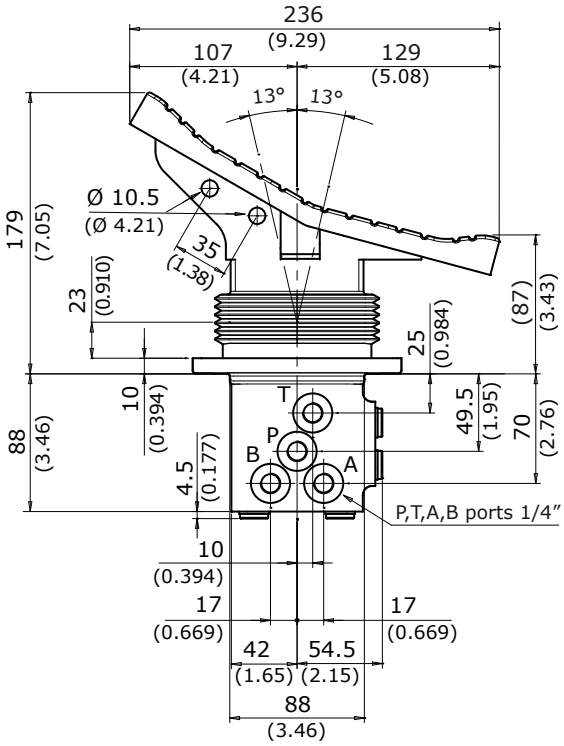
The special design with narrow body is suitable for use on small machines.

HYDRAULIC SCHEME









RCS FOOT PEDAL LOWER PORTS

ORDER EXAMPLE = RCS-/ 02P - 01S - A01T MD - RA01G02

RCS product type

1 PEDAL CLASSIFICATION:
02P pedal type

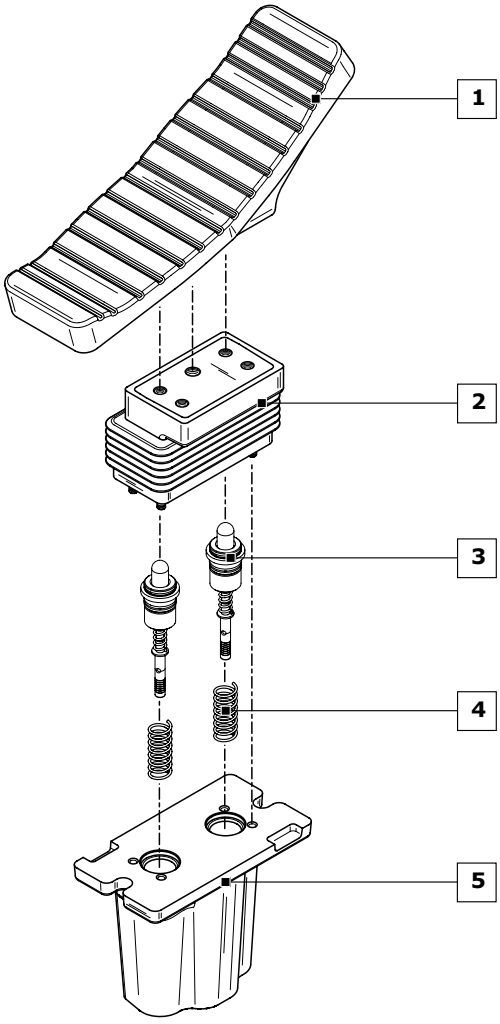
2 CONTROL CLASSIFICATION:
01S control type

3 METERING CURVE:
A01T curve type

4 RETURN SPRING:
MA spring return type

5 BODY ARRANGEMENT:
RA01 body specification
G02 body thread

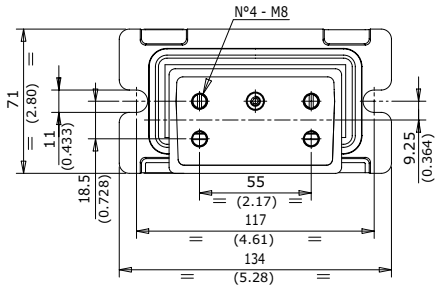
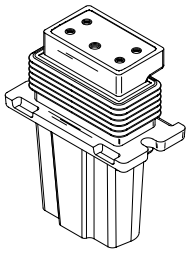
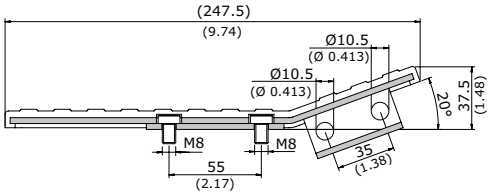
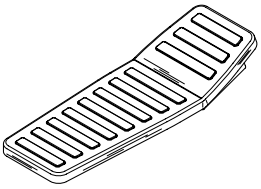
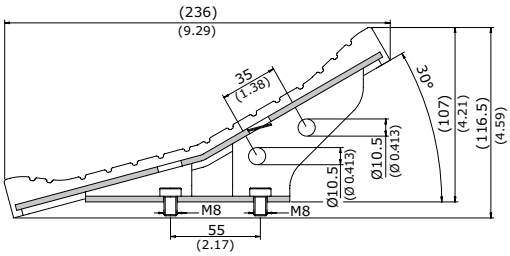
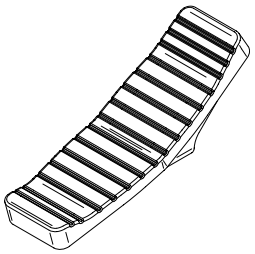
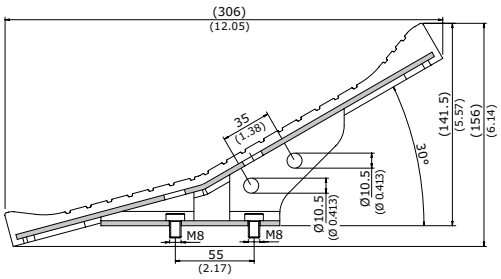
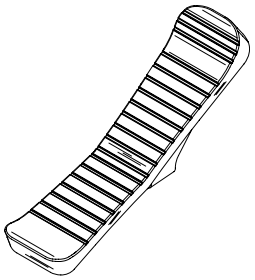
Ordering row 3 and 4, must be repeated for each port
complete sample: **RCS-/02P-01S-A01TMD-A01TMD-RA01G02**



1	**PEDAL CLASSIFICATION:** (page 49)
00P	Without pedal (pedal arrangement)
01P	Standard flat pedal
02P	Short pedal tilted 30°
03P	Long pedal tilted 30°
2	**CONTROL KIT CLASSIFICATION:** (page 49)
01S	Control kit with bellow
2	**METERING CURVE:** (page 74)
A01T	Linear metering curve with step (tipo A)
B01T	Linear metering curve without step (tipo B)
4	**RETURN SPRING:** (page 78)
MD	Preload 94 N (21.1 lbf) End stroke load 149 N (33.5 lbf)
5	**BODY ARRANGEMENT:** (page 50)
RA01G02	P - T lower (G 1/4 ports)
RA02G02	P - T side (G 1/4 ports)
RA11G02	P - T front A - B lower (G 1/4 ports)
RA12G02	A - B - P - T side (G 1/4 ports)
RA01U02	P - T lower (9/16-18 UNF ports)
RA02U02	P - T side (9/16-18 UNF ports)
RA11U02	P - T front A - B lower (9/16-18 UNF ports)
RA12U02	A - B - P - T side (9/16-18 UNF ports)

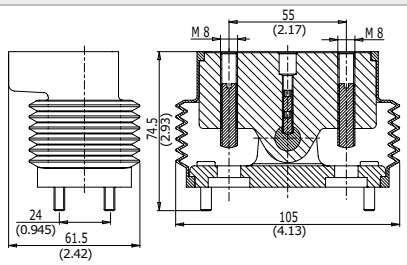
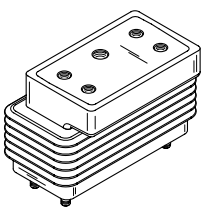
PEDAL CLASSIFICATION

All controls installed on the foot pedal RCS are interchangeable. Pedals represented correspond to standard configurations; for different applications contact our Sales Dept.

Code	Dimensions	Configuration	Description
00P			Without pedal (with arrangement)
01P			Standard flat pedal with rubber protection
02P			Short pedal tilted 30° with rubber protection
03P			Long pedal tilted 30° with rubber protection

CONTROL KIT CLASSIFICATION

Only one configuration is available; for different applications contact our Sales Dept.

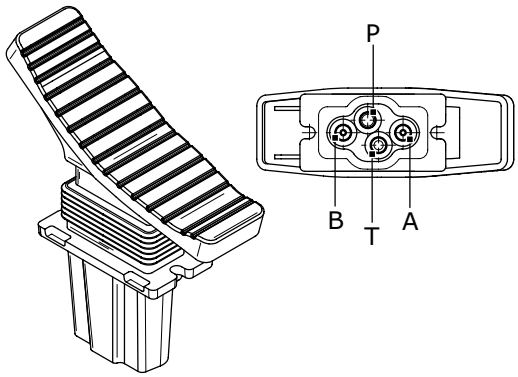
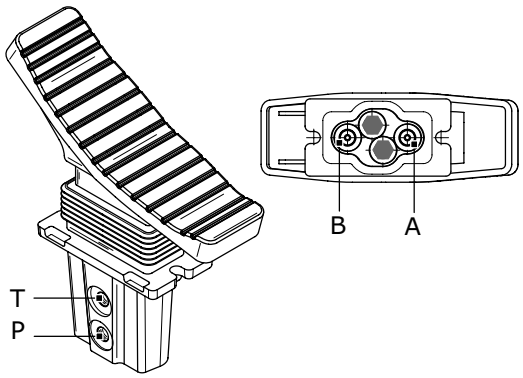
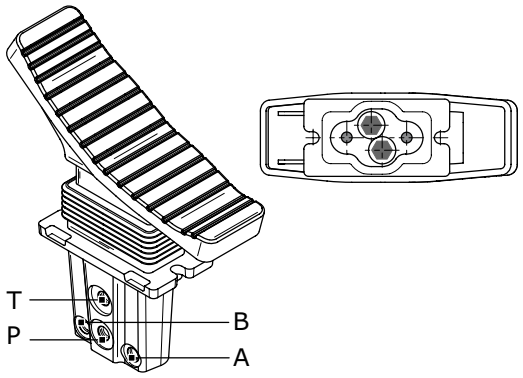
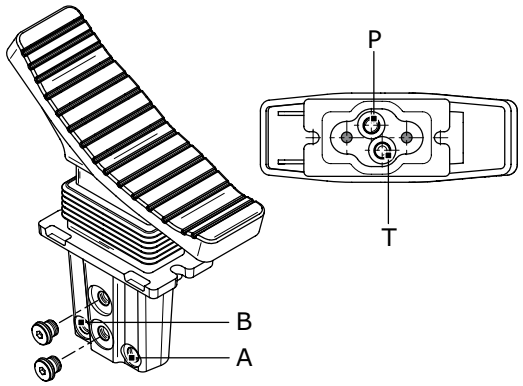
Code	Dimensions	Configuration	Description
01S			Control kit with bellow

Metering curves are available equipped with a swing-preventing dampening device; for more informations contact our Sales Dept.

RCS FOOT PEDAL LOWER PORTS

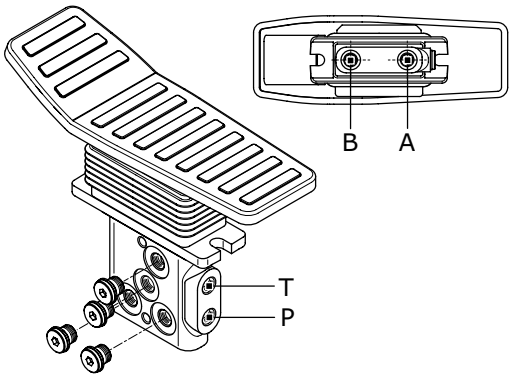
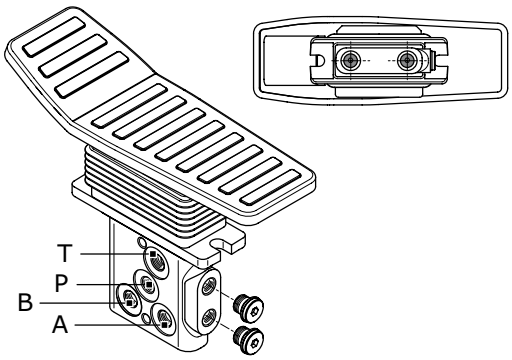
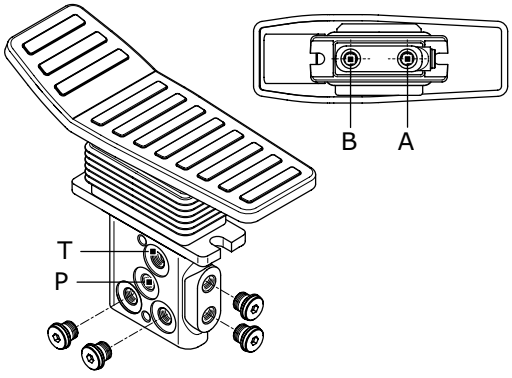
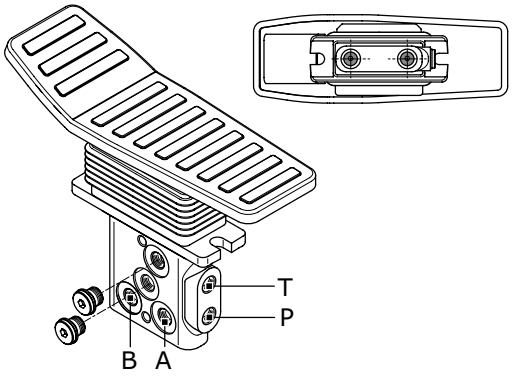
STANDARD BODY ARRANGEMENT

The listed configurations are all the possible combinations that can be obtained with the RCS standard body; two different pitch threads are available. For different applications contact our Sales Dept.

Code	Configuration	Description
RA01G02		Standard body (lower A-B-P-T ports) G 1/4 ports
RA01U02		Standard body (lower A-B-P-T ports) 9/16”-18 UNF ports
RA02G02		Body with side P-T ports and lower A-B ports G 1/4 ports
RA02U02		Body with side P-T ports and lower A-B ports 9/16”-18 UNF ports
RA03G02		Body with side A-B-P-T ports G 1/4 ports
RA03 U02		Body with side A-B-P-T ports 9/16”-18 UNF ports
RA04G02		Body with side A-B ports and lower P-T ports G 1/4 ports
RA04U02		Body with side A-B ports and lower P-T ports 9/16”-18 UNF ports

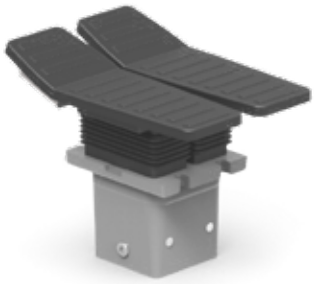
NARROW BODY ARRANGEMENT

The listed configurations are all the possible combinations that can be obtained with the RCS narrow body; two different pitch threads are available. For different applications contact our Sales Dept.

Code	Configuration	Description
RA11G02		Standard body (front P-T ports and lower A-B ports) G 1/4 ports
RA11U02		Standard body (front P-T ports and lower A-B ports) 9/16"-18 UNF ports
RA12G02		Body with side A-B-P-T ports G 1/4 ports
RA12U02		Body with side A-B-P-T ports 9/16"-18 UNF ports
RA13G02		Body side P-T ports and lower A-B ports G 1/4 ports
RA13U02		Body with side P-T ports and lower A-B ports 9/16"-18 UNF ports
RA14G02		Body with front P-T ports and side A-B ports G 1/4 ports
RA14U02		Body with front P-T ports and side A-B ports with 9/16"-18 UNF ports

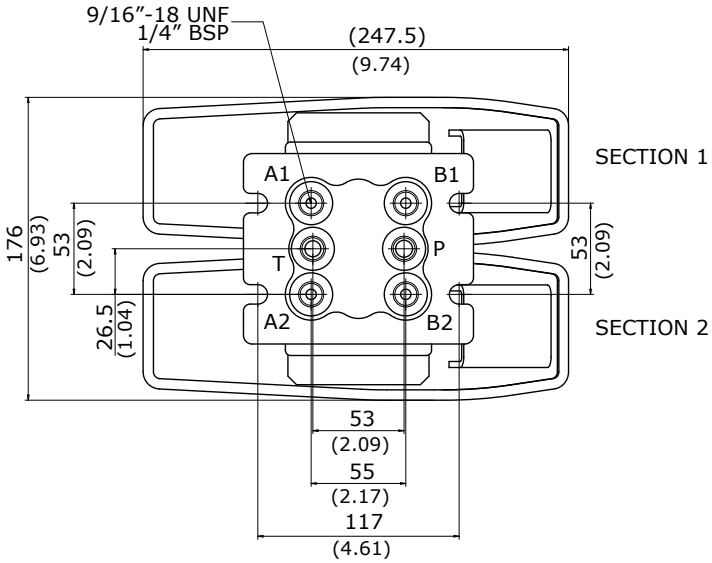
RCT DOUBLE FOOT PEDAL LOWER PORTS

RCT is a double pedal version remote control. It's a new family completing the broad range of remote control.
Different pedal designs are available: flat, bent, extended bent for an optimal ergonomic solution. This pedal work according to the principle of direct-acting pressure reducing valves. In rest position, the foot pedal is held in neutral by return spring; inlet port P is closed and ports are connected to tank port T.

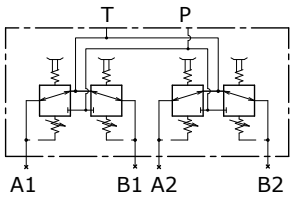


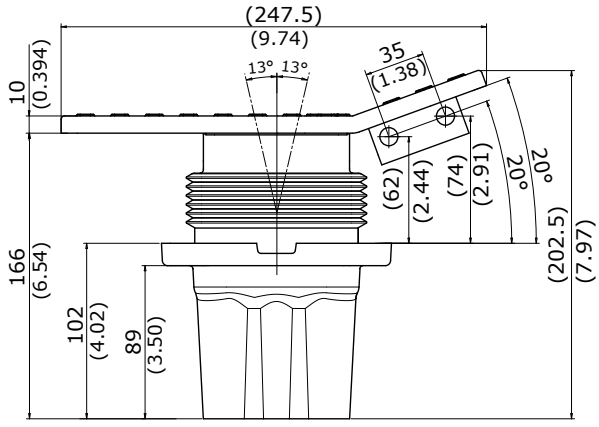
TECHNICAL SPECIFICATIONS	
Max pressure:	**100 bar (1450 psi)**
Nominal flow rating:	**from 5 to 20 l/min (from 1.32 to 5.28 US gpm)**
Weight:	**5.1 Kg (11.2 lb)**
APPLICATIONS	
Mini-excavators	

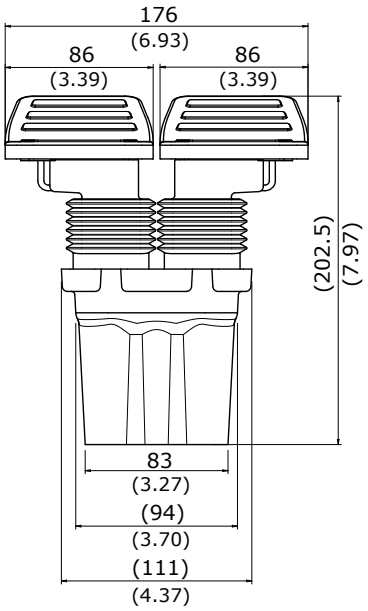
DIMENSIONS



HYDRAULIC SCHEME







DOUBLE FOOT PEDAL LOWER PORTS RCT

ORDER EXAMPLE = RCT-/ 02P / 01S /02P/01S - A01T MD - A01TMD-A01TMD-A01TMD- RA01G02

(SECTION 1 | SECTION 2 | SECTION 1 | SECTION 2)

RCT product type

1 **PEDAL CLASSIFICATION:**
02P pedal type

2 **CONTROL CLASSIFICATION:**
01S control type

3 **METERING CURVE:**
A01T curve type

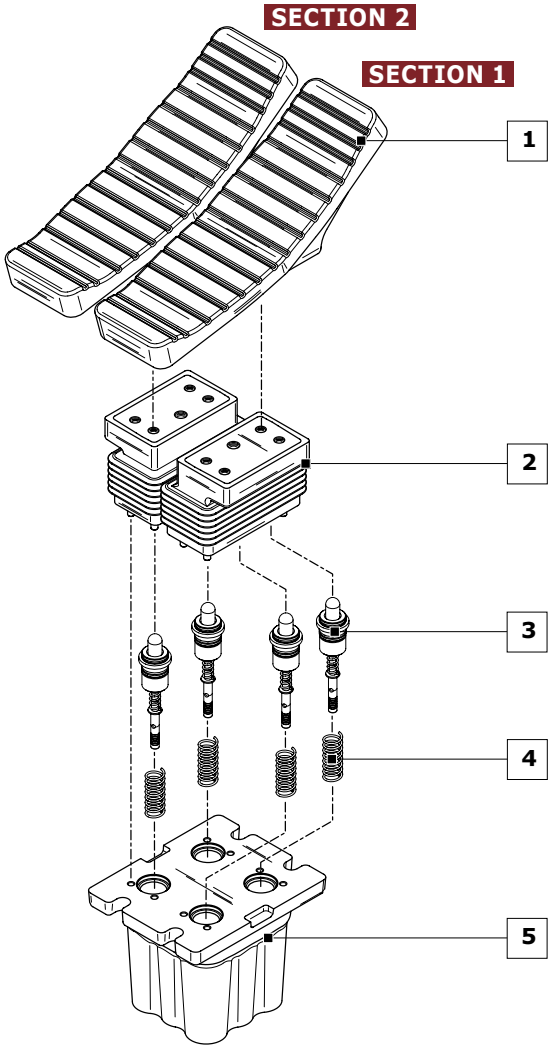
4 **RETURN SPRING:**
MD spring return type

5 **BODY ARRANGEMENT:**
RA01 body specification
G02 body thread

Ordering row 1, 2, 3, and 4 must be repeated for each section. Each section contains 2 curves and 2 springs.

COMPLETE EXAMPLE

RCT-/02P/01S/02P/01S-A01TMD-A01TMD-A01TMD-A01TMD-RA01G02

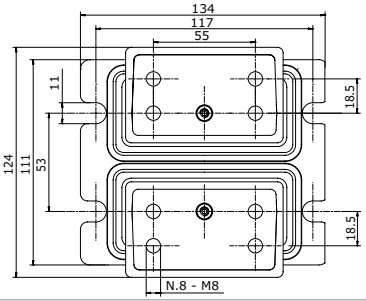
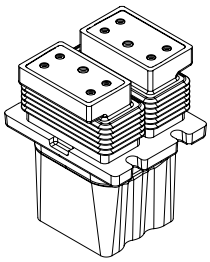
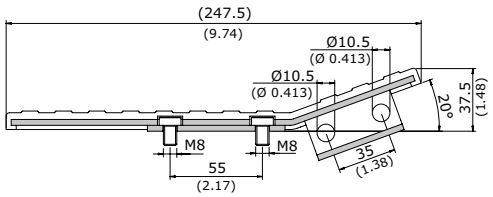
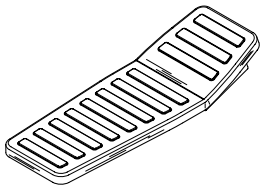
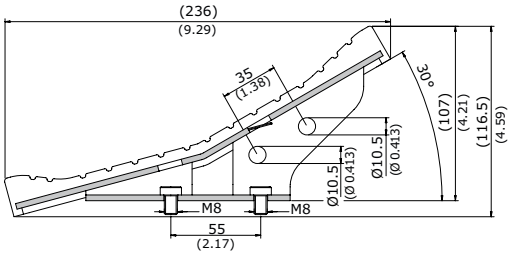
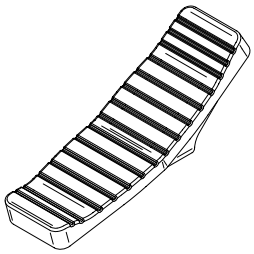
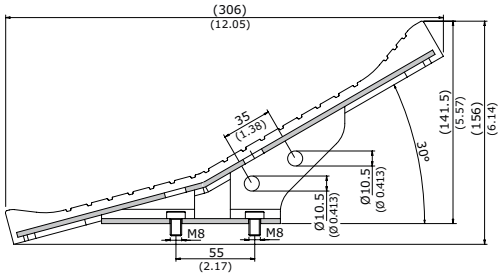
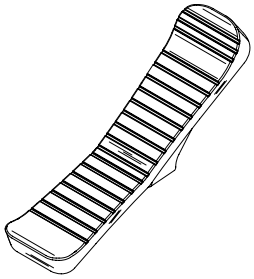


1	**PEDAL CLASSIFICATION:** (page 54)
00P	Without pedal (pedal arrangement)
01P	Standard flat pedal
02P	Short pedal tilted 30°
03P	Long pedal tilted 30°
2	**CONTROL KIT CLASSIFICATION:** (page 55)
01S	Control kit with bellows
2	**METERING CURVE:** (page 74)
A01T	Linear metering curve with step (tipo A)
B01T	Linear metering curve without step (tipo B)
4	**RETURN SPRING:** (page 78)
MD	Preload 94 N (21.1 lbf) End stroke load 149 N (33.5 lbf)
5	**BODY ARRANGEMENT:** (page 56)
RA01G02	P - T lower (G 1/4 ports)
RA02G02	P - T side (G 1/4 ports)
RA11G02	P - T front A - B lower (G 1/4 ports)
RA12G02	A - B - P - T side (G 1/4 ports)
RA01U02	P - T lower (9/16-18 UNF ports)
RA02U02	P - T side (9/16-18 UNF ports)
RA11U02	P - T front A - B lower (9/16-18 UNF ports)
RA12U02	A - B - P - T side (9/16-18 UNF ports)

RCT DOUBLE FOOT PEDAL LOWER PORTS

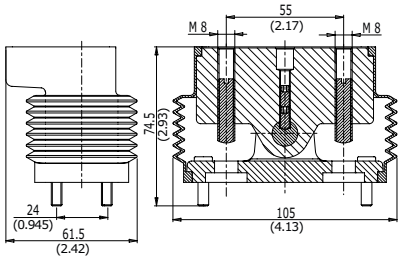
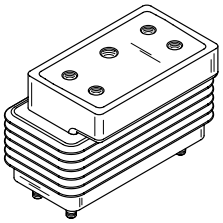
PEDAL CLASSIFICATION

All controls installed on the foot pedal RCT are interchangeable. Pedals represented correspond to standard configurations; for different applications contact our Sales Dept.

Code	Dimensions	Configuration	Description
00P			Without pedal (with arrangement)
01P			Standard flat pedal with rubber protection
02P			Short pedal tilted 30° with rubber protection
03P			Long pedal tilted 30° with rubber protection

CONTROL KIT CLASSIFICATION

Only one configuration is available; for different applications contact our Sales Dept.

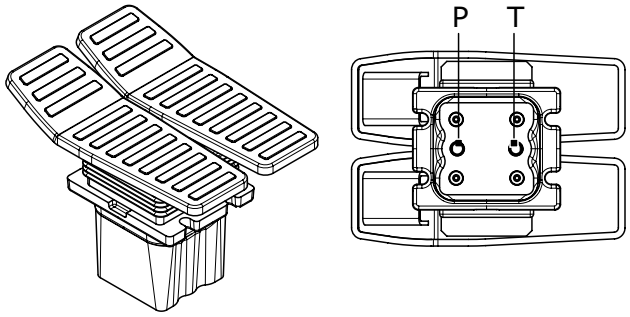
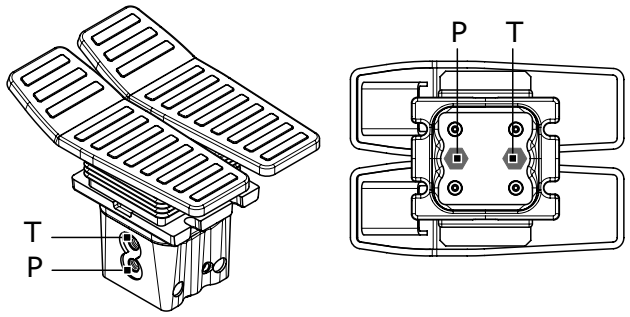
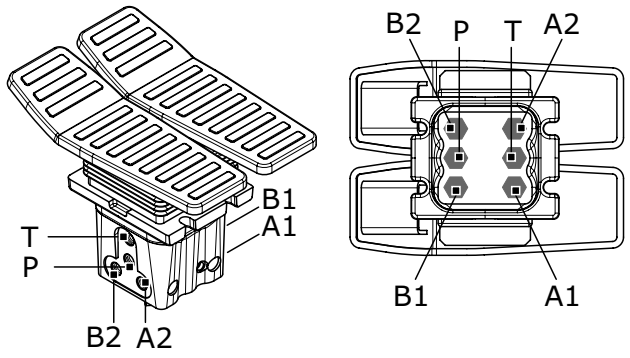
Code	Dimensions	Configuration	Description
01S			Control kit with bellow

Metering curves are available equipped with a swing-preventing dampening device; for more informations contact our Sales Dept.

RCT DOUBLE FOOT PEDAL LOWER PORTS

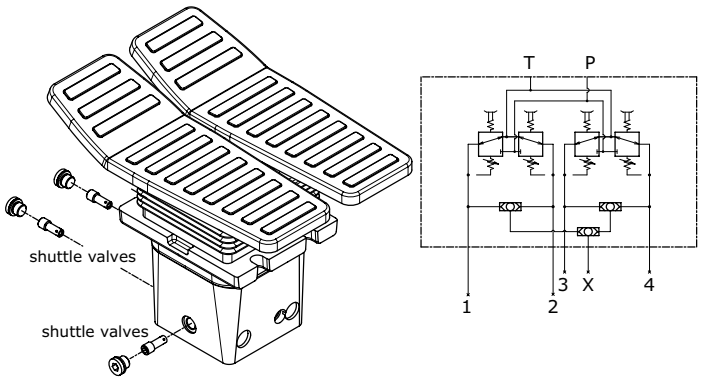
STANDARD BODY ARRANGEMENT

The listed configurations are all the possible combinations that can be obtained with the RCT standard body; two different pitch threads are available; for different applications contact our Sales Dept.

Code	Configuration	Description
RA01G02		Standard body (lower P-T ports) G 1/4 ports
RA01U02		Standard body (lower P-T ports) 9/16" - 18 UNF ports
RA02G02		Body with side P-T ports G 1/4 ports
RA02U02		Body with side P-T ports 9/16" - 18 UNF ports
RA03G02		Body with side A-B-P-T ports G 1/4 ports
RA03U02		Body with side A-B-P-T ports 9/16" - 18 UNF ports

BODY WITH SHUTTLE VALVE ARRANGEMENT

Bodies are available equipped with integrated shuttle valves to generate additional signals. The RA11 configuration includes a fifth port activated when any one of the four working ports is actuated (for safety, alert or brake release functions).

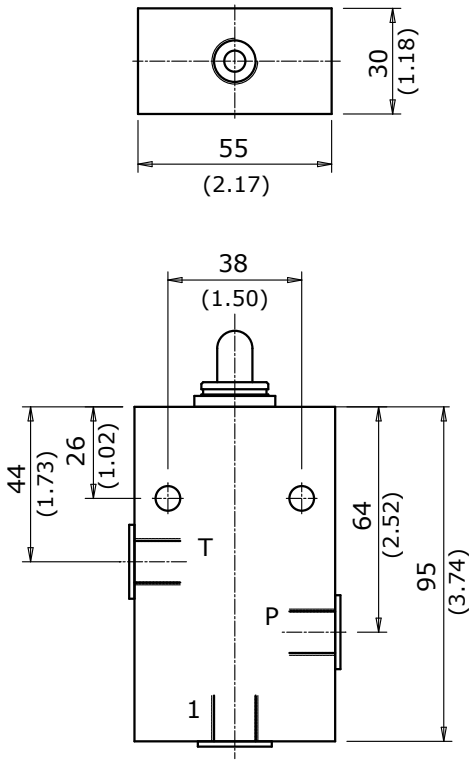
Code	Configuration	Description
RA11G02		Standard body with shuttle valves G 1/4 ports
RA11U02		Standard body with shuttle valves 9/16” - 18 UNF ports

RCV HYDRAULIC REMOTE CONTROL ONE WORKING PORT

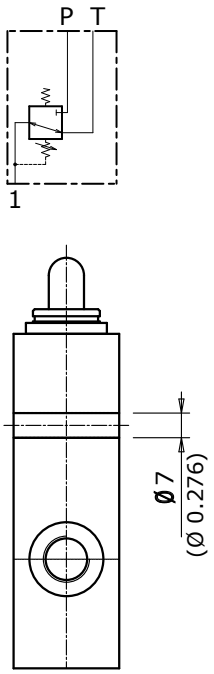
RCV is a general purpose single user remote control. It can be delivered with simple spring centering control, 360° regulating handle holding the control position or with pedal control. In rest position, the hydraulic remote control is held in neutral by return spring; inlet port P is closed and ports are connected to tank port T. By selecting control, plunger compresses return spring and reaction spring; consequently it shifts spool and opens connection holes between inlet port P and working ports. This causes a pressure increase on working ports that is proportional to the control stroke and the reaction spring.

TECHNICAL SPECIFICATIONS	
Max pressure:	**100 bar (1450 psi)**
Nominal flow rating:	**from 5 to 20 l/min (from 2.32 to 5.28 US gpm)**
Weight:	**1 Kg (2.2 lb)**
APPLICATIONS	
Forklifts, Tractors	

DIMENSIONS



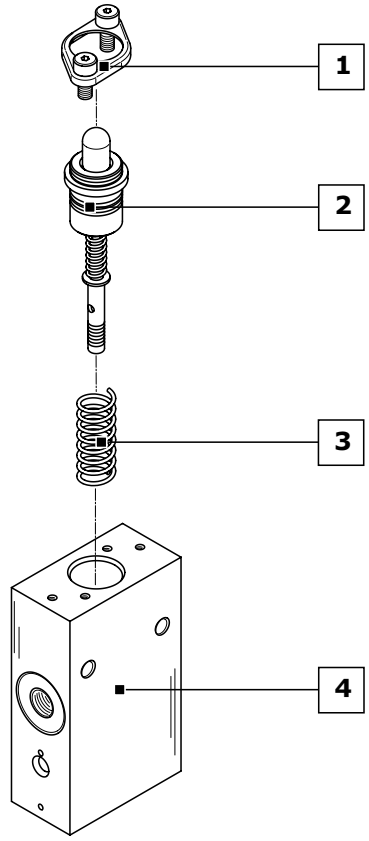
HYDRAULIC SCHEME



HYDRAULIC REMOTE CONTROL ONE WORKING PORT RCV

ORDER EXAMPLE = RCV-/ 00H - A01 MA - RAG02

RCV product type
1 **CONTROL CLASSIFICATION:**
00H control type
2 **METERING CURVE:**
A01 curve type
3 **RETURN SPRING:**
MA spring return type
4 **BODY ARRANGEMENT:**
RA body specification
G02 body thread

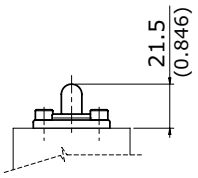
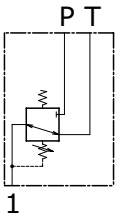
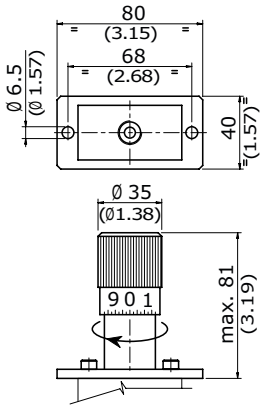
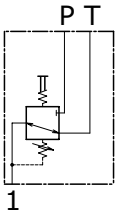
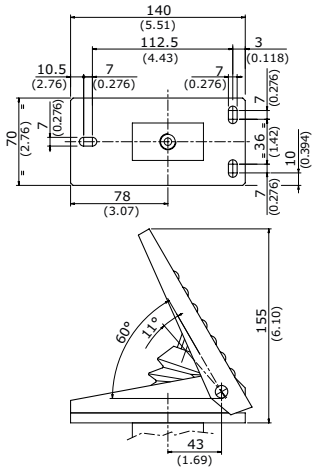
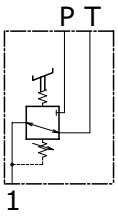


1	**CONTROL CLASSIFICATION:** (page 60)
00H	Without control with spring return in neutral position
01V	Graduate knob operation with 360° rotation angle and stop in any position
01S	Foot pedal with return spring in neutral position
2	**METERING CURVE:** (page 70)
A01	Linear metering curve with step
B01	Linear metering curve without step
C01	Broken line metering curve with step
D01	Broken line metering curve without step
3	**RETURN SPRING:** (page 78)
MA	Preload 25 N (5.6 lbf) - End stroke load 48 N (10.8 lbf)
MB	Preload 14 N (3.1 lbf)- End stroke load 27 N (6.1 lbf)
MC	Preload 73 N (16.4 lbf) - End stroke load 135 N (30.3 lbf)
MD	Preload 89 N (20.0 lbf)- End stroke load 169 N (38.0 lbf)
4	**BODY ARRANGEMENT:** (page 61)
RAG02	Standard Body (G 1/4 ports)
RAU02	Standard Body (9/16”-18 UNF ports)

RCV HYDRAULIC REMOTE CONTROL ONE WORKING PORT

CONTROL KIT CLASSIFICATION

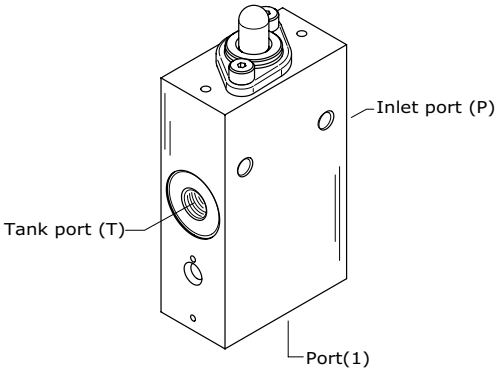
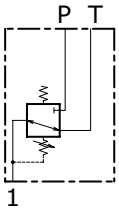
All controls installed on the foot pedal RCV are interchangeable: the controls shown correspond to standard configurations; for different applications contact our Sales Dept.

Code	Dimensions	Scheme	Description
00H			Without control with spring return in neutral position
01V			Graduate knob operation with 360° rotation angle and stop in any position
01S			Foot pedal with spring return in neutral position (standard)

HYDRAULIC REMOTE CONTROL ONE WORKING PORT RCV

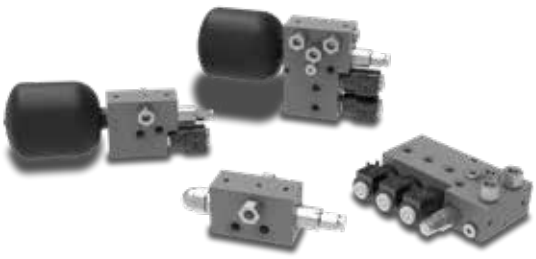
BODY ARRANGEMENT

The hydraulic remote control RCV has only one setting body, the only variable is represented by a different thread.

Code	Configuration	Scheme	Description
RAG02			Standard body G 1/4 ports
RAU02			Standard body 9/16”-18 UNF ports

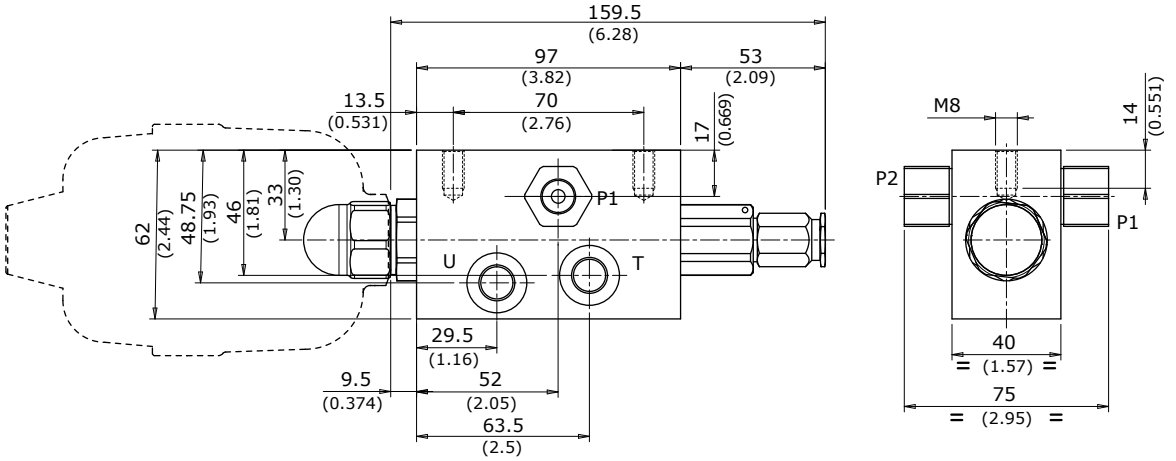
SU-SE HYDRAULIC REMOTE CONTROL ONE SERVICE PORT

The purpose of feed unit SU and SE is to fit hydraulic remote controls in an hydraulic system working at high pressure with reduced flow at low pressure.
The eed unit range is thus divided: **SU2, SU3, SE2, SE3**
SE3 can fit up to 3 dump valves (12 - 24 Vdc)

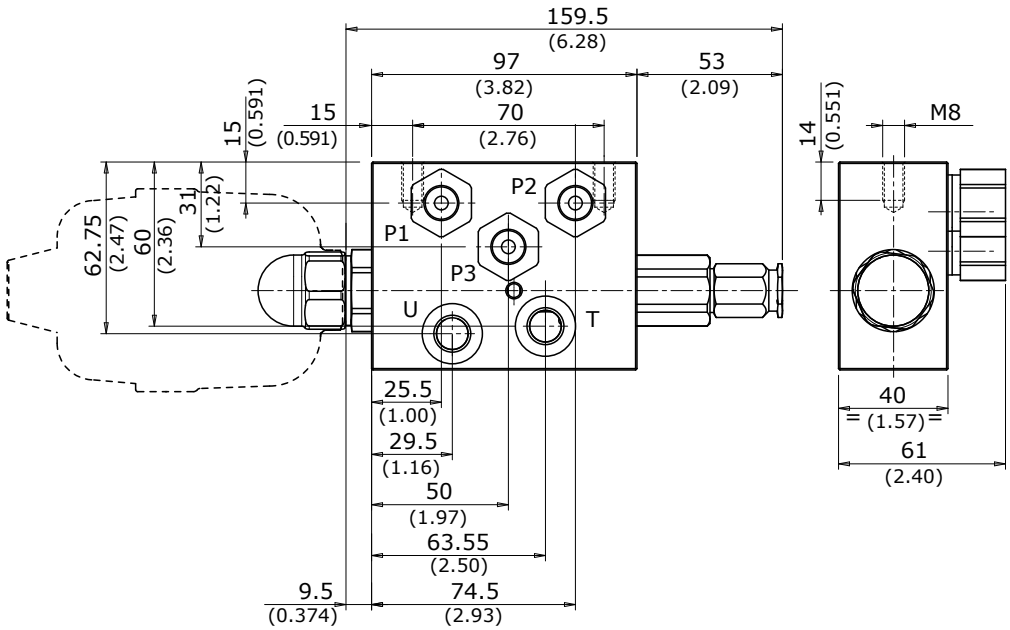


TECHNICAL SPECIFICATIONS	
Max pressure:	**350 bar (5100 psi)**
Pressure on port line (U):	**from 10 to 70 bar (from 145 to 1015 psi)**
Max. back pressure on tank line (T):	**3 bar (43.5 psi)**
Minimum pressure (P1):	**10 bar (145 psi)**
Max pressure:	**100 bar (1450 psi)**
Nominal flow rating:	**from 5 to 20 l/min (from 1.32 to 5.28 US gpm)**
Remote pilot of: directional control valves, variable displacement pumps and motors, auxiliary valves, frictions and hydraulic brakes	

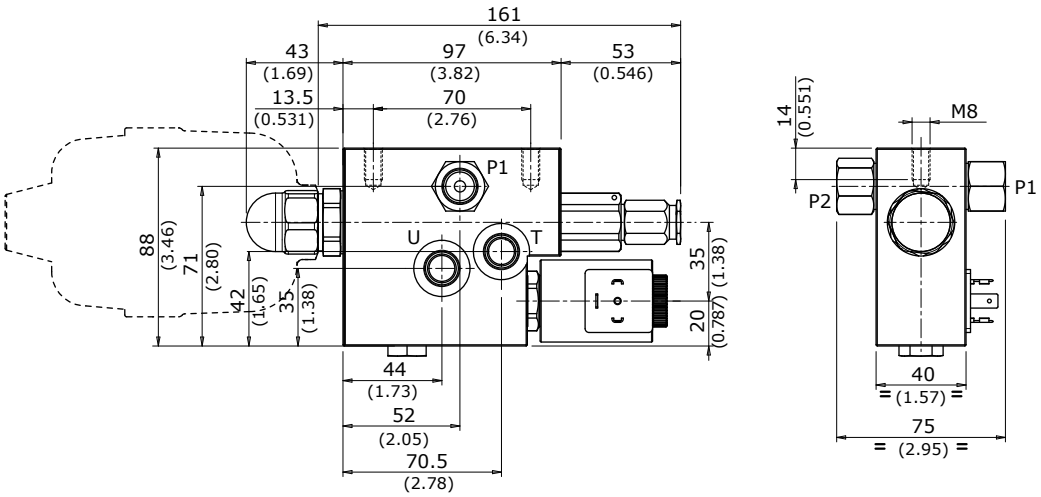
SU2 DIMENSIONS



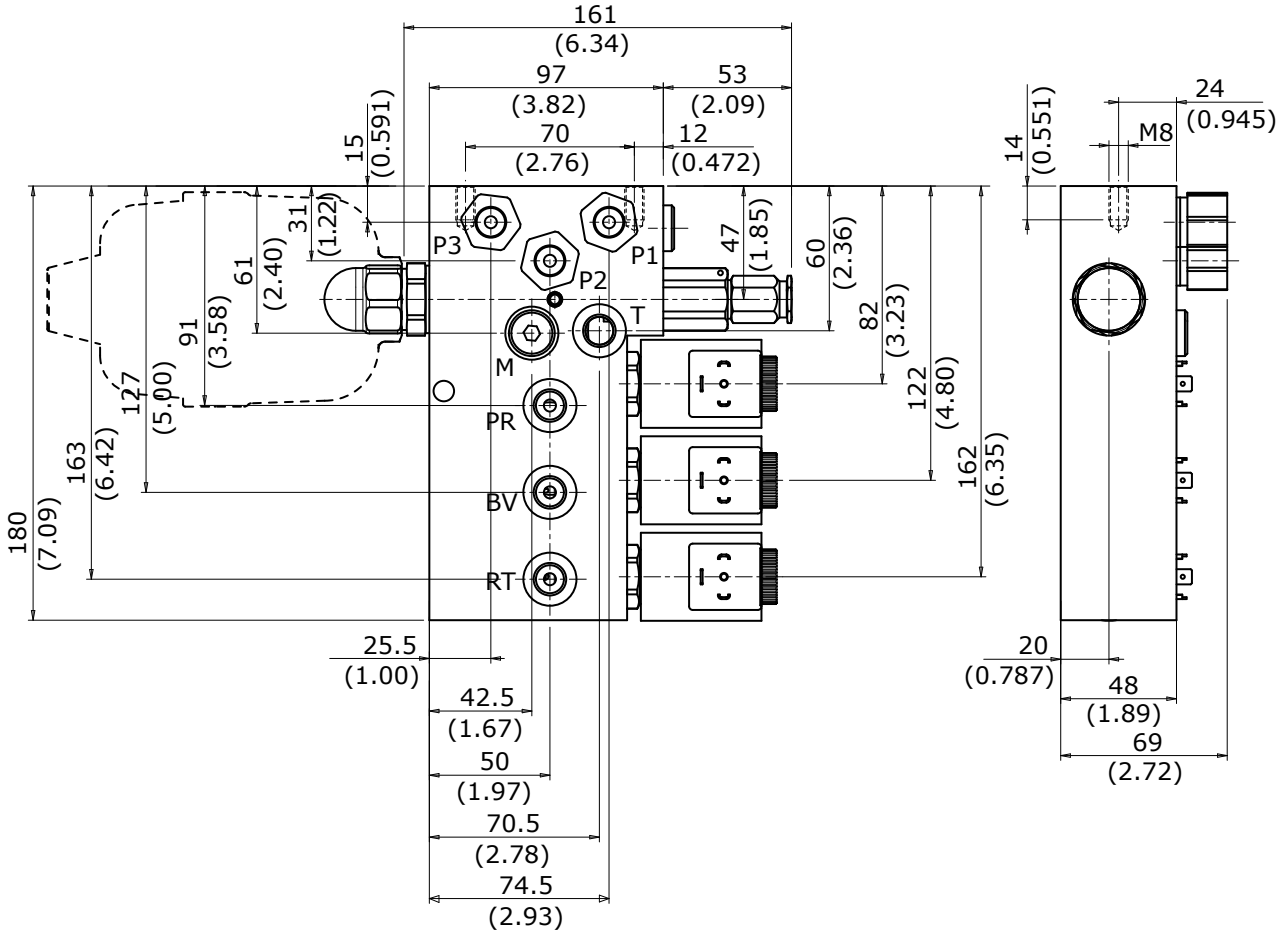
SU3 DIMENSIONS



SE2 DIMENSIONS



SE3 DIMENSIONS



SU-SE HYDRAULIC REMOTE CONTROL ONE SERVICE PORT

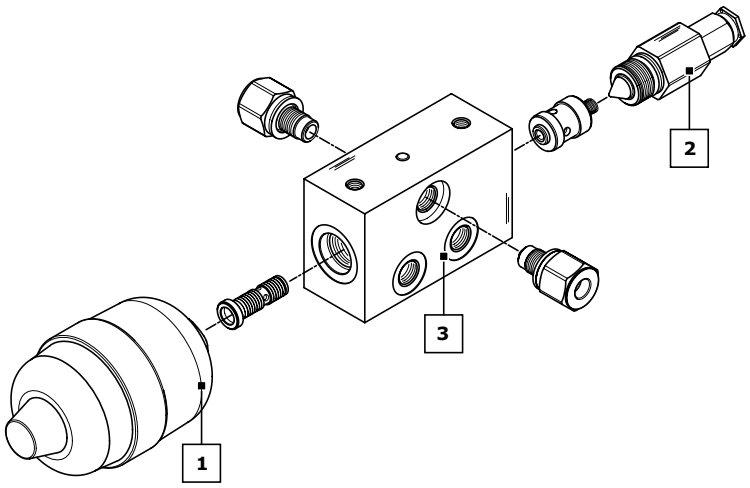
ORDER EXAMPLE = SU2: V04 - 30 - RA G02

SU product type
2 number of lines

1 ACCUMULATOR CLASSIFICATION:
V04 accumulator model

2 REDUCING VALVE:
30 pressure setting (0-70 bar on working port U)

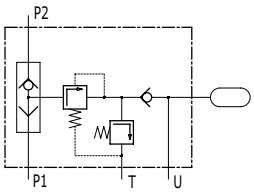
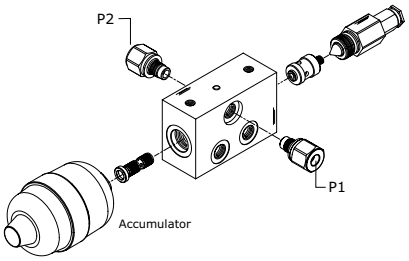
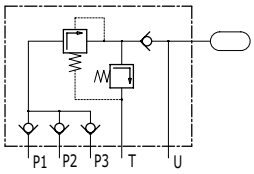
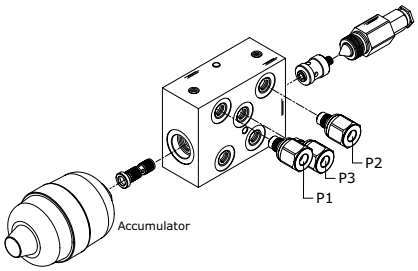
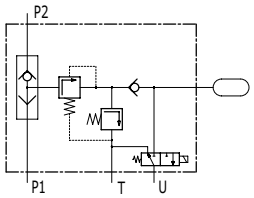
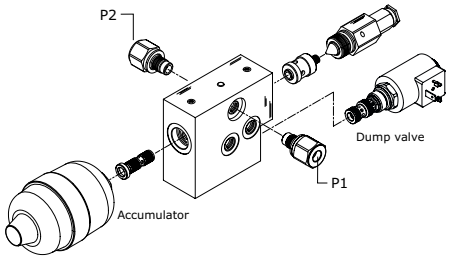
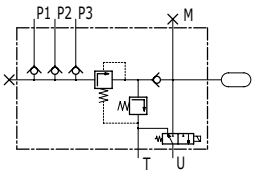
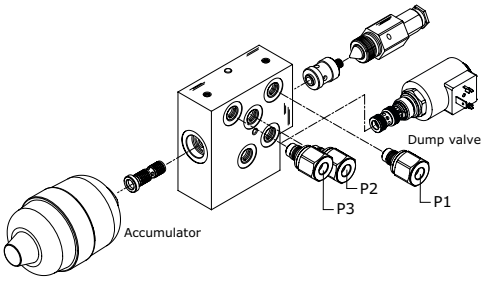
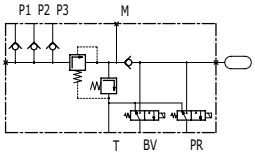
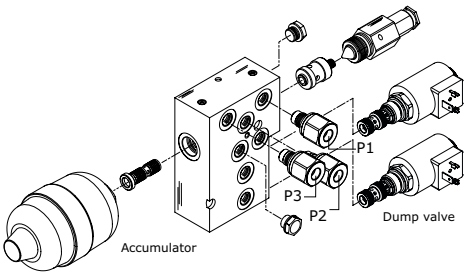
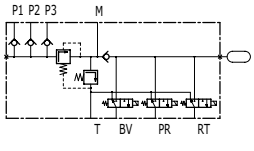
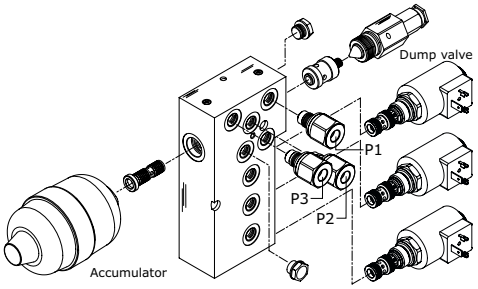
3 BODY ARRANGEMENT:
RA body specification
G02 body thread



	PRODUCT TYPE: (page 65)
SU2	Two (P) lines feed unit at high pressure
SU3	Three (P) lines feed unit at high pressure
SE2	Feed unit with 2 inlets at high pressure and 1 outlet with reduced pressure (port U) with dump valve
SE3/1	Feed unit with 3 inlets at high pressure and 1 outlet with reduced pressure (port U) with dump valve
SE3/2	Feed unit with 3 inlets at high pressure and 2 outlets with reduced pressure (port BV-PR) with dump valve on each outlet
SE3/3	Feed unit with 3 inlets at high pressure and 3 outlets with reduced pressure (port BV-PR-RT) with dump valve on each outlet
1	**ACCUMULATOR CLASSIFICATION CURVE:** (page 66)
V01	Without accumulator
V03	Prearranged for accumulator (1/2" BSP)
V04	Hydropneumatic accumulator with rubber membrane (Volume of nitrogen: lt. 0.35 - 21 in^3 / Precharge: 10 bar - 145 psi)
2	**REDUCING VALVE:**
30	In the ordering code is necessary to indicate the pressure setting of reducing valve. setting range pressure: from 0 to 70 bar (from 0 to 1015 psi)
3	**BODY ARRANGEMENT:** (page 69)
RA G02	Standard body (only for SU2) (G 1/4 ports)
RB G02	Standard body (only for SU3) (G 1/4 ports)
RV G02	Body with dump valve 12 VDC (only for SE2 - SE3) (G 1/4 ports)
RW G02	Body with dump valve 24 VDC (only for SE2 - SE3) (G 1/4 ports)
RA U02	Standard body (only for SU2) (9/16"-18 UNF ports)
RB U02	Standard body (only for SU3) (9/16"-18 UNF ports)
RV U02	Body with dump valve 12 VDC (only for SE2 - SE3) (9/16"-18 UNF ports)
RW U02	Body with dump valve 24 VDC (only for SE2 - SE3) (9/16"-18 UNF ports)

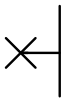
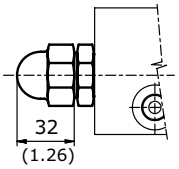
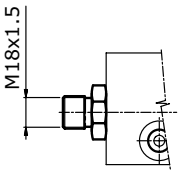
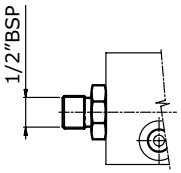
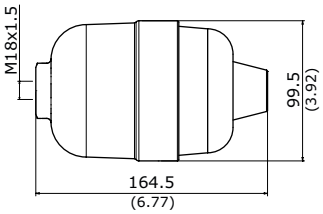
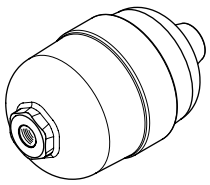
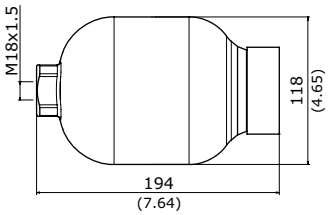
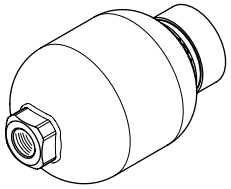
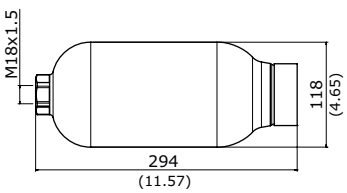
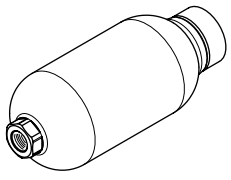
HYDRAULIC REMOTE CONTROL ONE SERVICE PORT SU-SE

FEED UNIT CLASSIFICATION

Code	Scheme	Configuration	Description
SU2			Two (P) lines feed unit at high pressure
SU3			Three (P) lines feed unit at high pressure
SE2			Feed unit with 2 inlets at high pressure and 1 outlet with reduced pressure (port U) with dump valve
SE3/1			Feed unit with 3 inlets at high pressure and 1 outlet with reduced pressure (port U) with dump valve
SE3/2			Feed unit with 3 inlets at high pressure and 2 outlets with reduced pressure (port BV-PR) with dump valve on each outlet
SE3/3			Feed unit with 3 inlets at high pressure and 3 outlets with reduced pressure (port BV-PR-RT) with dump valve on each outlet

SU-SE HYDRAULIC REMOTE CONTROL ONE SERVICE PORT

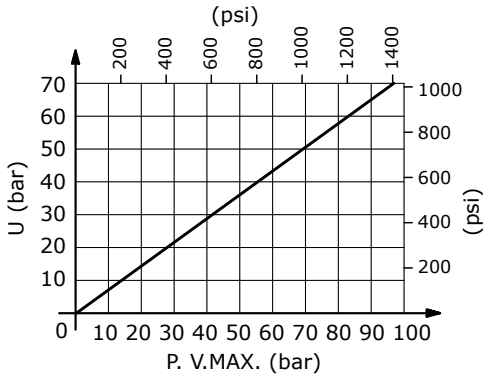
ACCUMULATOR CLASSIFICATION

Code	Scheme	Dimensions	Description
V01			Without accumulator
V02			With accumulator arrangement (M18x1,5)
V03			With accumulator arrangement (1/2" BSP)
V04		 	Hydropneumatic accumulator with rubber membrane Volume of nitrogen: lt. 0.35 Precharge: 10 bar
V05		 	Hydropneumatic accumulator with rubber membrane Volume of nitrogen: lt. 0.75 Precharge: 10 bar
V06		 	Hydropneumatic accumulator with rubber membrane Volume of nitrogen: lt. 1.50 Precharge: 10 bar

ACCUMULATORS TECHNICAL SPECIFICATIONS			
Max. working pressure	**Working temperature**	**Max. allowed pressure ratio**	**Accumulator precharge pressure**
210 bar (3050 psi)	from -20°C to 80°C (from -4°F to 176°F)	< 6/1	10 bar (145 psi)

SETTING DIAGRAM, REDUCING VALVE, RELIEF VALVE

Because of the small dimensions and working on the same adjusting screw, this valve has the possibility of setting both the pressure reducing valve and the main relief valve. Main relief valve pressure setting is higher than about 10 bar if compared to the pressure reducing valve - see the pressure setting diagram. Feed unit may be installed in any mounting position but the accumulator should be as far as possible from heat sources..



SU-SE HYDRAULIC REMOTE CONTROL ONE SERVICE PORT

DUMP VALVE TECHNICAL SPECIFICATIONS

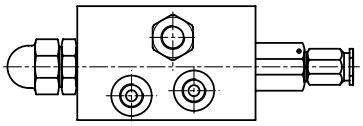
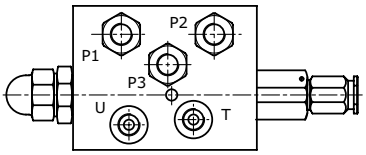
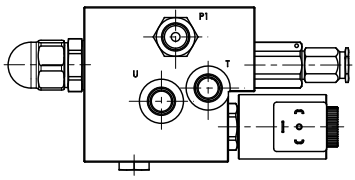
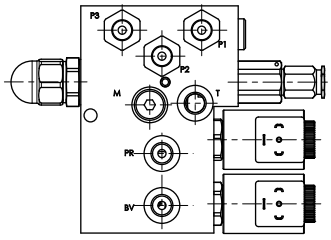
Description	Value
Operating voltage	12 - 24 VDC +/- 10%
Resistance at 20°C	6.8 Ω (12 VDC) - 27 Ω (24 VDC)
Power at 20°C	21 W
Utilization factor	ED100%
Copper wire thermal class according to CEI EN 60172	H
Coil thermal class according to CEI EN 60085	F
Connector	DIN 43650/ISO4400
Connector protection (EN 60529)	IP65

On request equipped counterpart connector DIN 43650/ISO4400. Ordering code: 413000313.

HYDRAULIC REMOTE CONTROL ONE SERVICE PORT **SU-SE**

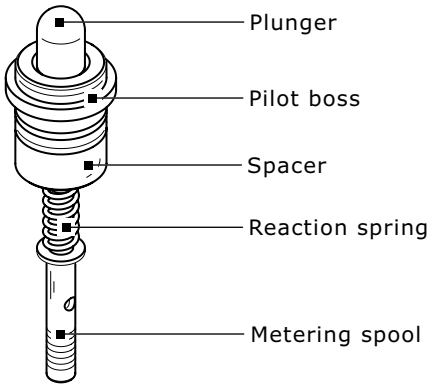
BODY ARRANGEMENT

The body configuration of a feed unit changes according to the product used; BSP and UNF service ports are featured in every set-up. For different applications contact our Sales Dept.

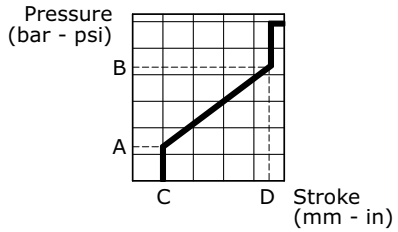
Code	Configuration	Description	SU2	SU3	SE2	SE3/1	SE3/2	SE3/3
RA G02		Standard body G 1/4 ports	•					
RA U02		Standard body 9/16"-18 UNF ports	•					
RB G02		Standard body G 1/4 ports		•				
RB U02		Standard body 9/16"-18 UNF ports		•				
RV G02		Body with dump valve (12 Vdc) G 1/4 ports			•	•	•	•
RV U02		Body with dump valve (12 Vdc) 9/16"-18 UNF ports			•	•	•	•
RW G02		Body with dump valve (24 Vdc) G 1/4 ports			•	•	•	•
RW U02		Body with dump valve (24 Vdc) 9/16"-18 UNF ports			•	•	•	•

METERING CURVE CLASSIFICATION

All the remote control configurations imply the choice of a "metering curve" kit; the number of metering curves changes according to the number of product working ports. The metering curve classification depends on the working pressure (measured in bars) and stroke length (measured in mm).
The sketch here below shows a typical metering curve and the list of available curves.
For information on the complete list of curves, contact the manufacturer's Sales department.



METERING CURVE CLASSIFICATION FOR RCX-RCM-RCB-RCP-RCF-RCD

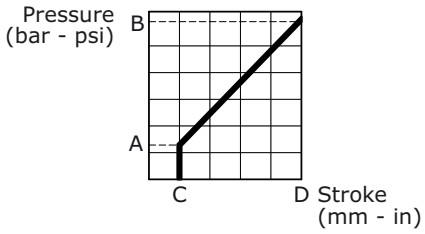
Type	Diagram	Description
A		Linear metering curve **with step**

CODE	PRESSURE				STROKE			
	A bar (psi)		B bar (psi)		C mm (in)		D mm (in)	
A01	5.8	(84)	19.5	(283)	1.5	(0.059)	7.5	(0.295)
A02	5	(72.5)	25	(363)	1.5	(0.059)	7.5	(0.295)
A03	2	(29)	13	(189)	1.5	(0.059)	7.5	(0.295)
A04	6	(87)	40	(580)	1.5	(0.059)	7.5	(0.295)
A05	0	0	64	(928)	1.5	(0.059)	7.5	(0.295)
A06	4	(58)	17	(247)	1.5	(0.059)	7.5	(0.295)
A07	5	(72.5)	15	(218)	1.5	(0.059)	7.5	(0.295)
A08	2	(29)	18	(261)	1.5	(0.059)	7.5	(0.295)
A09	5	(72.5)	20	(290)	1.5	(0.059)	6	(0.236)
A10	2	(29)	8	(116)	1.5	(0.059)	7.5	(0.295)
A11	4	(58)	10	(145)	1.5	(0.059)	7.5	(0.295)
A12	11.5	(167)	32	(464)	1.5	(0.059)	7.5	(0.295)
A13	10	(145)	20	(290)	1.5	(0.059)	7.5	(0.295)
A14	7	(102)	17	(247)	1.5	(0.059)	7.5	(0.295)
A15	7.5	(109)	29	(421)	1.5	(0.059)	7.5	(0.295)
A16	6	(87)	22	(319)	1.5	(0.059)	7.5	(0.295)
A17	0	0	20	(290)	1	(0.039)	7.5	(0.295)
A18	4	(58)	16	(232)	1.5	(0.059)	7	(0.276)

METERING CURVE CLASSIFICATION FOR RCX-RCM-RCB-RCP-RCF-RCD

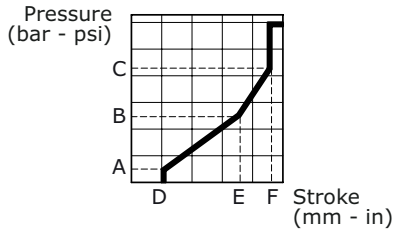
CODE	PRESSURE				STROKE			
	A bar (psi)		B bar (psi)		C mm (in)		D mm (in)	
A19	6	(87)	20.6	(299)	1.5	(0.059)	7	(0.276)
A20	8	(116)	28	(406)	1.5	(0.059)	7.5	(0.295)
A21	5	(72.5)	20.5	(297)	1.5	(0.059)	7.5	(0.295)
A22	5.8	(84)	18.3	(265)	1.5	(0.059)	7	(0.276)
A23	6.8	(98.6)	23.5	(341)	1	(0.039)	7.5	(0.295)
A24	5.8	(84)	19.2	(278)	1	(0.039)	9.5	(0.374)
A25	4.4	(63.8)	17.9	(260)	1	(0.039)	6.5	(0.256)
A26	2.8	(40.6)	20.8	(302)	1.5	(0.059)	9.5	(0.374)
A27	5.7	(82.7)	19.1	(277)	1.5	(0.059)	7.5	(0.295)
A28	3	(43.5)	16.2	(235)	1.5	(0.059)	7.5	(0.295)
A29	8	(116)	27	(392)	1.5	(0.059)	9.5	(0.374)
A30	5.8	(84)	15.5	(225)	1.5	(0.059)	7.5	(0.295)
A31	5.6	(81.2)	25.2	(365)	1.5	(0.059)	7.5	(0.295)
A32	7	(102)	15.5	(225)	1.2	(0.047)	7.5	(0.295)
A33	10.7	(155)	27.5	(399)	1	(0.039)	7.5	(0.295)
A34	0	0	28	(406)	1.5	(0.059)	7.5	(0.295)
A35	5.8	(84)	24	(348)	1.5	(0.059)	9.5	(0.374)
A36	7.4	(107)	21	(305)	1.5	(0.059)	7.5	(0.295)
A37	7.3	(106)	19.3	(280)	1.5	(0.059)	7	(0.276)
A38	7.5	(109)	17.7	(257)	1.5	(0.059)	7.5	(0.295)
A39	6.6	(95.7)	16.4	(238)	1.5	(0.059)	7.5	(0.295)
A40	6.5	(94.2)	11.6	(168)	1.5	(0.059)	7.5	(0.295)
A41	5.9	(85.5)	17.4	(252)	1.5	(0.059)	7.5	(0.295)
A42	6.6	(95.7)	16.3	(236)	1.5	(0.059)	9.5	(0.374)
A43	3	(43.5)	22.2	(322)	1.5	(0.059)	7.5	(0.295)
A44	14.5	(210)	26.9	(390)	1	(0.039)	7.5	(0.295)
A45	8.7	(126)	39.2	(568)	1.5	(0.059)	7.5	(0.295)
A46	4	(58)	22	(319)	1.5	(0.059)	7.5	(0.295)
A47	14.7	(213)	28.4	(412)	1.5	(0.059)	7.5	(0.295)
A48	5	(72.5)	74	(1073)	1	(0.039)	7.5	(0.295)
A49	0	0	34	(493)	1.5	(0.059)	7.5	(0.295)
A51	7.3	(106)	21	(305)	1.5	(0.059)	7	(0.276)
A52	10	(145)	79	(1146)	1	(0.039)	7.5	(0.295)
A54	4	(58)	20	(290)	1.5	(0.059)	7.5	(0.295)
A55	3	(43.5)	20	(290)	4.5	(0.177)	7.5	(0.295)
A56	5	(72.5)	20	(290)	1.5	(0.059)	4.5	(0.177)
A61	5	(72.5)	19	(276)	1.5	(0.059)	7	(0.276)
A62	8	(116)	22	(319)	1.5	(0.059)	7.5	(0.295)
A64	6.8	(98.6)	26	(377)	1.5	(0.059)	7.5	(0.295)
A67	2.5	(36.3)	14	(203)	1	(0.039)	7.5	(0.295)
A68	7.5	(109)	20.9	(303)	1.5	(0.059)	9.5	(0.374)
A74	7	(102)	16.2	(235)	1.5	(0.059)	7	(0.276)
A78	6	(87)	24.3	(352)	1.5	(0.059)	7	(0.276)
A80	5.8	(84)	23.6	(342)	1	(0.039)	6.5	(0.256)
A81	6	(87)	19	(276)	1	(0.039)	3.5	(0.138)
A82	6.9	(100)	21.7	(315)	1	(0.039)	7.5	(0.295)
A83	6.9	(100)	19.2	(278)	1	(0.039)	7.5	(0.295)

METERING CURVE CLASSIFICATION FOR RCX-RCM-RCB-RCP-RCF-RCD

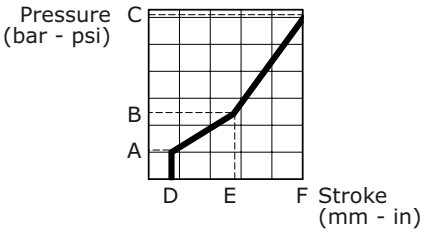
Type	Diagram	Description
B		Linear metering curve **without step**

CODE	PRESSURE				STROKE			
	A bar (psi)		B bar (psi)		C mm (in)		D mm (in)	
B01	5	(72.5)	22	(319)	1.5	(0.059)	8	(0.315)
B02	5	(72.5)	19	(276)	1.5	(0.059)	8	(0.315)
B03	5	(72.5)	16	(232)	1.5	(0.059)	8	(0.315)
B04	2	(29)	16.5	(239)	1.5	(0.059)	8	(0.315)
B05	7.5	(109)	32.5	(471)	1	(0.039)	8	(0.315)
B06	5	(72.5)	20	(290)	1	(0.039)	8	(0.315)
B07	4	(58)	10.5	(152)	1.5	(0.059)	8	(0.315)
B08	3	(43.5)	14.5	(210)	1.5	(0.059)	8	(0.315)
B09	6	(87)	24.3	(352)	1	(0.039)	8	(0.315)
B10	2	(29)	19.3	(280)	1.5	(0.059)	8	(0.315)
B11	7.1	(103)	21.9	(318)	1	(0.039)	8	(0.315)
B12	8.3	(120)	23.2	(336)	1	(0.039)	8	(0.315)
B13	7.9	(115)	23.6	(342)	1	(0.039)	8	(0.315)
B14	6	(87)	23	(334)	1.5	(0.059)	8	(0.315)
B15	10.2	(148)	25.8	(374)	1	(0.039)	8	(0.315)
B16	6.9	(100)	12.4	(180)	1.5	(0.059)	8	(0.315)
B17	2.1	(30.5)	20.3	(294)	1	(0.039)	8	(0.315)
B18	5.8	(84.1)	27	(392)	1.5	(0.059)	8	(0.315)
B19	3.2	(46.4)	24.4	(354)	1.5	(0.059)	8	(0.315)
B20	2	(29)	8.5	(123)	1.5	(0.059)	8	(0.315)
B21	2	(29)	13.7	(199)	1.5	(0.059)	8	(0.315)
B22	5.8	(84.1)	16.4	(238)	1.2	(0.047)	7.7	(0.303)
B23	4	(58)	18	(261)	1.5	(0.059)	8	(0.315)
B24	10.2	(148)	25.1	(364)	1	(0.039)	8	(0.315)
B25	4.5	(65.3)	23.9	(347)	1.5	(0.059)	8	(0.315)
B26	7.8	(113)	39	(566)	1.5	(0.059)	8	(0.315)
B27	7.5	(109)	18.9	(274)	1	(0.039)	8	(0.315)
B29	3	(43.5)	23.8	(345)	1.5	(0.059)	8	(0.315)
B30	6	(87)	42	(609)	1.5	(0.059)	8	(0.315)
B31	4	(58)	29	(421)	1	(0.039)	8	(0.315)
B32	5	(72.5)	27.5	(399)	1	(0.039)	8	(0.315)
B35	6.5	(94.3)	20	(290)	1	(0.039)	8	(0.315)
B36	7.8	(113)	20.2	(293)	1	(0.039)	8	(0.315)
B39	2.7	(39.2)	15	(218)	1.5	(0.059)	8	(0.315)
B43	7	(102)	17.8	(258)	1.5	(0.059)	8	(0.315)
B44	6.5	(94.3)	19	(276)	1.5	(0.059)	8	(0.315)

METERING CURVE CLASSIFICATION FOR RCX-RCM-RCB-RCP-RCF-RCD

Type	Diagram	Description
C		Broke line metering curve **with step**

CODE	PRESSURE						STROKE					
	A bar (psi)		B bar (psi)		C bar (psi)		D mm (in)		E mm (in)		F mm (in)	
C01	2	(29)	6	(87)	15	(218)	1.5	(0.059)	5	(0.197)	7.5	(0.295)
C02	3	(43.5)	7	(102)	16	(232)	1.5	(0.059)	5	(0.197)	7.5	(0.295)
C03	7	(102)	18	(261)	27	(392)	0.5	(0.020)	4.8	(0.248)	6	(0.236)
C04	7	(102)	18	(261)	27	(392)	0.5	(0.020)	6.3	(0.248)	8	(0.315)
C05	5	(72.5)	11	(160)	18	(261)	1	(0.039)	5	(0.197)	7.5	(0.295)
C07	4.2	(61)	9	(131)	20	(290)	1.5	(0.059)	5	(0.197)	7.5	(0.295)
C08	6.5	(94.3)	11	(160)	18.5	(268)	1	(0.039)	5	(0.197)	7.5	(0.295)
C09	5	(72.5)	11	(160)	18	(261)	1	(0.039)	5	(0.197)	7.5	(0.295)
C10	5.4	(78.3)	10.9	(158)	17.3	(251)	1	(0.039)	5	(0.197)	7.5	(0.295)

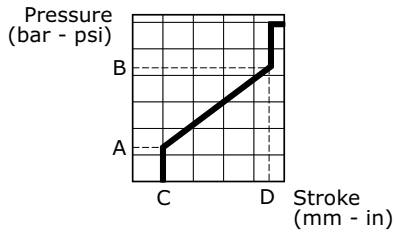
Type	Diagram	Description
D		Broke line metering curve **without step**

CODE	PRESSURE						STROKE					
	A bar (psi)		B bar (psi)		C bar (psi)		D mm (in)		E mm (in)		F mm (in)	
D01	2	(29)	6	(87)	15	(218)	1.5	(0.059)	5	(0.197)	8	(0.315)
D02	4.2	(61)	9	(131)	22	(319)	1	(0.039)	5	(0.197)	8	(0.315)
D04	5	(72.5)	16.2	(235)	20	(290)	1.5	(0.059)	7.5	(0.295)	8	(0.315)
D07	4.2	(61)	9	(131)	20	(290)	1.5	(0.059)	5	(0.197)	8	(0.315)

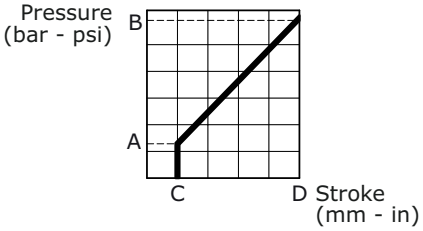
METERING CURVE CLASSIFICATION FOR RCS - RCT

The RCS and RCT tilting foot controls imply the use of limited-stroke dedicated curves guaranteeing improved control ergonomics.

Metering curves are available equipped with a swing-preventing dampening device (with "TD" in the code); for more informations contact our Sales Dept.

Type	Diagram	Description
A		Linear metering curve **with step**

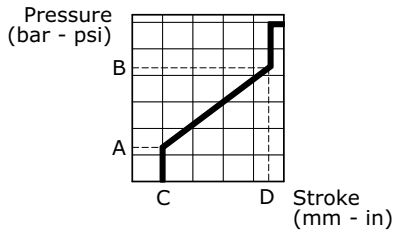
CODE	PRESSURE				STROKE			
	A bar (psi)		B bar (psi)		C mm (in)		D mm (in)	
A01T	5.8	(84.1)	19.5	(283)	1	(0.039)	5.5	(0.217)
A02T - A02TD	5	(72.5)	25	(363)	1	(0.039)	5.5	(0.217)
A06T	4	(58)	17	(247)	1	(0.039)	5.5	(0.217)
A07T	5	(72.5)	15	(218)	1	(0.039)	5.5	(0.217)
A16T - A16TD	6	(87)	22	(319)	1	(0.039)	5.5	(0.217)
A20T - A20TD	8	(116)	28	(406)	1	(0.039)	5.5	(0.217)
A52T - A52TD	10	(145)	79	(1146)	1	(0.039)	5.5	(0.217)
A53T	6	(87)	26	(377)	1	(0.039)	5.5	(0.217)
A58TD	5.8	(84.1)	19.5	(283)	1	(0.039)	4.2	(0.165)

Type	Diagram	Description
B		Linear metering curve **without step**

CODE	PRESSURE				STROKE			
	A bar (psi)		B bar (psi)		C mm (in)		D mm (in)	
B01T	5	(72.5)	22	(319)	1	(0.039)	5.5	(0.217)
B07T	4	(58)	10.5	(152)	1	(0.039)	5.5	(0.217)
B14T	6	(87)	23	(334)	1	(0.039)	5.5	(0.217)
B23T	4	(58)	18	(261)	1.5	(0.059)	5	(0.197)
B28	8.2	(119)	26.8	(389)	1	(0.039)	7.5	(0.295)
B32T - B32TD	5	(72.5)	27.5	(399)	1.5	(0.059)	5	(0.197)
B34TD	5.8	(84.1)	22	(319)	1	(0.039)	5.5	(0.217)
B40T	6	(87)	18.7	(271)	1	(0.039)	4.2	(0.165)

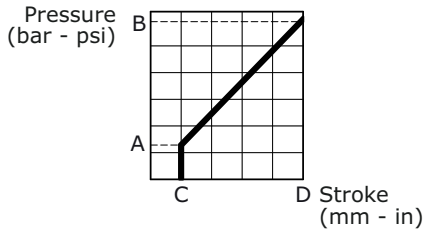
METERING CURVE CLASSIFICATION FOR RCY

The RCY hydraulic remote control imply the use of dedicated curves, specially designed to reduce actuation forces. The available choices are shown here below.

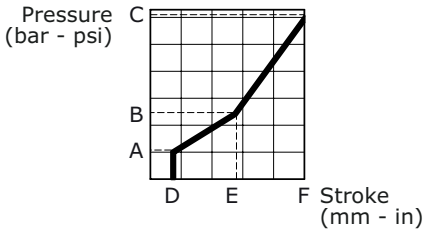
Type	Diagram	Description
A		Linear metering curve **with step**

CODE	PRESSURE				STROKE			
	A bar (psi)		B bar (psi)		C mm (in)		D mm (in)	
A01	5.8	(84.1)	19.5	(283)	1.5	(0.059)	7.5	(0.295)
A02	5	(72.5)	25	(363)	1.5	(0.059)	7.5	(0.295)
A07	5	(72.5)	15	(218)	1.5	(0.059)	7.5	(0.295)
A23	6.8	(98.6)	23.5	(341)	1	(0.039)	7.5	(0.295)
A35	5.8	(84.1)	24	(348)	1.5	(0.059)	9.5	(0.374)
A50	5	(72.5)	26.8	(389)	1	(0.039)	7.5	(0.295)
A53	6	(87)	26	(377)	1.5	(0.059)	7.5	(0.295)
A54	4	(58)	20	(290)	1.5	(0.059)	7.5	(0.295)
A57	6.6	(95.7)	22.7	(329)	1.5	(0.059)	7.5	(0.295)
A59	5	(72.5)	26.8	(389)	1	(0.039)	6.5	(0.256)
A60	5	(72.5)	26.8	(389)	1	(0.039)	8.5	(0.335)
A63	3.4	(49.3)	15.5	(225)	1.5	(0.059)	7.5	(0.295)
A65	6.5	(94.3)	23.7	(344)	1.5	(0.059)	7.5	(0.295)
A66	6.9	(100)	18.4	(267)	1.5	(0.059)	7.5	(0.295)
A69	5.5	(79.8)	21	(305)	1.5	(0.059)	7.5	(0.295)
A70	6.25	(90.6)	23.7	(344)	1	(0.039)	7.5	(0.295)
A71	6.9	(100)	25.2	(365)	1.5	(0.059)	9.5	(0.374)
A72	9.2	(133)	27.5	(399)	1.5	(0.059)	9.5	(0.374)
A73	5.8	(84.1)	20.6	(299)	1	(0.039)	7.5	(0.295)
A75	5.8	(84.1)	17	(247)	1.5	(0.059)	7.5	(0.295)
A76	10	(145)	17	(247)	1.5	(0.059)	7.5	(0.295)
A77	8	(116)	28	(406)	1.5	(0.059)	7.5	(0.295)
A79	9.3	(135)	23.1	(335)	1.5	(0.059)	7.5	(0.295)

METERING CURVE CLASSIFICATION FOR RCY

Type	Diagram	Description
B		Linear metering curve **without step**

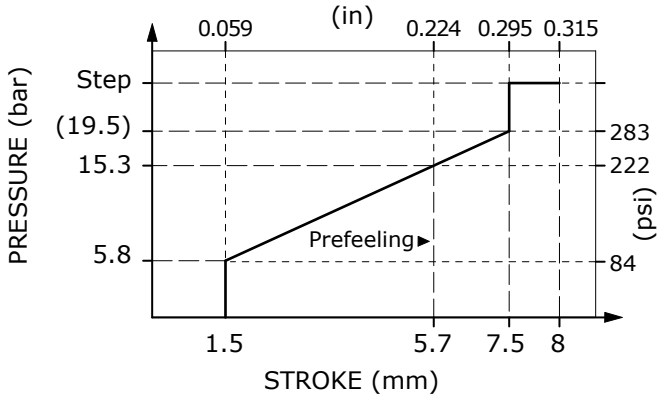
CODE	PRESSURE				STROKE			
	A bar (psi)		B bar (psi)		C mm (in)		D mm (in)	
B28	8.2	(119)	26.8	(389)	1	(0.039)	7.5	(0.295)
B33	5.9	(85.6)	24.8	(360)	1.5	(0.059)	8	(0.315)
B37	5	(72.5)	15.8	(229)	1.5	(0.059)	8	(0.315)
B38	6.3	(91.4)	21.2	(307)	1.5	(0.059)	8	(0.315)
B41	5	(72.5)	26.6	(386)	1.5	(0.059)	8	(0.315)
B42	5.8	(84.1	25.1	(364)	1.5	(0.059)	10	(0.394)

Type	Diagram	Description
D		Broke line metering curve **without step**

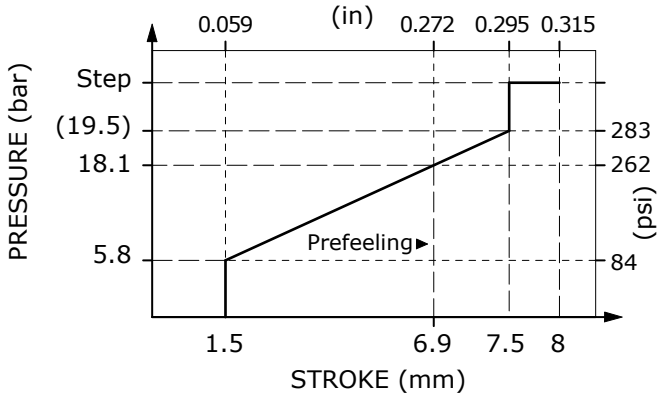
CODE	PRESSURE						STROKE					
	A bar (psi)		B bar (psi)		C bar (psi)		D mm (in)		E mm (in)		F mm (in)	
D03	5.2	(75.4)	14.4	(209)	30.9	(448)	1.5	(0.059)	5	(0.197)	8	(0.315)

PREFEELING - MECHANICAL DETENT

The prefeeling function enables users to safely lock the lever adjustment without accidentally reaching the point of detent. When choosing from the metering curves shown, the reduced adjustment stroke should be taken into consideration, and a curve should be chosen allowing the required pressure value to be reached at the prefeeling stage.
The RCX and RCY hydraulic remote controls have a prefeeling setting at 5.7 mm (0.224 in) along the stroke in combination with the mechanical detent (type 02, 20, 22, 23).
The RCX, RCY prefeeling effect on the A01 curve is shown by way of example.

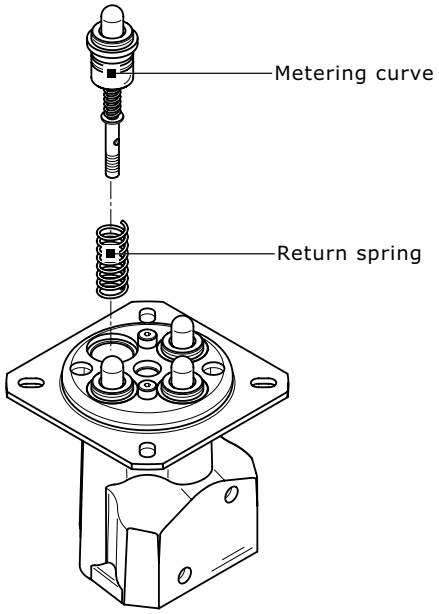


Similarly, the RCM and RCB hydraulic remote controls have a prefeeling setting at 6.9 mm (0.272 in) along the stroke in combination with the mechanical detents (type 02, 03, 04, 08, 14, 30).
The RCM, RCB prefeeling effect on the A01 curve is shown by way of example.



RETURN SPRING CLASSIFICATION

For all the remote control configurations, in each working port and on the relevant metering curve, a return spring must be selected.
The exploded view here below shows the example configuration of a 4 working port remote control; as you can see, a return spring is pictured at each metering curve. 4 types of return spring are currently available (see table).



CODE	PRELOAD	END STROKE LOAD
MA	25 N (5.6 lbf)	48 N (10.8 lbf)
MB	14 N (3.1 lbf)	27 N (6.1 lbf)
MC	73 N (16.4 lbf)	135 N (30.3 lbf)
MD	89 N (20.0 lbf)	169 N (38.0 lbf)

RETURN SPRING CLASSIFICATION FOR RCS AND RCT

The range of RCS and RCT tilting foot controls only includes the MD type return spring. The relative values are shown here below.

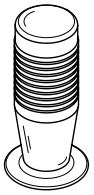
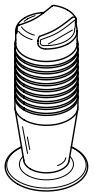
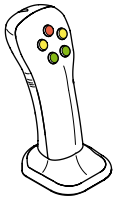
CODE	PRELOAD	END STROKE LOAD
MD	94 N (21.1 lbf)	149 N (33.5 lbf)

SUGGESTED METERING CURVE FOR VALVES

VALVES			METERING CURVE	
TYPE	**FUNCION**	**SPOOL**	**GENERAL**	**RCX (control 02)**
D9	std	W001 - H005	**A01**	
DVS10	std	W001 - H005	**A01**	
D3M	std	W001 - H005	**A01**	
	floating			**A22**
D4	std	W001 - H005	**A01**	
	floating	W012 - H005	**A01** (lifting)	**A22** (lowering)
DVS14	std	W001A - HP05	**A01**	
D6	std	W001 - H005	**A01**	
	floating	W012 - H005	**A01** (lifting)	**A22** (lowering)
D16	std	W001 - H006	**A01**	
	floating	W012 - H006	**A01**	**A22** (lowering)
	floating	W012 - H034	**A07**	**A61** (lowering)
DVS16	std		**A01**	
D12	std	W001 - H005	**A16**	
	floating	W012 - H005	**A01**	**A19** (lowering)
DVS20	std	W001 - H005	**A21**	
	floating	W012 - H005	**A01** (lifting)	
			A22 (lowering)	
D20	std	W001 - H005	**A41**	
	floating	W012 - H005	**A41**	**A19** (lowering)
D25	std	W001 - H005	**A01**	
	floating	W012 - H005	**A16**	**A19** (lowering)
D40	std	W001 - H005	**A01**	
	floating	W012 - H005	**A01**	**A19** (lowering)
M45	std	W001 - H005	**A22**	
D10	std	W001 - H005	**A01**	
M50	std	W001 - H005	**A01**	
TR55	std	W001 - H005	**A01**	
M25	std	W001 - H005	**A01**	
	floating (28 bar)	W012 - H005	**A01**	**A19** (lowering)
SK6	std	W021 - H005	**A01**	
	floating	W012 - H005	**A07**	**B03** (lowering)
EX38	std	W001C - HP05	**A01**	
EX54	std	W001C - HP05	**A01**	
EX72	std	W001C - HP05	**A46**	
DF350	std	W025 - H005	**A02**	
DF250	std	W025 - H005	**A02**	

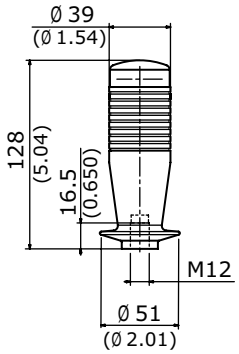
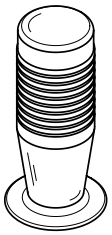
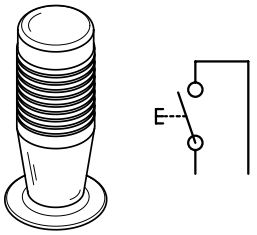
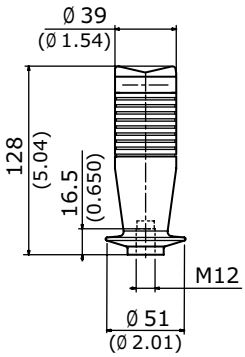
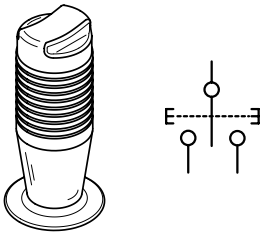
HANDLES CLASSIFICATION

All the hydraulic remote controls can be set up to have different handles according to the system dimensions and applications. All the handles in the range are shown here below; for each handle, the corresponding operation is also pictured. The choice of a handle will also influence the choice of a lever kit.

HANDLE IDENTIFICATION - QUICK REFERENCE GUIDE								
	Type	**Description**	**RCX**	**RCY**	**RCL**	**RCL3**	**RCM**	**RCB**
A		Handle without micro-switch	•	•			•	
B		Handle with micro-switch to close	•	•			•	
D		Handle with dual micro-switch	•	•			•	
F		Ergonomic handle	•	•	•	•		
M		Handle with lens					•	•
K		Spherical handle	•	•				

HANDLES "A - B - D"

The handle families identified with A, B and D have been designed to equip the vast range of earth-moving machines including Mini-excavators, Mini-loaders, Brush Cutters, Backhoe Loaders, Tractors, etc.
These handles can be set up to have – or not – a microswitch.
The hydraulic remote controls most suitable for fitting these handles are RCX, RCY and RCM.

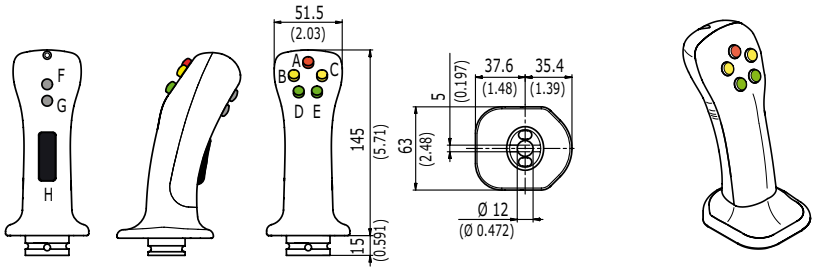
Type	Description	Dimensions	Configuration
A	without micro-switch (standard)		
B	with micro-switch to close		
D	with dual micro-switch		

HANDLES MICROSWITCH BREAKING B - C - D

MICROSWITCH SPECIFICATIONS	
Direct current load resistive	4.8 A @ 30 Vdc
Alternative current load resistive	1.5 A @ 30 Vdc
TECHNICAL SPECIFICATIONS	
Hande protection	IP 40

HANDLE "F"

This handle has been designed to be used on our remote controls type RCX. Its ergonomics, the accurate buttons position and dimensions make its use comfortable and restful.
It can be supplied with 7 microswitches in different combinations together with a push button for safety.

Type	Description	Dimensions	Configuration
F	Ergonomic handle		

TECHNICAL SPECIFICATIONS

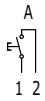
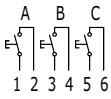
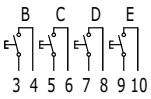
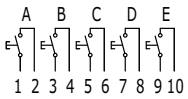
BUTTONS COLOURS	
Type A	red
Type B - C	yellow
Type D - E	green
Type F - G	grey
Type H (push button for safety)	black
MICROSWITCH SPECIFICATIONS	
Direct current load resistive	5 A @ 30 Vdc
Direct current load inductive	3 A @ 30 Vdc
TECHNICAL SPECIFICATIONS	
Handle protection	IP 65
Cable section	0.5 mm^2 (7.75x10^{-4} in^2)
Useful cable lenght	700 mm (27.56 in)

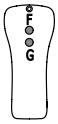
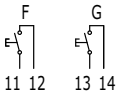
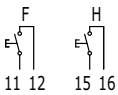
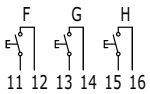
ORDER EXAMPLE HANDLE "F"

05F - 01R - 2 - WF53

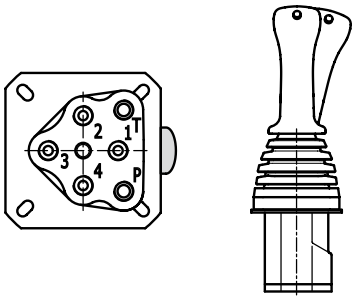
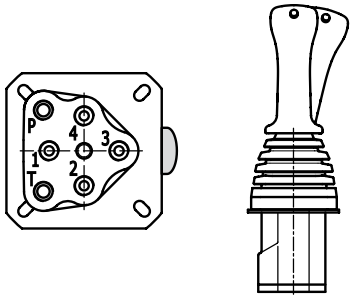
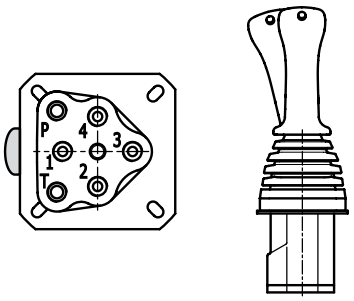
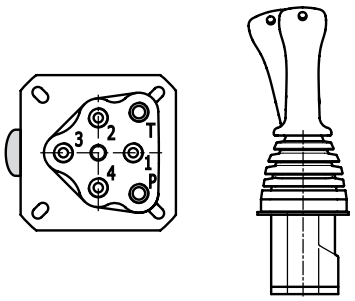
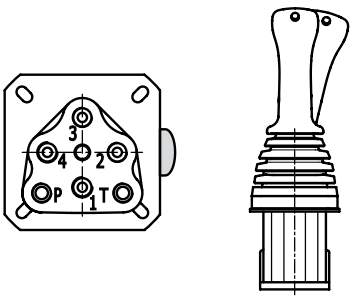
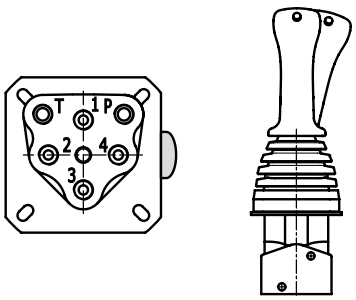
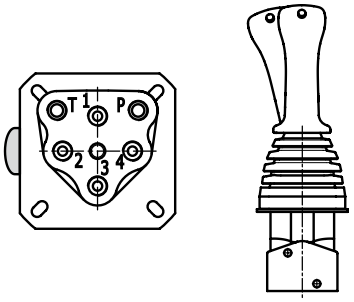
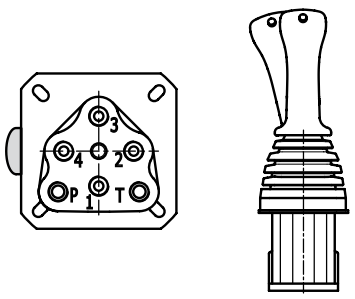
1 FRONT BUTTONS ARRANGEMENT:
05F arrangement with 5 front buttons
2 REAR BUTTONS ARRANGEMENT:
01R arrangement with 1 rear button
3 HANDLE POSITION (RESPECT TO THE BODY):
2 return spring type
4 LEVER ROD CLASSIFICATION:
WF53 type and length rod lever straight
WG51 type and length rod lever bent
WH48 type and length rod lever bent

HANDLE "F"

FRONT BUTTONS ARRANGEMENT		
Code	**Drawing**	**Schema**
00F		
01F		
02F		
03F		
04F		
05F		

REAR BUTTONS ARRANGEMENT		
Code	**Drawing**	**Schema**
00R		
01R		
02R		
03R		
04R		
05R		

HANDLE "F"

HANDLE POSITION "F" (RESPECT TO THE BODY)			
Code	**Configuration**	**Code**	**Configuration**
1		**5**	
2		**6**	
3		**7**	
4		**8**	

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