

Pilot Control Device in Pedal Design for the Remote Control of Directional Valves, Pumps and Motors

RE 64 551/05.06 1/6

Replaces: 05.03

Type 2 TH6 R

Series 1X



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Features

- Progressive, sensitive operation
 - Precise control
 - Working ports underneath
 - Control elements protected by rubber sleeve
 - Plungers made of stainless steel, plunger guides made of brass; this prevents corrosion and seizing
- Further remote controls and pilot control units:**
- Hydraulic remote control
 - Pilot control device type 2TH6 (see RE 64552) in sandwich plate design
 - Pilot control unit types 4 TH 6, 4 TH 5, 4TH 6 N, for arm rest installation (see RE 64555)
 - Pilot control device type TH 7, for instrument panel installation or in pedal design (see RE 64558)
 - Pilot control device with end position locking type 4/5 THF 6 (see RE 64553) or type 4/6 THF 5 (see RE 64557)
 - Electronic pilot control device
 - Electronic remote control device type THE6 for direct controlling of electrical or electro-hydraulic pilot operated actuators (see RE 29771)
 - Electronic pilot control device type THE5 (see RE 29881)

Functional description, section

Hydraulic remote controls of type 2 TH 6 R... operate on the basis of direct operated pressure reducing valves.

They basically consist of foot pedal (1), two pressure reducing valves and housing (6).

Each pressure reducing valve comprises control spool (2), control spring (3), return spring (4) and plunger (5).

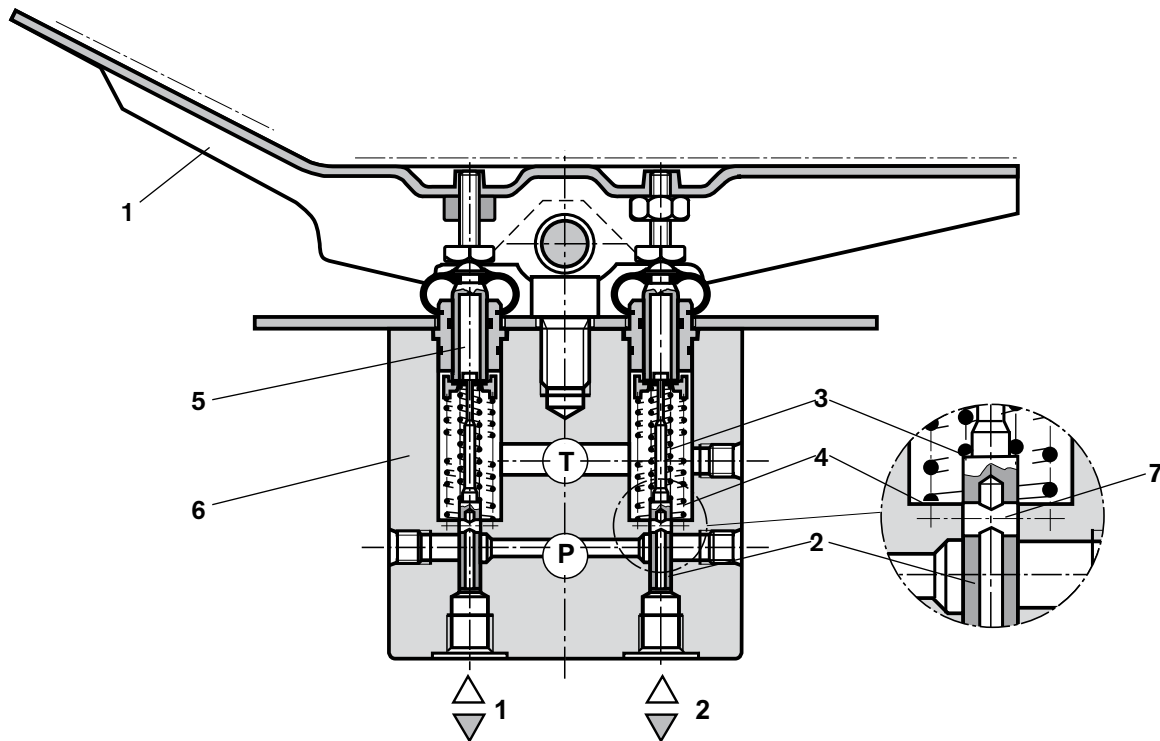
At rest, the pedal is held in the neutral position by return springs (4). Ports (1,2) are connected to the tank port T via bore (7).

When foot pedal (1) is depressed, plunger (5) is pressed against the return spring (4) and control spring (3). Control spring (3) initially moves control spool (2) downwards and closes the connection between the relevant port and tank port T. At the same time, the relevant port is connected to port P

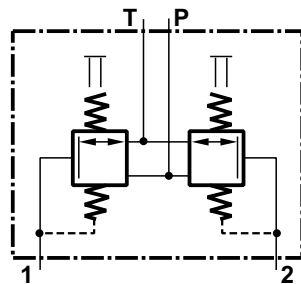
via bore (7). The control phase starts as soon as control spool (2) finds its balance between the force of control spring (3) and the force that results from the hydraulic pressure in the relevant port (port 1 or 2).

Due to the interaction of control spool (2) and control spring (3), the pressure in the relevant ports is proportional to the stroke of plunger (5) and hence to the position of pedal (1).

This closed-loop pressure control in relation to the position of foot pedal (1) and the properties of control spring (3) allows a proportional hydraulic control of directional valves and high-response control valves for hydraulic pumps and motors.



Symbol, hydraulic



Technical data (for applications outside these paramters, please consult us!)

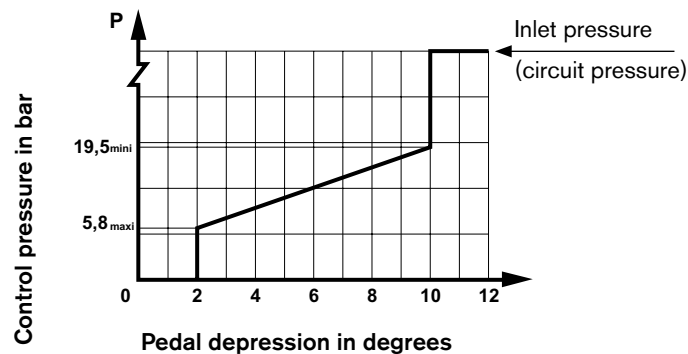
Max. inlet pressure	bar	max. 50
Counterpressure in port T	bar	max. 3
Pilot flow	l/min	max. 16.
Hysteresis	bar	max. 1
Pressure fluid ¹⁾ suitable for NBR seals ²⁾ suitable for FKM seals		Mineral oil (HL, HLP) to DIN 51524 ¹⁾ Phosphate ester (HFD-R) ²⁾
Hydraulic fluid temperature range	°C	- 20 to + 80
Viscosity range	mm ² /s	10 to 380
Fluid cleanliness		Max. permissible degree of hydraulic fluid contamination according to NAS 1638 class 9. For this, we recommend a filter with a minimum retention rate of $\beta_{10} \geq 75$.
Max. permissible operating torque at foot pedal	Nm	200
Weight	kg	approx 3,8

Application guideline (this list is not intended to be considered as complete)

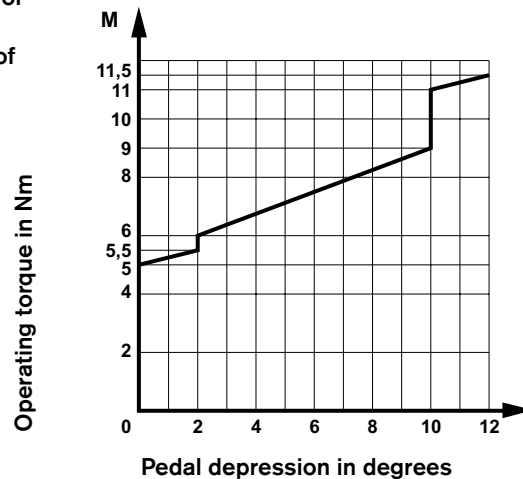
- Do not direct the jet of a pressure washing unit directly at the unit.
- Replace worn bellows to maintain foot pedal tightness..

Characteristic curves : control ranges, operating torque

06 Control curve, identification no. 06



Operating torque for control curve 06, standard return spring and inlet pressure of 50 bar



Ordering details

2	TH6	R			-1X		*
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2 control ports	= 2						
Pedal operation		= R					
Pedal version							
Bent pedal			= C				
Flat pedal			= P				
Control curve 06				= 06			
Series 10 à 19 (10 to 19, unchanged installation and connection dimensions)					= 1X		

Further details in plain text

Connecting thread

- 01 = G1/4 pipe thread to standard ISO 228/1
- 02 = M14 x 1,5 metric to standard ISO 9974
- 05 = 9/16 UNF-2B UNF connections to standard ISO 11926

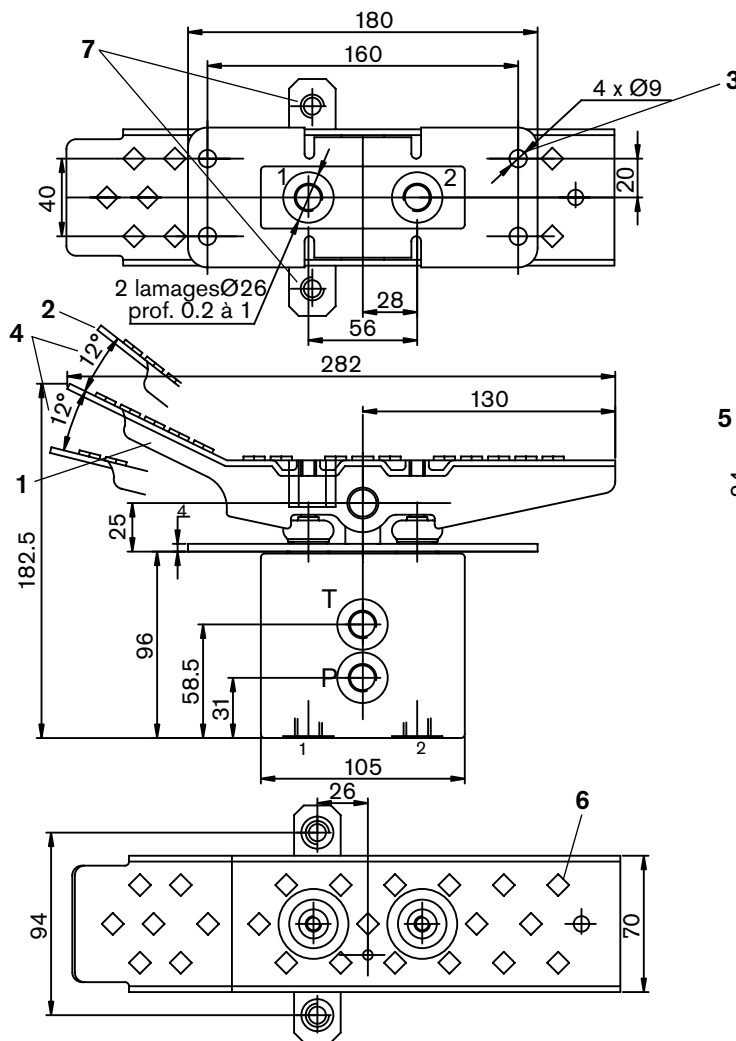
Seals

- M = NBR seals
- V = FKM seals

⚠ Attention !

The compatibility of the seals and pressure fluid has to be taken into account

Unit dimensions : flat pedal type "P" (dimensions in mm)

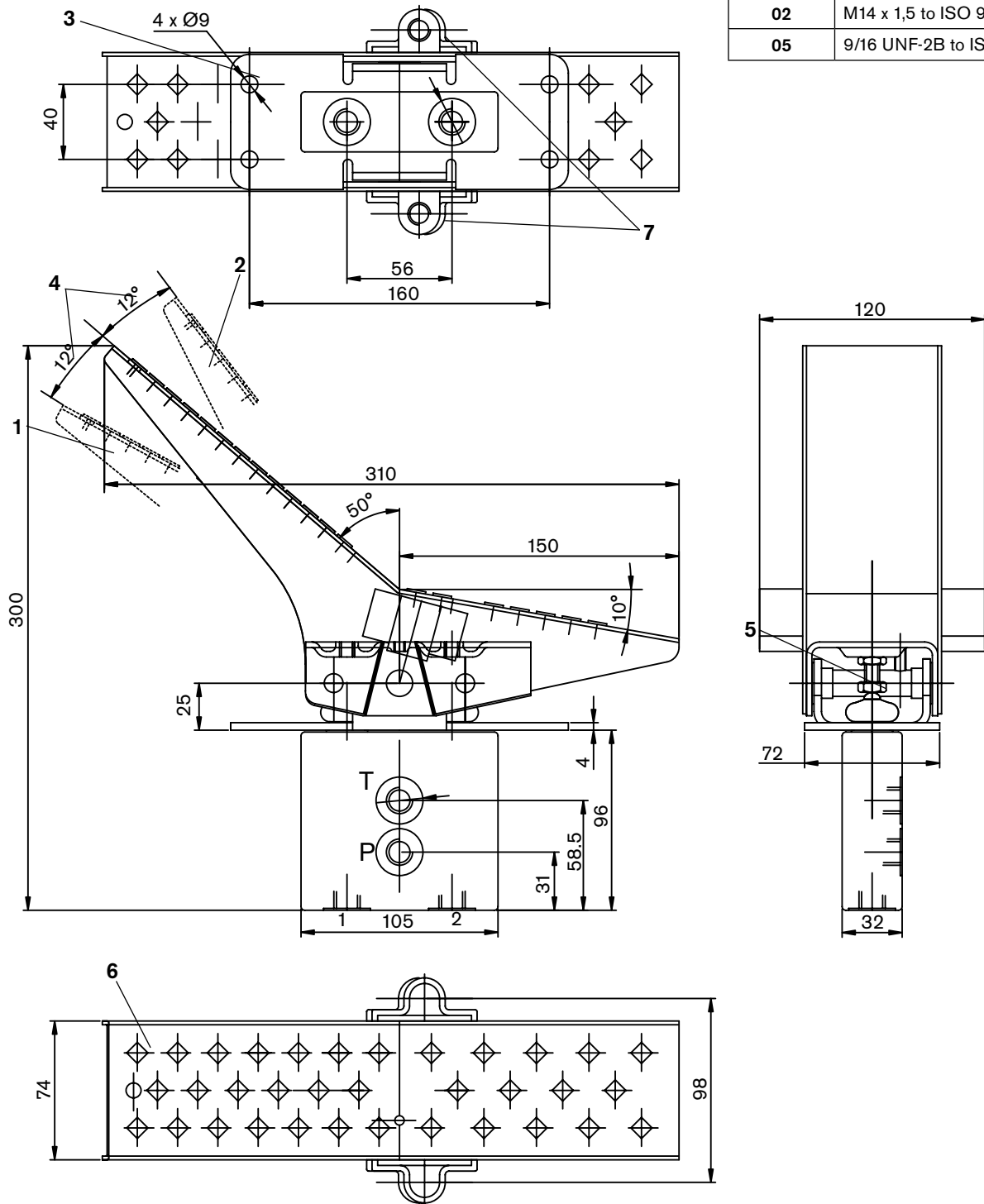


Ordering code	Ports P, T, 1 and 2
01	G 1/4 to ISO 228/1
02	M14 x 1,5 to ISO 9974
05	9/16 UNF-2B to ISO 11926

- 1 Position 1 (port 1 pressurised)
- 2 Position 2 (port 2 pressurised)
- 3 Fixing holes
- 4 Pedal depression
- 5 Adjustment screw
- 6 Anti-slip foot rest
- 7 Fixation of manual operating lever

Unit dimensions : bent pedal type "C" (dimensions in mm)

Ordering code	Ports P, T, 1 and 2
01	G 1/4 to ISO 228/1
02	M14 x 1,5 to ISO 9974
05	9/16 UNF-2B to ISO 11926



- 1 Position 1 (port 1 pressurised)
- 2 Position 2 (port 2 pressurised)
- 3 Fixing holes
- 4 Pedal depression
- 5 Adjustment screw
- 6 Anti-slip foot rest
- 7 Fixation of manual operating lever

Installation guidelines

- Mounting flange area: Flatness = 0,5 mm
- Screw head imensions = Ø13 mm
- Tightening torque for the flange fixing screws = Max. 10 Nm
- Tightening torque for the pipe connections = Max. 30 Nm

Bosch Rexroth AG
Hydraulics
Produktsegment
Axialkolbenmaschinen
Werk Elchingen
GlockeraustraÙe 2
89275 Elchingen, Germany
Tel. +49 (0) 73 08 82-0
Fax. +49 (0) 73 08 72 74
info.brm-ak@boschrexroth.de
www.boschrexroth.com/brm

Bosch Rexroth DSI S.A.S.
BP 101
91, bd Irène Joliot-Curie
69634 Vénissieux Cedex, France
Tel. +33 (0) 4 78 78 52 52
Fax. +33 (0) 4 78 78 52 26
www.boschrexroth.fr

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Subject to revision.

Notes

Bosch Rexroth AG
Hydraulics
Produktsegment
Axialkolbenmaschinen
Werk Elchingen
Glockeraustraße 2
89275 Elchingen, Germany
Tél. +49 (0) 73 08 82-0
Fax. +49 (0) 73 08 72 74
info.brm-ak@boschrexroth.de
www.boschrexroth.com/brm

Bosch Rexroth DSI S.A.S.
BP 101
91, bd Irène Joliot-Curie
69634 Vénissieux Cedex, France
Tél. +33 (0) 4 78 78 52 52
Fax. +33 (0) 4 78 78 52 26
www.boschrexroth.fr

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Werk Elchingen
Glockeraustraße 2
89275 Elchingen, Germany
Tél. +49 (0) 73 08 82-0
Fax. +49 (0) 73 08 72 74
info.brm-ak@boschrexroth.de
www.boschrexroth.com/brm

Bosch Rexroth DSI S.A.S.
BP 101
91, bd Irène Joliot-Curie
69634 Vénissieux Cedex, France
Tél. +33 (0) 4 78 78 52 52
Fax. +33 (0) 4 78 78 52 26
www.boschrexroth.fr

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