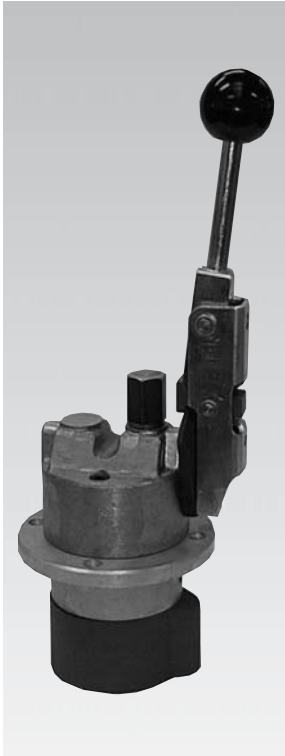


RE 64 558/05.03

Replaces : 03.00

Hydraulic remote controls**Type TH7, series 1X**

Type 2TH7N



Type 4TH7G



Type 1TH7QL



Type 1TH7Z



Type 2TH7Q

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Features

- Progressive, sensitive operation
- Precise and play-free control



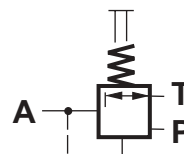
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Functional description, symbol

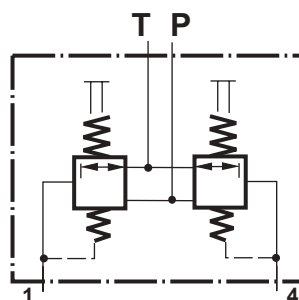
1TH7QL: Single acting hydraulic remote control, operation via one long pedal

1TH7Z: Single acting hydraulic remote control without operator

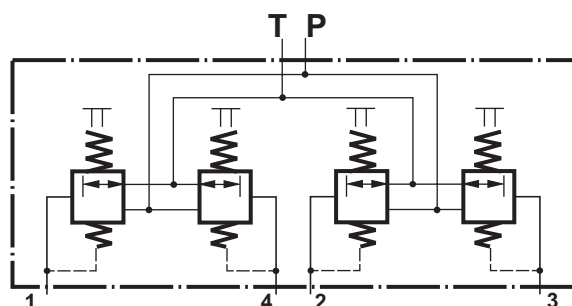


2TH7Q: Single acting hydraulic remote control, operation via two independent pedals

2TH7L, M, N, P: Double acting hydraulic remote control, operation via one side lever



4TH7G, H, J, K: Double acting hydraulic remote control, operation via two side levers



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

Inlet pressure	bar	50
Back pressure at port T	bar	3
Pilot oil flow	L/min	Up to 20
Hysteresis	bar	Up to 1
Pressure fluid		Mineral oil (HL, HLP) to DIN 51524 Phosphate ester (HFD-R)
Pressure fluid temperature range	°C	-20 to +80
Viscosity range	mm ² /s	10 to 380
Degree of pressure fluid contamination		Max. permissible degree of contamination of the pressure fluid is to NAS 1638 class 9. We, therefore, recommend a filter with a minimum retention rate of $\beta_{10} \oplus 75$
Max. permissible actuation moment at the pedals	Nm	20
Max. permissible actuation force at the plunger	N	88
Max. permissible actuation moment at the levers	Nm	8
Weight	kg	3.2 (1TH7QL, 2TH7L, M, N, P)
	kg	1.2 (1TH7Z)
	kg	6.2 (2TH7Q)
	kg	3.5 (4TH7G, H, J, K)

Ordering details



1 control port:

- Long pedal = 1TH7QL
- Without operator = 1TH7Z

2 control ports:

- 2 independent pedals = 2TH7Q
- 1 side lever, with spring return = 2TH7L
- 1 side lever, with spring return and detents in 3 positions = 2TH7M
- 1 side lever, with spring return, lockable in any position and release = 2TH7N
- 1 side lever, with spring return and can be fixed in any position by a friction clutch = 2TH7P

4 control ports:

- 2 side levers, with spring return = 4TH7G
- 2 side levers, with spring return and detents in 3 positions = 4TH7H
- 2 side levers, with spring return, lockable in any position and release = 4TH7J
- 2 side levers, with spring return and can be fixed in any position by a friction clutch = 4TH7K

- 1X /

SO.008 = Sea water resistant (only 2TH7L, 2TH7M, 4TH7G, 4TH7H)

SO.198 = Plunger grommet (only 1TH7Z)

Threaded ports

01 = G 1/4

Pipe thread to standard ISO 228/1

05 = 9/16 UNF-2B

UNF connection to ISO 11926

Seals

M = NBR seals

⚠ Attention!

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

1X = Series 10 to 19

Unchanged installation and connection dimensions (10 to 19)

05, 06, 73, 91, 93 = Control curve

Application guidelines (these guidelines are not intended to be considered as complete)

- Do not direct the jet of a pressure washing unit directly at the unit
- Replace worn rubber grommets

Safety guidelines (these guidelines are not intended to be considered as complete)

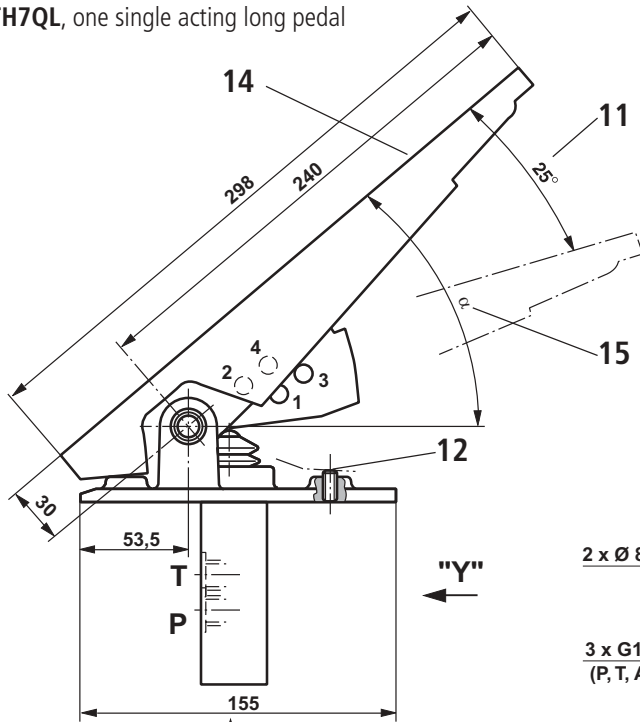
- Take into account all of the application limits, particularly those application limits stated within this catalogue sheet!

Installation guidelines

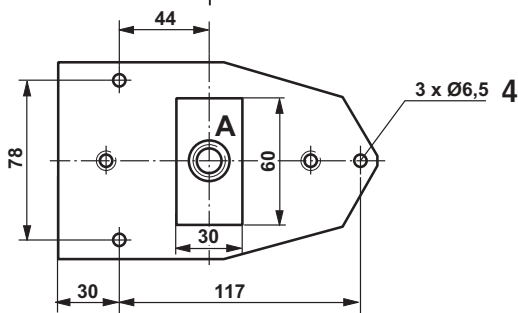
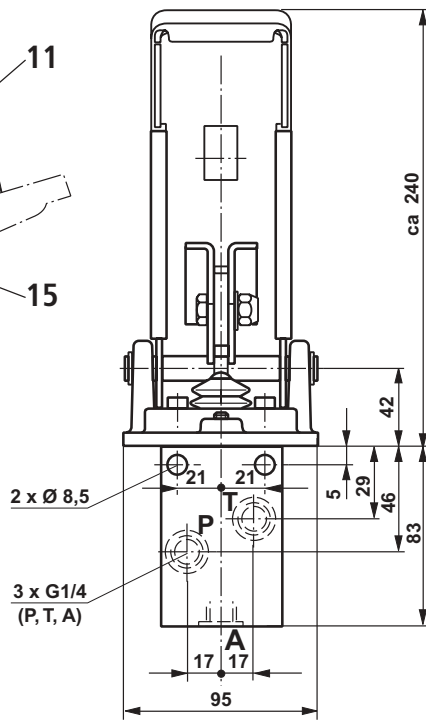
- Mounting flange area: flatness = 0.5 mm
- Screw head dimensions = ø10 mm
- Tightening torque for the flange fixing screws = 10 Nm max.
- Tightening torque for the pipe connections = 30 Nm max.

Unit dimensions (Dimensions in mm)

Type 1TH7QL, one single acting long pedal

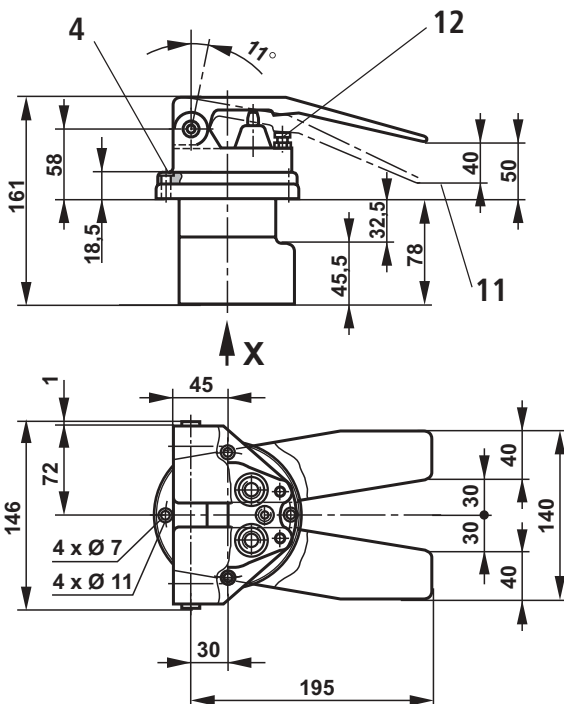


View Y

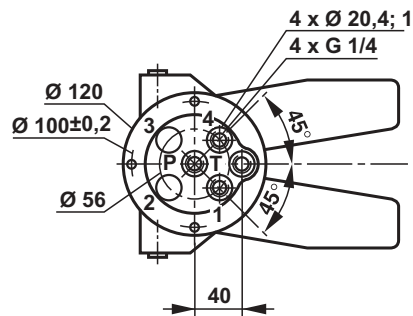


- | | | | |
|----|-------------------------|------|------------------------------------|
| 4 | Fixing holes | 15 | Adjustable angle approx. every 5°: |
| 11 | Pedal movement | Hole | α |
| 12 | Setting screw | 1 | 25° |
| 14 | Anti-slip pedal surface | 2 | 30° |
| | | 3 | 35° |
| | | 4 | 40° |

Type 2TH7Q, 2 independent single acting pedals



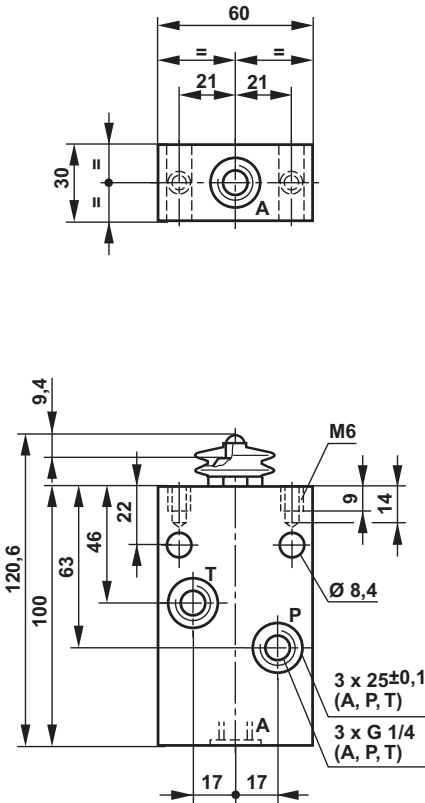
View X



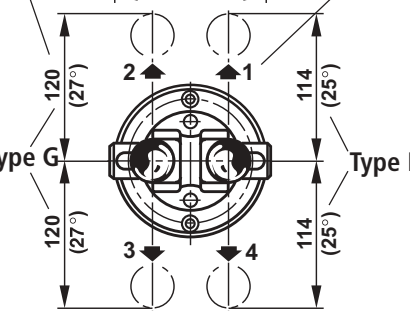
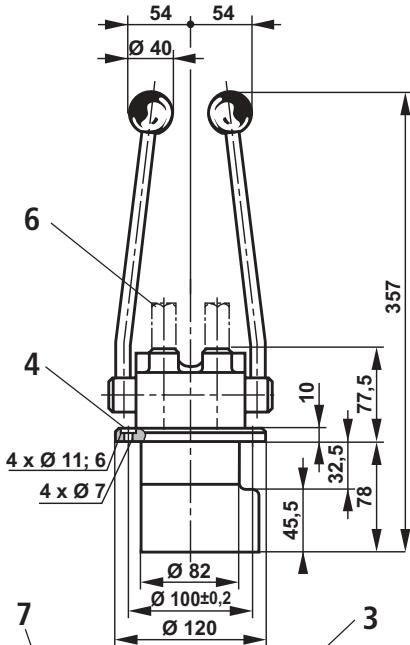
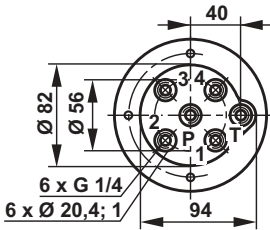
- | | |
|----|----------------|
| 4 | Fixing holes |
| 11 | Pedal movement |
| 12 | Setting screw |

Unit dimensions (Dimensions in mm)

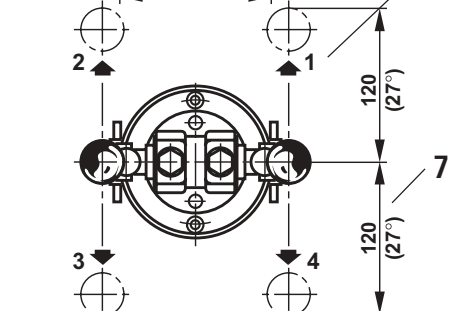
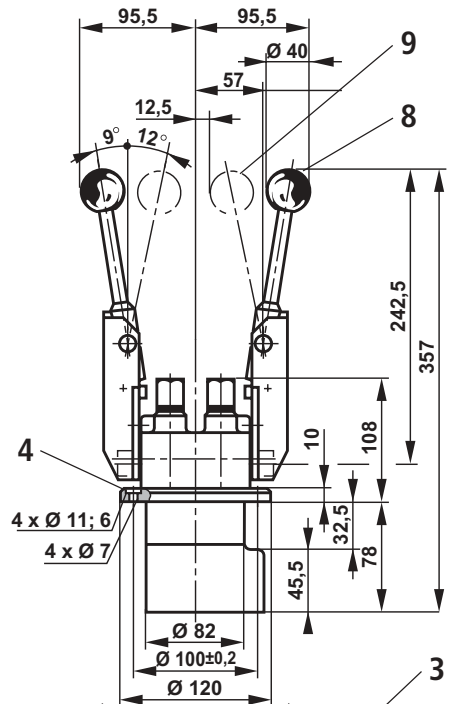
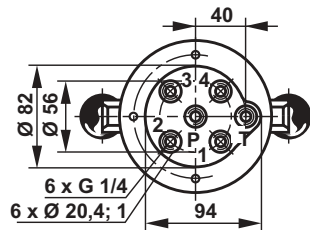
Type 1TH7Z Without operator element
(grommet = SO.198)



Type G 2 side levers, with spring return
Type H 2 side levers, with spring return and detents in 3 positions



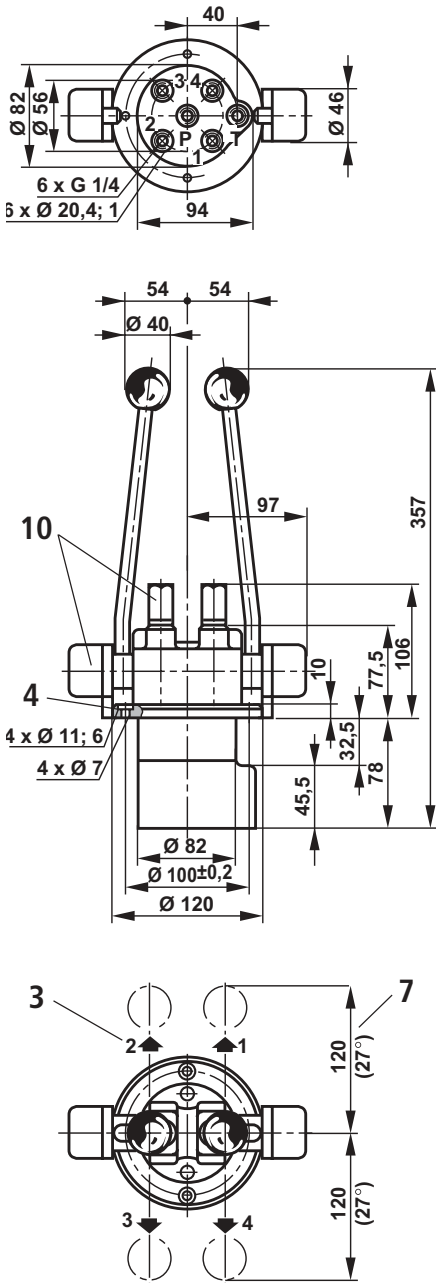
Type J 2 side levers, spring return, with lock and release in any position



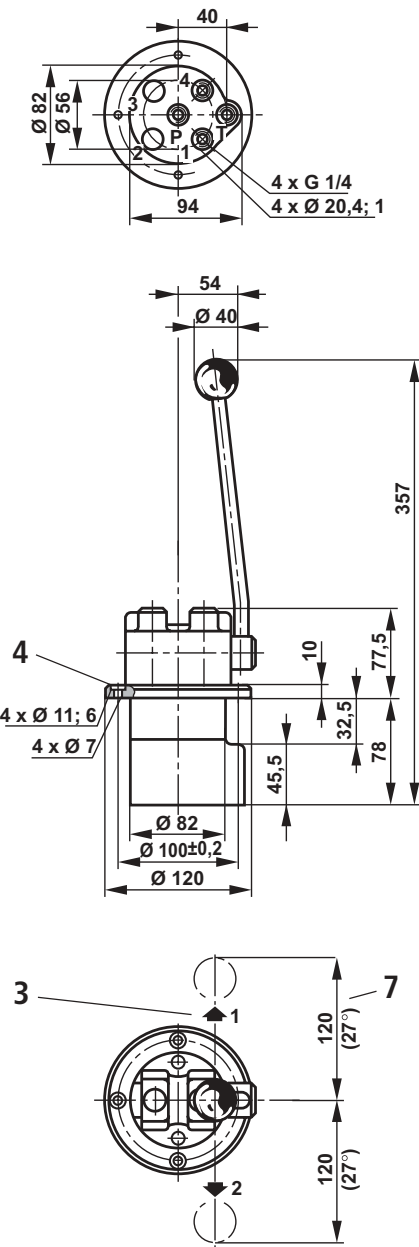
- 3 Lever operation direction and control ports thereby influenced
- 4 Fixing holes
- 6 Detents in 3 positions (type H)
- 7 Lever deflection
- 8 Lever position locked
- 9 Lever position released

Unit dimensions (Dimensions in mm)

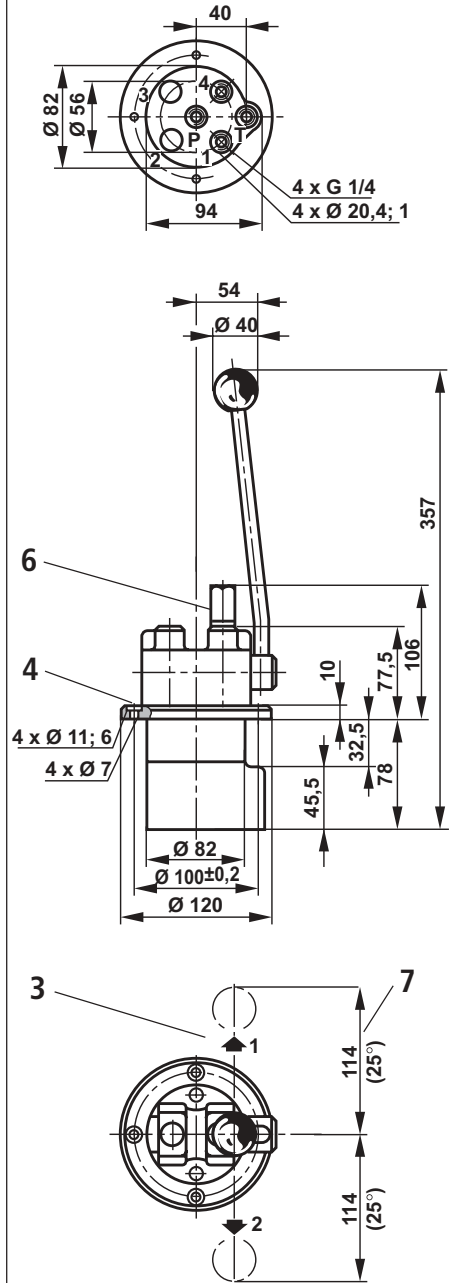
Type K 2 side levers,
spring return,
can be fixed in any position
by friction clutch



Type L 1 side lever,
spring return



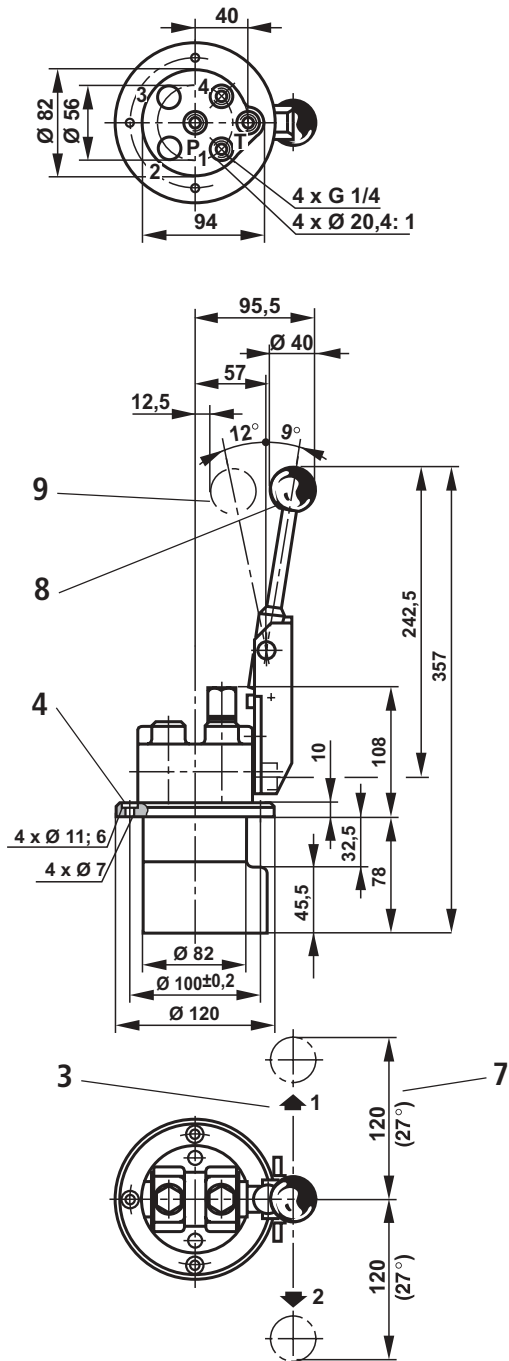
Type M 1 side lever,
spring return,
detents in 3 positions



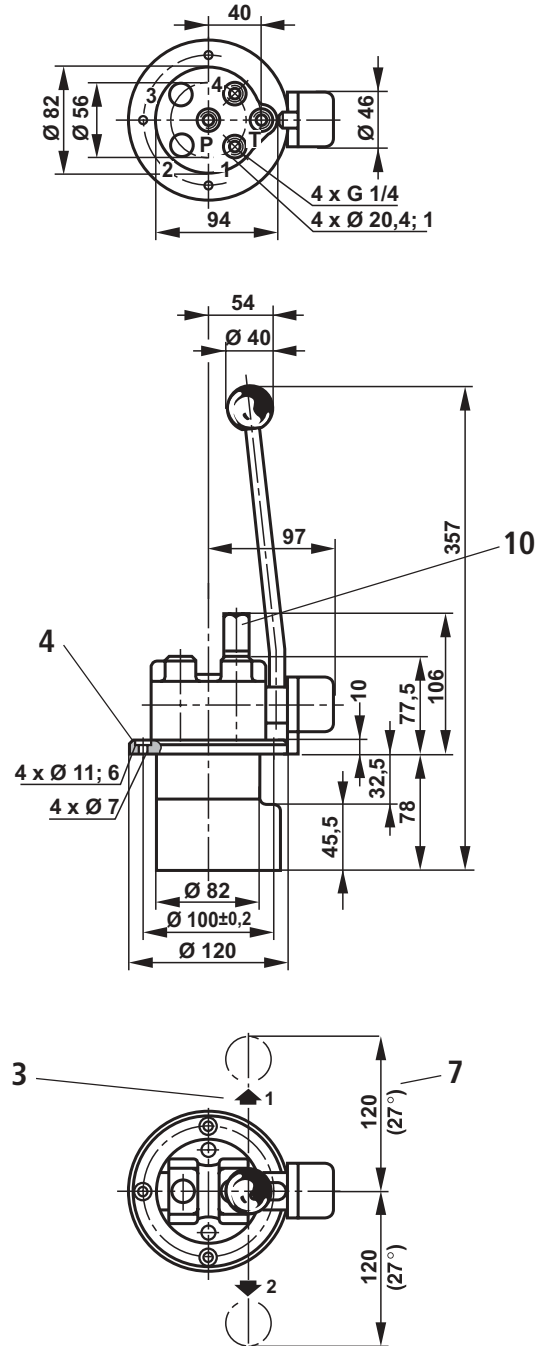
- 3 Lever operation direction and control ports thereby influenced
- 4 Fixing holes
- 6 Detents in 3 positions (type M)
- 7 Lever deflection
- 10 Fixed in any position by friction clutch

Unit dimensions (Dimensions in mm)

Type N 1 side lever, spring return, with lock and release in any position



Type P 1 side lever, spring return, can be fixed in any position by friction clutch

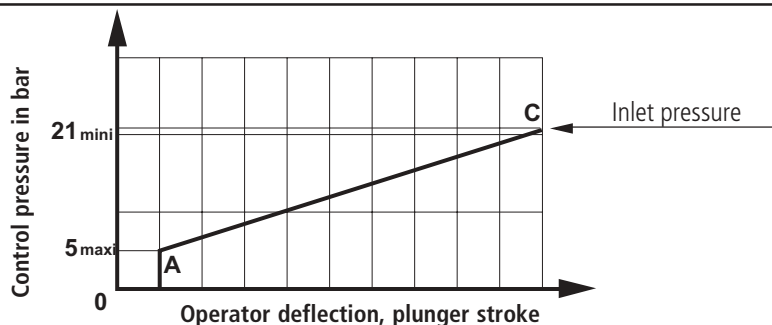


- 3 Lever operation direction and control ports thereby influenced
- 4 Fixing holes
- 7 Lever deflection

- 8 Lever position locked
- 9 Lever position released
- 10 Fixed in any position by friction clutch

Characteristic curves : control ranges, actuation moments

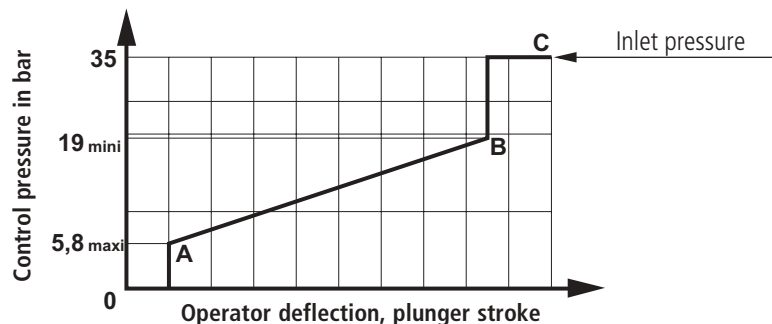
05 Control curve, identification no. 05



	1TH7QL			1TH7Z			2TH7Q			TH7 G/H/J/L/M/N			TH7 K/P		
Intersection point	A		C	A		C	A		C	A		C	A		C
Operator deflection (°)	4°55'		26°10'				1°50'	10°40'		4°40'		27°30'	4°40'		27°30'
Plunger stroke (mm)				1.6	9.2										
Actuation moment (Nm)	0.82		2.38				2.33	6.72		1.95		3.57			
Actuation force (N)				5.49	13.57										

06 Control curve, identification no. 06

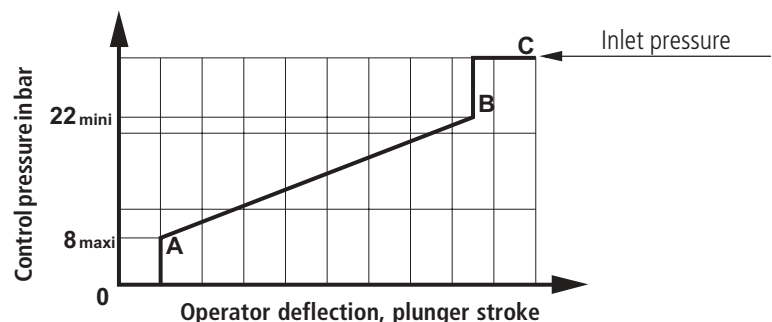
This curve is used for the pilot control of the SM12, SM18, M1 control blocks



	1TH7QL			1TH7Z			2TH7Q			TH7 G/H/J/L/M/N			TH7 K/P		
Intersection point	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Operator deflection (°)	4°55'	20°30'	26°10'				1°50'	8°10'	10°40'	4°40'	21°20'	27°30'	4°40'	21°20'	27°30'
Plunger stroke (mm)				1.6	7.1	9.2									
Actuation moment (Nm)	0.86	2.29	2.66				2.42	6.48	7.53	1.17	3.33	3.63			
Actuation force (N)				6.57	12.80	18.96									

73 Control curve, identification no. 73

This curve is used for the pilot control of the SP12 control blocks

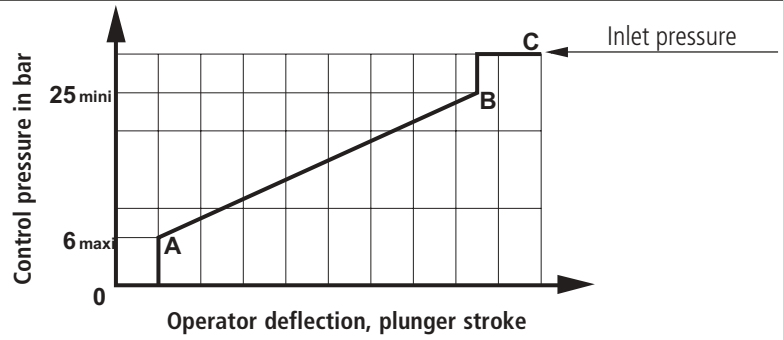


	1TH7QL			1TH7Z			2TH7Q			TH7 G/H/J/L/M/N			TH7 K/P		
Intersection point	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Operator deflection (°)	4°55'	20°30'	26°10'				1°50'	8°10'	10°40'	4°40'	21°20'	27°30'	4°40'	21°20'	27°30'
Plunger stroke (mm)				1.6	7.1	9.2									
Actuation moment (Nm)	0.94	2.29	2.66				2.67	6.48	7.53	1.29	3.13	3.63			
Actuation force (N)				8.57	13.96	18.96									

Characteristic curves : control ranges, actuation moments

91 Control curve, identification no. 91

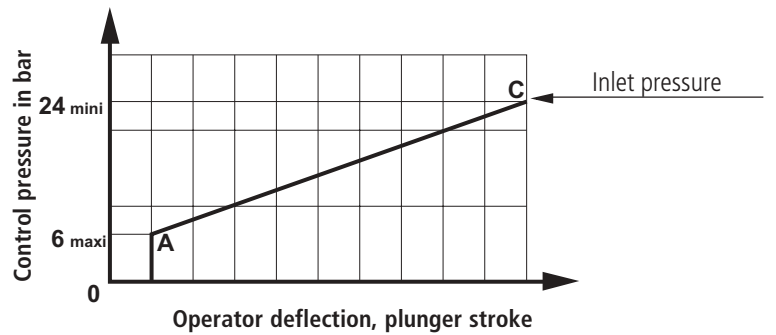
This curve is used for the pilot control of the SX12, SX14, SX18 control blocks



	1TH7QL			1TH7Z			2TH7Q			TH7 G/H/J/L/M/N			TH7 K/P		
Intersection point	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Operator deflection (°)	4°55'	20°30'	26°10'				1°50'	8°10'	10°40'	4°40'	21°20'	27°30'	4°40'	21°20'	27°30'
Plunger stroke (mm)				1.6	7.1	9.2									
Actuation moment (Nm)	0.86	2.29	2.66				2.44	6.48	7.53	1.18	3.13	3.63			
Actuation force (N)				7.79	15.11	18.96									

93 Control curve, identification no. 93

This curve is used for the pilot control of the M7, M4 control blocks



	1TH7QL			1TH7Z			2TH7Q			TH7 G/H/J/L/M/N			TH7 K/P		
Intersection point	A		C	A		C	A		C	A		C	A		C
Operator deflection (°)	4°55'		26°10'				1°50'		10°40'	4°40'		27°30'	4°40'		27°30'
Plunger stroke (mm)				1.6		9.2									
Actuation moment (Nm)	2.44		6.72				1.18		3.25	0.86		2.74			
Actuation force (N)				7.79		14.73									

Notes

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