



2.3.1

HYDRAULIC PILOT CONTROL UNIT OF SANDWICH PLATE DESIGN

Type: H*-2TH6

Benefits:

- Progressive, sensitive control
- Precise and play-free control characteristics
- Low actuation force at the lever
- Rust-free plunger



Contents

	Page
Features	03
Functional description, section view	04
· Hydraulic operating diagram	04
Technical data	05
Ordering code	06
Control curves	07
Unit dimension	08-09

Features

1. Function:

- Precise linear control
- Perfect adjustment characteristic
- Easy and flexible operation

2. Applications



Horizontal directional drilling



Tractor loader backhoes



Mining equipment



Drilling rigs

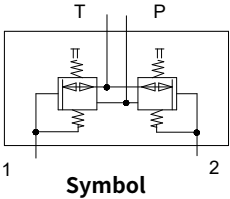
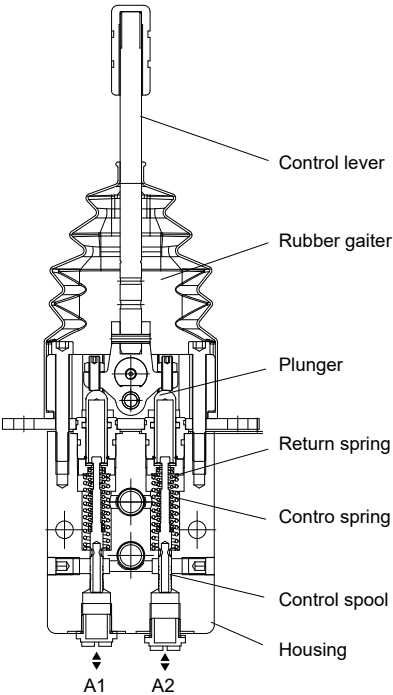
Functional description, section view

• Hydraulic operating diagram

Hydraulic pilot control unit basically comprise of a control lever, two pressure reducing valves and a housing.

In the non-actuated condition, the control lever is held in the neutral position by the return spring. The control ports are connected to tank port T. When the control lever is deflected, the plunger is pressed against the return spring and the control spring. The control spring moves the control spool downwards and closes the connection between the control port and tank port T. At the same time, the control port is connected to port P. The control phase starts as soon as the control spool finds its balance position between the force from the control spring and the force of the hydraulic pressure in the control ports. As the result of the interaction of the control spool and the control spring the pressure in the control ports is proportional to the stroke of the plunger and thus to the position of the control lever.

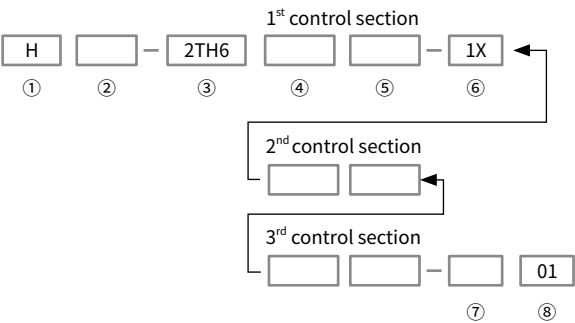
This pressure control as a function of the control lever position and the characteristics of the control spring enables the proportional hydraulic control of directional valves and high response control valves for hydraulic pumps and motors. A rubber gaiter protects the mechanical parts in the housing against contamination and ensures that the pilot control units can also be used for the arduous applications.



Technical data

Inlet pressure		bar	Up to 50
Back pressure at port T		bar	Up to 3
Control fluid flow (P to 1-2)		L/min	Up to 16
Hysteresis		bar	Up to 1
Pressure fluid	¹⁾ suitable for NBR seals ²⁾ suitable for FKM seals	Mineral oil (HL, HLP) ¹⁾ to DIN 51524 Phosphate ester (HFD-R) ²⁾	
Pressure fluid temperature range		°C	-20 to +80
Viscosity range		mm ² /s	10 to 380
Degree of pressure fluid contamination		Maximum permissible degree of contamination of the pressure Maximum 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 $\beta_{10} \geq 75$ fluid is to NAS 1638 Class 9. We, therefore, recommend a filter with a minimum retention rate of $\beta_{10} \geq 75$.	
Max. permissible operating torque at lever		Nm	10 in operation
Weight		kg	1.0 to 1.75

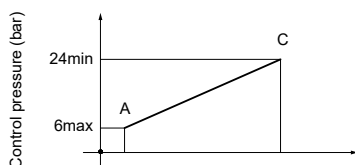
Ordering code



① Company code	- H -	
② Number of control sections	*	For example: 3, means 3 sections
	blank	1 section
③ Structure type	2TH6	2 control channels
④ Actuator type	L	lever without detent
	P	lever held in any position by a friction coupling
	M	Three-points positioning (center position and neutral position on both sides)
	T	Three-point positioning + friction positioning
	F	Single-sided positioning (floating position)
	D	With electric button on lever upside
⑤ Control curve	97	control curve, NO. 97
	06	control curve, NO. 06
	70	control curve, NO. 70
	20	control curve, NO. 20
⑥ Standard installation and connection dimensions	1X	
⑦ Seals	M	NBR
	V	FKM
⑧ Connection threads	01	G1/4 pipe thread to standard ISO228/1

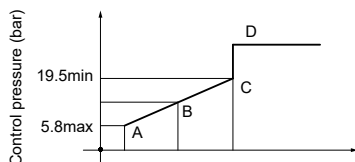
Control curves

97 control curves



Inter-section point		A	C
Lever deflection		3°	25°
Actuation moment for actuator L	N.m	0.8	3.3

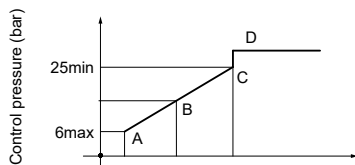
06 control curves



Inter-section point		A	B	C	D
Lever deflection		3°	18°	21°	25°
Actuation moment for actuator L	N.m	0.8	/	2.7	3.8 (p=35bar)

B = resistance point before changeover to inlet pressure

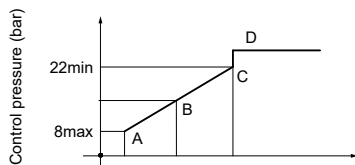
70 control curves



Inter-section point		A	B	C	D
Lever deflection		3°	18°	21°	25°
Actuation moment for actuator L	N.m	0.8	/	2.7	3.8 (p=35bar)

B = resistance point before changeover to inlet pressure

20 control curves

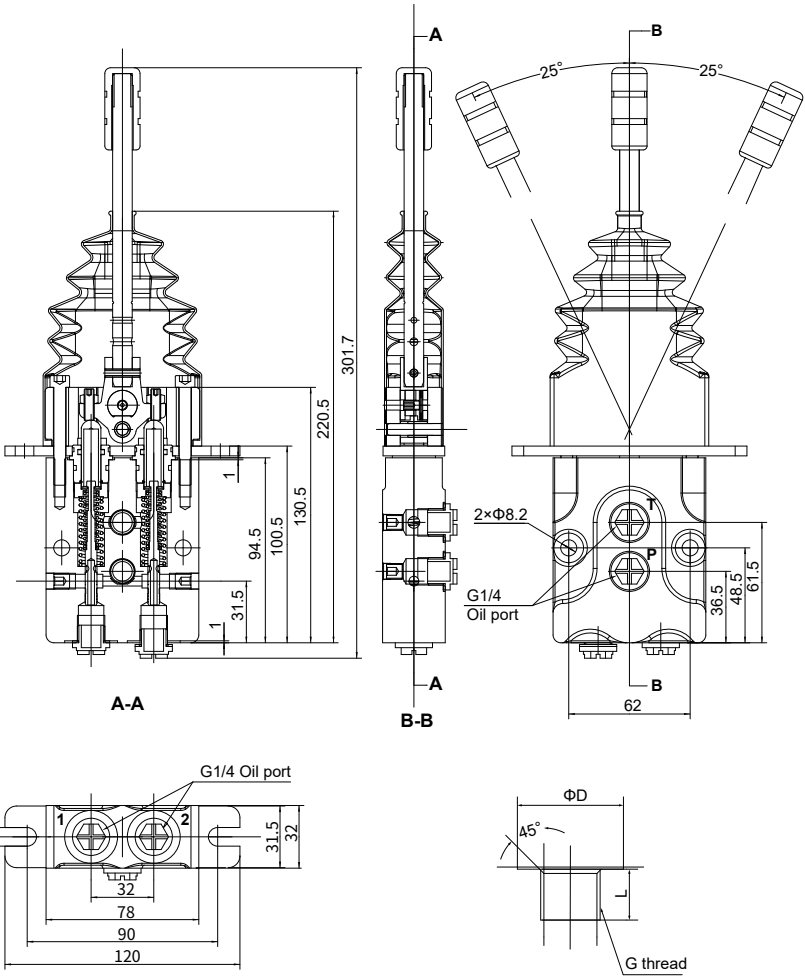


Inter-section point		A	B	C	D
Lever deflection		3°	18°	21°	25°
Actuation moment for actuator L	N.m	1	/	2.9	3.8 (p=35bar)

B = resistance point before changeover to inlet pressure

Unit dimensions

(dimensions in mm)



Port dimension

P Inlet port: G1/4

T Inlet Port: G1/4

1 Port: G1/4

2 Port: G1/4

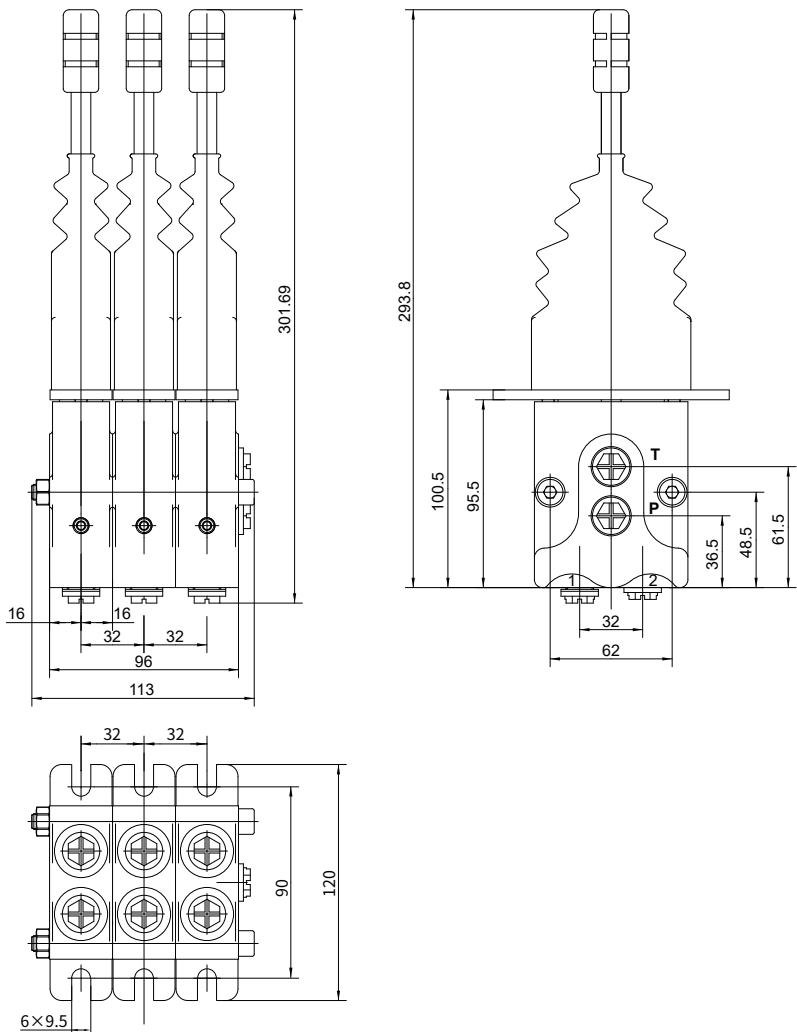
Thread dimensions

G1/4: ΦD 20.4 L 12min

ΦD 24 L 12min

Unit dimensions

(dimensions in mm)



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