

Fluidea

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JH2 SINGLE AXIS HYDRAULIC JOYSTICKS

20.03



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Description:

Hydraulic single axis pilot valve JH2 are proportional remote control operating by the principle of the direct action reducer valves.

They can work up to 100 bar supply pressure and a maximum 60 bar control pressure, flow range from 5 to 15 l/min and they are suitable for the remote control of main valves, proportional valves, servo controls for the adjustment of hydraulic pump and motor variable displacement, hydraulic clutches and brakes.

The consumed energy is extremely low, very little maintenance is needed, the anti-oscillation system of the control lever and the reduced operating force minimize the operational costs and optimize the working sensitivity and comfort.

The robust control device, the galvanized cast iron body, the wide range of metering curves, the possibility to assemble all our range of multifunction ergonomic handles with on-off and proportional hall effect rollers, the availability of straight and bent rubber boots, the check valve block for translation control, make this product flexible and reliable for the heaviest application: from agricultural to earth moving machine, from the naval to industrial applications.

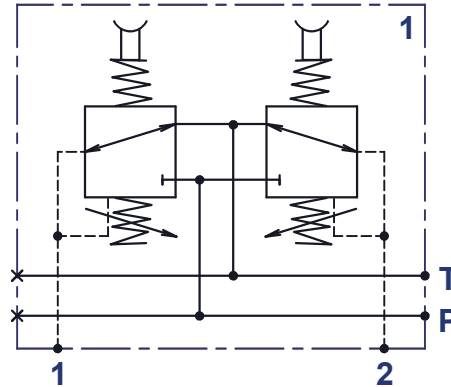
Technical features:

Minimum input flow:	5 l/min
Maximum input flow:	15 l/min
Maximum input pressure (P):	100 bar
Maximum output pressure (1,2,3,4):	60 bar
Maximum tank counter pressure (T):	3 bar
Maximum hysteresis:	0,5 bar
Internal leakage:	1,5 ÷ 3,0 cc/min @ 30 bar
Fluids:	Mineral hydraulic oils HL, HLP DIN 51524
Fluid temperature range:	- 20 ÷ + 80 °C
Ambient temperature range:	- 40 ÷ + 60 °C
Fluid viscosity range:	10 ÷ 300 cSt
Fluid contamination class:	21/16/13 ISO 4406
Body material:	Cast iron
Plunger materials:	Stainless steel
Plunger guide material:	Brass
Body surface treatment:	Galvanization
Ports:	1/4" ISO 228/1; 9/16"-18 UNF-2B ISO 11226

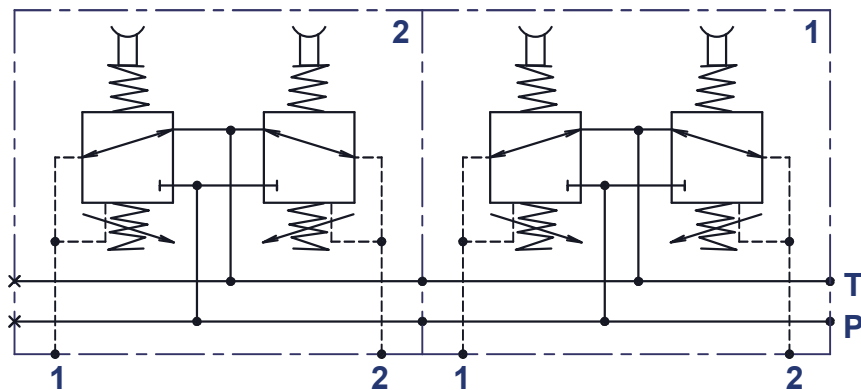
The data and the technical features in this catalogue are not binding. The manufacturer reserves the right to carry out modifications, by its unquestionable judgement and without prior notice, in order to improve its products. The manufacturer is not responsible for damage to people or properties caused by an improper use of the product.

Internal hydraulic circuits:

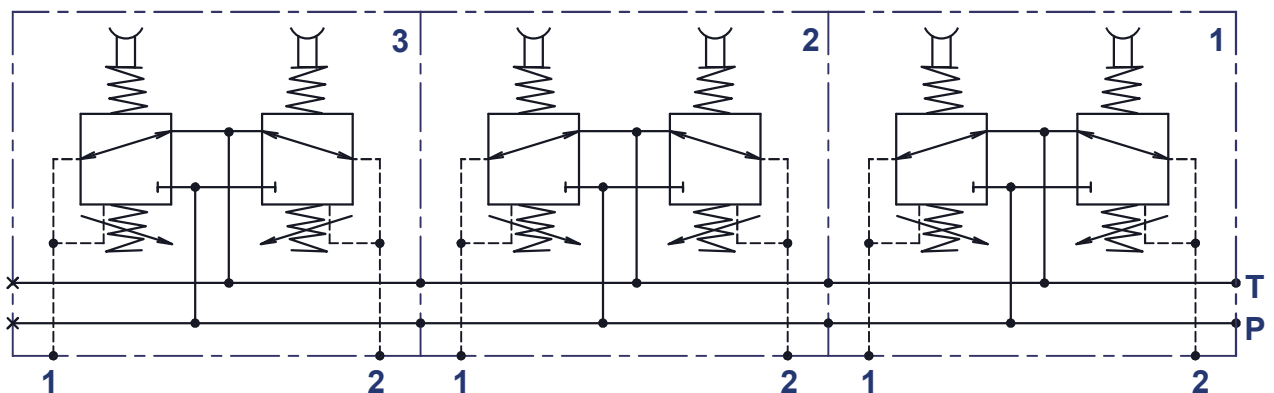
Single axis pilot valve JH2/1



Two section single axis pilot valve JH2/2

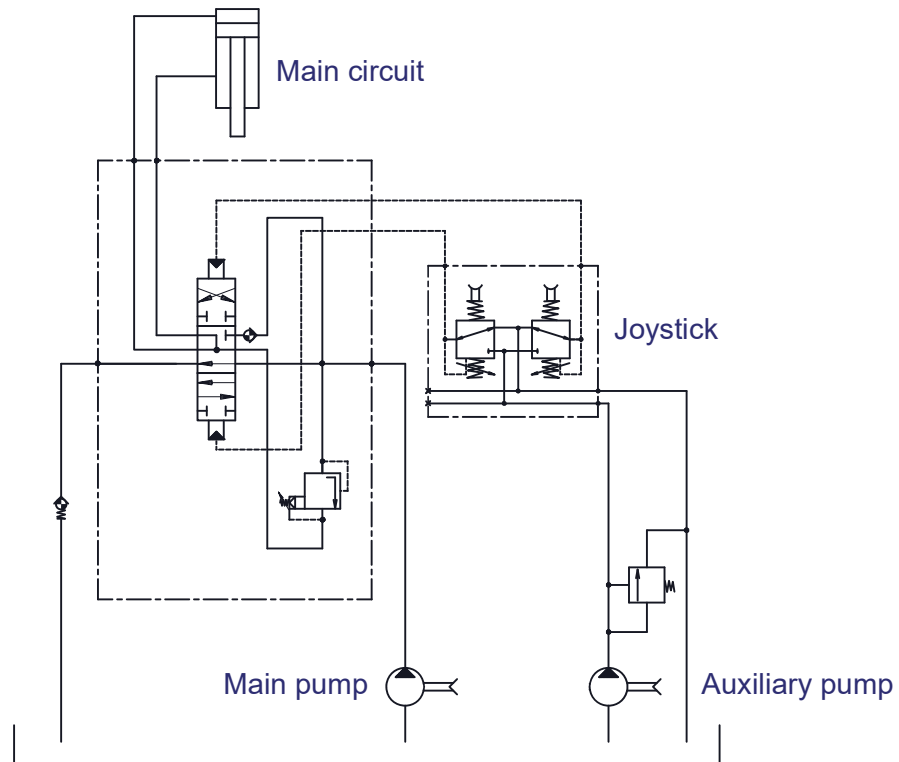


Three section single axis pilot valve JH2/3

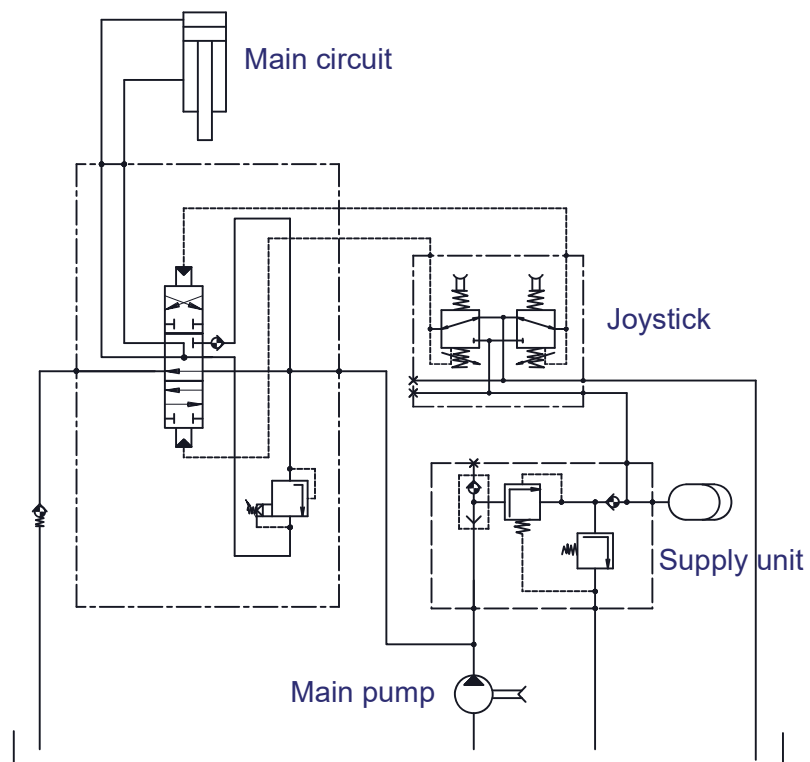


Connection hydraulic circuits:

Supply from auxiliary pump



Supply from pressure reducer valve



Metering curves:

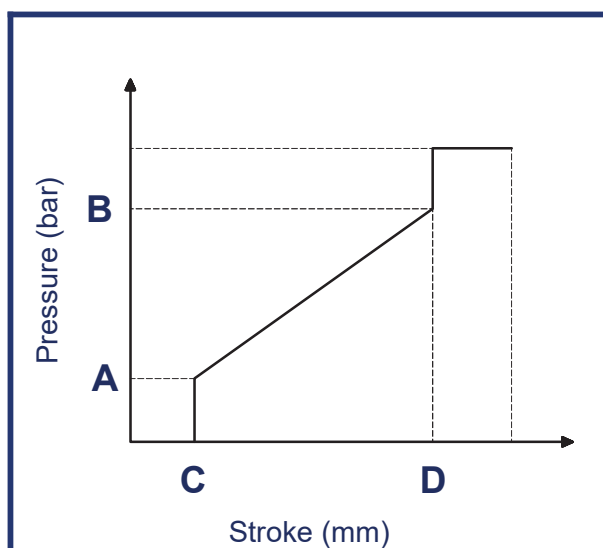


Diagram and metering curve specification type **A**

METERING CURVE CODE		A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11	A12	A13	A14	A15
Press. (bar)	A	5,8	5,0	2,0	6,0	0,0	4,0	5,0	2,0	5,0	2,0	4,0	11,5	10,0	7,0	7,5
	B	19,5	25,0	13,0	40,0	4,0	17,0	15,0	18,0	20,0	8,0	10,0	32,0	20,0	17,0	29,0
Stroke (mm)	C	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5
	D	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	6,0	7,5	7,5	7,5	7,5	7,5	7,5
METERING CURVE CODE		A16	A17	A18	A19	A20	A21	A22	A23	A24	A25	A26	A27	A28	A29	A30
Press. (bar)	A	6,0	0,0	4,0	6,0	8,0	5,0	5,8	6,8	5,8	4,5	2,8	8,0	3,0	8,0	5,8
	B	22,0	20,0	16,0	20,6	28,0	20,5	18,3	23,5	19,2	14,5	20,8	34,0	16,2	27,6	15,5
Stroke (mm)	C	1,5	1,0	1,5	1,5	1,5	1,5	1,5	1,0	1,5	1,0	1,5	1,5	1,5	1,5	1,5
	D	7,5	7,5	7,0	7,0	7,5	8,0	8,0	7,5	9,5	5,0	10,0	7,5	7,5	10,0	7,5
METERING CURVE CODE		A31	A32	A33	A34	A35	A36	A37	A38	A39	A40	A41	A42	A43	A44	
Press. (bar)	A	5,7	7,0	10,8	0,0	5,8	7,4	7,1	7,5	6,6	6,5	5,9	6,6	3,0	14,5	
	B	25,7	15,5	27,5	28,0	24,0	21,0	18,8	17,7	16,4	11,6	17,4	16,3	22,2	26,9	
Stroke (mm)	C	1,5	1,2	1,0	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,0	
	D	7,5	7,5	7,5	7,5	9,5	7,5	7,0	7,5	7,5	7,5	7,5	9,5	7,5	7,5	

Metering curves:

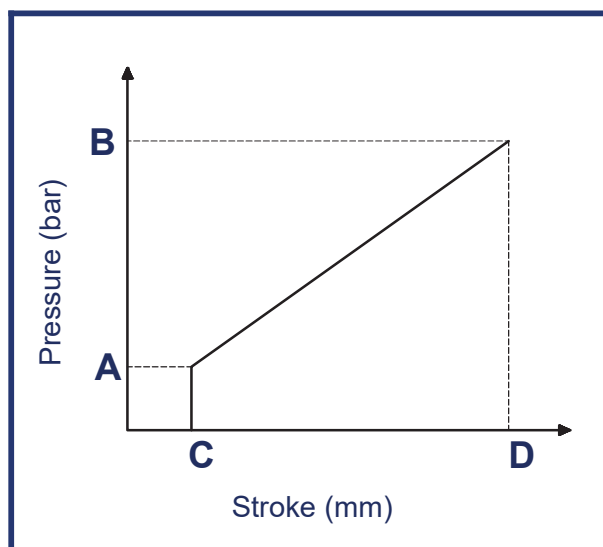
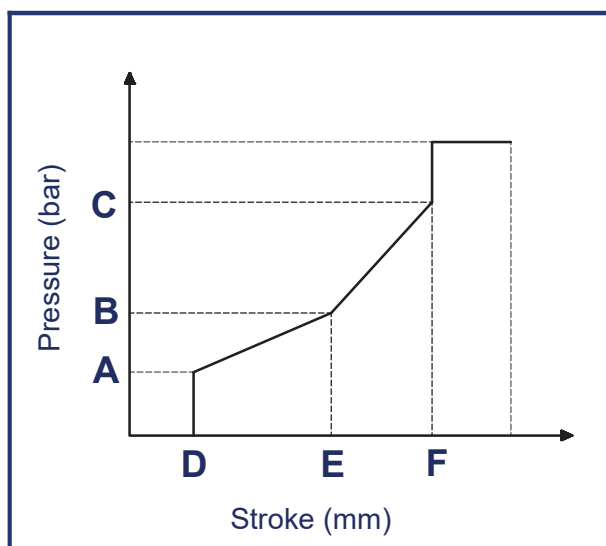


Diagram and metering curve specification type **B**

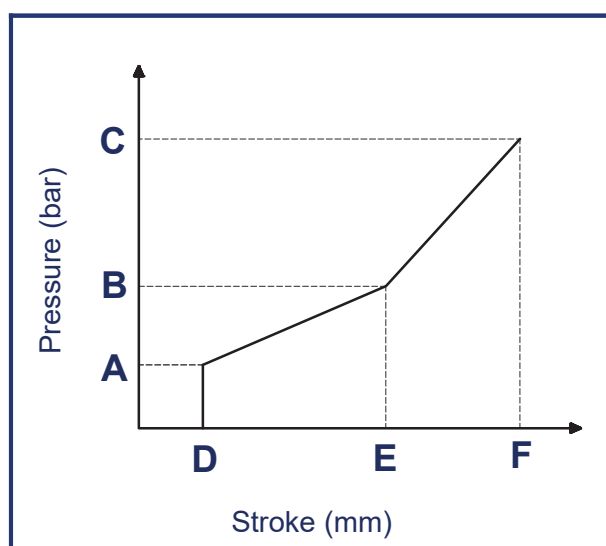
METERING CURVE CODE		B01	B02	B03	B04	B05	B06	B07	B08
Press. (bar)	A	5,0	5,0	5,0	2,0	7,5	5,0	4,0	3,0
	B	22,0	19,0	16,0	16,5	32,5	20,0	10,5	14,5
Stroke (mm)	C	1,5	1,5	1,5	1,5	1,0	1,0	1,5	1,5
	D	8,0	8,0	8,0	8,0	8,0	8,0	8,0	8,0
METERING CURVE CODE		B09	B10	B11	B12	B13	B14	B15	B16
Press. (bar)	A	6,0	2,0	7,2	8,3	8,0	6,0	10,4	6,5
	B	24,3	19,3	21,3	22,4	22,8	23,0	25,5	12,0
Stroke (mm)	C	1,0	1,5	1,0	1,0	1,0	1,5	1,0	1,0
	D	8,0	8,0	7,5	7,5	7,5	8,0	7,5	8,0
METERING CURVE CODE		B17	B18	B19	B20	B21	B22	B23	B24
Press. (bar)	A	2,1	5,8	6,5	2,0	2,0	5,8	4,0	10,2
	B	20,3	27,0	12,0	8,5	13,7	16,4	18,0	25,1
Stroke (mm)	C	1,0	1,5	1,5	1,5	1,5	1,2	1,5	1,0
	D	8,0	8,0	8,0	8,0	8,0	7,7	8,0	8,0

Metering curves:



METERING CURVE CODE		C01	C02	C04	C07	C08	C10
Pressure (bar)	A	2,0	3,0	7,0	4,2	6,5	5,4
	B	6,0	7,0	18,0	9,0	11,0	10,9
	C	15,0	16,0	27,0	20,0	18,5	17,3
Stroke (mm)	D	1,5	1,5	0,5	1,5	1,0	1,0
	E	5,0	5,0	6,3	5,0	5,0	5,0
	F	7,5	7,5	8,0	7,5	7,5	7,5

Diagram and metering curve specification type **C**

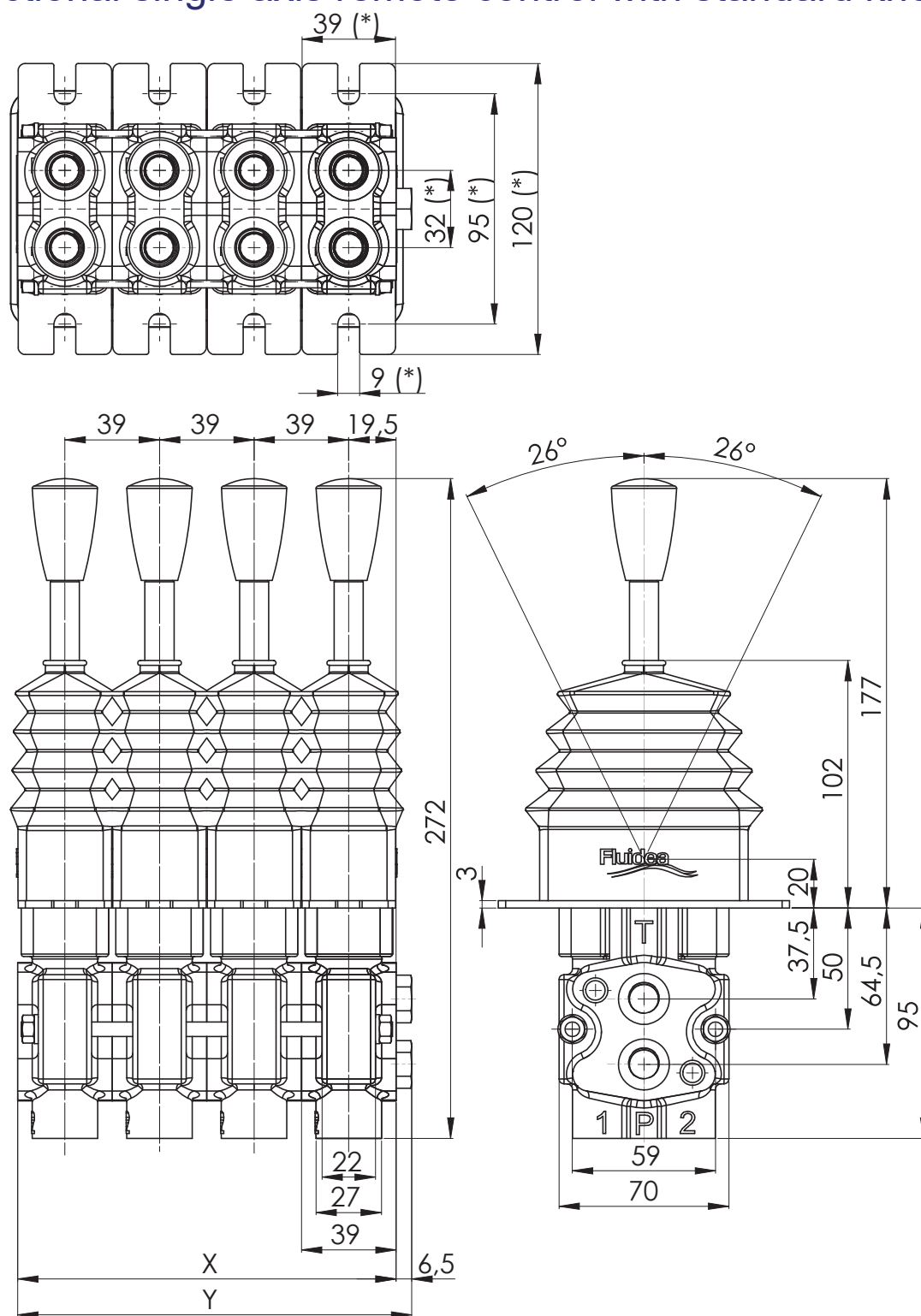


METERING CURVE CODE		D01	D02	D04
Pressione (bar)	A	2,0	4,2	5,0
	B	6,0	9,0	16,0
	C	15,0	22,0	20,0
Corsa (mm)	D	1,5	1,0	1,0
	E	5,0	5,0	7,5
	F	8,0	8,0	8,0

Diagram and metering curve specification type **D**

Overall dimension:

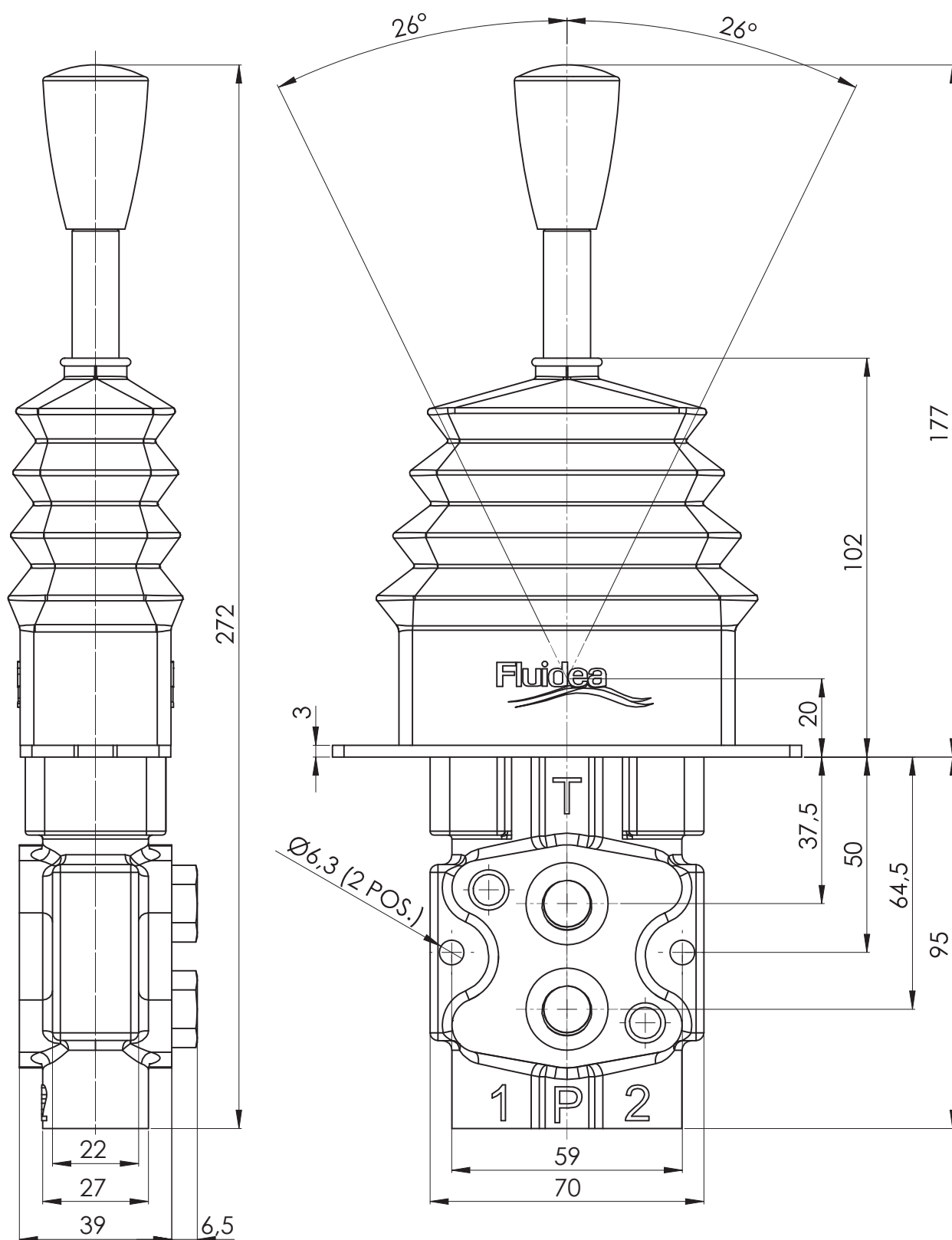
Sectional single axis remote control with standard knob



Variable dimensions												
JH2	/1	/2	/3	/4	/5	/6	/7	/8	/9	/10	/11	/12
X (mm)	39	78	117	156	195	234	273	312	351	390	429	468
Y (mm)	45,5	84,5	123,5	162,5	201,5	240,5	279,5	318,5	357,5	396,5	435,5	474,5

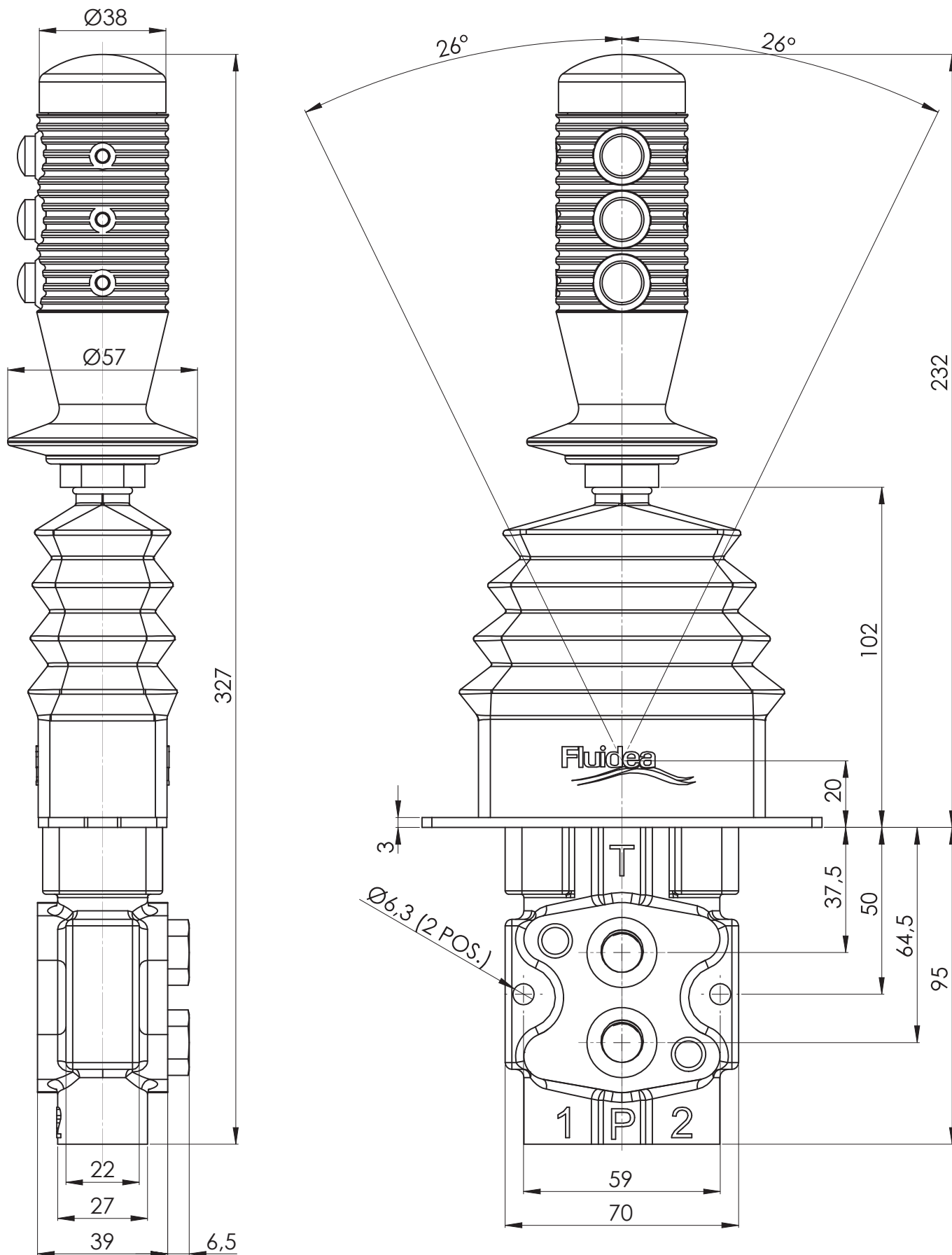
Overall dimensions:

Single axis pilot valve with standard knob



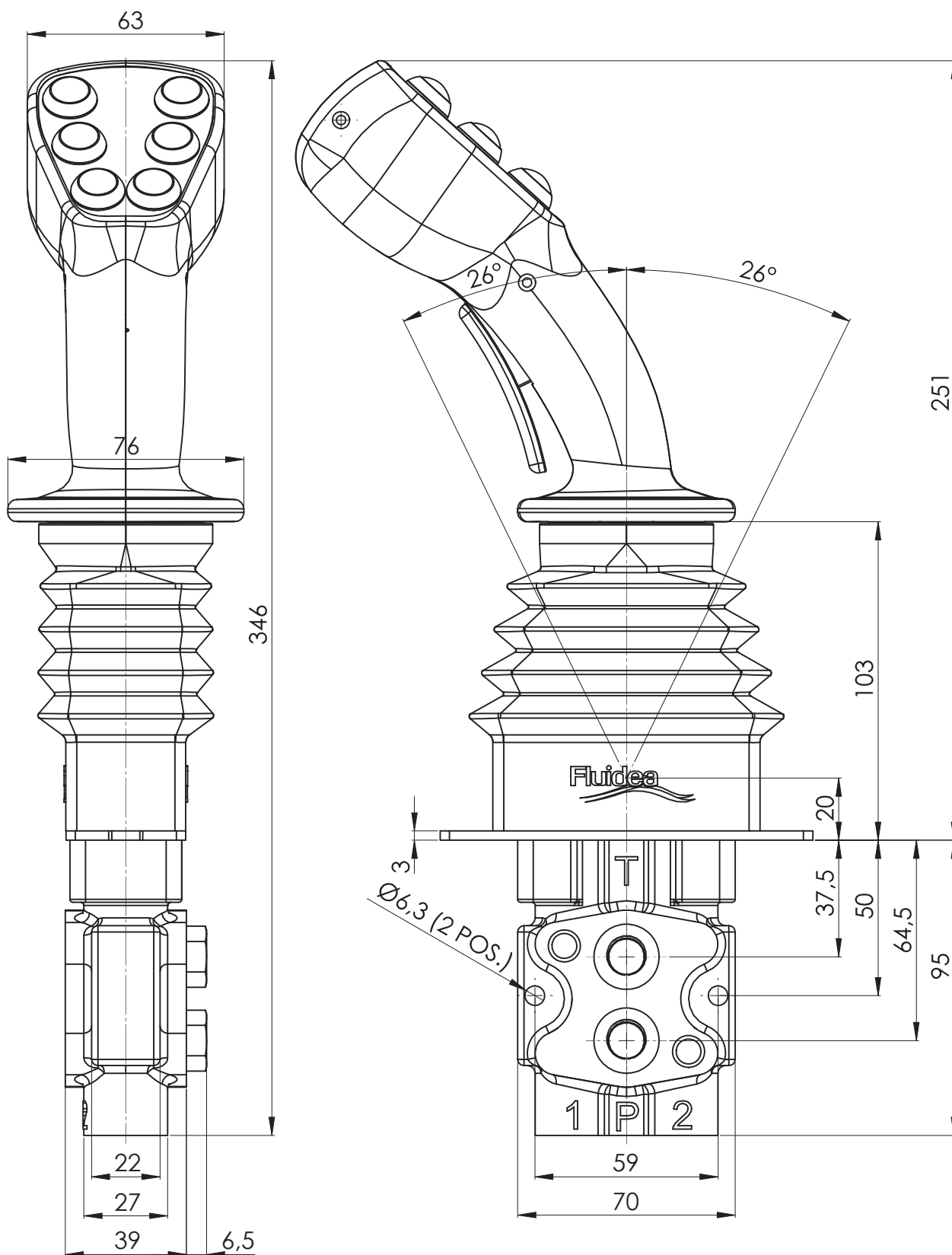
Overall dimensions:

Single axis pilot valve with straight handle IC2



Overall dimensions:

Single axis pilot valve with multifunctional ergonomic handle IE2



Rubber boot protection:

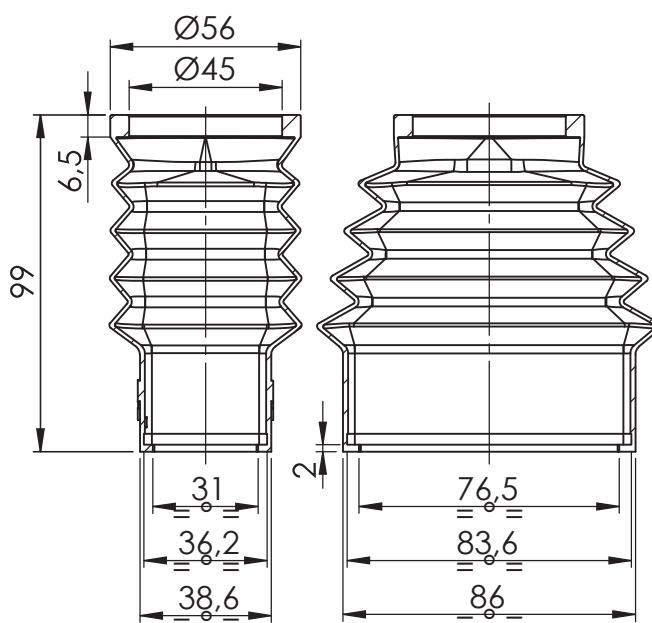
Without rubber boot

Z

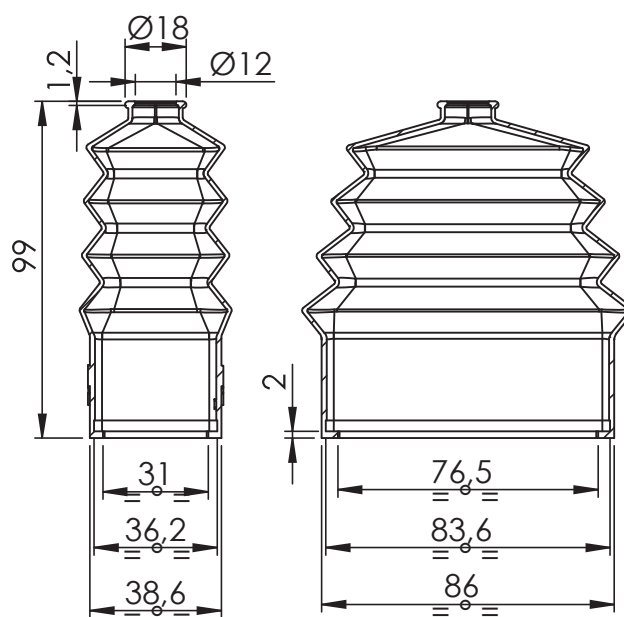
With rectangular rubber boot

R

For handle IE2



For all other handle option



Handle options:

For a detailed configuration of the handle, please refer to the technical catalogue of the required model.

Without handle

Z

Knob (available for sectional version with MAX Diam <38 mm)

IP1

Standard conical knob with lens

S



Multifunction ergonomic (not available for modular version)

IE2



Standard straight (not available for modular version)

IC1



Multifunctional straight (not available for modular version)

IC2



Model coding:

JH2/	1	01	A01	L	B	R	IE20001
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Handle (page 14)

- **IE20001** = Handle coding, assigned by Fluidea (for available options please refer to handle technical catalogue)
- **S** = Conical knob with lens (standard version)
- **Z** = without handle

Rubber boot (page 13):

- **Z** = Without rubber boot
- **R** = Standard rectangular rubber boot

Ports:

- **B** = 1/4" BSP ports
- **U** = 9/16"-18 UNF ports

Return spring:

- **A** = Standard (Preload 29,5 N - End stroke load 44,0 N)
- **B** = Light (Preload 14,6 N - End stroke load 29,4 N)
- **C** = Medium (Preload 73,5 N - End stroke load 135,5 N)
- **D** = Heavy (Preload 98,0 N - End stroke load 186,0 N)

Metering curve type (pages 6÷8):

- **A**** = Linear metering curve with step
- **B**** = Linear metering curve without step
- **C**** = Broken metering curve with step
- **D**** = Broken metering curve without step

Control configuration:

- **01** = Return spring in neutral position (standard)
- **02** = With lever detented in any position
- **03** = With lever detented at both stroke ends
- **04** = With safety detent in neutral position

Section number:

- **N** = specify number of sections (max.12)

Basic model:

- **JH2** = Single axis pilot valve

** Replace with the metering curve number shown in the tables

THE COMPREHENSIVE RANGE OF MANUFACTURED AND MARKETING COMPONENTS INCLUDES:

- Hydraulic gear and axial piston pumps & motors
- Directional control valves & selector valves
- Proportional EH pressure reducing valves & manifold blocks
- Hydraulic, pneumatic and electric on-off & proportional joysticks
- Control electronics
- Radio controls, push buttons stations, dashboards and armrests
- Multifunction ergonomic, cylindrical & palm grips
- Hydraulic filters & contamination control systems
- Heat exchangers and cooling systems
- Fluid monitoring & diagnostic instruments
- Bell housings, driving flanges & elastic couplings



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