

Part number:

103-10004

HYDROMA

HYDRAULICKÉ SYSTÉMY

**HIDROMA
SYSTEMS**

UKŁADY HYDRAULICZNE

HYDROMA

ГИДРАВЛИЧЕСКИЕ СИСТЕМЫ

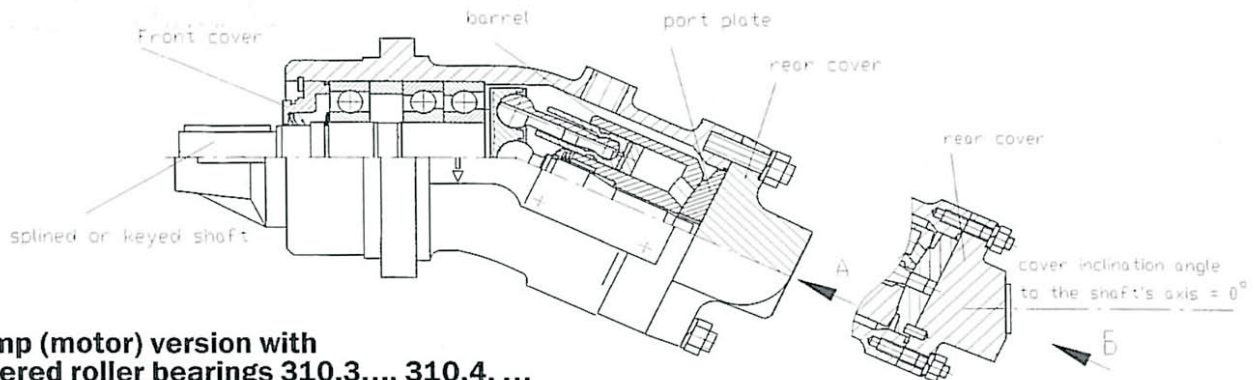
2.1 Fixed displacement hydraulic pumps and motors 310 series



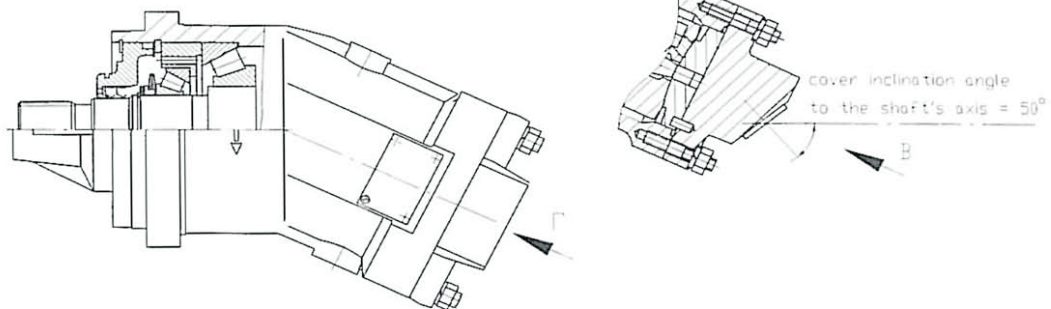
Sheet 1

Sheets 12

Pump (motor) version with angular ball bearings 310.2. ...



Pump (motor) version with tapered roller bearings 310.3..., 310.4. ... (310.4... – with bimetal cylinder blocks)



See views A, B, B and Γ in the table “Back cover design variants”

Fixed displacement pumps and hydraulic motors 310 series consist of a pumping unit mounted in the body and a cover.

The pumping unit consists of a distributor and a hydraulic assemble including a shaft, bearings (tapered roller bearings or radial thrust ball bearings), and a cylinder block. The cylinder block contacts with the distributor through a spherical surface.

The pumps are produced with splined and keyed shafts, both with counterclockwise and with clockwise rotation as well as with different back cover designs.

Designation example for fixed displacement pump on ordering 310.3.56.04.06,

where 310 - fixed displacement pump

3 - version with tapered roller bearings

56 - displacement, cm³

0 - mounting flange with 4 holes

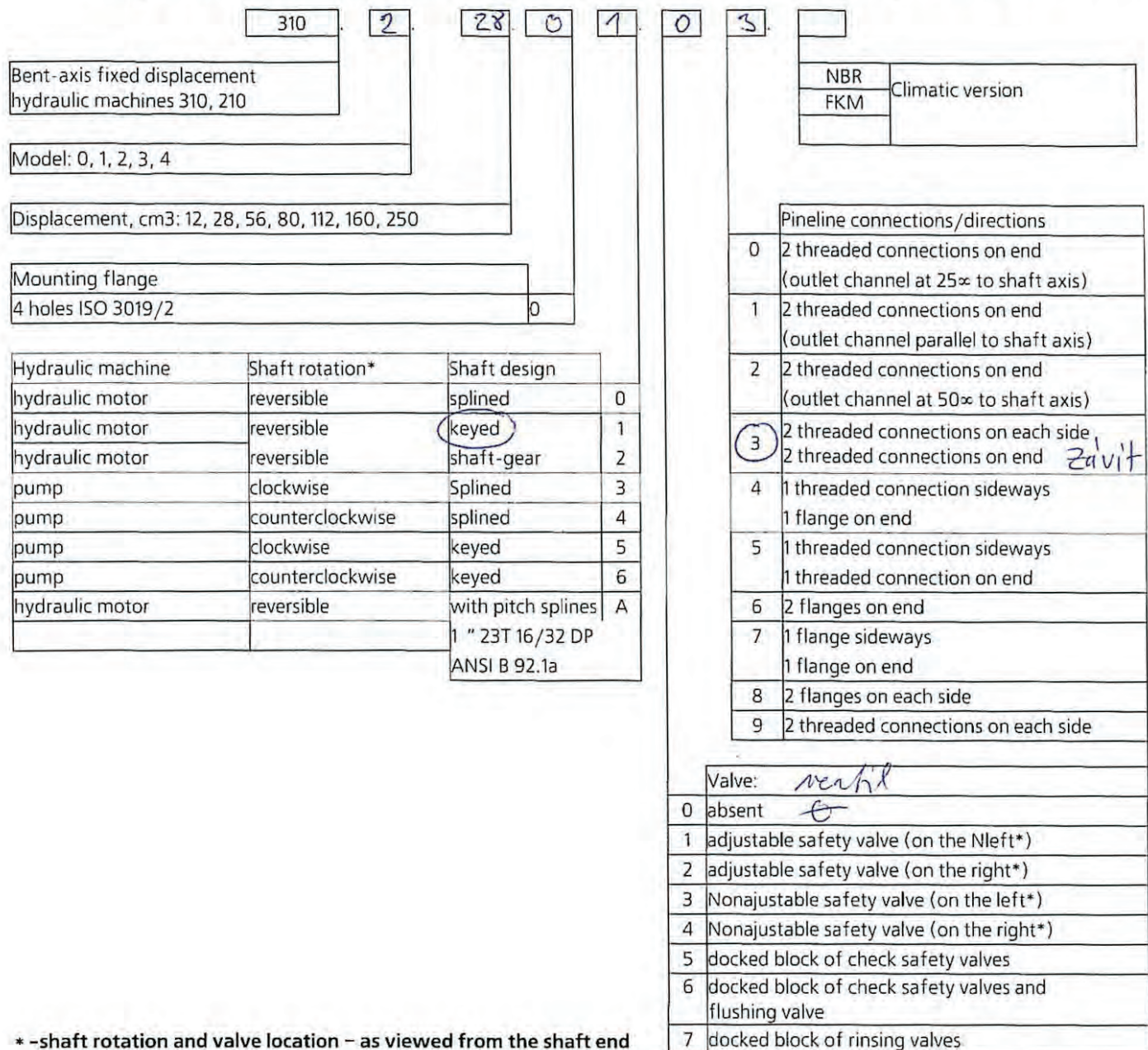
4 - counterclockwise shaft rotation, splined shaft

0 - no valve

6 - pipes connection - 2 flanges at the rear end



Designation structure diagram for fixed displacement pumps and hydraulic motors



* -shaft rotation and valve location – as viewed from the shaft end

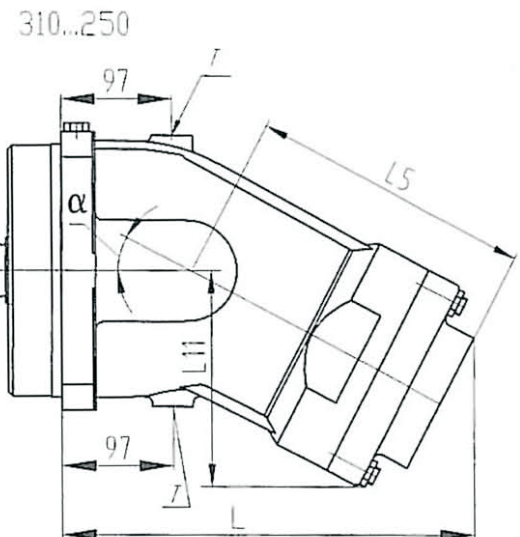
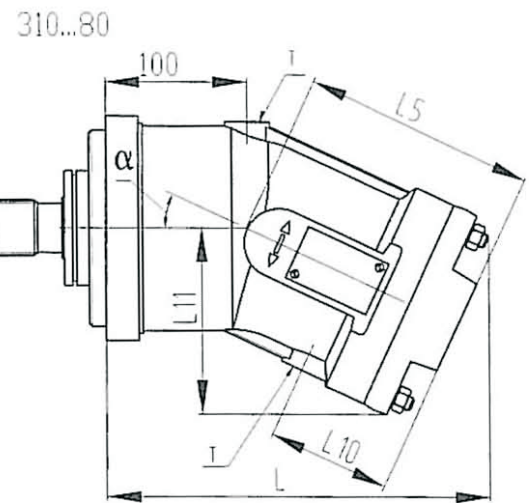
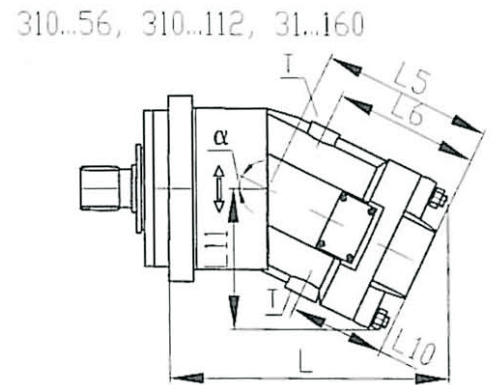
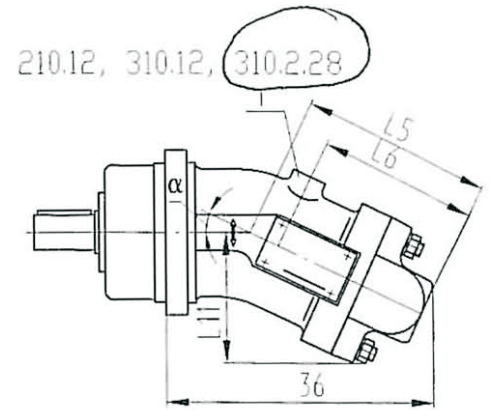
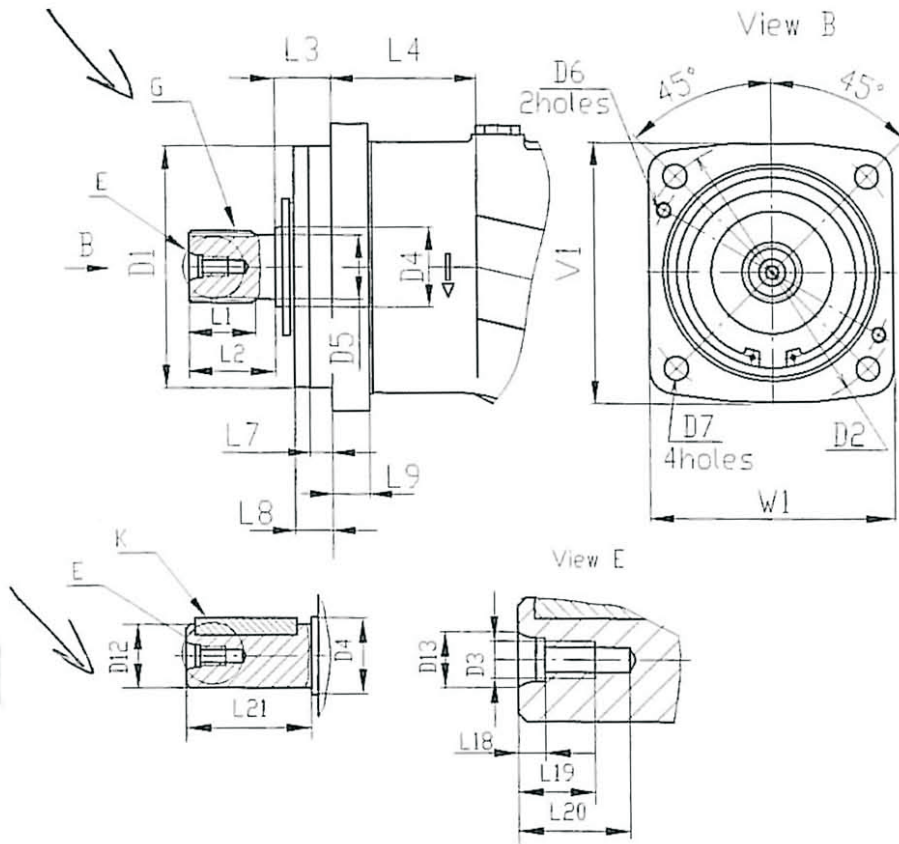


Back cover design variants

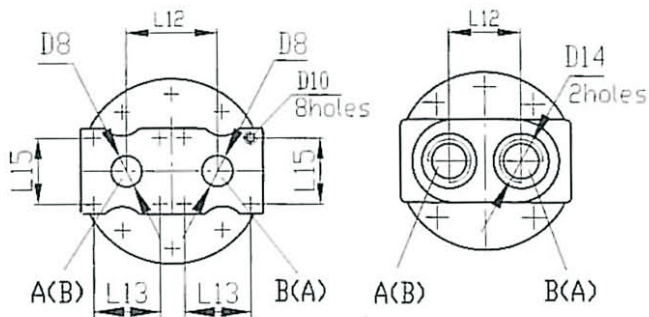
Articles	Left pump	Right pump	Hydraulic motor
310.12 210.12 310.2.28 (View A)			
210.12 310.12 (View B)			
210.12 310.12 (View B)			
<div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;"> 310.2.28 (View B) </div>			
310.2.28 (View B)			
310...56 310...80 310...160 310...112 310...250 (View Γ)			
310...160 310...250 (View Γ)			
Hydraulic motors 310.12 210.12 (View A)			



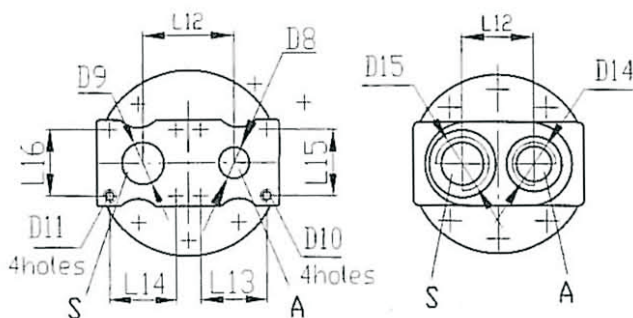
Mounting dimensions of hydraulic machines



Hydraulic motors



Pumps





Size	210.12	310.12	310.2.28	310.3.56, 310.4.56	310.3.80 310.4.80	310.3.112 310.4.112	310.3.160 310.4.160	310.3.250 310.4.250
G spline DIN 5480	WA20x1,5x30x12x f7x9g *W20-1,5x30x15x 9g		WA25x1,5x30x15x f7x9g *W25-1,5x30x15x 9g	WA35x2x30x16x 7x9g *W35- 2x30x16x9g	WA40x2x30x18x f7x9g *W40- 2x30x18x9g	WA45x2x30x21xh8x9g *W45-2x30x21x9g		WA50x2x30x24x h8x9g *W50-2x30x24 x9g
K key DIN 6885	AS 6x6x32		AS 8x7x40	AS 8x7x50 AS 10x8x50*	AS 10x8x56	AS 12x8x63	AS 14x9x70	AS 14x9x80
D1	80 h7		100 h7	125 h7	140 h7	160 h7	180 h7	224 h7
D2	100		125	160	180	200	224	280
D3	M6-7H		M8-7H	M12-7H	M12-7H	M12-7H	M16-7H	M16-7H
D4	25h8		30h8	40 h8	45 h8	50 h8	50 h8	55 h8
D5	16,6		21,2	30 h11	35 h11	40 h11	40 h11	45 h11
D6			M8-7H	M8-7H	M10-7H	M10-7H	M12-7H	M12-7H
D7	9		11	14	14	18	18	22
D8				22	22	28	32	32
D9				30	30	38	42	62
D10				M10	M10	M12	M14	M16
D11				M10	M10	M12	M12	M16
D12	20k6		25k5	30k6 (32h6)**	35k6	40k6	45k6	50k6
D13	11		12,5	17	17	17	21	21
D1	M22x1,5		M27x2					
D15	M27x2		M33x2					
L	160	192	196	244	275	290	320	367
L1	23,5		33	32,5	34,5	39,5	39,5	43,5
L2	40		50	49	50	55	55	58
L3	40	9	50	33,5	32	40	40	50
L4	50	81	62	85	99	101	108,5	162
L5	113		147	153	166	177	210	251,2
L6	93		122	128		150	190	
L7	9	5,5	10	9	10	11	10	9
L8	38	7	48	18	12	25	34	48
L9	13		16	20	23	25	28	30
L10				90	88	100	118	
L11	81		99	120	135	145	165	191
L12	36		50	67	67	82	99	102
L13				48	48	60	66,7	75
L14				48	48	60	69,9	75
L15				48	48	60	31,8	75
L16				48	48	60	35,7	75
L18	5,5		7	8,5	8,5	8,5	8,5	9
L19	14		17	24	24	25	36	36
L20	19		23	35	35	35	46	46
L21	40		50	58	70	80	90	82
V1	90		118	140	160	180	200	246
W1	90		118	140	160	180	200	246
a	25°		25°	25°	25°	26°	25°	27°
T ***	M12x1,5		M18x1,5	M18x1,5	M18x1,5	M18x1,5	M22x1.5	M22x1.5

* - sizes at special order

** - size for 310.3.56 with keyed shaft 10x8x50

*** - joint leakproofness by rubber rings