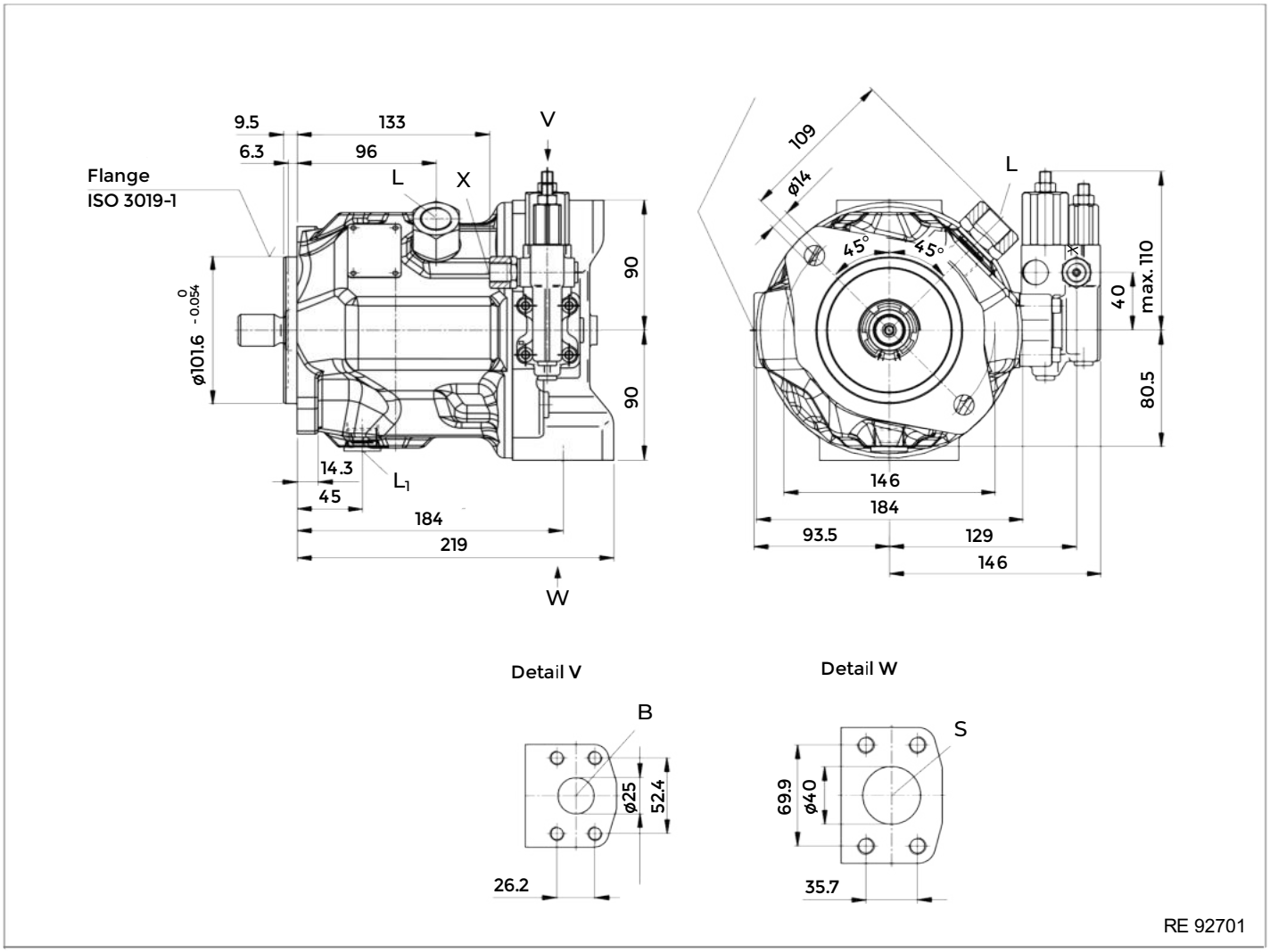
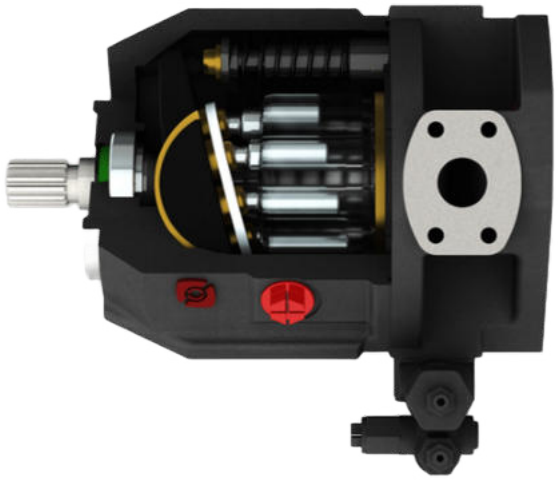
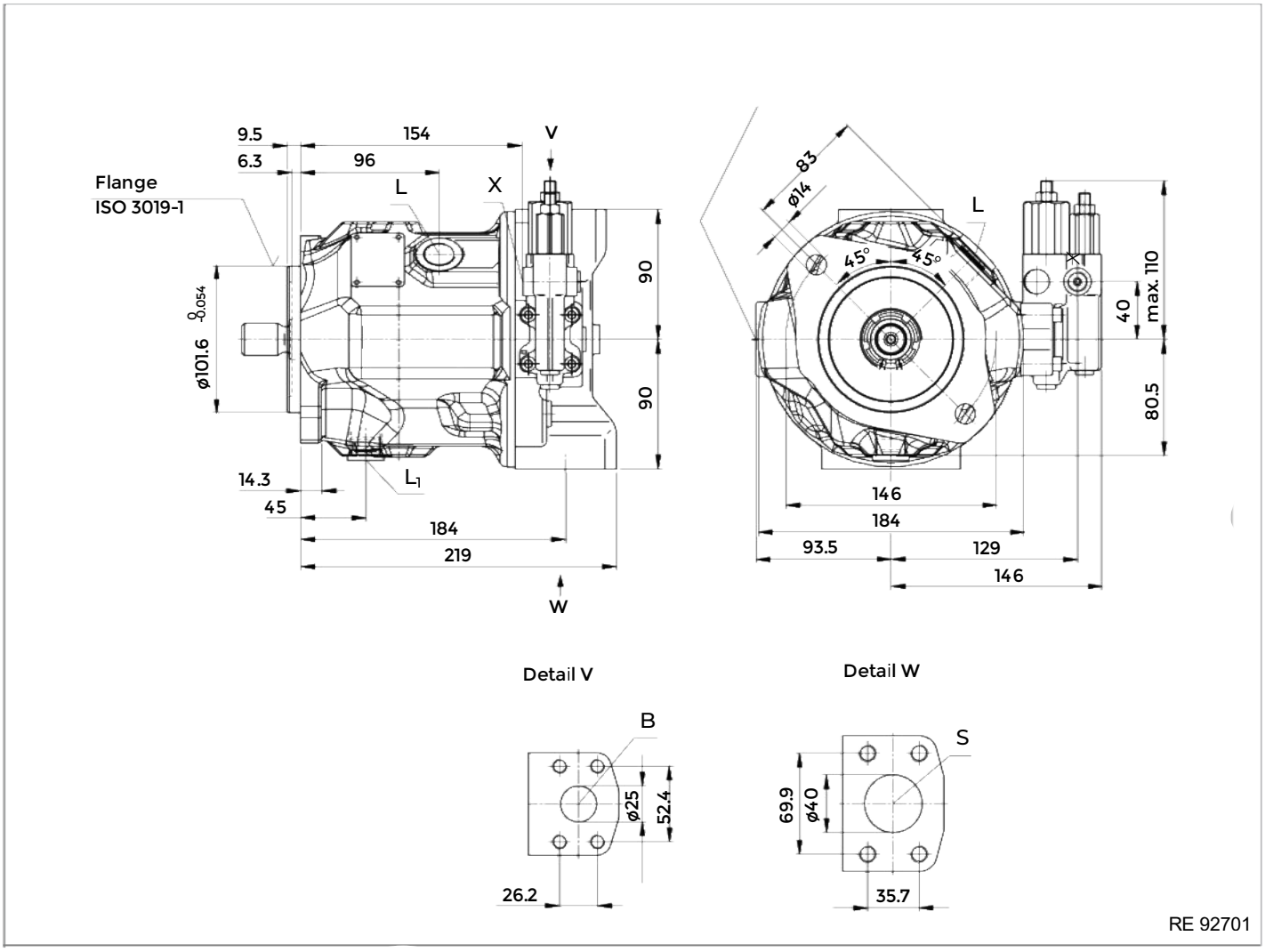
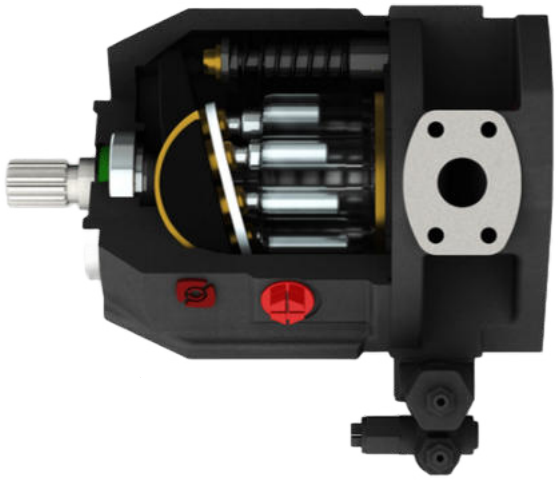
LS-X/ LS-C – Pressure and flow control, hydraulic; clockwise rotation, version: Ports metric





LS-X/ LS-C – Pressure and flow control, hydraulic; clockwise rotation, version: SAE ports



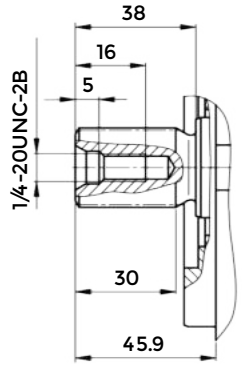


Dimensions Size;

HA10VO31-88cc

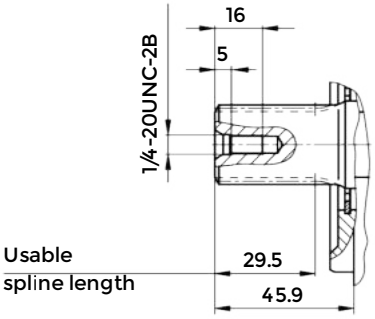
Splined shaft 1 in (SAE J744)

S – 15T 16/32DP1)



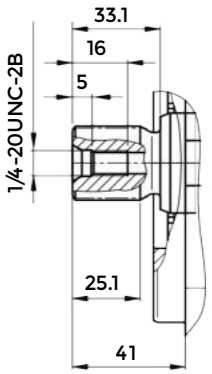
Splined shaft 1 in (SAE J744)

R – 15T 16/32DP1)2)



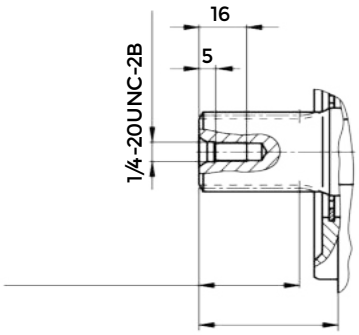
Splined shaft 7/8 in (SAE J744)

U – 13T 16/32DP1)



Splined shaft 7/8 in (SAE J744)

W – 13T 16/32DP1)2)



-Technical Data

Size		NG		18	28	45	71	88	100	140
Displacement, geometric, per revolution		$V_{g\,max}$	cm³	18	28	45	71	88	100	140
Rotational speed maximum)	at V_g max	n_{nom}	rpm	3300	3000	2600	2200	2100	2000	1800
	at $V_g < V_{g\,max}$²)	$n_{max\,perm}$	rpm	3900	3600	3100	2600	2500	2400	2100
Flow	at n_{nom} and $V_{g\,max}$	$q_{v\,max}$	l/min	59	84	117	156	185	200	252
	at n_E= 1500 rpm and $V_{g\,max}$	$q_{vE\,max}$	l/min	27	42	68	107	132	150	210
Power at Δp = 280 bar	at nnom, Vg max	P_{max}	kW	28	39	55	73	86	93	118
	at nE= 1500 rpm and Vg max	$P_{E\,max}$	kW	12.6	20	32	50	62	70	98
Torque at $V_{g\,max}$ and	Δp = 280 bar	T_{max}	Nm	80	125	200	316	392	445	623
	Δp = 100 bar	T	Nm	30	45	72	113	140	159	223
Rotary stiffness of drive shaft	S	c	Nm/rad	11087	22317	37500	71884	71884	121142	169437
	R	c	Nm/rad	14850	26360	41025	76545	76545	-	-
	U	c	Nm/rad	8090	16695	30077	52779	52779	91093	-
	W	c	Nm/rad	-	19898	34463	57460	57460	101847	165594
Moment of inertia for rotary group		J_{tw}	kgm²	0.00093	0.0017	0.0033	0.0083	0.0083	0.0167	0.0242
Maximum angular acceleration)		α	rad/s²	6800	5500	4000	2900	2600	2400	2000
Case volume		V	l	0.4	0.7	1.0	1.6	1.6	2.2	3.0
Weight without through drive (approx.)		m	kg	12.9	18	23.5	35.2	35.2	49.5	65.4
Weight with through drive (approx.)				13.8	19.3	25.1	38	38	55.4	74.4

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01	02	03	04	05		06	07		08	09	10	11	12	13
	A10V(S)	**O**			**/**	**31**		**-**	**V**					

Version

		18	28	45	71	88	100	140	
01	Standard version (without code)	•	•	•	•	•	•	•	
	High-speed version (external dimensions are the same as the standard version)	–	–	•	•	–	•	•	**H**

Axial piston unit

02	Swashplate design, variable, nominal pressure 280 bar, maximum pressure 350 bar	•	–	–	–	–	–	–	**A10VS**
		–	•	•	•	•	•	•	**A10V**

Operating mode

03	Pump, open circuit	**O**

Size (NG)

		18	28	45	71	88	100	140
04	Geometric displacement, see table of values on pages 6 and 7	**18**	**28**	**45**	**71**	**88**	**100**	**140**

Control device

05	Two-point control, direct operated				•	•	•	•	•	•	•	**DG**
	Pressure controller	hydraulic			•	•	•	•	•	•	•	**DR**
	with flow controller	hydraulic	X-T open		•	•	•	•	•	•	•	**DFR**
			X-T plugged with flushing function		•	•	•	•	•	•	•	**DFR1**
			X-T plugged without flushing function		•	•	•	•	•	•	•	**DRSC**
	with flow and differential pressure control, electrically variable				•	•	•	•	•	•	•	**EF** [1]
	with pressure cut-off	hydraulic	remote controlled		•	•	•	•	•	•	•	**DRG**
		electrical	negative control	U = 12 V	•	•	•	•	•	•	•	**ED71**
				U = 24 V	•	•	•	•	•	•	•	**ED72**
		electrical	positive control	U = 12 V	•	•	•	•	•	•	•	**ER71**
				U = 24 V	•	•	•	•	•	•	•	**ER72**
	Pressure-flow power control				–	•	•	•	•	•	•	**DFLR**

Series

06	Series 3, index 1	**31**

Direction of rotation

07	Viewed on drive shaft	clockwise	**R**
		counter-clockwise	**L**

Sealing material

08	FKM (fluoroelastomer)	**V**

Drive shaft

09	Splined shaft ANSI B92.1a	standard shaft	•	•	•	•	•	•	•	**S**
		similar to shaft “S” however for higher input torque	•	•	•	•	•	–	–	**R**
		reduced diameter, limited suitability for through drive (see table of values, page 9)	•	•	•	•	•	•	○	**U**
		same as “U”, higher torque; limited suitability for through drive (see table of values, page 9)	–	•	•	•	•	•	•	**W**

Mounting flange

10	ISO 3019-1 (SAE)	2-hole	•	•	•	•	•	•	•	**S**
		4-hole	•	•	•	•	•	–	–	**R**

01	02	03	04	05		06	07		08	09	10	11	12	13
	A10V(S)	**O**			**/**	**31**		**-**	**V**					

Working port

				18	28	45	71	88	100	140	
11	SAE flange ports according to J518 Working ports metric	Fastening thread metric; rear	not for through drive	–	●	●	–	–	●	●	**11**
				–	–	–	●	●	–	–	**41**
		Fastening thread metric; lateral top bottom	for through drive	●	●	●	–	–	●	●	**12**
				–	–	–	●	●	–	–	**42**
	SAE flange ports according to J518 Working ports UNF	Fastening thread UNF; rear	not for through drive	–	●	●	–	–	●	●	**61**
				–	–	–	●	●	–	–	**91**
		Fastening thread UNF; lateral top bottom	for through drive	●	●	●	–	–	●	●	**62**
				–	–	–	●	●	–	–	**92**

Through drive

				18	28	45	71	88	100	140	
12	Flange ISO 3019-1 Diameter	Hub for splined shaft Diameter									
	without through drive			●	●	●	●	●	●	●	**N00**
	82-2 (A)	5/8 in	9T 16/32DP	●	●	●	●	●	●	●	**K01**
		3/4 in	11T 16/32DP	●	●	●	●	●	●	●	**K52**
	101-2 (B)	7/8 in	13T 16/32DP	–	●	●	●	●	●	●	**K68**
		1 in	15T 16/32DP	–	–	●	●	●	●	●	**K04**
	127-2 (C)	1 1/4 in	14T 12/24DP	–	–	–	●	●	●	●	**K07**
		1 1/2 in	17T 12/24DP	–	–	–	–	–	●	●	**K24**
	152-4 (D)	1 3/4 in	13T 8/16DP	–	–	–	–	–	–	●	**K17**

● = Available ○ = On request – = Not available