Hydraulic Pump T7AS/T7ASW Series Vane Pumps

Pressure up to 300 bar
Fixed Displacement from 6 to 40 ml/rev.

Catalogue HY29-0008/UK
April 2006



DENISON Hydraulics

GENERAL

Characteristics :
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Minimum allowable inlet pressure 3
General characteristics 3

T7AS

Ordering code and technical data 4
Dimensions 5

T7ASW

Ordering code and technical data 6
Dimensions 7

MINIMUM & MAXIMUM SPEED, PRESSURE RATINGS

Size	Series	Theoretical Displacement Vi	Minimum Speed	Maximum Speed		Maximum pressure					
				HF-0, HF-1 HF-2	HF-3, HF-4	HF-0, HF-2		HF-1, HF-4		HF-3	
						Int.	Cont.	Int.	Cont.	Int.	Cont.
		ml/rev.	RPM	RPM	RPM	bar	bar	bar	bar	bar	bar
T7AS*	B06	5,8	600	3600	1800	300	275	240	210	175	140
	B10	9,8									
	B11	11,0									
	B13	12,8									
	B17	17,2									
	B20	19,8									
	B22	22,5									
	B25	24,9		3000		275	240				
T7ASW*	B26	26,0	600	3600	1800	300	275	240	210	175	140
	B28	28,0									
	B30	30,0									
	B32	31,8									
	B34	34,0		3000		280	240				
	B36	36,0									
	B40	40,0									

HF-0, HF-2 = Antiwear Petroleum Base
HF-1 = Non Antiwear Petroleum Base
HF-3 = Water in oil Emulsions
HF-4 = Water Glycols

* Please be careful as the cartridge designation is now in ml/rev. (example : B22 = 22,5 ml/rev.)

For further information or if the performance characteristics outlined above do not meet your particular requirements, please consult your local Parker Denison office.

WARNING

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND:OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

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MINIMUM ALLOWABLE INLET PRESSURE (BAR ABSOLUTE)

Cartridge		Speed RPM										Series
Size	**Series**	**1200**	**1500**	**1800**	**2100**	**2200**	**2300**	**2500**	**2800**	**3000**	**3600**	
T7AS	**B06**	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	**B06**
	B10											**B10**
	B11											**B11**
	B13											**B13**
	B17										0,88	**B17**
	B20										0,94	**B20**
	B22										1,00	**B22**
	B25									0,85		**B25**
T7ASW	**B26**	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80	**B26**
	B28											**B28**
	B30											**B30**
	B32											**B32**
	B34										0,88	**B34**
	B36										0,94	**B36**
	B40										1,00	**B40**

Inlet pressure is measured at inlet flange with petroleum base fluids at viscosity between 10 and 65 cSt. The difference between inlet pressure at the pump flange and atmospheric pressure must not exceed 0,2 bar to prevent aeration.

Multiply absolute pressure by 1,25 for HF-3, HF-4 fluids.
by 1,10 for ester or rapeseed base.

GENERAL CHARACTERISTICS

	Mounting standard	**Weight without connector and bracket kg**	**Moment of inertia $Kgm^2 \times 10^{-4}$**	**Suction**	**Pressure**
T7AS	SAE J744 ISO/3019-1 SAE A	9,5	2,6	1" - SAE 4 bolts J518 - ISO/DIS 6162-1	3/4" - SAE 4 bolts J518 - ISO/DIS 6162-1
				SAE 16 - SAE threads 1" 5/16 - 12 UNF - 2B	SAE 12 - SAE threads 1" 1/16 - 12 UNF - 2B
				NPTF threads 1" 1/4 NPTF	NPTF threads 3/4" NPTF
				1" BSP	3/4" BSP
T7ASW	SAE J744 ISO/3019-1 SAE A	11,3	3,7	1"1/4 - SAE 4 bolts J518 - ISO/DIS 6162-1	3/4" - SAE 4 bolts J518 - ISO/DIS 6162-1
				SAE 20 - SAE threads 1" 5/8 - 12 UNF - 2B	SAE 12 - SAE threads 1" 1/16 - 12 UNF - 2B
				NPTF threads 1" 1/4 NPTF	SAE 12 - SAE threads 1" 1/16 - 12 UNF - 2B
				1"1/4 BSP	3/4" BSP

Model No. **T7AS - B17 - 1 R 00 - A 1 - 00 - ..**

T7AS series - SAE A 2 bolts
Mounting flange J744

Displacement *
Volumetric displacement (ml/rev.)
B06 = 5,8
B10 = 9,8
B11 = 11,0
B13 = 12,8
B17 = 17,2
B20 = 19,8
B22 = 22,5
B25 = 24,9

Type of shaft T7AS
1 = keyed (non SAE) Ø 19,05
3 = splined 16/32 (SAE B) 13 teeth
4 = splined 16/32 (SAE A) 9 teeth

Direction of rotation (view on shaft end)
R = Clockwise
L = Counter-clockwise

Modifications

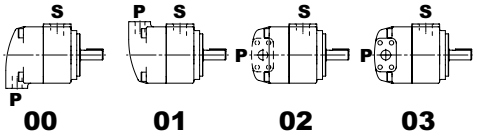
Mounting w/connection variables
00 = 4 bolts SAE flanges (J518) UNC thread
S = 1" SAE
P = 3/4" SAE
02 = SAE thread
S = 1"5/16 (SAE 16)
P = 1"1/16 (SAE 12)
03 = NPTF thread
S = 1"1/4 NPTF
P = 3/4" NPTF
04 = BSP threads
S = 1" BSP
P = 3/4" BSP

Seal class
1 = S1 BUNA N - 0,7 bar max.
(for mineral oil)
5 = S5 VITON - 0,7 bar max.
(for mineral oil and fire resistant fluids)

Design letter

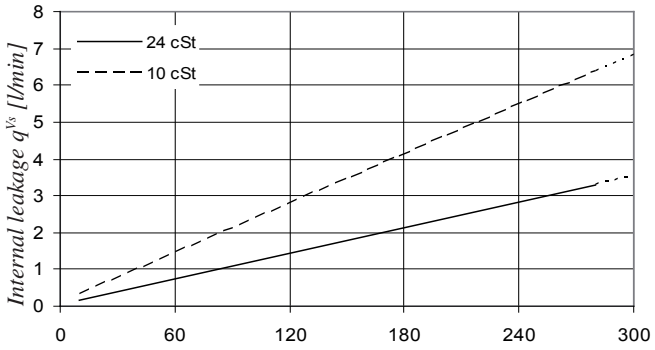
Porting combination
00 = standard

P = Pressure
S = Suction



00 **01** **02** **03**

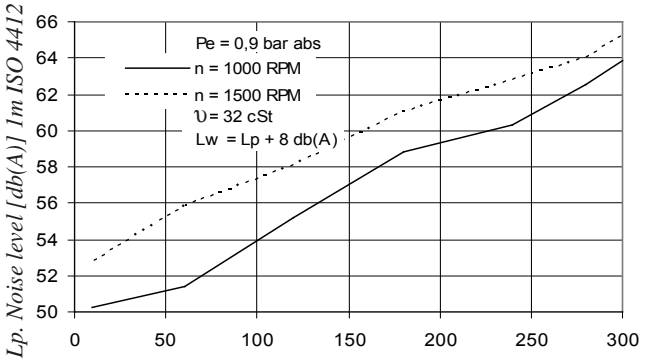
INTERNAL LEAKAGE (TYPICAL)



Pressure p [bar]

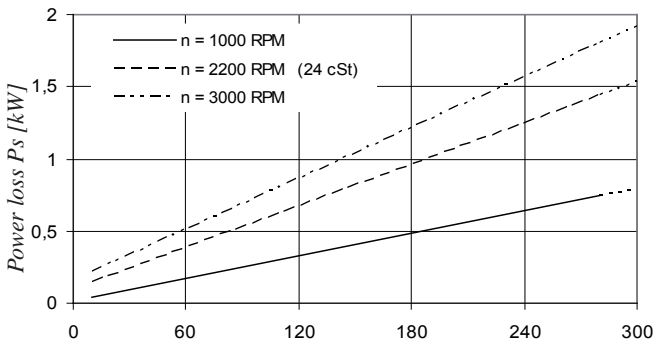
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.

NOISE LEVEL (TYPICAL) - T7AS B20



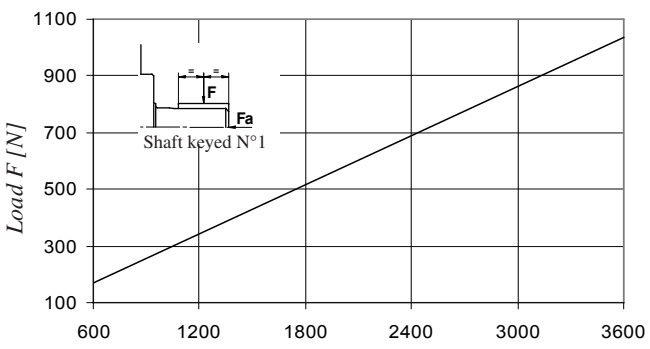
Pressure p [bar]

POWER LOSS HYDROMECHANICAL (TYPICAL)



Pressure p [bar]

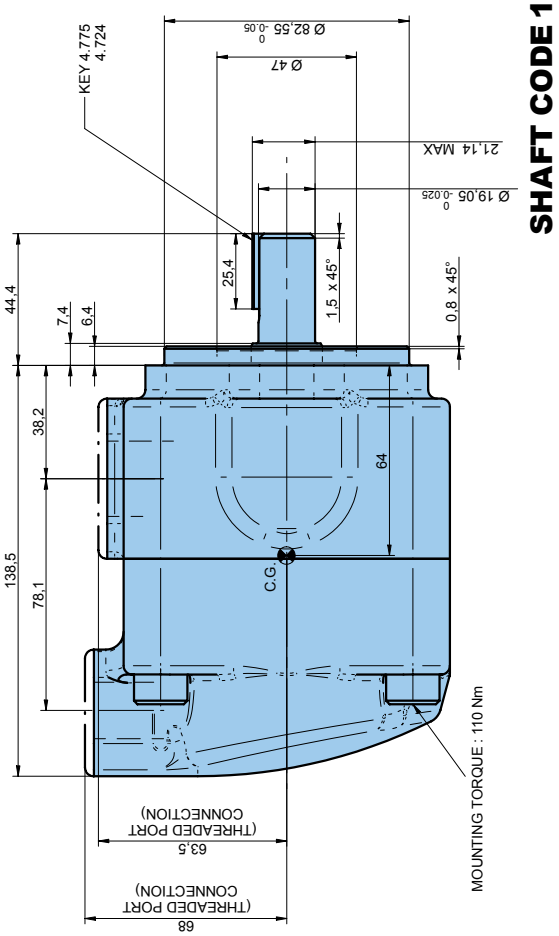
PERMISSIBLE RADIAL LOAD

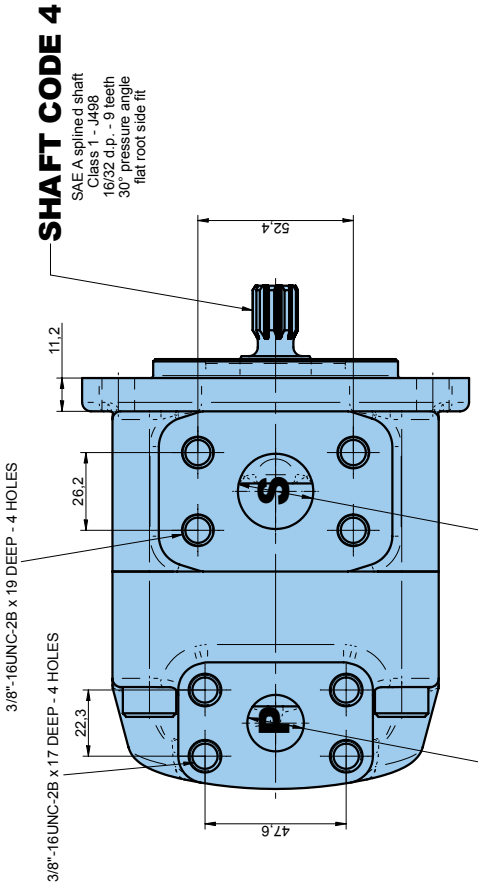


Speed n [RPM]

** Cartridge designation is now in ml/rev. (example : B22 = 22,5 ml/rev.)* *Maximum permissible axial load Fa = 600 N*

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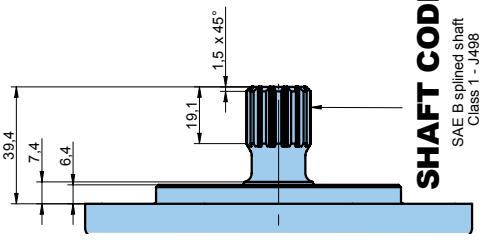


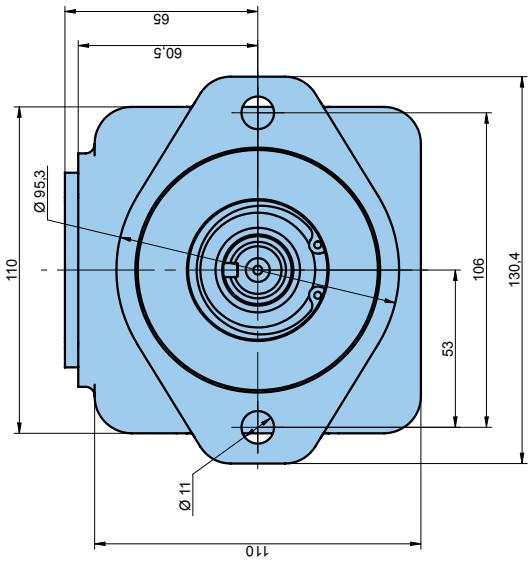


Code	00	02	03	04
A	Ø 25,40	SAE # 16 1" 5/16 - 12 UNF - 2B	1" 1/14 NPTF	1" BSP
B	Ø 19,05	SAE # 12 1" 1/16 - 12 UNF - 2B	3/4" NPTF	3/4" BSP

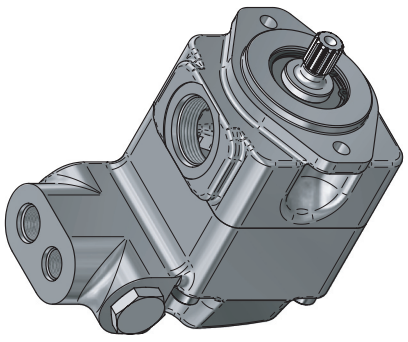
If inlet velocity > 1,9 m/s, please contact Parker Denison.

Shaft torque limits [ml/rev. x bar]	
Shaft	Vi x p max.
1	8720
3	8720
4	6550





Option : with valve



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Model No. **T7ASW - B32 - 1 R 00 - A 1 - 00 - ..**

T7ASW series - SAE A 2 bolts
Mounting flange J744

Displacement *
Volumetric displacement (ml/rev.)
B26 = 26,0
B28 = 28,0
B30 = 30,0
B32 = 31,8
B34 = 34,0
B36 = 36,0
B40 = 40,0

Type of shaft T7ASW
1 = keyed (non SAE) Ø 19,05
3 = splined 16/32 (SAE B) 13 teeth
4 = splined 16/32 (non SAE) 11 teeth

Direction of rotation (view on shaft end)
R = Clockwise
L = Counter-clockwise

Modifications

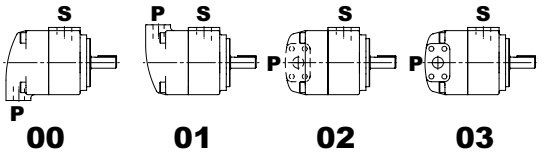
Mounting w/connection variables
00 = 4 bolts SAE flanges (J518) UNC threads
S = 1"1/4 SAE
P = 3/4" SAE
02 = SAE thread
S = 1"5/8 (SAE 20)
P = 1"1/16 (SAE 12)
03 = NPTF & SAE threads
S = 1"1/4 NPTF
P = 1"1/16 (SAE 12)
04 = BSP threads
S = 1"1/4 BSP
P = 3/4" BSP

Seal class
1 = S1 BUNA N - 0,7 bar max.
(for mineral oil)

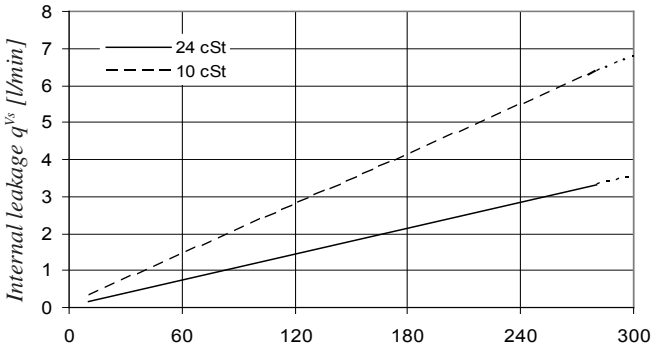
Design letter

Porting combination
00 = standard

P = Pressure
S = Suction

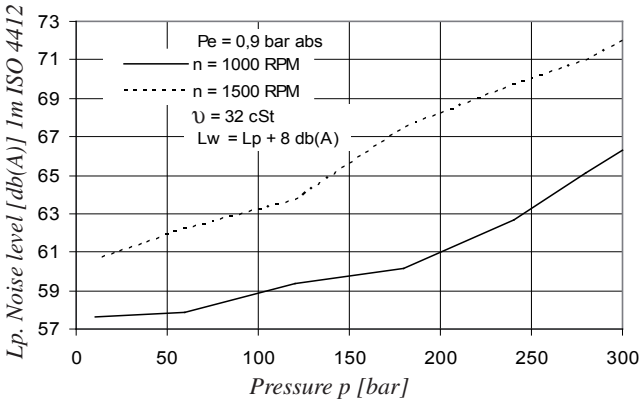


INTERNAL LEAKAGE (TYPICAL)

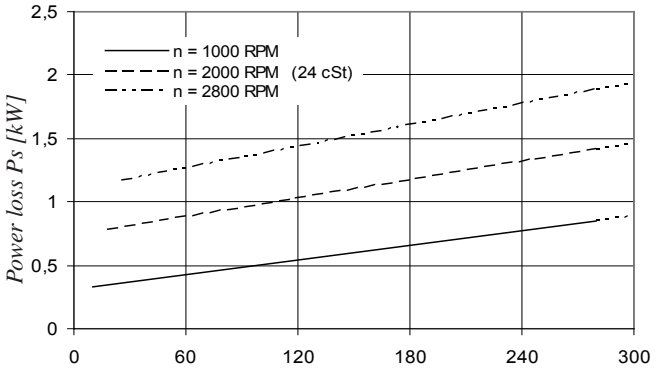


Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.

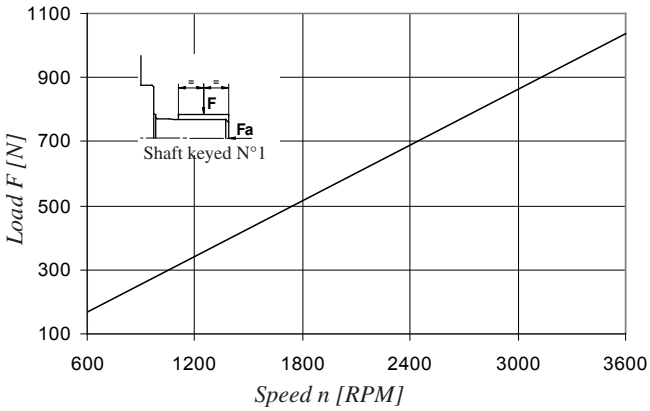
NOISE LEVEL (TYPICAL) - T7ASW B28



POWER LOSS HYDROMECHANICAL (TYPICAL)

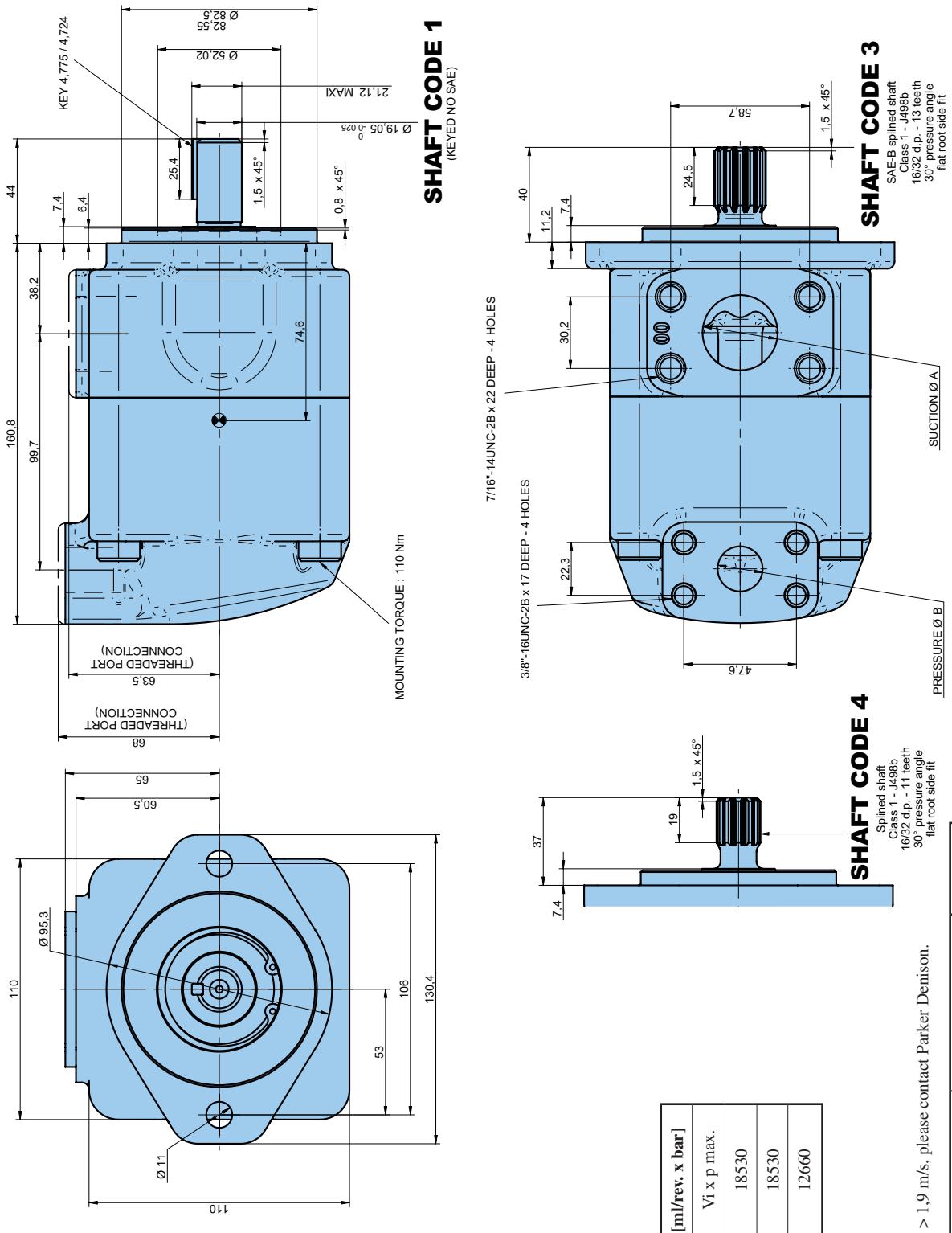


PERMISSIBLE RADIAL LOAD



** Cartridge designation is now in ml/rev. (example : B22 = 22,5 ml/rev.) Maximum permissible axial load Fa = 800 N*

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Shaft torque limits [ml/rev. x bar]	
Shaft	Vi x p max.
1	18530
3	18530
4	12660

If inlet velocity > 1,9 m/s, please contact Parker Denison.

Code	00	02	03	04
A	Ø 31,80	SAE # 20 1" 5/16 - 12 UNF - 2B	1" 1/14 NPTF	1"1/4 BSP
B	Ø 19,05	SAE # 12 1" 1/16 - 12 UNF - 2B	SAE # 12 1" 1/16 - 12 UNF - 2B	3/4 " BSP

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