Hydraulic Pump T7AS/T7ASW Series Vane Pumps

Pressure up to 4350 PSI
Fixed Displacement from .35 to 2.44 in³/rev.

Catalogue HY29-0008/US
December 2005

DENISON Hydraulics

GENERAL

Characteristics :
displacements, max./min. speeds, max. pressures 2
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

WARNING 8

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.
		in³/rev.	RPM	RPM	RPM	PSI	PSI	PSI	PSI	PSI	PSI
T7AS	B06	.35	600	3600	1800	4350	4000	3500	3000	2500	2000
	B10	.60									
	B11	.67									
	B13	.78									
	B17	1.05									
	B20	1.21									
	B22	1.37									
	B25	1.52		3000		4000	3500				
T7ASW	B26	1.59	600	3600	1800	4350	4000	3500	3000	2500	2000
	B28	1.71									
	B30	1.83									
	B32	1.94									
	B34	2.07		3000		4060	3500				
	B36	2.20									
	B40	2.44									

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

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

MINIMUM ALLOWABLE INLET PRESSURE (PSI ABSOLUTE)

Cartridge		Speed RPM										Series
Size	**Series**	**1200**	**1500**	**1800**	**2100**	**2200**	**2300**	**2500**	**2800**	**3000**	**3600**	
T7AS	**B06**	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	**B06**
	B10											**B10**
	B11											**B11**
	B13											**B13**
	B17										12.8	**B17**
	B20										13.6	**B20**
	B22										14.5	**B22**
	B25									12.3		**B25**
T7ASW	**B26**	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	**B26**
	B28											**B28**
	B30											**B30**
	B32											**B32**
	B34										12.8	**B34**
	B36										13.6	**B36**
	B40										14.5	**B40**

Inlet pressure is measured at inlet flange with petroleum base fluids at viscosity between 60 and 300 SUS. The difference between inlet pressure at the pump flange and atmospheric pressure must not exceed 2.9 PSI 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 Lbs**	**Moment of inertia Lb.in²**	**Suction**	**Pressure**
T7AS	SAE J744 ISO/3019-1 SAE A	20.9	0.9	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	24.9	1.3	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 (in³/rev.)
B06 = .35
B10 = .60
B11 = .67
B13 = .78
B17 = 1.05
B20 = 1.21
B22 = 1.37
B25 = 1.52

Type of shaft T7AS
1 = keyed (non SAE) .75 DIA
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

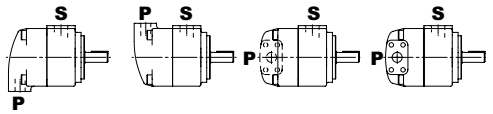
Mounting w/connection variables
00 = 4 bolts SAE flanges (J518) UNC thread
S = 1" SAE
P = 3/4" SAE
02 = SAE thread
S = 1"5/16 (SAE 16)
P = 1"1/16 (SAE 12)
03 = NPTF thread
S = 1"1/4 NPTF
P = 3/4" NPTF
04 = BSP threads
S = 1" BSP
P = 3/4" BSP

Seal class
1 = S1 BUNA N - 10.16 PSI max.
(for mineral oil)
5 = S5 VITON - 10.16 PSI max.
(for mineral oil and fire resistant fluids)

Design letter

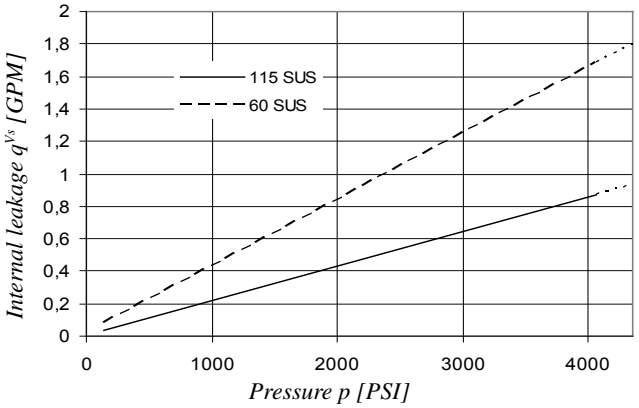
Porting combination
00 = standard

P = Pressure
S = Suction



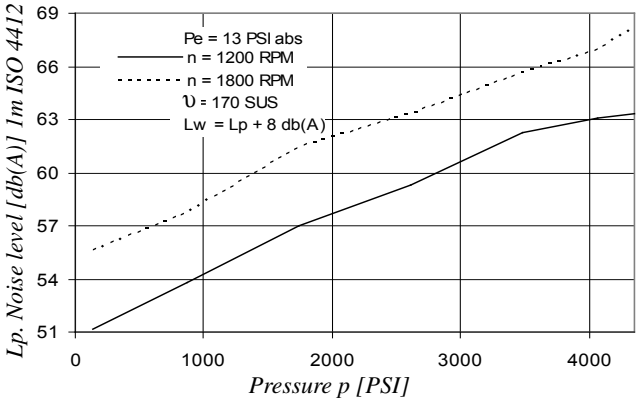
00 **01** **02** **03**

INTERNAL LEAKAGE (TYPICAL)

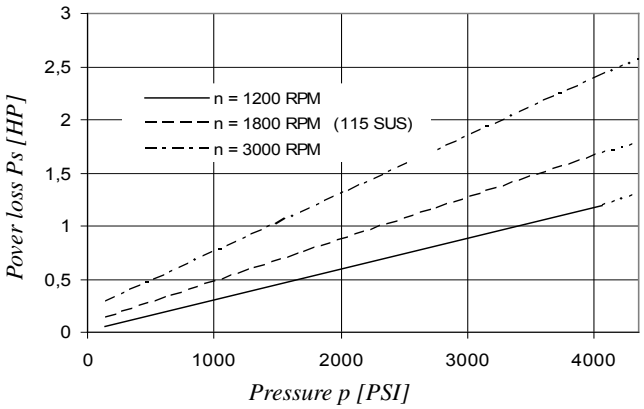


Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.

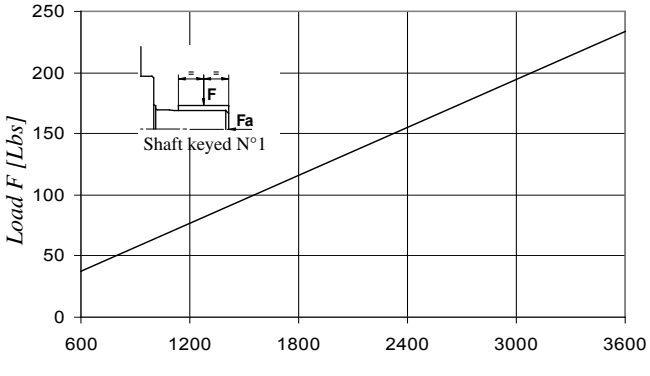
NOISE LEVEL (TYPICAL) - T7AS B20



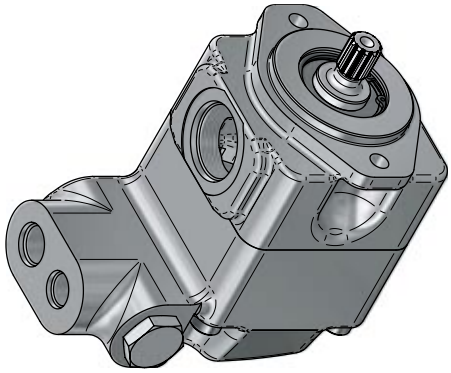
POWER LOSS HYDROMECHANICAL (TYPICAL)



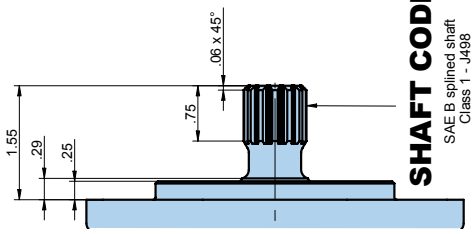
PERMISSIBLE RADIAL LOAD



Maximum permissible axial load Fa = 135 Lbs

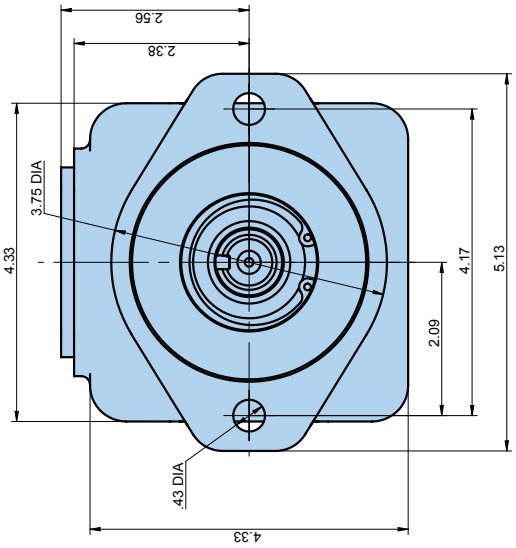


Option : with valve



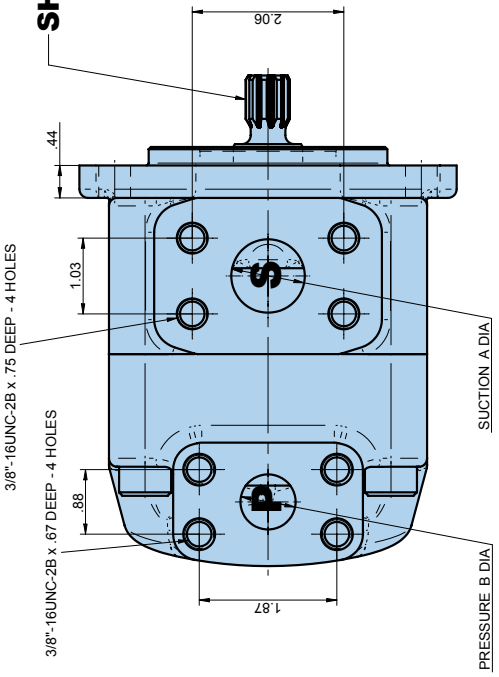
SHAFT CODE 3

SAE B splined shaft
Class 1 - J498
16/32 d.p. - 13 teeth
30° pressure angle
flat root side fit



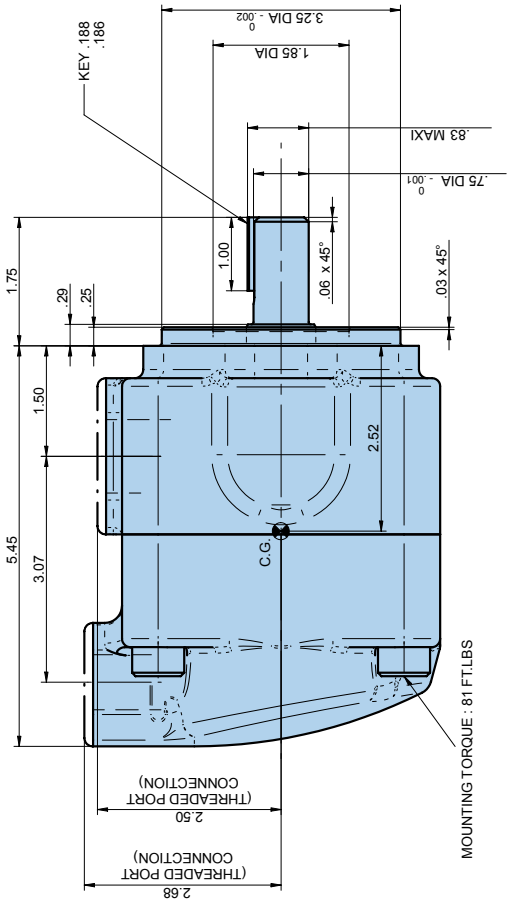
SHAFT CODE 4

SAE A splined shaft
Class 1 - J498
16/32 d.p. - 9 teeth
30° pressure angle
flat root side fit



SHAFT CODE 1

Keyed (non SAE)



Code	00	02	03	04
A	1.00 DIA	SAE # 16 1" 5/16 - 12 UNF - 2B	1" 1/14 NPTF	1" BSP
B	.75 DIA	SAE # 12 1" 1/16 - 12 UNF - 2B	3/4" NPTF	3/4" BSP

If inlet velocity > 6.23 ft/s, please contact Parker Denison.

Shaft torque limits [in³/rev. x PSI]	
Shaft	Vi x p max.
1	7713
3	7713
4	5793

Parker Hannifin
Denison Vane Pump Division
Vierzon - France

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

T7ASW series - SAE A 2 bolts
Mounting flange J744

Displacement
Volumetric displacement (in³/rev.)
B26 = 1.59
B28 = 1.71
B30 = 1.83
B32 = 1.94
B34 = 2.07
B36 = 2.20
B40 = 2.44

Type of shaft T7ASW
1 = keyed (non SAE) .75 DIA
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

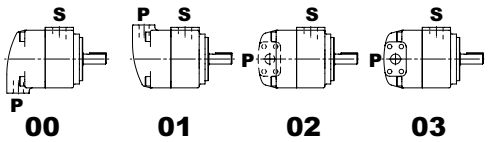
Mounting w/connection variables
00 = 4 bolts SAE flanges (J518) UNC threads
S = 1"1/4 SAE
P = 3/4" SAE
02 = SAE thread
S = 1"5/8 (SAE 20)
P = 1"1/16 (SAE 12)
03 = NPTF & SAE threads
S = 1"1/4 NPTF
P = 1"1/16 (SAE 12)
04 = BSP threads
S = 1"1/4 BSP
P = 3/4" BSP

Seal class
1 = S1 BUNA N - 10.16 PSI max.
(for mineral oil)

Design letter

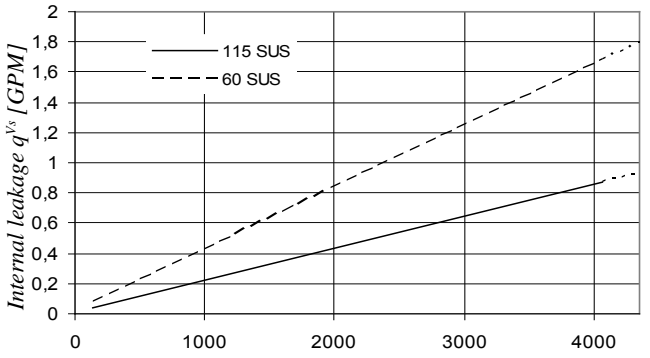
Porting combination
00 = standard

P = Pressure
S = Suction



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

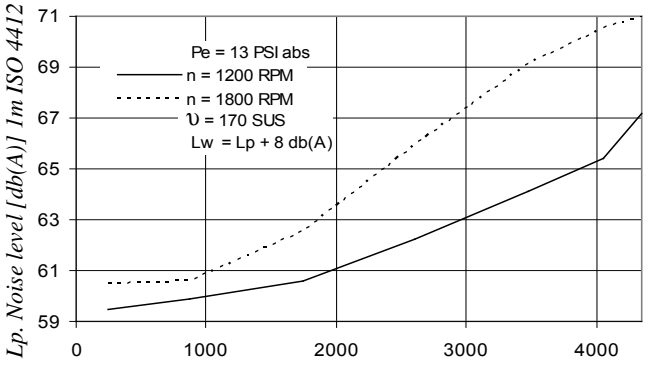
INTERNAL LEAKAGE (TYPICAL)



Pressure p [PSI]

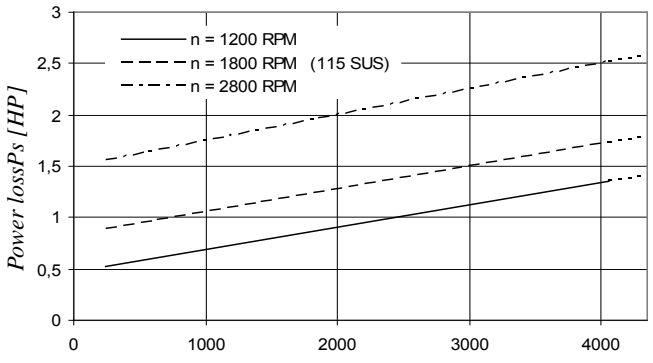
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.

NOISE LEVEL (TYPICAL) - T7ASW B28



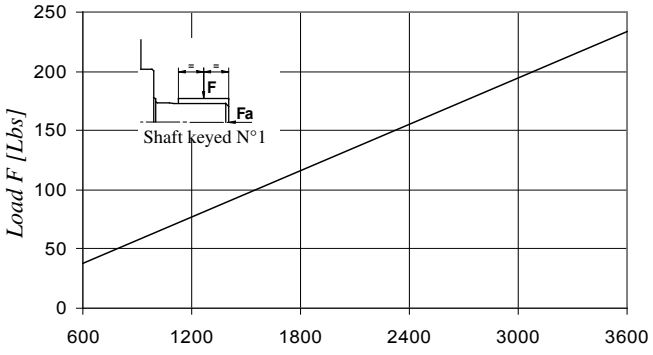
Pressure p [PSI]

POWER LOSS HYDROMECHANICAL (TYPICAL)



Pressure p [PSI]

PERMISSIBLE RADIAL LOAD



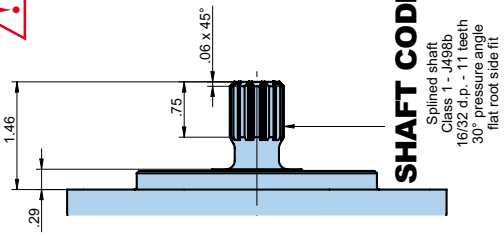
Speed n [RPM]

Maximum permissible axial load Fa = 180 Lbs

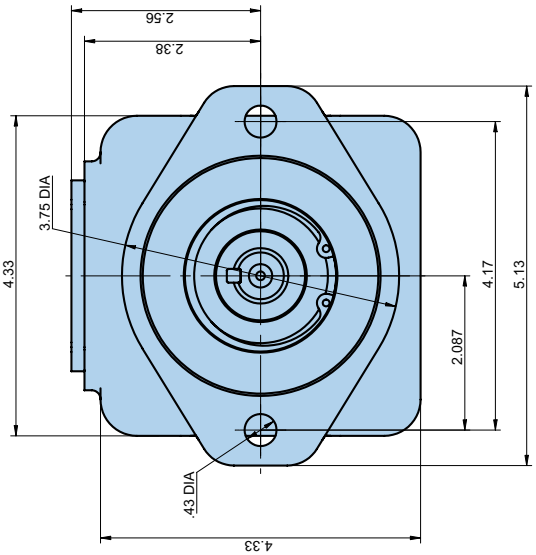
Code	00	02	03	04
A	1.25 DIA	SAE # 16 1" 5/16 - 12 UNF - 2B	1" 1/14 NPTF	1"1/4 BSP
B	.75 DIA	SAE # 12 1" 1/16 - 12 UNF - 2B	SAE # 12 1" 1/16 - 12 UNF - 2B	3/4" BSP

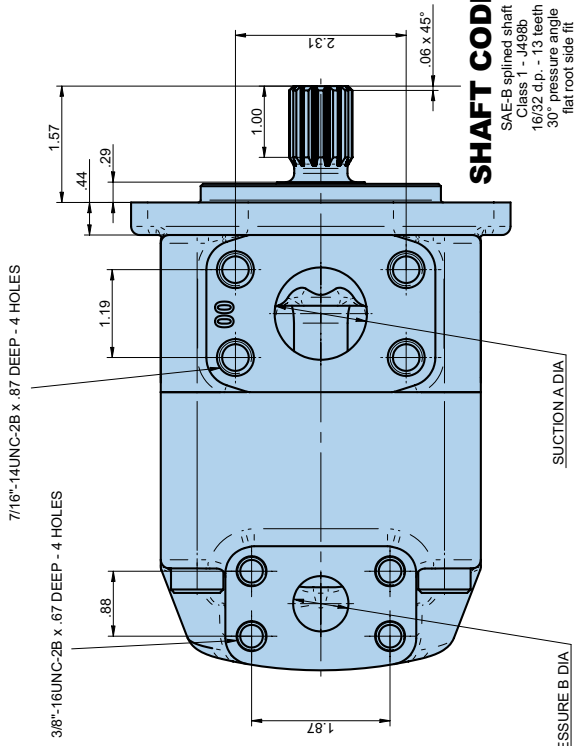
Shaft torque limits [in³/rev. x PSI]	
Shaft	Vi x p max.
1	16390
3	16390
4	11198

If inlet velocity > 6.23 ft/s, please contact Parker Denison.

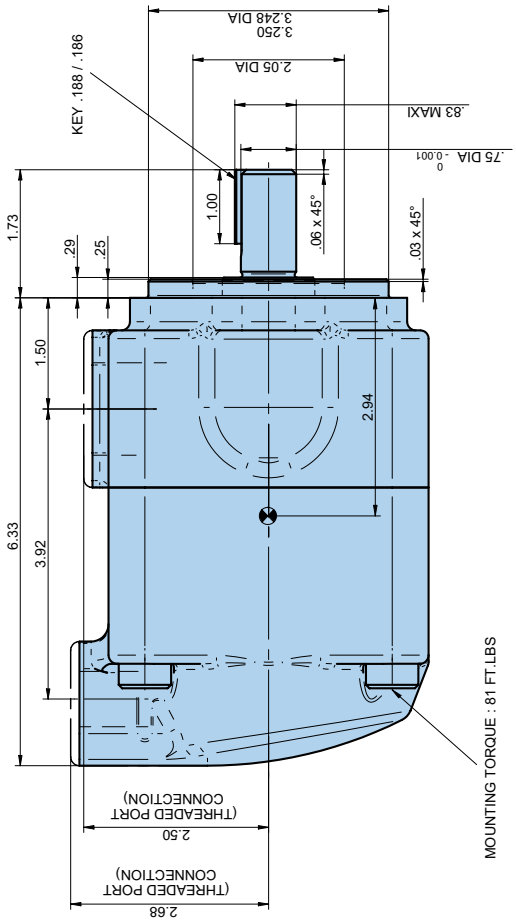


SHAFT CODE 4
Splined shaft
Class 1 - J498b
16/32 d.p. - 11 teeth
30° pressure angle
flat root side fit





SHAFT CODE 3
SAE-B splined shaft
Class 1 - J498b
16/32 d.p. - 13 teeth
30° pressure angle
flat root side fit



SHAFT CODE 1
(KEYED NO SAE)

Parker Hannifin
Denison Vane Pump Division
Vierzon - France

⚠ 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.

This document and other information from Parker Hannifin, its subsidiaries, sales offices and authorized distributors provide product or system options for further investigation by users having technical expertise. Before you select or use any product or system it is important that you analyse all aspects of your application and review the information concerning the product or system in the current product catalogue. Due to the variety of operating conditions and applications for these products or systems, the user, through his own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance and safety requirements of the application are met.
The products are subject to change by Parker Hannifin at any time without notice.

Offer of Sale

Please contact your Parker representation for a detailled ”Offer of Sale”.

Hydraulics Group Sales Offices

Europe

Austria
Wiener Neustadt
Tel: +43 (0)2622 23501
Fax: +43 (0)2622 66212

Belgium
Nivelles
Tel: +32 (0)67 280 900
Fax: +32 (0)67 280 999

Czech Republic
Klecany
Tel: +420 284 083 111
Fax: +420 284 083 112

Denmark
Ballerup
Tel: +45 4356 0400
Fax: +45 4373 8431

Finland
Vantaa
Tel: +358 (0)9 4767 31
Fax: +358 (0)9 4767 3200

France
Contamine-sur-Arve
Tel: +33 (0)450 25 80 25
Fax: +33 (0)450 03 67 37

Germany
Kaarst
Tel: +49 (0)2131 4016 0
Fax: +49 (0)2131 4016 9199

Hungary
Budapest
Tel: +36 (06)1 220 4155
Fax: +36 (06)1 422 1525

Ireland
Dublin
Tel: +353 (0)1 293 9999
Fax: +353 (0)1 293 9900

Italy
Corsico (MI)
Tel: +39 02 45 19 21
Fax: +39 02 4 47 93 40

The Netherlands
Oldenzaal
Tel: +31 (0)541 585000
Fax: +31 (0)541 585459

Norway
Ski
Tel: +47 64 91 10 00
Fax: +47 64 91 10 90

Poland
Warsaw
Tel: +48 (0)22 573 24 00
Fax: +48 (0)22 573 24 03

Portugal
Leca da Palmeira
Tel: +351 22 9997 360
Fax: +351 22 9961 527

Slovakia
Ref. Czech Republic

Spain
Madrid
Tel: +34 91 675 73 00
Fax: +34 91 675 77 11

Sweden
Spånga
Tel: +46 (0)8 597 950 00
Fax: +46 (0)8 597 951 10

Turkey
Merter/Istanbul
Tel: +90 212 482 91 06 or 07
Fax: +90 212 482 91 10

United Kingdom
Warwick
Tel: +44 (0)1926 317 878
Fax: +44 (0)1926 317 855

International

Australia
Castle Hill
Tel: +61 (0)2-9634 7777
Fax: +61 (0)2-9899 6184

Canada
Milton, Ontario
Tel: +1 905-693-3000
Fax: +1 905-876-0788

China
Beijing
Tel: +86 10 6561 0520
Fax: +86 10 6561 0526

Asia Pacific Group
Hong Kong, Kowloon
Tel: +852 2428 8008
Fax: +852 2425 6896

India
Mumbai
Tel: +91 22 7907081
Fax: +91 22 7907080

Japan
Tokyo
Tel: +(81) 3 6408 3900
Fax: +(81) 3 5449 7201

Latin America Group
Brazil
Tel: +55 12 3954-5100
Fax: +55 12 3954-5266

South Africa
Kempton Park
Tel: +27 (0)11-961 0700
Fax: +27 (0)11-392 7213

USA
Cleveland (industrial)
Tel: +1 216-896-3000
Fax: +1 216-896-4031
Lincolnshire (mobile)
Tel: +1 847-821-1500
Fax: +1 847-821-7600

Parker Hannifin is the world's premier supplier of motion and control systems and solutions, with sales and manufacturing facilities throughout the world. For product information and details of your nearest Parker sales office, visit us at www.parker.com or call free on 00800 2727 5374.

Catalogue HY29-0008/US
PDF 01/06