THM

T7D/T7DS

Fixed Displacement Vane Pump

Introduction

- T7D and T7DS Series are fixed displacement and balanced type single vane Pumps. The pump is designed for higher operating pressure and greater flow at the same housing size.
- With a balanced pin-vane design, outlet pressure is continuously applied only the pin. The pin provides the steady light force against the vane. Top and bottom areas of the vane are subject to the same pressure, either inlet or outlet pressure, depending on the vane's location during rotor rotation. This pin-vane design minimizes noise level and improves volumetric efficiency.
- With the cartridge independent of the shaft, allowing for easy change of flow capacity and servicing without removing the pump from its mounting.

Content

Ordering Code

T7D*	-	B42	-	1	-	R	-	00	-	A	-	1	-	M0	-	··

T7D series - 125 A2 HW
ISO 2 bolts 3019-2 mounting flange = T7D
T7DS series - SAE C 2 bolts
J744 mounting flange = T7DS
* Rear drive option available, please contact us.

Displacement
Volumetric displacement (ml/rev.)

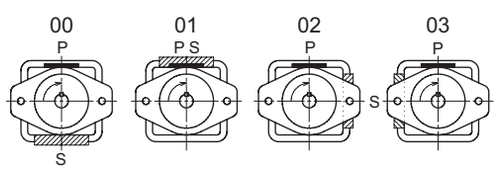
B14 = 44.0	B31 = 99.2
B17 = 55.0	B35 = 113.4
B20 = 66.0	B38 = 120.6
B22 = 70.3	B42 = 137.5
B24 = 81.1	045 = 145.7
B28 = 90.0	050 = 158.0

Type of shaft T7D - T7DS
keyed (ISO 3019-2 - G32M) = 5

Type of shaft T7DS
keyed (SAE C) Ø31.7 = 1
keyed (non SAE) = 2
splined (SAE C) 14 teeth = 3
splined (non SAE) = 4

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

Porting combination
standard = 00



P = Pressure port
S = Suction port

Design code

Seal class
S1 BUNA N - 0.7 bar max. (for mineral oil) = 1
S4 EPDM - 7 bar max. (for fire resistant fluids) = 4
S5 VITON® - 7 bar max. (for mineral oil and fire resistant fluids) = 5

Mounting w/connection variables
4 bolts SAE flange J518

	P = 1.1/4" - S = 2"		
	Metric thread		UNC thread
T7D	M0		
T7DS	M0	Y0[1)]	00

[1)] 250 bar max. int.

Modifications

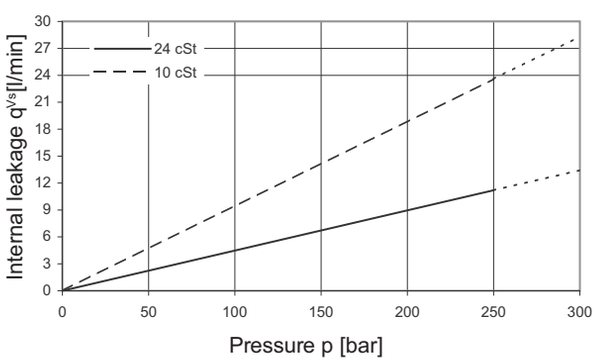
Technical data

Pressure port	Series	Vi Volumetric displacement	Flow qVe [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM			Weight
			p = 0 bar	p = 140 bar	p = 300 bar	p = 0 bar	p = 140 bar	p = 300 bar	
T7D T7DS	B14	44.0 ml/rev	66.0	59.4	51.9	1.5	16.6	34.2	24 kg
	B17	55.0 ml/rev	82.5	75.9	68.4	1.7	20.4	42.4	
	B20	66.0 ml/rev	99.0	92.4	84.9	1.9	24.3	50.7	
	B22	70.3 ml/rev	105.5	98.8	91.3	2.0	25.8	53.9	
	B24	81.1 ml/rev	121.7	115.0	107.5	2.2	29.5	62.0	
	B28	90.0 ml/rev	135.0	128.4	120.9	2.3	32.7	68.7	
	B31	99.2 ml/rev	148.8	142.2	134.7	2.5	35.9	75.6	
	B35	113.4 ml/rev	170.1	163.5	156.9[1])	2.7	40.8	80.5[1])	
	B38	120.6 ml/rev	180.9	174.3	167.7[1])	2.9	43.4	85.6[1])	
	B42	137.5 ml/rev	206.3	199.6	194.0[2])	3.2	49.3	90.5[2])	
	045	145.7 ml/rev	218.6	209.2	202.6[2])	4.1	52.8	89.5[2])	
	050	158.0 ml/rev	237.0	227.7	223.4[4])	4.4	57.1	85.0[4])	

1) B35 - B38 = 280 bar max. int.
2) B42 = 260 bar max. int.
3) 045 = 240 bar max. int.
4) 050 = 210 bar max. int.
* special 2.1/2" (Ø63.5) suction also available

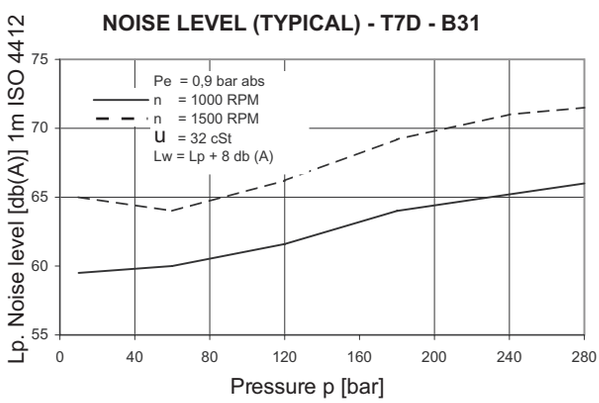
Characteristic Curves

INTERNAL LEAKAGE (TYPICAL)

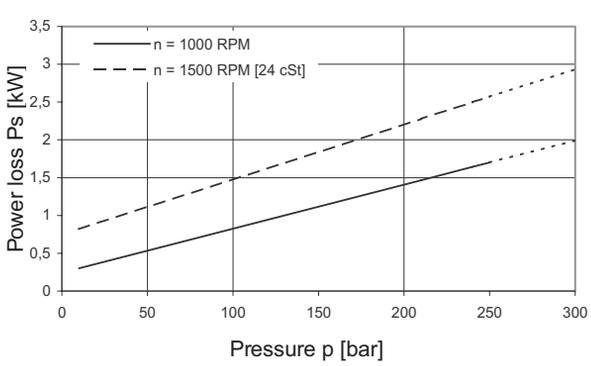


Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.

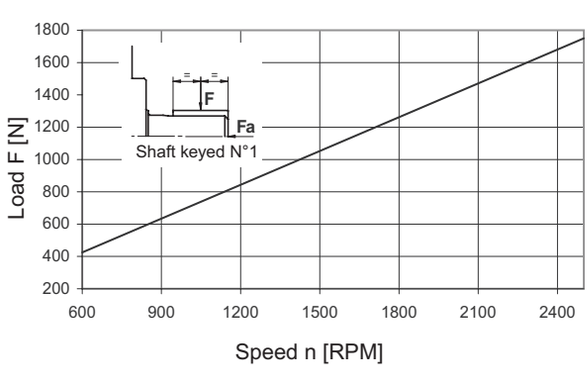
NOISE LEVEL (TYPICAL) - T7D - B31



POWER LOSS HYDROMECHANICAL (TYPICAL)

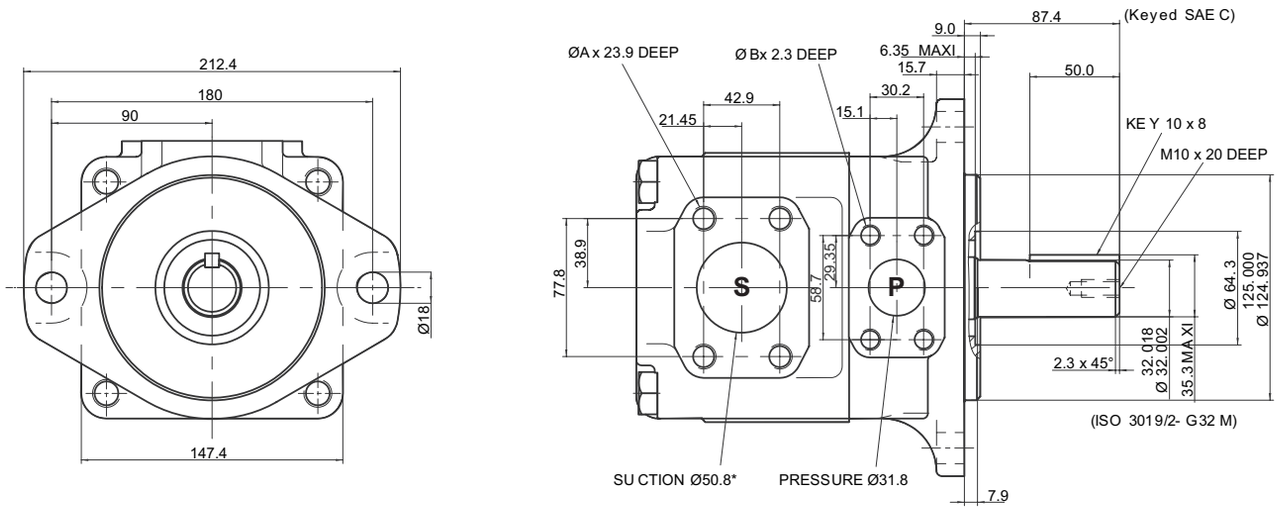


PERMISSIBLE RADIAL LOAD

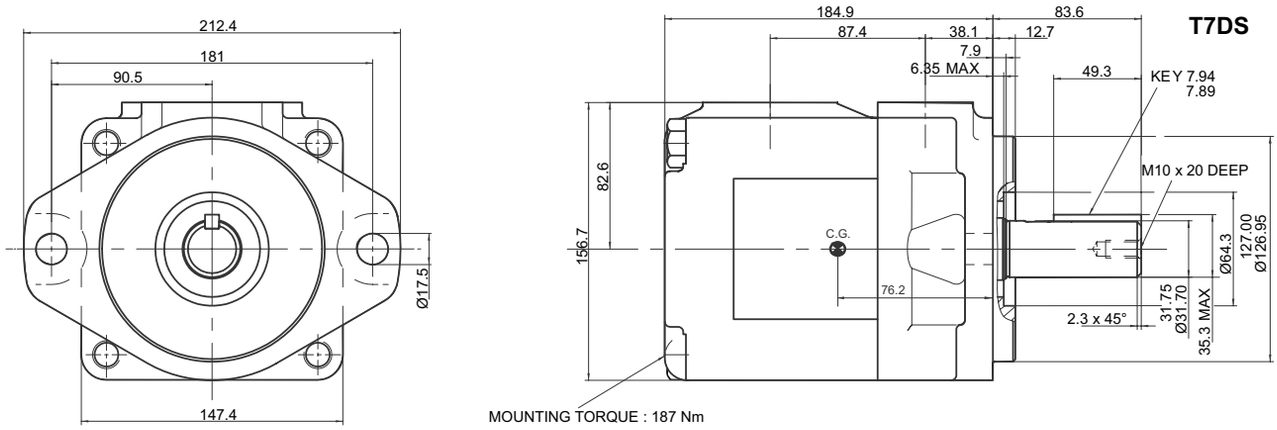


Maximum permissible axial load Fa = 1200 N

Unit Dimensions of T7D (Dimensions in mm)



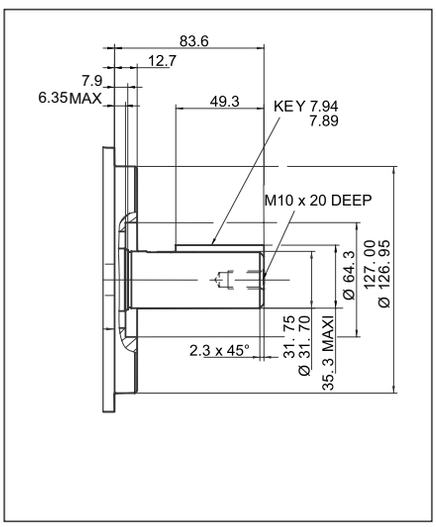
Unit Dimensions of T7DS (Dimensions in mm)



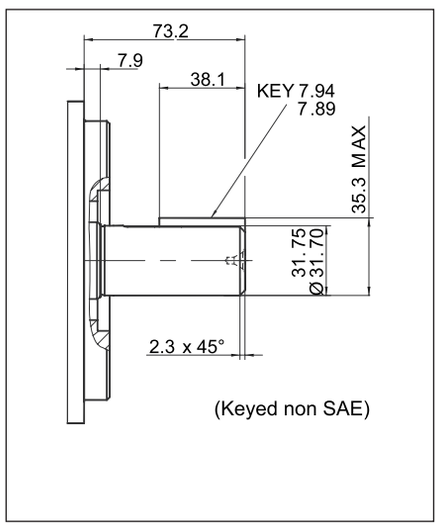
Model	T7D	T7DS		
Code	M0	00	M0	YO[1)]
ØA	M12	1/2”-13 UNC	M12	M12
ØB	M12	7/16”-14 UNC	M12	M10
C	180.0	181.0		

Shaft codes (Dimensions in mm)

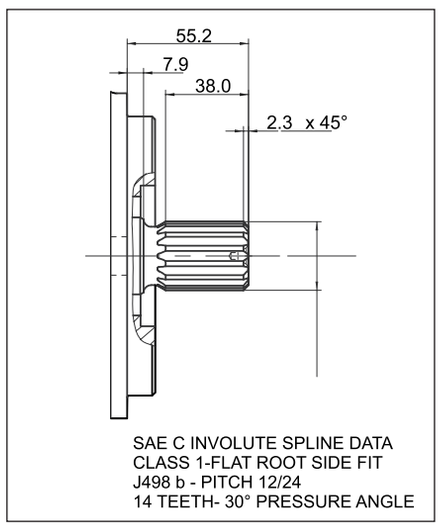
Shaft code 1



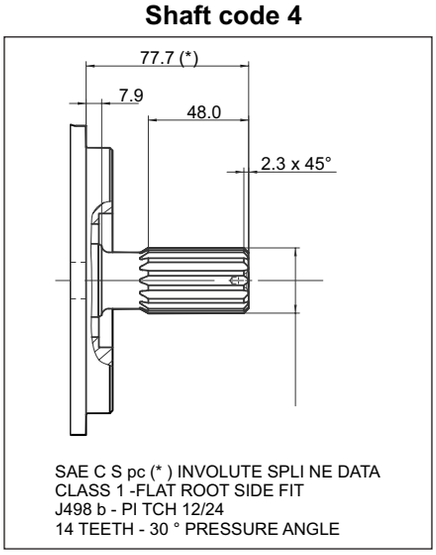
Shaft code 2



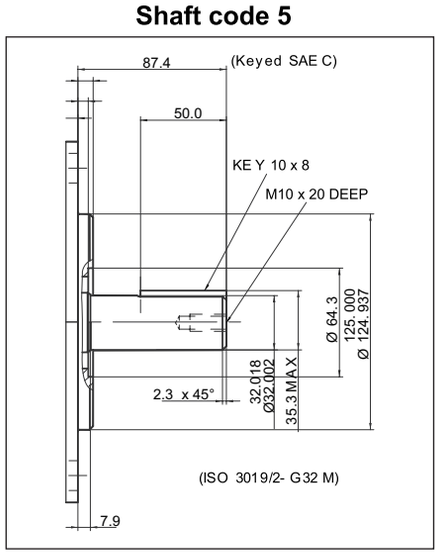
Shaft code 3



Shaft code 4



Shaft code 5



Shaft torque limits [ml/rev.x bar]	
Shaft	**Vi x max.**
1	43240
2	34590
3	61200
4	61200
5	44300

The specified data is for product description purposes only and may not be deemed to be guaranteed unless expressly confirmed in the contract.

THM

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