



# DTA

Damen Technical Agencies



## Industrial Hydraulic Pumps T7DDB, T7DDBS

Denison Vane Technology, fixed displacement

### Hydraulic Pumps

- Hydraulic Motors
- Hydraulic Valves
- Hydraulic Cylinders
- Hydraulic Filtration
- Hydraulic Accumulators



ENGINEERING YOUR SUCCESS.

## We are doing our parts to keep you moving!

DTA your 1 Stop Shop for Hydraulics, Pneumatics and Power Transmissions.

# DECLARATION OF CONFORMITY

DTA Hydraulics is a tradename of Damen Technical Agencies BV, supplying hydraulic parts to various industries since 1990. As a Certified Distributor Hydraulics by Parker Hannifin and Authorized Denison Vane Pump Assembler, we guarantee the use of original parts and components. As such we provide you with vane pumps of the same level of quality and warranty conditions as the factory does.

We highly recommend to **use genuine Denison Hydraulics spare parts only** in order to ensure smooth operation and longer service life. Spare parts that we have on stock include pump cartridge kits, shaft and bearing assemblies, seal kits and non-wearing parts of both the T6 and T7 series vane pumps.



**ALL VANE PUMPS SUPPLIED OR REPAIRED BY  
DTA HYDRAULICS HAVE BEEN ASSEMBLED ACCORDING  
TO THE LATEST FACTORY SPECIFICATIONS WITH  
BRAND NEW AND GENUINE DENISON HYDRAULICS PARTS**

We are able to provide you a large variety of options of the original Parker Denison single, double, and triple vane pumps. We can build any customized vane pump from our stock of genuine parts. You can now easily configure that vane pump yourself with the Denison Hydraulics Vane Pump Configurator.

[vanepump.eu/vanepumps](http://vanepump.eu/vanepumps)

Use advanced search to filter results based on configurable options and select any of the 25,000 vane pumps that are listed in our online catalogue. Most of the models are available from stock and ready for shipment to any place in the world instantly. We can supply **Any part, Anytime, Anywhere!**



**Model No.**     **T7DDB or T7DDBS - 050 - B22 - B12 - 1 R 00 - A 1 - M0 - ..**

**T7DDB series** - ISO 6 bolts 3019-2  
Mounting flange 125-A2-HW or 125-B4-HW

**P1     P2     P3**

**T7DDBS series** - SAE C 6 bolts  
J744 mounting flange

**Displacement for "P1" & "P2"**  
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

**Displacement for "P3"**  
Volumetric displacement (ml/rev)  
B02 = 5,8     B09 = 28,0  
B03 = 9,8     B10 = 31,8  
B04 = 12,8     B11 = 35,0  
B05 = 15,9     B12 = 41,0  
B06 = 19,8     B14 = 45,0  
B07 = 22,5     B15 = 50,0  
B08 = 24,9

**Type of shaft T7DDBS**  
1 = keyed (SAE C)  
2 = keyed (SAE CC)  
3 = splined 12/24 (SAE C) (14 teeth)  
4 = splined 12/24 (SAE CC) (17 teeth)

**Type of shaft T7DDB & T7DDBS**  
5 = keyed (ISO 3019/2 - G38M)

**Modifications**

**Mounting w/connection variables**  
4 bolts SAE flange J518

P1 & P2 = 1.1/4" - S = 4"		
	Metric thread	UNC thread
T7DDB-P3 = 1"	M0	
T7DDB-P3 = 3/4"	M1	
T7DDBS-P3 = 1"	M0	00
T7DDBS-P3 = 3/4"	M1	01

**Seal class**

1 = S1 BUNA N - 0,7 bar max. (for mineral oil)  
4 = S4 EPDM - 7 bar max. (for fire resistant fluids)  
5 = S5 VITON® - 7 bar max. (for mineral oil and fire resistant fluids)

**Design letter**

**Porting combination (see pages 72 - 73)**  
00 = standard

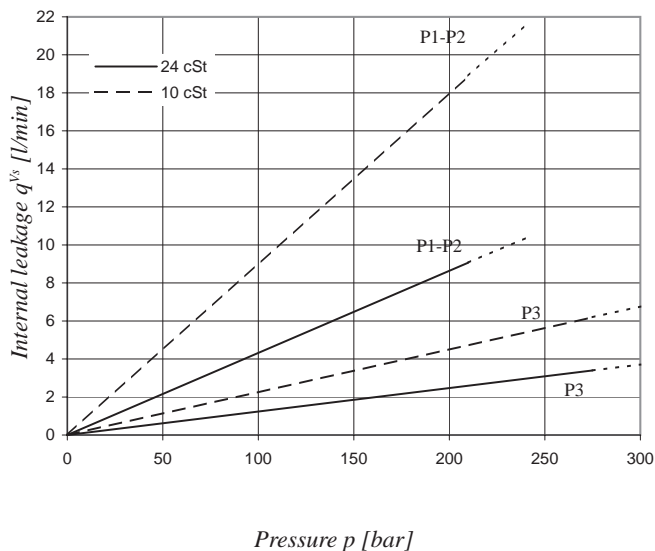
**Direction of rotation (shaft end view)**  
R = Clockwise  
L = Counter-clockwise

**OPERATING CHARACTERISTICS - TYPICAL [24 cSt]**

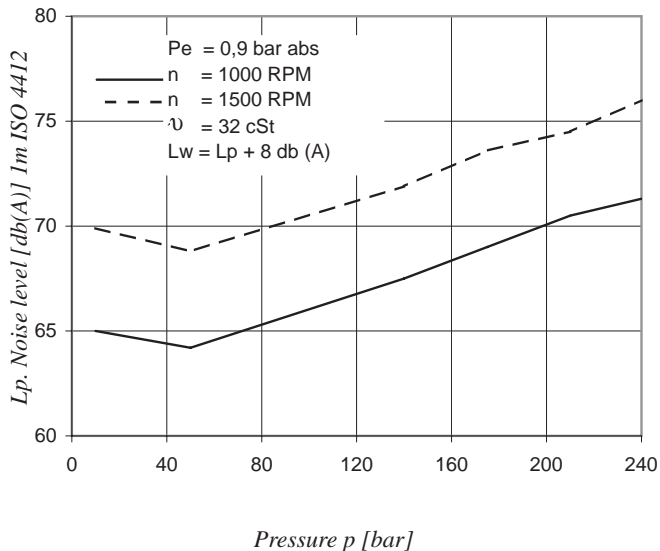
Pressure port	Series	Vi Volumetric displacement	Flow q <sub>v</sub> [l/min] & n = 1500 RPM			Input power P [kW] & n = 1500 RPM		
			p = 0 bar	p = 140 bar	p = 250 bar	p = 7 bar	p = 140 bar	p = 250 bar
P1 & P2	B14	44,0 ml/rev	66,0	59,4	54,2	1,5	16,6	29,0
	B17	55,0 ml/rev	82,5	75,9	70,7	1,7	20,4	35,8
	B20	66,0 ml/rev	99,0	92,4	87,2	1,9	24,3	42,7
	B22	70,3 ml/rev	105,5	98,8	93,7	2,0	25,8	45,4
	B24	81,1 ml/rev	121,7	115,0	109,9	2,2	29,5	52,1
	B28	90,0 ml/rev	135,0	128,4	123,2	2,3	32,7	57,7
	B31	99,2 ml/rev	148,8	142,2	137,0	2,5	35,9	63,5
	B35	113,4 ml/rev	170,1	163,5	158,3	2,7	40,8	72,3
	B38	120,6 ml/rev	180,9	174,3	169,1	2,9	43,4	76,8
	B42	137,5 ml/rev	206,3	199,6	194,5	3,2	49,3	87,4
	045	145,7 ml/rev	218,6	209,2	202,6 <sup>1)</sup>	4,1	52,8	89,5 <sup>1)</sup>
	050	158,0 ml/rev	237,0	227,7	223,0 <sup>2)</sup>	4,4	57,1	85,0 <sup>2)</sup>
			p = 0 bar	p = 140 bar	p = 300 bar	p = 7 bar	p = 140 bar	p = 300 bar
P3	B02	5,8 ml/rev	8,7	7,0	5,1	0,5	2,6	5,1
	B03	9,8 ml/rev	14,7	13,0	11,1	0,6	4,0	8,1
	B04	12,8 ml/rev	19,2	17,5	15,6	0,6	5,0	10,4
	B05	15,9 ml/rev	23,9	22,2	20,2	0,7	6,1	12,7
	B06	19,8 ml/rev	29,7	28,0	26,1	0,7	7,5	15,6
	B07	22,5 ml/rev	33,7	32,0	30,2	0,8	8,5	17,6
	B08	24,9 ml/rev	37,4	35,7	33,7	0,8	9,3	19,5
	B09	28,0 ml/rev	42,0	40,3	38,4	0,9	10,4	21,8
	B10	31,8 ml/rev	47,7	46,0	44,1	0,9	11,7	26,2
	B11	35,0 ml/rev	52,5	50,8	48,9	1,0	12,8	27,0
	B12	41,0 ml/rev	61,5	59,8	57,9	1,1	14,9	31,5
	B14	45,0 ml/rev	67,5	65,8	63,9	1,2	16,3	34,5
B15	50,0 ml/rev	75,0	73,3	71,6 <sup>3)</sup>	1,3	18,1	35,7 <sup>3)</sup>	

<sup>1)</sup> 045 = 240 bar max. int.     <sup>2)</sup> 050 = 210 bar max. int.     <sup>3)</sup> B15 = 280 bar max.int.

**INTERNAL LEAKAGE (TYPICAL)**



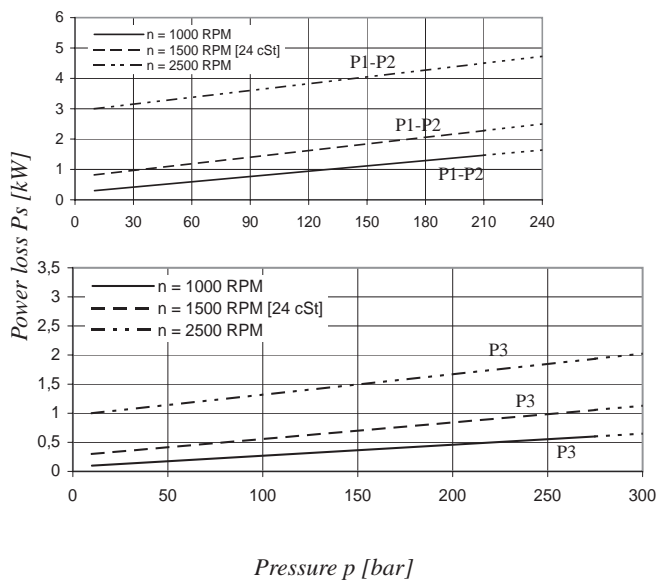
**NOISE LEVEL (TYPICAL) - T7DDB - B31 - B31 - B10**



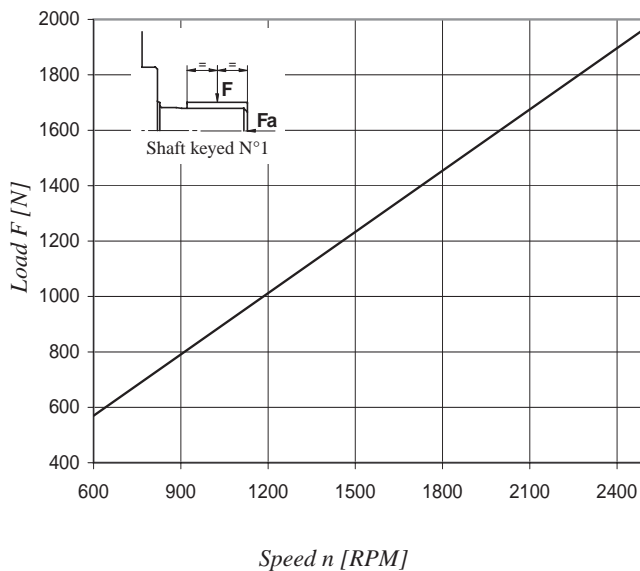
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is higher than 50% of theoretical flow.  
 Total leakage is the sum of each section loss under its respective operating conditions.

Triple pump noise level is given with all stages discharging at the pressure value indicated on the curve.

**POWER LOSS HYDROMECHANICAL (TYPICAL)**

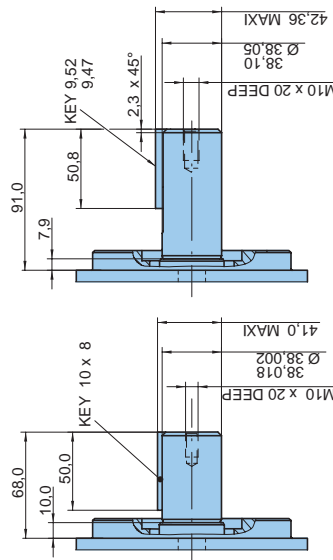
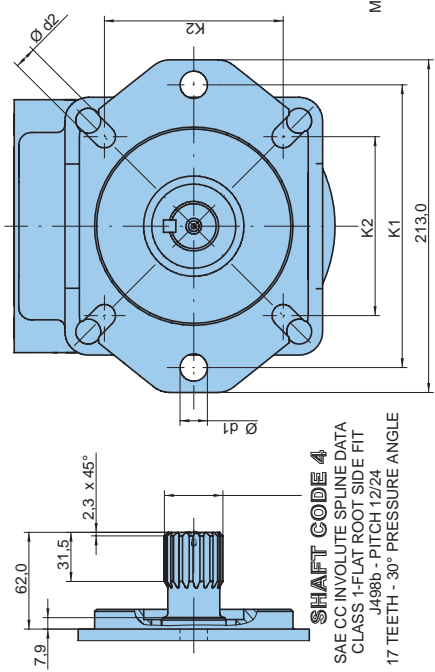
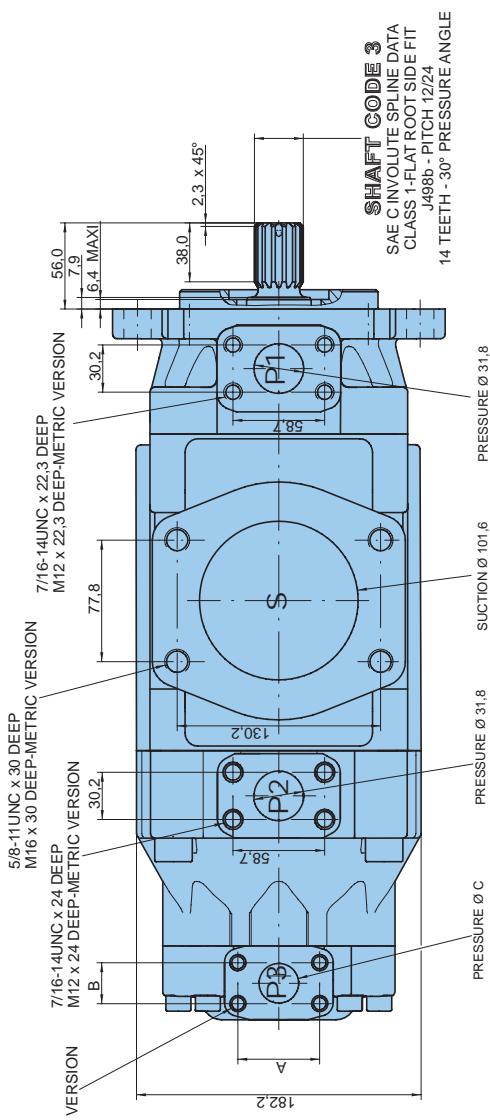
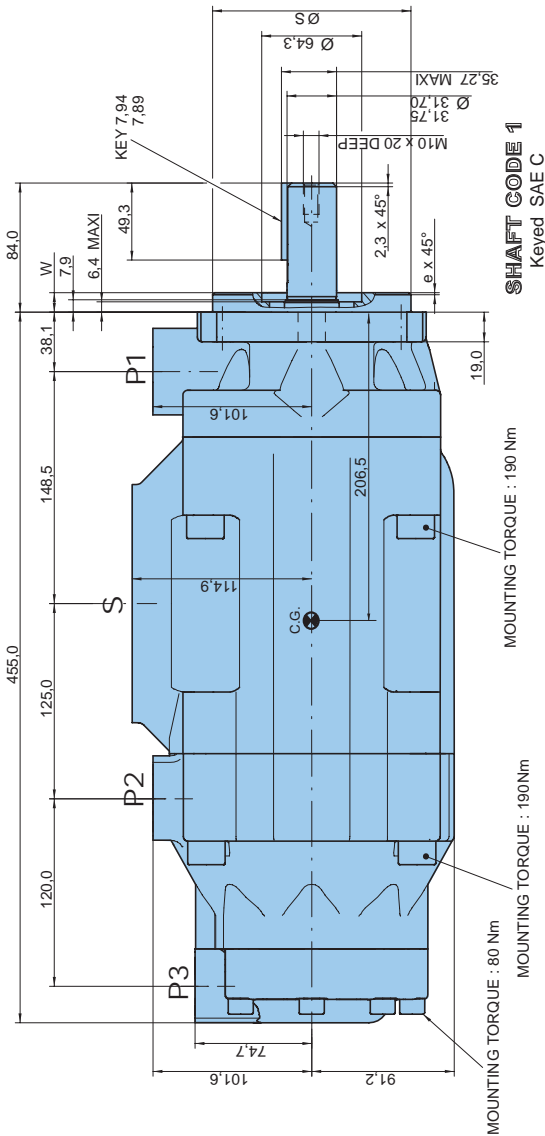


**PERMISSIBLE RADIAL LOAD**



Total hydromechanical power loss is the sum of each section loss under its respective operating conditions.

Maximum permissible axial load  $F_a = 1200\text{ N}$



Shaft	Shaft torque limits [ml/rev. x bar]		
	V1 x p max. P1 + P2 + P3	Shaft V1 x p max. P1 + P2 + P3	Shaft V1 x p max. P1 + P2 + P3
1	43240	4	66500
2	72306	5	53100
3	61200		

Alternate mounting flange							
Series	Dia S		Dia d1	K1	K2	Dia d2	
	Max.	Min.					
T7DDB	125,000	124,937	2,0	9,5	180,0	113,14	14,0
T7DDBS	127,000	126,950	1,5	12,7	181,0	114,50	14,3

Alternate connect. variables			
Series	00 & M0		01 & M1
	A	B	
T7DDB	52,4	26,2	22,2
T7DDBS	52,4	25,4	19,0



**ANY PART  
TIME  
WHERE**

we are doing our parts to keep you moving!

**Damen Technical Agencies B.V.**

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