

2. Vane Pumps

Versions		Series	Max. Pressure (PSI)			Max. Displacement (in ³ /rev)			Weight lbs	Page
			P1	P2	P3	P1	P2	P3		
Medium Duty, Single		TB	2800			2.31			15	2 - 2
Industrial & Mobile	Single	T7B(S)	4600			3.05			51	2 - 8
		T6C	4100			6.10			35	
		T6D	3500			9.64			53	
		T6E	3500			16.41			95	
	Double	T7BB(S)	4600	4600		3.05	3.05			2 - 10
		T67CB	4100	4400		6.10	3.05		57	
		T6CC	4100	4100		6.10	6.10		57	
		T67DB	3500	4400		9.64	3.05		81	
		T6DC	3500	4100		9.64	6.10		81	
		T6DD(S)	3500	3500		9.64	9.64			
		T67EB	3500	4400		16.41	3.05		121	
		T6EC	3500	4100		16.41	6.10		121	
	Triple	T6ED	3500	3500		16.41	9.64		146	2 - 14
		T67DBB	3500	4400	4400	9.64	3.05	3.05	135	
		T67DCB	3500	4100	4400	9.64	6.10	3.05	135	
		T6DCC	3500	4100	4100	9.64	6.10	6.10	135	
		T67DDB(S)	3500	3500	4400	9.64	9.64	3.05	146	
		T6DDC(S)	3500	3500	4100	9.64	9.64	6.10	146	
		T67EDB(S)	3500	3500	4400	16.41	9.64	3.05	221	
	Single Rear Drive	T6EDC(S)	3500	3500	4100	16.41	9.64	6.10	221	2 - 18
		T6CR	4100			6.10			38	
		T6DR	3500			9.64			64	
	Double rear drive	T6ER	3500			16.41			86	2 - 20
		T6EE(S)	3500	3500		16.41	16.41		209	
Triple rear drive	T6DCCR	3500	4100	4100	9.64	6.10	6.10	137	2 - 22	
	T6EDCR	3500	3500	4100	16.41	9.64	6.10	221		
Hybrid	Double	T6H20B	4100	4400		2.61	3.05		82	2 - 24
		T6H20C	4100	4100		2.61	6.10		82	
		T6H29B	3000	4400		3.78	3.05		108	
		T6H29C	3000	4100		3.78	6.10		108	
		T6H29D	3000	4100		3.78	9.64		132	
Rear Drive Selection Table									2 - 29	
Porting Tables									2 - 30	

Vane Pumps - Product Range Overview

Series		Displacement Range (in ³ /rev)																		
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
T7B	P	0.3 ██████████ 3.05																		
T6C, T6CR	P	0.66 ██████████ 6.10																		
T6D, T6DR	P	2.90 ██████████ 9.64																		
T6E, T6ER	P	8.07 ██████████ 16.41																		
T7BB(S)	P1	0.3 ██████████ 3.05																		
	P2	0.3 ██████████ 3.05																		
T67CB	P1	0.66 ██████████ 6.10																		
	P2	0.3 ██████████ 3.05																		
T6CC	P1	0.66 ██████████ 6.10																		
	P2	0.66 ██████████ 6.10																		
T67DB	P1	2.90 ██████████ 9.64																		
	P2	0.3 ██████████ 3.05																		
T6DC	P1	2.90 ██████████ 9.64																		
	P2	0.66 ██████████ 6.10																		
T6DD	P1	2.90 ██████████ 9.64																		
	P2	2.90 ██████████ 9.64																		
T67EB	P1	8.07 ██████████ 16.41																		
	P2	0.3 ██████████ 3.05																		
T6EC	P1	8.07 ██████████ 16.41																		
	P2	0.66 ██████████ 6.10																		
T6ED	P1	8.07 ██████████ 16.41																		
	P2	2.90 ██████████ 9.64																		
T6EE	P1	8.07 ██████████ 16.41																		
	P2	8.07 ██████████ 16.41																		
T67DBB	P1	2.90 ██████████ 9.64																		
	P2	0.3 ██████████ 3.05																		
	P3	0.3 ██████████ 3.05																		
T67DCB	P1	2.90 ██████████ 9.64																		
	P2	0.66 ██████████ 6.10																		
	P3	0.3 ██████████ 3.05																		
T6DCC	P1	2.90 ██████████ 9.64																		
	P2	0.66 ██████████ 6.10																		
	P3	0.66 ██████████ 6.10																		
T67DDB(S)	P1	2.90 ██████████ 9.64																		
	P2	2.90 ██████████ 9.64																		
	P3	0.3 ██████████ 3.05																		
T6DDC(S)	P1	2.90 ██████████ 9.64																		
	P2	2.90 ██████████ 9.64																		
	P3	0.66 ██████████ 6.10																		
T67EDB(S)	P1	8.07 ██████████ 16.41																		
	P2	2.90 ██████████ 9.64																		
	P3	0.3 ██████████ 3.05																		
T6EDC(S)	P1	8.07 ██████████ 16.41																		
	P2	2.90 ██████████ 9.64																		
	P3	0.66 ██████████ 6.10																		

Vane Pumps - Performance & Operation Limits, Mineral Oil

Cam	Size	in ³ / rev	Mineral Oil Antiwear petroleum base (HF-0, HF-2)										Size				
			Speed Range ¹	Maximum Outlet Pressure		Minimum inlet pressure (vs. rpm)											
				Int.	Cont.	1200	1500	1800	2100	2200	2300	2500		2800			
			rpm	PSI	PSI	PSI (absolute)											
B	B02	0.35	600...3600	4600	4200	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	B02
	B03	0.60															B03
	B04	0.78															B04
	B05	0.97															B05
	B06	1.21															B06
	B07	1.37															B07
	B08	1.52															B08
	B10	1.94															B10
	B12	2.50															B12
	B15	3.05															B15
C	003	0.66	600...2800	4100	3500	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	003
	005	1.05															005
	006	1.30															006
	008	1.61															008
	010	2.08															010
	012	2.26															012
	014	2.81															014
	017	3.56															017
	020	3.89															020
	022	4.29															022
	025	4.84															025
	028	5.42															028
	031	6.10															031
D	014	2.90	600...2500	3500	3000	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	014
	017	3.55															017
	020	4.03															020
	024	4.85															024
	028	5.47															028
	031	6.00															031
	035	6.77															035
	038	7.34															038
	042	8.30															042
	045	8.89															045
	050	9.64															050
E	042	8.07	600...2200	3500	3000	11.6	11.6	11.6	13.1	14.5	-	-	-	-	-	-	042
	045	8.69															045
	050	9.67															050
	052	10.06															052
	057	10.97															057
	062	12.00															062
	066	13.02															066
	072	13.86															072
	085	16.41															085
			600...1800	1700	1200	14.5	14.5	14.5	-	-	-	-	-	-	-	-	

¹ For speed below 600 RPM, consult Denison Hydraulics.

Cam	Size	In ³ / rev	Fire Resistant Fluids Water-glycol (HF-4), Synthetic fluids (HF-5)					Size	
			Speed Range	Maximum Outlet Pressure		Minimum inlet pressure (vs. rpm)			
				Int.	Cont.	1200	1500		1800
			rpm	PSI	PSI	PSI (absolute)			
B	B02	0.35	600...1800	3500	3000	14.5	14.5	14.5	B02
	B03	0.60							B03
	B04	0.78							B04
	B05	0.97							B05
	B06	1.21							B06
	B07	1.37							B07
	B08	1.52							B08
	B10	1.94							B10
	B12	2.50							B12
	B15	3.05							B15
C	003	0.66	600...1800	3000	2500	14.5	14.5	14.5	003
	005	1.05							005
	006	1.30							006
	008	1.61							008
	010	2.08							010
	012	2.26							012
	014	2.81							014
	017	3.56							017
	020	3.89							020
	022	4.29							022
	025	4.84							025
	028	5.42			028				
031	6.10	2300	031						
D	014	2.90	600...1800	3000	2500	14.5	14.5	14.5	014
	017	3.55							017
	020	4.03							020
	024	4.85							024
	028	5.47							028
	031	6.00							031
	035	6.77							035
	038	7.34							038
	042	8.30							042
	045	8.89			045				
050	9.64	2300	16.0	050					
E	042	8.07	600...1800	3000	2500	14.5	14.5	14.5	042
	045	8.69							045
	050	9.67							050
	052	10.06							052
	057	10.97							057
	062	12.00							062
	066	13.02							066
	072	13.86							072
	085	16.41		1700	1200	18.1	18.1	18.1	085

Vane Pumps - Output Flow & Input Power

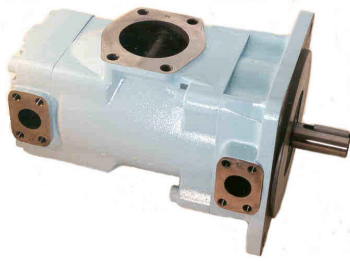
Input Speed : 1200 rpm (Mineral oil, HF-0 / HF-2, 24 cSt)

CAM	SIZE	In ³ / rev	Output Flow (GPM)							Input Power (HP)							SIZE
			0 PSI	1000 PSI	2000 PSI	3000 PSI	3500 PSI	4100 PSI	4600 PSI	0 PSI	1000 PSI	2000 PSI	3000 PSI	3500 PSI	4100 PSI	4600 PSI	
B	B02	0.35	1.9	1.6	1.4	1.2	1.1			0.5	1.7	3.0	4.3	4.8			B02
	B03	0.60	3.1	2.9	2.7	2.5	2.3	2.2	2.1	0.5	2.4	4.4	6.6	7.4	8.6	9.8	B03
	B04	0.78	4.1	3.8	3.7	3.4	3.3	3.1	3.0	0.7	3.0	5.6	8.2	9.3	10.9	12.3	B04
	B05	0.97	5.1	4.8	4.6	4.4	4.3	4.1	4.0	0.7	3.6	6.7	9.9	11.3	13.1	15.0	B05
	B06	1.21	6.3	6.1	5.9	5.6	5.5	5.4	5.2	0.8	4.3	8.2	12.2	13.8	16.1	18.4	B06
	B07	1.37	7.1	6.9	6.7	6.5	6.3	6.2	6.1	0.5	4.6	8.9	13.3	15.3	17.8	20.4	B07
	B08	1.52	7.9	7.7	7.5	7.2	7.1	7.0	6.8	0.8	5.2	10.2	15.0	17.2	19.9	22.7	B08
	B10	1.94	10.1	9.9	9.7	9.4	9.3	9.2	9.0	0.9	6.6	12.7	18.9	21.6	25.1	28.7	B10
	B12	2.50	13.0	12.8	12.6	12.3	12.2	12.1		1.2	8.3	16.2	24.1	27.5	32.1		B12
	B15	3.05	15.9	15.6	15.4	15.2	15.1	14.9		1.3	9.9	19.6	29.1	33.3	38.8		B15
C	003	0.66	3.4	2.8	2.1					1.5	3.5	5.9					003
	005	1.05	5.4	4.8	4.1	3.5	3.3	3.0		1.5	4.7	8.3	11.8	13.4	15.4		005
	006	1.30	6.8	6.1	5.4	4.8	4.7	4.4		1.6	5.5	9.8	14.1	16.0	18.5		006
	008	1.61	8.4	7.7	7.1	6.4	6.3	6.0		1.7	6.4	11.7	17.0	19.3	22.3		008
	010	2.08	10.8	10.2	9.5	8.8	8.7	8.4		1.9	7.9	14.6	21.3	24.3	28.0		010
	012	2.26	11.8	11.1	10.4	9.8	9.6	9.4		1.9	8.5	15.7	23.1	26.2	30.3		012
	014	2.81	14.6	13.9	13.3	12.6	12.5	12.2		2.0	10.2	19.0	28.0	31.9	37.0		014
	017	3.56	18.5	17.8	17.2	16.5	16.4	16.1		2.3	12.5	23.7	35.0	39.8	46.3		017
	020	3.89	20.2	19.6	18.9	18.3	18.1	17.8		2.4	13.4	25.8	38.1	43.3	50.4		020
	022	4.29	22.3	21.6	21.0	20.3	20.2	19.9		2.6	14.8	28.2	41.7	47.6	55.3		022
	025	4.84	25.2	24.5	23.8	23.2	23.0	22.8		2.7	16.4	31.7	46.8	53.4	62.1		025
028	5.42	28.2	27.5	26.8	26.2				2.8	18.1	35.1	52.2				028	
031	6.10	31.7	31.0	30.4	29.7				3.1	20.3	39.4	58.5				031	
D	014	2.90	15.1	14.0	12.7	11.7	11.1			2.4	10.7	20.0	29.2	33.3			014
	017	3.55	18.4	17.4	16.1	15.0	14.5			2.6	12.7	24.0	35.3	40.1			017
	020	4.03	20.9	19.9	18.6	17.5	17.0			2.8	14.2	27.0	39.7	45.1			020
	024	4.85	25.2	24.2	22.8	21.8	21.2			3.0	16.8	32.1	47.2	53.8			024
	028	5.47	28.4	27.4	26.1	25.0	24.5			3.2	18.6	35.8	53.0	60.4			028
	031	6.00	31.2	30.1	28.8	27.7	27.2			3.4	20.3	39.0	57.8	65.8			031
	035	6.77	35.2	34.1	32.8	31.8	31.2			3.6	22.7	43.9	65.0	74.0			035
	038	7.34	38.2	37.1	35.8	34.7	34.2			3.8	24.4	47.3	70.3	80.1			038
	042	8.30	43.1	42.1	40.7	39.7	39.2			4.0	27.4	53.2	79.1	90.1			042
	045	8.89	46.2	45.1	43.8	42.8	42.2			4.3	29.1	56.9	84.5	96.4			045
050	9.64	50.1	49.0	47.7	46.7				4.4	31.5	61.4	91.5				050	
E	042	8.07	42.0	40.6	39.3	38.0	37.5			5.4	27.9	53.0	78.2	88.9			042
	045	8.69	45.2	43.8	42.5	41.2	40.7			5.5	29.8	56.9	83.8	95.5			045
	050	9.67	50.3	48.9	47.6	46.3	45.8			5.8	32.9	62.9	92.9	105.8			050
	052	10.06	52.3	50.9	49.6	48.3	47.8			5.9	34.1	65.2	96.4	109.8			052
	057	10.97	57.0	55.7	54.4	53.1	52.5			6.2	36.9	70.8	104.9	119.5			057
	062	12.00	62.4	61.0	59.7	58.4	57.9			6.6	40.0	77.2	114.4	130.4			062
	066	13.02	67.6	66.3	65.0	63.7	63.1			6.8	43.2	83.4	123.8	141.1			066
	072	13.86	72.0	70.7	69.4	68.0	67.5			7.1	45.7	88.6	131.6	149.9			072
	085	16.41	85.3	84.0						7.9	53.6						085

Vane Pumps - Output Flow & Input Power

Input Speed : 1800 rpm (Mineral oil, HF-0 / HF-2, 24 cSt)

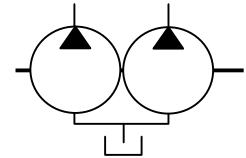
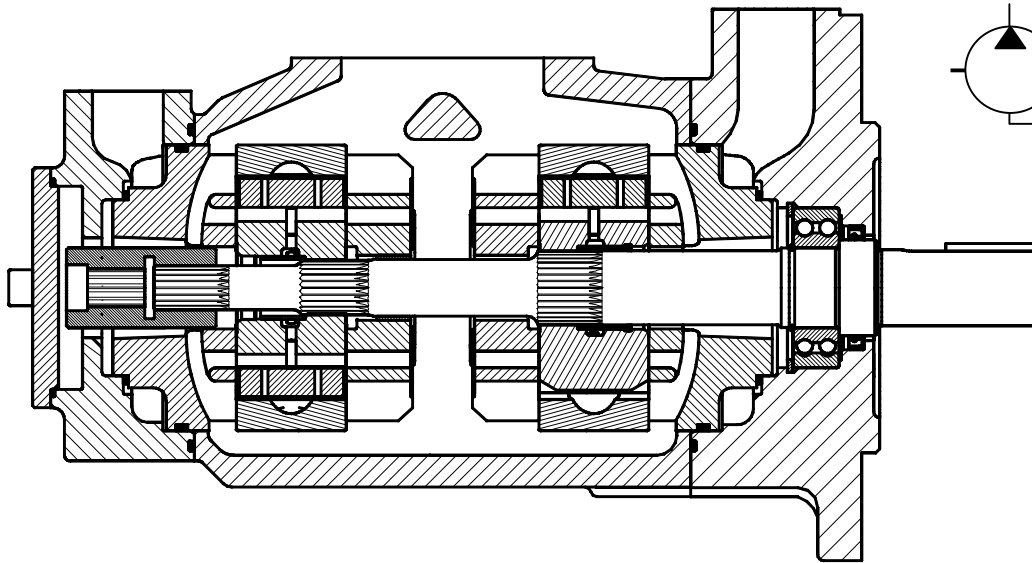
CAM	SIZE	In ³ / rev	Output Flow (GPM)							Input Power (HP)							SIZE
			0 PSI	1000 PSI	2000 PSI	3000 PSI	3500 PSI	4100 PSI	4600 PSI	0 PSI	1000 PSI	2000 PSI	3000 PSI	3500 PSI	4100 PSI	4600 PSI	
B	B02	0.35	2.8	2.5	2.3	2.1	2.0	1.8	1.7	0.9	2.7	4.6	6.7	7.5	8.6	9.7	B02
	B03	0.60	4.7	4.4	4.2	4.0	3.9	3.7	3.6	1.1	3.8	6.8	10.1	11.4	13.0	14.8	B03
	B04	0.78	6.1	5.8	5.7	5.4	5.3	5.2	5.0	1.2	4.6	8.6	12.6	14.2	16.5	18.6	B04
	B05	0.97	7.6	7.3	7.1	6.9	6.8	6.6	6.5	1.2	5.5	10.3	15.2	17.2	20.0	22.7	B05
	B06	1.21	9.4	9.2	9.0	8.8	8.6	8.5	8.4	1.3	6.6	12.5	18.5	21.1	24.3	27.6	B06
	B07	1.37	10.7	10.5	10.3	10.0	9.9	9.8	9.6	0.8	6.6	13.1	19.6	22.5	27.4	30.0	B07
	B08	1.52	11.8	11.6	11.4	11.2	11.0	10.9	10.8	1.5	8.1	15.4	22.8	25.9	30.0	34.2	B08
	B10	1.94	15.1	14.9	14.7	14.5	14.3	14.2	14.1	1.7	9.9	19.3	28.6	32.6	37.8	43.1	B10
	B12	2.50	19.5	19.3	19.1	18.8	18.7	18.6		2.0	12.6	24.4	36.3	41.4	48.1		B12
	B15	3.05	23.8	23.5	23.4	23.1	23.0	22.9		2.3	15.2	29.5	44.0	50.2	58.3		B15
C	003	0.66	5.1	4.5	3.8	3.1	3.0	2.7		2.3	5.4	8.6	11.9	13.4	15.4		003
	005	1.05	8.2	7.5	6.9	6.2	6.1	5.8		2.6	7.1	12.2	17.4	19.6	22.5		005
	006	1.30	10.1	9.5	8.8	8.1	8.0	7.7		2.6	8.3	14.5	20.9	23.6	27.2		006
	008	1.61	12.6	11.9	11.2	10.6	10.4	10.2		2.8	9.7	17.4	25.2	28.6	33.0		008
	010	2.08	16.2	15.6	14.9	14.2	14.1	13.8		3.0	11.9	21.7	31.7	35.9	41.6		010
	012	2.26	17.7	17.0	16.3	15.7	15.5	15.2		3.1	12.7	23.5	34.2	38.9	45.1		012
	014	2.81	21.9	21.2	20.6	19.9	19.8	19.5		3.4	15.3	28.4	41.7	47.5	55.0		014
	017	3.56	27.7	27.1	26.4	25.7	25.6	25.3		3.6	18.6	35.4	52.2	59.3	68.9		017
	020	3.89	30.3	29.7	29.0	28.4	28.2	27.9		3.8	20.3	38.5	56.7	64.6	75.1		020
	022	4.29	33.4	32.8	32.1	31.4	31.3	31.0		4.0	22.1	42.1	62.2	70.9	82.5		022
	025	4.84	37.7	37.0	36.4	35.7	35.6	35.3		4.3	24.7	47.2	69.9	79.5	92.5		025
028	5.42	42.2	41.6	40.9	40.2				4.6	27.2	52.6	77.9				028	
031	6.10	47.6	46.9	46.2	45.6				4.8	30.4	58.9	87.3				031	
D	014	2.90	22.6	21.6	20.3	19.2	18.7			3.9	16.2	29.9	43.6	49.5			014
	017	3.55	27.7	26.6	25.3	24.3	23.7			4.2	19.3	35.9	52.6	59.7			017
	020	4.03	31.4	30.3	29.0	28.0	27.4			4.4	21.5	40.4	59.1	67.2			020
	024	4.85	37.8	36.8	35.4	34.4	33.8			4.8	25.2	47.9	70.5	80.3			024
	028	5.47	42.7	41.6	40.3	39.2	38.7			5.1	28.2	53.6	79.1	90.1			028
	031	6.00	46.7	45.7	44.4	43.3	42.8			5.4	30.6	58.5	86.5	98.4			031
	035	6.77	52.8	51.7	50.4	49.4	48.8			5.6	34.1	65.7	97.2	110.6			035
	038	7.34	57.2	56.1	54.8	53.8	53.2			5.9	36.7	70.9	105.0	119.6			038
	042	8.30	64.7	63.6	62.3	61.2	60.7			6.4	41.2	79.8	118.3	134.8			042
	045	8.89	69.3	68.2	66.9	65.9	65.3			6.7	43.9	85.2	126.5	144.2			045
050	9.64	75.1	74.1	72.8	71.7				7.0	47.3	92.1	136.9				050	
E	042	8.07	62.9	61.6	60.3	58.9	58.4			8.6	42.2	79.7	117.1	133.3			042
	045	8.69	67.7	66.4	65.1	63.8	63.2			8.9	45.1	85.4	125.7	143.0			045
	050	9.67	75.4	74.1	72.7	71.4	70.9			9.3	49.6	94.4	139.3	158.5			050
	052	10.06	78.4	77.0	75.7	74.4	73.9			9.5	51.4	98.0	144.6	164.7			052
	057	10.97	85.5	84.2	82.9	81.5	81.0			9.9	55.7	106.5	157.3	179.2			057
	062	12.00	93.6	92.2	90.9	89.6	89.1			10.3	60.4	116.0	171.5	195.4			062
	066	13.02	101.4	100.1	98.8	97.5	96.9			10.9	65.0	125.3	185.6	211.5			066
	072	13.86	108.0	106.7	105.4	104.0	103.5			11.3	68.9	133.0	197.3	224.8			072
	085	16.41	127.9	126.6						12.3	80.7						085



(T6EES)

Double Rear Drive Pump

T6EE(S) Series



Key sheet Example : T6EES-072-045-1R00-A10-00

1. **T6EES-072-050-1R00-A10-00** Series

Metric mounting (250B4W - ISO-3019)	T6EE
SAE mounting (SAE-E, 4 bolts)	T6EES

2. **T6EES-072-050-1R00-A10-00** Cam size

E Size	
042	8.07
045	8.69
050	9.67
052	10.06
057	10.97
062	12.00
066	13.02
072	13.86
085	16.41

3. **T6EES-072-050-1R00-A10-00** Shaft

4. **T6EES-072-050-1R00-A10-00** Rotation

CW	R
CCW	L

5. **T6EES-072-050-1R00-A10-00** Porting

6. **T6EES-072-050-1R00-A10-00** Design

7. **T6EES-072-050-1R00-A10-00** Seal Class

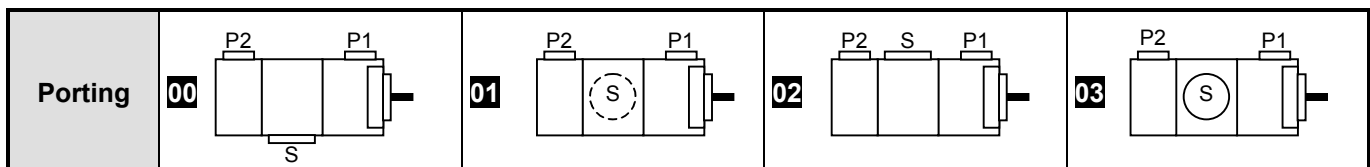
Buna N : mineral oil	1
Viton : mineral oil & fire resistant fluid	5

8. **T6EES-072-050-1R00-A10-00** Rear Coupling

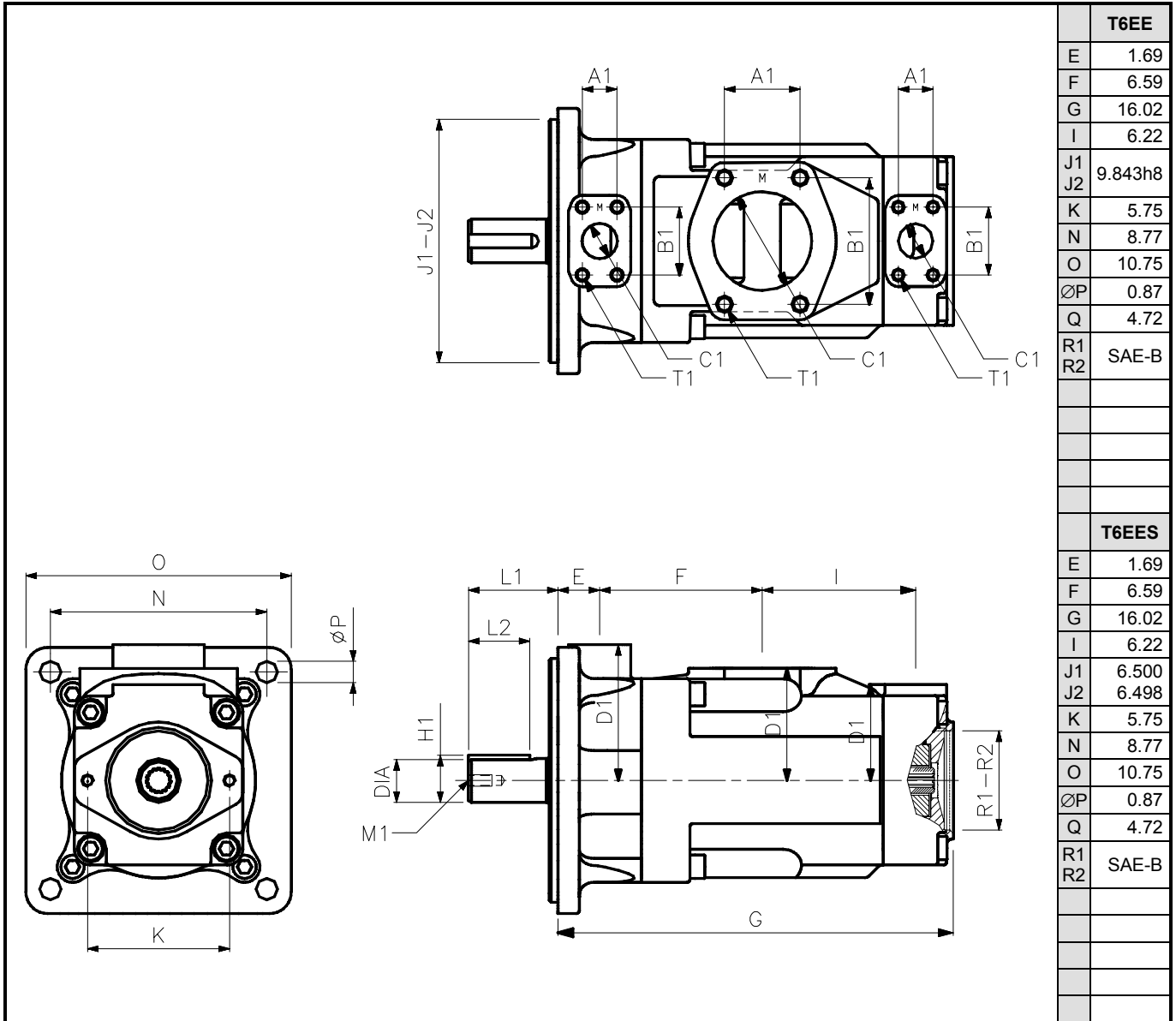
None (Rear drive plugged)	0
SAE-B (13 teeth) Torque : 3040 in-lbs.	2
SAE-BB (15 teeth) Torque : 4820 in-lbs.	3

9. **T6EES-072-050-1R00-A10-00** Connections

Connections	Metric threads	UNC threads
T6EE	M0	-
T6EES	M0	00



Vane Pumps - Double Rear Drive Pumps



Shafts		Torque Limits (in-lbs.)		Dimensions (in)					
		T6EE	T6EES	L1	L2	DIA	K1 x K2	H1	M1
2	Key : ISO3019-2	16400		3.62	2.48	1.77 h7	0.55 h8	1.91	M12 x 0.94
1	Key : SAE CC		10670	3.58	2.00	1.500 - 1.498	0.375x0.373	1.67	M10 x 0.79
5	Key : SAE D&E		16400	3.94	2.50	1.750 - 1.748	0.437 x 0.435	1.94	1/2"UNCx0.94
3	Splined : SAE CC		18700	2.45	1.24	Class 1-J498b, 12/24 d.p. - 17 teeth			
4	Splined : SAE D&E		18700	2.95	1.92	Class 1-J498b, 8/16 d.p. - 13 teeth			

Ports		Dimensions (in)				Threads T1	
		A1	B1	C1	D1	Metric (T6EE)	UNC (T6EES)
P1	SAE 61 - 1 1/2"	1.41	2.75	1.46	5.50	M12 x 1.18	1/2" 13UNC x 1.18
P2	SAE 61 - 1 1/2"	1.41	2.75	1.46	3.87	M12 x 0.92	1/2" 13UNC x 0.92
S	SAE 61 - 4"	3.06	5.13	4.00	4.53	M16 x 1.18	5/8" 11UNC x 1.18