



VNKM series motor are small volume, economical type, which is designed with shaft distribution flow, which adapt the Gerotor gear set design and provide compact volume, high power and low weight.

Characteristic features:

- * Advanced manufacturing devices for the Gerotor gear set, which provide small volume, high efficiency and long life.
- * Shaft seal can bear high pressure of motor of which can be used in parallel or in series.
- * Advanced construction design, high power and low weight.

Main Specification

Type		VNKM 8	VNKM 12.5	VNKM 20	VNKM 32	VNKM 40	VNKM 50
Geometric displacement (cm ³ /rev.)		8.2	12.9	19.9	31.6	39.8	50.3
Max. speed (rpm)	cont.	1950	1550	1000	630	500	400
	int.	2450	1940	1250	800	630	500
Max. torque (N·m)	cont.	11	16	25	40	45	46
	int.	15	23	35	57	70	88
	peak	21	33	51	64	82	100
Max. output (kW)	cont.	1.8	2.4	2.4	2.4	2.2	1.8
	int.	2.6	3.2	3.2	3.2	3.2	3.2
Max. pressure drop (MPa)	cont.	10	10	10	10	9	7
	int.	14	14	14	14	14	14
	peak	20	20	20	16	16	16
Max. flow (L/min)	cont.	16	20	20	20	20	20
	int.	20	25	25	25	25	25
Weight (kg)		1.9	2	2.1	2.2	2.3	2.4

Type		Max.inlet pressure
VNKM8-50 (MPa)	cont.	17.5
	int.	22.5

- * Continuous pressure:Max. value of operating motor continuously.
- * Intermittent pressure:Max. value of operating motor in 6 seconds per minute.
- * Peak pressure:Max. value of operating motor in 0.6 second per minute.



VNKM8 [8.2 cm³/rev.]

		Pressure (MPa)					
		3.5	5	7	10	12	14
Flow (L/min)	2	3	5	8	10	12	14
	4	228	218	206	156	111	58
	8	3	5	7	11	13	15
	12	474	471	463	426	391	331
	15	3	5	7	11	13	15
	20	953	946	926	884	855	816
Max.cont.	12	2	5	7	10	13	15
	15	1444	1426	1402	1360	1324	1288
Max.int.	15		4	7	10	12	14
	20		1912	1900	1861	1833	1780
Max.int.	20			6	10	11	14
	25			2395	2350	2328	2281

VNKM12.5 [12.9 cm³/rev.]

		Pressure (MPa)					
		3.5	5	7	10	12	14
Flow (L/min)	2	6	8	11	16	19	
	4	140	136	119	68	35	
	8	6	8	12	17	19	23
	12	296	289	274	229	200	145
	15	5	8	12	17	20	24
	20	605	596	583	543	514	469
Max.cont.	12	5	8	11	16	20	24
	15	912	905	895	859	834	784
Max.int.	15	5	7	11	16	19	23
	20	1152	1144	1136	1102	1078	1036
Max.int.	20	3	7	10	15	19	22
	25	1542	1532	1521	1500	1482	1437
Max.int.	25	2	6	9	14	18	22
	25	1910	1891	1878	1848	1828	1788

VNKM20 [19.9 cm³/rev.]

		Pressure (MPa)					
		1.7	3.5	5	7	10	12
Flow (L/min)	2	3	9	14	19	26	30
	4	99	96	89	74	42	21
	8	4	9	14	19	26	31
	12	197	191	182	178	134	112
	15	4	9	13	19	27	31
	20	398	395	391	377	340	319
Max.cont.	12	3	8	13	18	26	31
	15	596	594	588	579	545	523
Max.int.	15	3	8	12	17	25	30
	20	745	741	738	728	695	684
Max.int.	20	1	6	11	19	24	29
	25	998	995	991	985	962	916
Max.int.	25		4	9	14	23	28
	25		1247	1245	1242	1189	1180

VNKM32 [31.6 cc/rev.]

		Pressure (MPa)					
		2	3.5	5	7	10	12
Flow (L/min)	2	7	15	21	28	40	
	4	61	57	52	47	16	
	8	7	15	21	29	41	48
	12	126	121	114	106	82	67
	15	7	15	21	29	41	49
	20	250	244	239	231	207	194
Max.cont.	12	6	13	20	28	40	48
	15	378	374	369	362	338	322
Max.int.	15	4	12	18	27	39	47
	20	476	472	468	462	441	429
Max.int.	20	3	10	17	25	37	46
	25	633	630	627	619	601	585
Max.int.	25	1	8	15	23	35	43
	25	791	789	787	783	766	753

VNKM40 [39.8 cm³/rev.]

		Pressure (MPa)					
		3	5	7	8.5	10	12
Flow (L/min)	2	16	27	36	44	51	
	4	45	40	34	28	17	
	8	16	27	37	44	52	62
	12	96	93	85	79	65	52
	15	15	26	36	44	52	63
	20	197	195	182	176	166	154
Max.cont.	12	14	25	35	43	51	62
	15	293	287	282	277	268	257
Max.int.	15	13	24	34	42	50	62
	20	371	365	360	355	347	338
Max.int.	20	10	21	31	39	48	59
	25	497	492	487	480	472	463
Max.int.	25	7	19	29	37	44	56
	25	622	617	612	607	600	591

VNKM50 [50.3 cm³/rev.]

		Pressure (MPa)				
		1.5	3	5	7	10
Flow (L/min)	2	11	23	36	50	
	4	37	33	27	22	
	8	11	22	36	50	70
	12	76	73	68	63	55
	15	11	21	35	50	71
	20	157	154	149	145	137
Max.cont.	12	11	20	33	49	71
	15	237	234	231	226	218
Max.int.	15	10	18	32	47	69
	20	296	295	294	288	282
Max.int.	20	8	14	29	44	64
	25	395	395	393	390	381
Max.int.	25	4	10	25	40	59
	25	498	496	494	490	484

Torque (N·m) 37
Speed (rpm) 607

cont.
int.



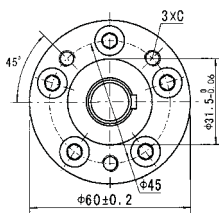
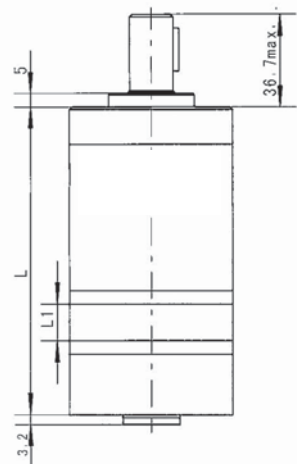
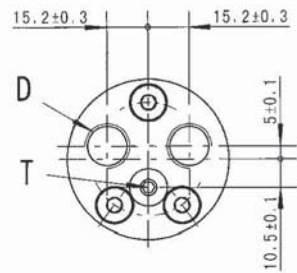
HYDRAULIC MOTORS

VNKM END PORT DIMENSIONS AND MOUNTING DATA

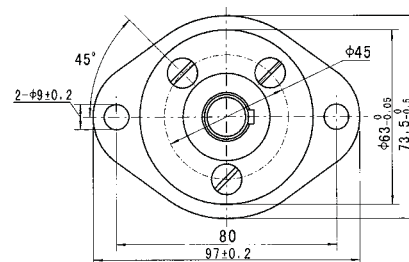
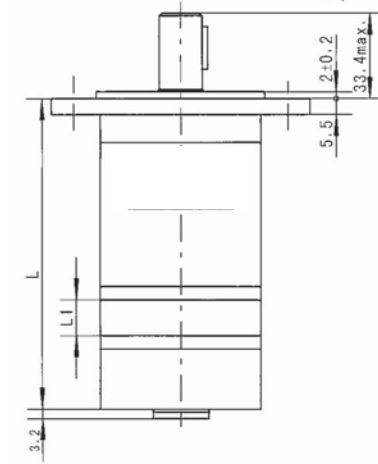
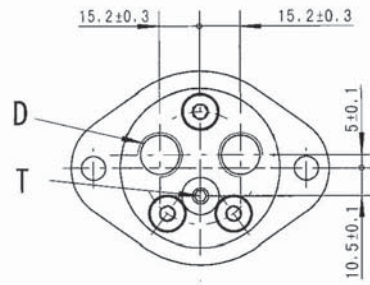
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MOUNTING

Flange M, U



Flange F



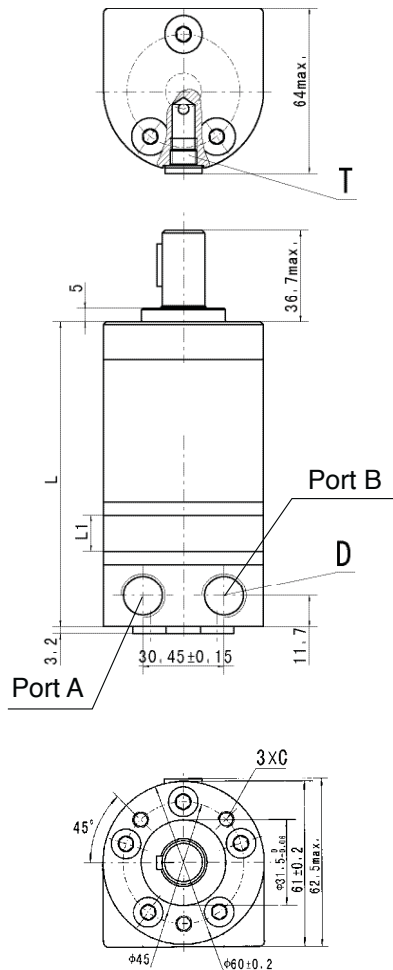
Model	M, U Flange		F Flange	
	L	L1	L	L1
VNKM8	104	35	1.075	35
VNKM12.5	106	55	1.095	55
VNKM20	109	85	1.125	85
VNKM32	114	135	1.175	135
VNKM40	1.175	17	121	17
VNKM50	122	215	1.255	215

Code Mounting	M, U Flange		F Flange	
	1E (depth)	1U (depth)	1E (depth)	1U (depth)
C	3-M6 (10)	3-1/4-28UNF-2B(10)	--	--
D	G3/8 (12)	9/16-18UNF(12)	G3/8 (12)	9/16-18UNF(12)
T	G1/8 (8)	3/8-24UNF(8)	G1/8 (8)	3/8-24UNF(8)

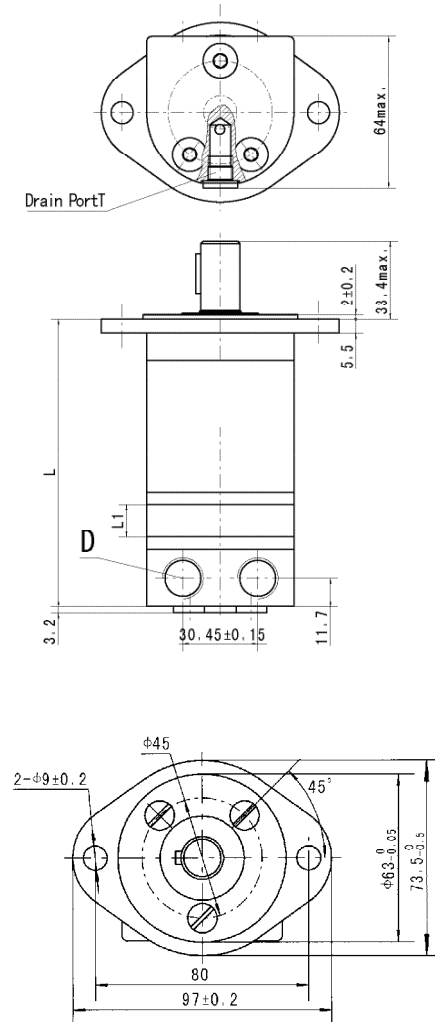


MOUNTING

Flange M,U



Flange F

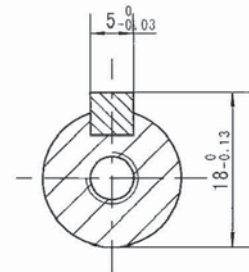
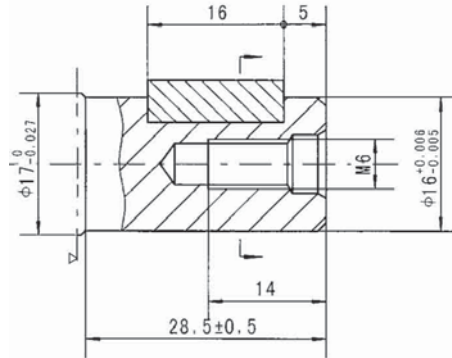


	M, U Flange		F Flange	
Model	L	L1	L	L1
VNKM8	105	35	1.085	35
VNKM12.5	107	55	1.105	55
VNKM20	110	85	1.135	85
VNKM32	115	135	1.185	135
VNKM40	1.185	17	122	17
VNKM50	123	215	1.265	215

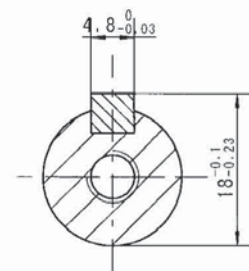
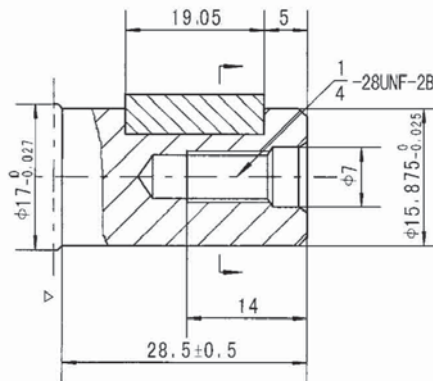
	M, U Flange		F Flange	
Code	E (depth)	U (depth)	E (depth)	U (depth)
C	3-M6 (10)	3-1/4-28UNF-2B(10)	--	--
D	G3/8 (12)	9/16-18UNF(12)	G3/8 (12)	9/16-18UNF(12)
T	G1/8 (8)	3/8-24UNF(8)	G1/8 (8)	3/8-24UNF(8)



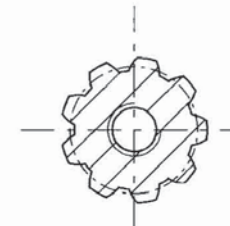
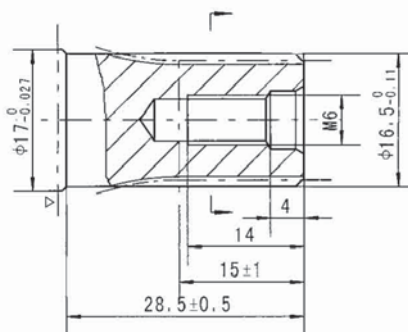
Shaft A: Cylindrical shaft $\varnothing 16$
Parallel key 5x5x16



Shaft B: Cylindrical shaft
 $\varnothing 15.875$
Parallel key 4.8x4.8x19.05



Shaft C: Involute splind shaft
B17x14 DIN5482



Motor Mounting Surface →

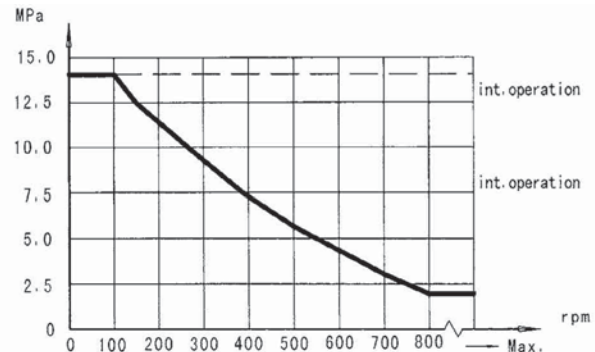
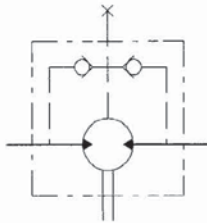


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VNKM SERIES HYDRAULIC MOTOR

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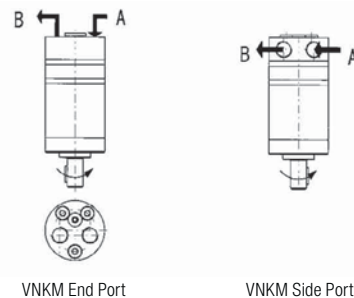
Permissible shaft seal pressure



In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

Direction of shaft rotation: Standard

When facing shaft end of motor, shaft to rotate:
Clockwise when port "A" is pressurized.
Counter-clockwise when port "B" is pressurized.

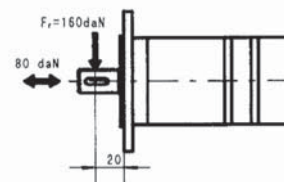


VNKM End Port

VNKM Side Port

Status of the shaft's radial force

$$F_r = \frac{13040}{61.5 + L} \text{ daN}$$



F_r = Radial Force (daN)
 L = Distance (mm)
 n = Speed (rpm)
 Max. force load
 Rhomb-flange $L=15\text{mm}$
 Square-flange $L=20\text{mm}$



VNKM ORDER INFORMATION

VNKM		1	2	3	4	5	6	7	8
Pos.1	2	3	4	5	6	7	8		
Code	Displacement	Flange	Output shaft	Ports and drain port	Rotation direction	Paint	Unusually function		
Omit	8	M	A	E	Omit	00	No paint	Omit	Standard
	12.5	U	B	U	R	Omit	Blue	B	No case drain
	20	F	C	1E		B	Black	S	
	32			TU		S	Silver grey		
Note: When the table is used, please fill the code of left rows in the table and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. If the specification is not in the table or you have specific requirements, please contact us.									