



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.	2	5	7	10	13	15	
Max.int.	15	4	7	10	12	14	
	20			6	10	11	14
			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.	5	8	11	16	20	24	
Max.int.	20	5	7	11	16	19	23
	25	1152	1144	1136	1102	1078	1036
		3	7	10	15	19	22
		1542	1532	1521	1500	1482	1437
		2	6	9	14	18	22
		1910	1891	1878	1848	1828	1788

VNKM20 [19.9 cm³/rev.]

	Pressure (MPa)							
	1.7	3.5	5	7	10	12	14	
Flow (L/min)	2	3	9	14	19	26	30	
	4	99	96	89	74	42	21	
	8	4	9	13	19	27	31	36
	12	197	191	182	178	134	112	74
	15	4	9	13	19	27	31	36
	20	398	395	391	377	340	319	288
Max.cont.	3	8	13	18	26	31	37	
Max.int.	20	3	8	12	17	25	30	36
	25	745	741	738	728	695	684	660
		1	6	11	19	24	29	35
		998	995	991	985	962	916	885
			4	9	14	23	28	33
			1247	1245	1242	1189	1180	1176

VNKM32 [31.6 cc/rev.]

	Pressure (MPa)								
	2	3.5	5	7	10	12	14		
Flow (L/min)	2	7	15	21	28	40			
	4	61	57	52	47	16			
	8	7	15	21	29	41	48	57	
	12	126	121	114	106	82	67	49	
	15	7	15	21	29	41	49	58	
	20	250	244	239	231	207	194	167	
Max.cont.	6	13	20	28	40	48	58		
Max.int.	20	4	12	18	27	39	47	57	
	25	476	472	468	462	441	429	406	
		3	10	17	25	37	46	55	
		633	630	627	619	601	585	566	
			1	8	15	23	35	43	52
			791	789	787	783	766	753	732

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.	14	25	35	43	51	62		
Max.int.	20	13	24	34	42	50	62	
	25	371	365	360	355	347	338	
		10	21	31	39	48	59	
		497	492	487	480	472	463	
			7	19	29	37	44	56
			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.	11	20	33	49	71		
Max.int.	20	10	18	32	47	69	
	25	296	295	294	288	282	
		8	14	29	44	64	
		395	395	393	390	381	
			4	10	25	40	59
			498	496	494	490	484

Torque (N·m) 37
Speed (rpm) 607

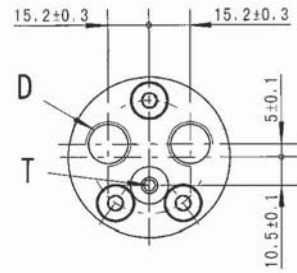
cont.
int.



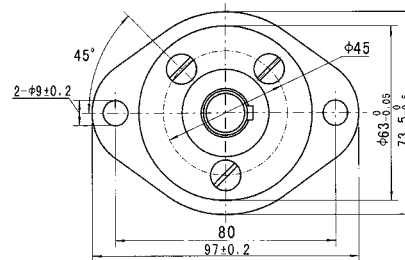
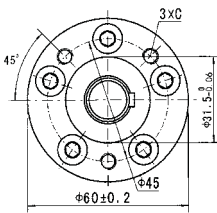
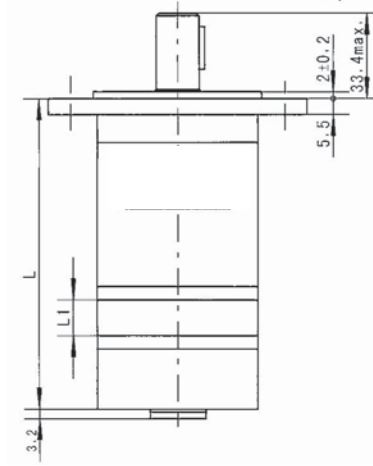
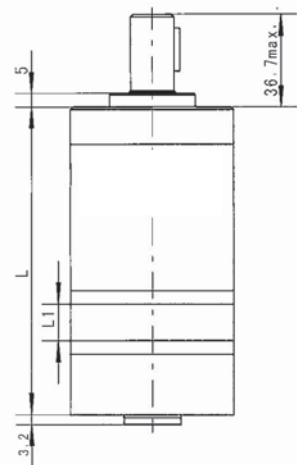
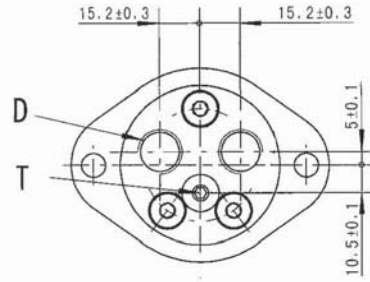


MOUNTING

Flange M, U



Flange F



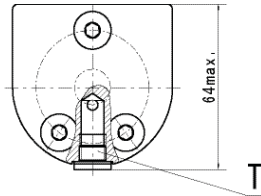
Model	M, U Flange		F Flange	
	L	L1	L	L1
VNKM8	104	35	1.075	35
VNKM12.5	106	55	1.095	55
VNKM20	109	85	1.125	85
VNKM32	114	135	1.175	135
VNKM40	1.175	17	121	17
VNKM50	122	215	1.255	215

Mounting	Code	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)	

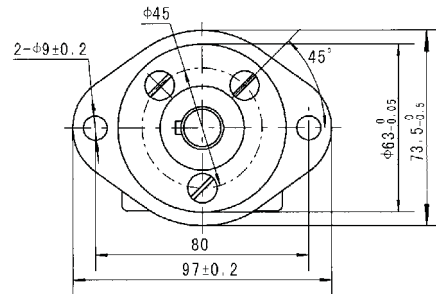
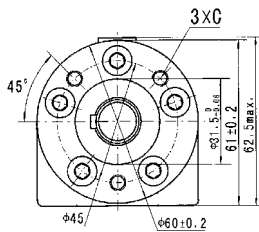
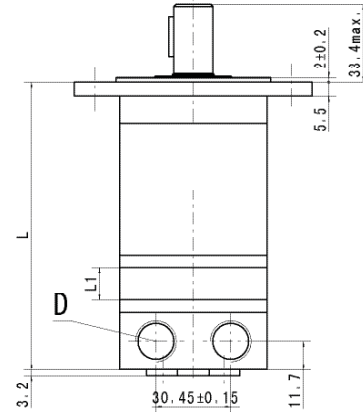
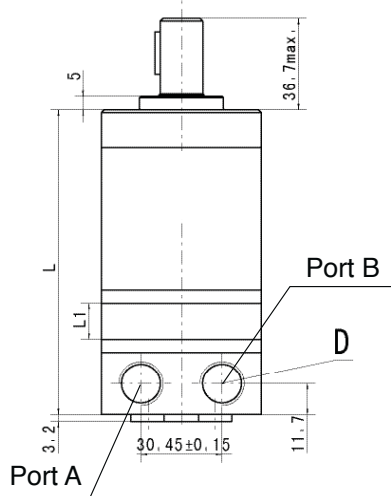
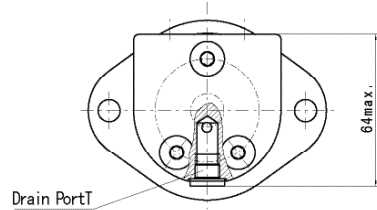


MOUNTING

Flange M,U



Flange F



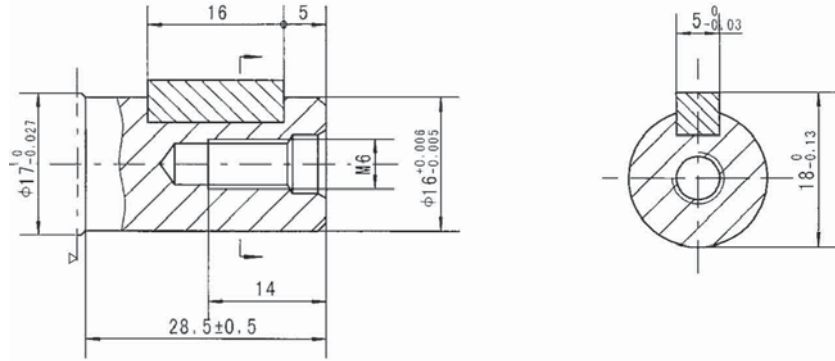
Model	M, U Flange		F Flange	
	L	L1	L	L1
VNKM8	105	35	1.085	35
VNKM12.5	107	55	1.105	55
VNKM20	110	85	1.135	85
VNKM32	115	135	1.185	135
VNKM40	1.185	17	122	17
VNKM50	123	215	1.265	215

Code	M, U Flange		F Flange	
	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)

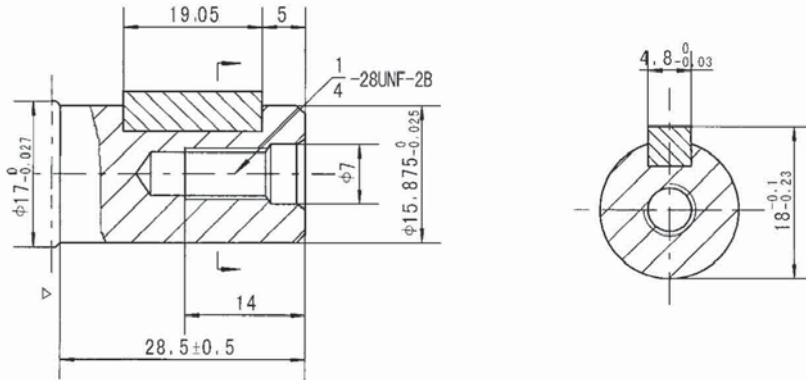


VNKM SHAFT EXTENSIONS FOR VNKM MOTORS

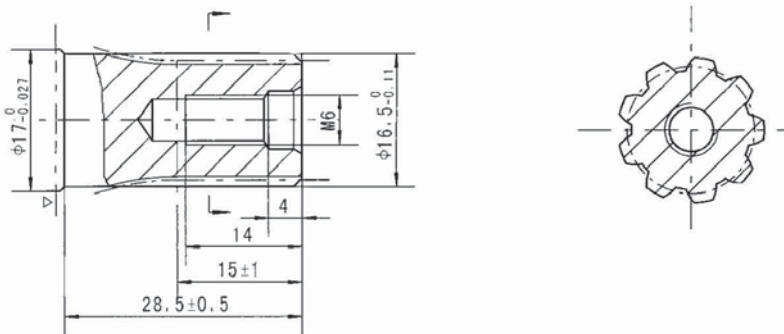
Shaft A: Cylindrical shaft $\phi 16$
Parallel key 5x5x16



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



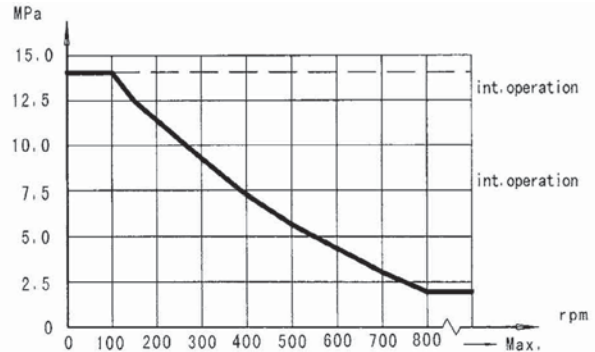
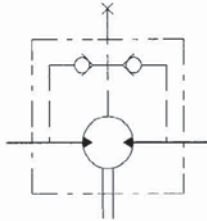
Shaft C: Involute splind shaft
B17x14 DIN5482



Motor Mounting Surface →



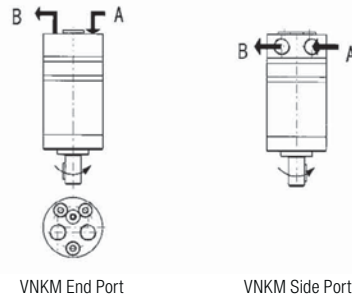
Permissible shaft seal pressure



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.

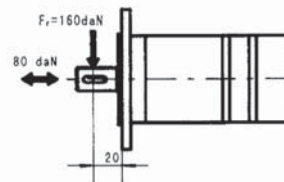
Direction of shaft rotation: Standard

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



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 12.5 20 32 40 50	M 3-M6 Circle-flange, pilot Ø31.5×5 U 3-1/4-28UNF Circle flange, pilot Ø31.5×5 F 2-Ø9 Rhomb-flange, pilot Ø63×2	A Shaft Ø16, parallel key 5×5×16 B Shaft Ø15.8/5, parallel key 4.8×4.8×19.05 C Shaft Ø16.5, involute B17×14, DIN5482	E G3/8, G1/8 U 9/16-18UNF, 3/8-24UNF TE End port G3/8, G1/8 TU End port 9/16-18UNF, 3/8-24UNF	Omit R Standard Opposite	00 Omit B S	No paint Blue Black Silver grey	Omit 0 Standard No case drain
<p>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.</p>								