VNKR-VNK3 Series Hydraulic Motor

INTRODUCTION

VNKR-VNK3 is a type of shaft flow distribution brake motor with a friction pair direct brake linkage shaft, reliable braking, need external brake oil circuit, multiple sets of spring braking force, compact structure, flexible adjustment, assembly, parameter adjustment and disassembly maintenance and other convenience.

SPECIFICATION Main Specification

Technical data for **VNKR-VNK3** with ø25 and ø25.4 and ø25.4 splined SAE 6B and ø28.56 tapered shaft.

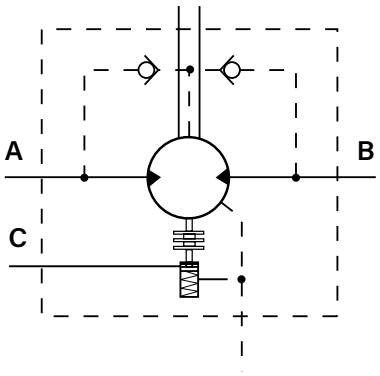
Type		VNKR -VNK3 65	VNKR -VNK3 80	VNKR -VNK3 100	VNKR -VNK3 125	VNKR -VNK3 160	VNKR -VNK3 200	VNKR -VNK3 250	VNKR -VNK3 315	VNKR -VNK3 400
Geometric displacement (cm3/rev.)		66.8	81.5	102	127.2	157.2	194.5	253.3	311	384
Max. speed (rpm)	cont.	800	750	600	475	378	310	240	190	155
	int.	950	940	750	600	475	385	300	240	190
Max. torque (N•m)	cont.	165	195	240	300	360	360	410	490	500
	int.	195	220	280	340	430	440	490	550	620
	peak	220	270	320	370	460	560	640	650	680
Max. output (kW)	cont.	11	12.5	13	12.5	12.5	10	7	9	7.5
	int.	13	15	15	14.5	14	13	9.5	10	9
Max. pressure drop (MPa)	cont.	17.5	17.5	17.5	17.5	16.5	13	12	12	10
	int.	20	20	20	20	20	17.5	15	14	12.5
	peak	22.5	22.5	22.5	22.5	22.5	22.5	20	17.5	15
Max. flow (L/min)	cont.	55	60	60	60	60	60	60	60	60
	int.	65	75	75	75	75	75	75	75	75
Item Code		VNKR-VNK3A				VNKR-VNK3B				
Static Torque (N•m)		360~440				460~540				
Brake release press (MPa)		1.4~1.9				1.7~2.3				
Max. release press (MPa)		20				20				
Weight (Kg)		11.4	11.7	11.9	12.1	12.4	12.9	13.5	13.8	13.8

* **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.

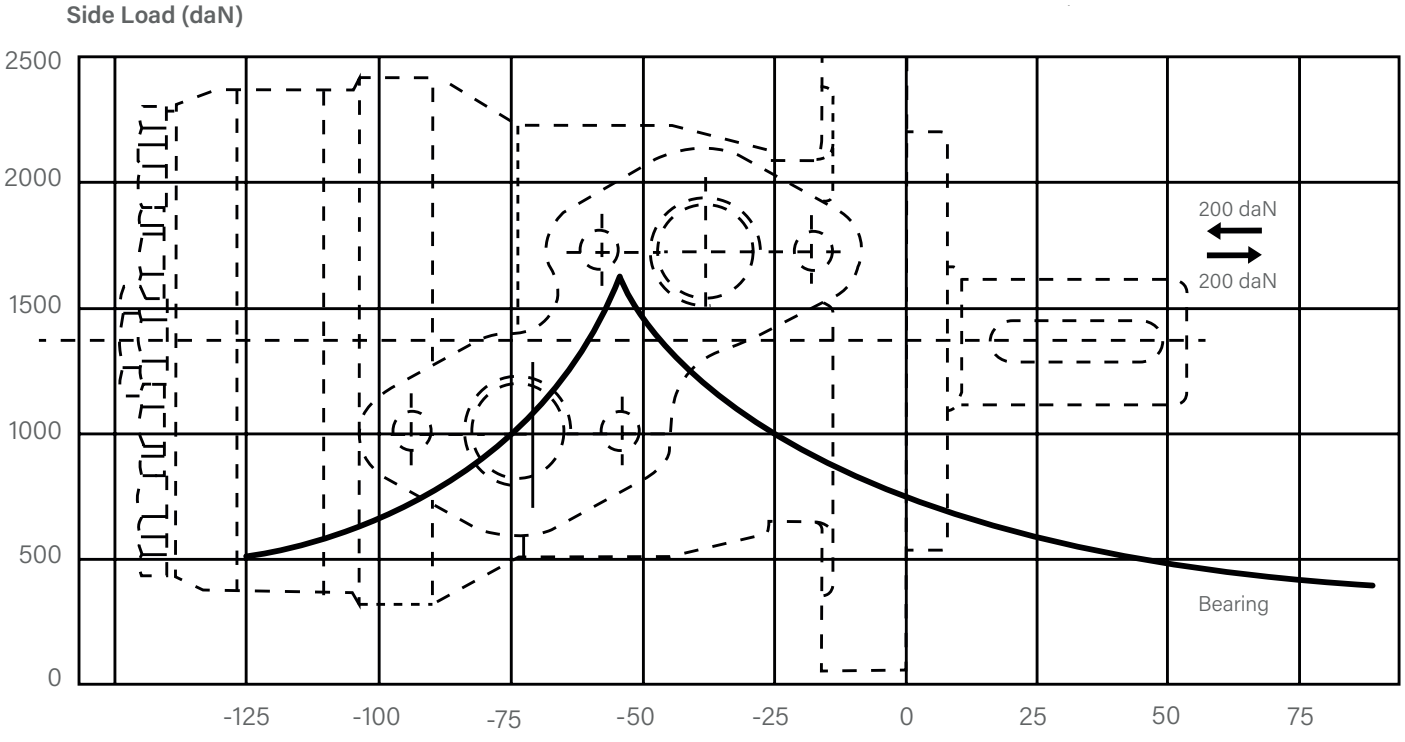
1. The ture pressure difference between inlet port and outlet port.
2. Normal oil temperature 20°C~60°C upper limit 90°C (no more than 1 hour).
3. Filtering and oil cleanliness: A return filter should be installed in the system with fineness in the rang of 10~30μm and a piece of magnet should be installed at the bottom of the tank to prevent grits into the system. The max. solid contamination grade of the oil is no more than 19/16.
4. Viscosity: 42~74mm2/s at 40°C of oil temperature,according to the condition to choose an applicable hydraulic oil.
5. The optimal operation situation should be at the 1/3~2/3 of the max. cont. operation situation.
6. To assure best motor life,run motor for approximately 1 hour at 30% of the max. cont. pressure before application to full load.
Besure motor is fulled with fluid prioe to any load applications.

VNKR-VNK3 Hydraulic Systems

The brake motor must always have a drain line.
The brake release pressure is the difference between the pressure in the brake release line and the pressure in the drain line.



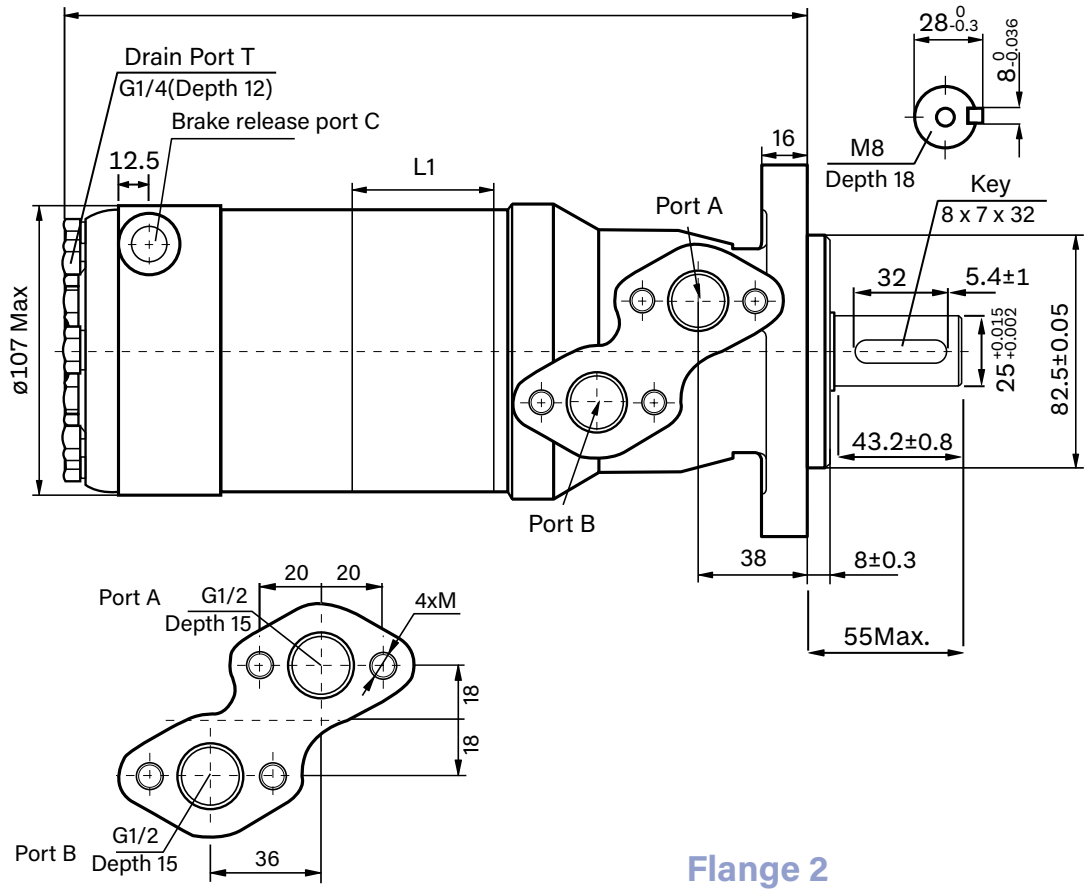
VNKR-VNK3 N1 Mounting Flange Radial Forceting



The bearing curve represents allowable bearinng loads for an L_{10} bearing life at 12×10^6revolutions. Or 2000 hours at 100 rpm.

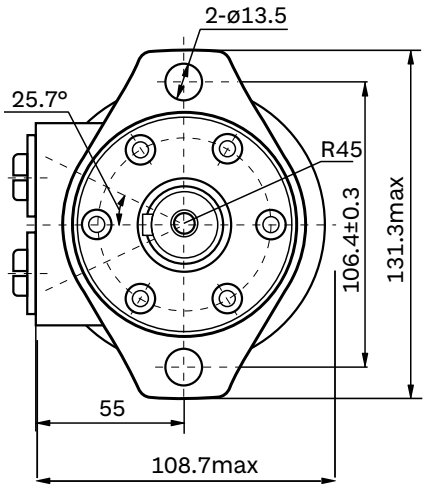
Bearing load multiplication factor table									
RPM	50	100	200	300	400	500	600	700	800
FACTOR	1.23	1	0.81	0.72	0.66	0.62	0.58	0.56	0.54

VNKR-VNK3 Dimensions and Mounting Data



Model	L	L1
VNKR-ZD10-36	214	7
VNKR-ZD10-50	217	10
VNKR-ZD10-80	223	16
VNKR-ZD10-100	227	20
VNKR-ZD10-125	232	25
VNKR-ZD10-160	237.5	30.5
VNKR-ZD10-200	245	38.1
VNKR-ZD10-250	257	50
VNKR-ZD10-310	269	62
VNKR-ZD10-400	281	74

Flange 2



Content Mounting	Code				
	D (Depth)	**M** (Depth)	**S** (Depth)	**P** (Depth)	**R** (Depth)
P(A,B)	G1/2(15)	M22x1.5(15)	7/8-14UNF(17)	1/2-14NPTF(15)	PT(RC)1/2(15)
	G1/4(12)	M14x1.5(12)	7/16-20UNF(12)	7/16-20UNF(12)	PT(RC)1/4(12)
M	4xM10(13)	4xM8(13)	4x5/16-18UNC(13)	4x5/16-18UNC(13)	4xM8(13)

Order Information

1	2	3	4	5	6	7	8	9
VNKR-VNK3	–	–	–	–	–	–	–	–

Pos.1	2	3		4		5		6		7		8		9	
Code	**Disp.**	**Flange and Pilot**		**Output shaft**		**Ports and drain port**		**Brake release Port**		**Rotation Direction**		**Paint**		**Usually Function**	
VNKR-ZD10A	65	2	2xØ13.5 Oval flange, pilot Ø82.5×8	A	Shaft Ø25,parallel Key 8×7×32	D	G1/2 Manifold Mount 4×M8, G1/4	G	G1/4	Omit	Standard	00	No paint	N1	Big radial force
	80			C	Shaft Ø25.4, parallel Key 6.35×6.35×31.75	M	M22×1.5 Manifold Mount 4×M8, M14×1.5	S	7/16-20UNF	R	Opposite	Omit	Paint (Grey)	SD	Speed sensor
	100	4	4xØ13.5 Oval flange, pilot Ø82.5×8	E	Shaft Ø25.4,splined tooth SAE 6B	S	7/8-14UNF Manifold Mount 4×5/16-18UNC, 7/16-20UNF					B	Black		
	125			JP	Shaft Ø25,parallel Key 8×7×32	P	1/2-14 NPTF Manifold Mount 4×5/16-18UNC, 7/16-20UNF					S	Silver grey		
	160	H4	4x3/8x16 Square-flange, pilot Ø44.4×2.8	K	Shaft Ø25.4,Woodruff Key Ø25.4×6.35	R	PT(Rc)1/2 Manifold 4×M8, PT(Rc)1/4								
VNKR-ZD10B	200			H	Shaft Ø25.4,Cross hole Ø10.3										
	250			W	Shaft Ø24.5,Splined B25x22 Din 5482										
	315	H5	4xM10 Square-flange, pilot Ø44.4×2.8		Cone-Shaft Ø28.56,parallel Key B5×5×14										
	400														

Note: When the table is used , please fill the code of left rows in dash area 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.