# NACHi

# VDC SERIES HIGH PRESSURE TYPE VARIABLE VOLUME VANE PUMP

VDC Series
High-Pressure Type Variable Volume Vane Pump

30 to 120ℓ/min 14MPa





### **Features**

# 1) Highly efficient and stable high-pressure operation

Innovative pressure control and pressure balance mechanisms combine with an original 3-point ring support system dramatically improves high-pressure operation. The result is outstanding performance at high pressures up to 14MPa

### 2 Low vibration and noise

A number of innovative new mechanisms are adopted to minimize vibration and noise. In particular, a 3-point support system is used for the control piston and bias piston to increase ring

stability. This minimizes ring vibration and delivers quiet operation.

# **3 Outstanding** response, high-precision operation

An innovative new ring stopper eliminates excessive ring displacement and improves response. The result is high precision operation at all times, including during starts, stops, and load changes.

# 4 Precise characteristics for a stable discharge rate

A revolutionary new pressure compensator type pressure control mechanism

ensures a highly stable fixed discharge rate, even in the high pressure range.

# **5**High efficiency operation with minimal power loss

New mechanical innovations minimize power loss, especially at full cutoff.

# **©Simplified maintenance and handling**

Pressure adjusting and discharge rate adjusting mechanisms are located on the same side of the pump for simplified maintenance and handling.

### **Specifications**

Model No.	Capacity	No-load Discharge Rate ℓ/min			Pressure Adjustment Range	Allowable Peak Pressure	Revolutio mi	on Speed n <sup>-1</sup>	Weight	
Model No.	cm³/rev	1000min <sup>-1</sup>	1200min <sup>-1</sup>	1500min <sup>-1</sup>	1800min <sup>-1</sup>	MPa {kgf/cm²}	MPa {kgf/cm²}	Min.	Max.	kg
VDC-1A(B)-1A2-20 1A3						1.5 to 3.5 {15.3 to 35.7} 2 to 7 {20.4 to 71.4}	14 {143}			
1A4	16.7	16.7	20	25	30	5 to 10.5 {51 to 107}	21 {214}	800	1800	9.5
1A5 VDC-1A(B)-2A2-20 2A3	22	22	27	33	40	7 to 14 {71.4 to 143} 1.5 to 3.5 {15.3 to 35.7} 2 to 7 {20.4 to 71.4}	14 {143}	800	1800	9.5
VDC-2A(B)-1A2-20						1.5 to 3.5 {15.3 to 35.7}	14 {143}			
1A3 1A4	30	30	36	45	54	2 to 7 {20.4 to 71.4} 5 to 10.5 {51 to 107}	21 {214}	800	1800	25
1A5 VDC-2A(B)-2A2-20	39	39	47	58	70	7 to 14 {71.4 to 143} 1.5 to 3.5 {15.3 to 35.7}	14 {143}	800	1800	25
2A3 VDC-3A(B)-1A2-20			.,			2 to 7 {20.4 to 71.4} 1.5 to 3.5 {15.3 to 35.7}	. ,	000	1000	20
1A3 1A4	67	67	80	100	120	2 to 7 {20.4 to 71.4} 5 to 10.5 {51 to 107}	14 {143}	800	1800	47 (33)
1A5						7 to 14 {71.4 to 143}	21 {214}			(55)

#### Double Pump

Model No.		Vent Sic	le	Shaft Side			Revolution Speed min <sup>-1</sup>		
Foot Mounting Type	Discharge Rate ℓ/min		Pressure Adjust- ment Range	Discharge Rate ℓ/min		Pressure Adjust- ment Range			Weight kg
(Flange Mounting)	1800min <sup>-1</sup>	1500min <sup>-1</sup>	MPa {kgf/cm²}	1800min <sup>-1</sup>	1500min <sup>-1</sup>	MPa {kgf/cm²}	Min.	Max.	kg
VDC-11A(B)-2A3-2A3-20	40	33	2 to 7 {20.4 to 71.4}	40	33	2 to 7 {20.4 to 71.4}	800	1800	Type A 27
VDC-11A(B)-2A3-1A5-20	40	33	2 10 7 {20.4 10 7 1.4}	30	25	7 to 14 {71.4 to 143}	800	1600	Type B 20
VDC-12A(B)-2A3-2A3-20	40	33	2 to 7 {20.4 to 71.4}	70	58	2 to 7 {20.4 to 71.4}			
VDC-12A(B)-2A3-1A5-20	40	2 10 7 (20.4 10 7 1.4)	54	45	7 to 14 {71.4 to 143}	800	1800	Type A 42	
VDC-12A(B)-1A5-2A3-20	30	25	7 to 14 {71.4 to 143}	70	58	2 to 7 {20.4 to 71.4}	800	1000	Type B 35
VDC-12A(B)-1A5-1A5-20	30	23	1 10 14 (11.4 10 143)	54	45	7 to 14 {71.4 to 143}			
VDC-22A(B)-2A3-2A3-20	70	58	2 to 7 {20.4 to 71.4}	70	58	2 to 7 {20.4 to 71.4}	800	1800	Type A 62
VDC-22A(B)-2A3-1A5-20	70	36	56 2 10 7 (20.4 to 71.4)	54	45	7 to 14 {71.4 to 143}	800	1000	Type B 50
VDC-13A(B)-2A3-1A3-20	40	33	2 to 7 {20.4 to 71.4}			2 to 7 {20.4 to 71.4}			
VDC-13A(B)-2A3-1A5-20	40	40 33	2 10 / {20.4 10 / 1.4}	120	100	7 to 14 {71.4 to 143}	800	1800	Type A 62
VDC-13A(B)-1A5-1A3-20	30	25	7 to 14 {71.4 to 143}	120	100	2 to 7 {20.4 to 71.4}	000	1000	Type B 48
VDC-13A(B)-1A5-1A5-20	30	25	1 10 14 (11.4 10 143)			7 to 14 {71.4 to 143}			

Note) 1. VDC-3A, VDC-11A, VDC-12A and VDC-13A are foot mounting types, and come with foot mountings.

2. VDC-1A and VDC-2A are sub plate types. Sub plates are not included.

#### Handling

- Rotation Direction The direction of rotation is always is clockwise (rightward) when viewed from the shaft side.
- 2 Drain Drain piping must be direct piping up to a point that is below the tank fluid level, and piping should comply with the conditions shown in the table below to ensure that back pressure due to pipe resistance does not exceed 0.1MPa. When using a pump that has drain ports at two locations, use the drain port that is higher after the pump is installed.

In the case of a double pump, run separate pipes from both the shaft side and the head side drains directly connect to the tank, so the drain pipe is below the surface of the oil.

Model No.	VDC-1	VDC-2	VDC-3
Pipe Joint	At least	At least	At least
Size	1/4"	1/4"	3/8"
Pipe I.D.	At least	At least	At least
Pipe I.D.	φ 7.6	φ 7.6	φ 9.6
Pipe	1m or less	1m or less	1m or less
Length	1111 01 1033	1111 01 1033	1111 07 1033

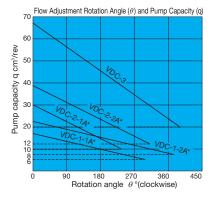
#### 3 Discharge Volume Adjustment

The discharge flow rate is decreased by clockwise (rightward) rotation of the discharge rate adjusting screw, and increased by counterclockwise (leftward) rotation.

Loosen the lock nut before making adjustments. After adjustment is complete, re-tighten the lock nut. The graph below provides general guidelines for the relationship between the rotation angle of the flow rate adjusting screw and the no-load discharge rate.

However:  $Q=q \times N \times 10^{-3}$ 

- Q : No-load Discharge RateQ $\ell/min$
- q: Volume cm<sup>3</sup>/rev
- N: Revolution Speed min-1



#### Note)

The values indicated above are at maximum pump discharge volume with the flow volume adjusting screw at the 0° position. The broken line shows the flow volume adjustment range lower limit value.

4 Pressure Adjustment Pressure is increased by clockwise (rightward) rotation of the discharge rate adjusting screw, and decreased by counterclockwise (leftward) rotation.

Loosen the lock nut before making adjustments. After adjustment is complete, re-tighten the lock nut.

- 5 Factory Default P-Q Settings (Standard Model)
  - Flow Rate Setting = Maximum flow rate for model as indicated in the catalog
  - Pressure Setting = Pressure shown in table below

#### 6 Thrust Screw and Stopper

The thrust screw and stopper are precision adjusted at the factory during assembly. Never touch them. See callouts 15/43 and 15/38 in the VDC-1A and 2A/3A cross-section diagrams on pages B-33 and B-34.

 $\begin{tabular}{ll} \hline \emph{Z} \mbox{An unload circuit} & \mbox{is required when the motor is started under condition} \ \lambda - \Delta. & \mbox{Contact your agent about the unload circuit.} \label{eq:lambda}$ 

#### 8 Initial Operation

Before operating the pump for the first time, put the pump discharge side into the noload state and then repeatedly start and stop the motor to bleed all air from inside the pump and the suction piping. After confirming that the pump is discharging oil, continue the no-load operation for at least 10 minutes to discharge all the air from the circuit. Provide an air bleed valve in circuits where it is difficult to bleed air before startup.

#### 9 Sub Plate

Use the table below for to specify a sub plate type when one is required.

#### 10 Foot Mounting

For a double pump with VDC-3 foot mounting, the foot mounting kit and pump are sold as a set. When only the mounting feet are required, pump mounting bolts, washers and other parts are sold together as the Foot Mounting Kit.

See page B-36 for detailed dimensions.

- 11)For the hydraulic operating fluid, use type ISO VG32 or equivalent (viscosity index of at least 90) for pressures of 7MPa or lower, and type ISO VG68 or equivalent (viscosity index of at least 90) for pressures greater than 7MP.
- 12The operating temperature range is 15 to 60°C. When the oil temperature at startup is 15°C or less, perform a warm-up operation at low pressure until the oil temperature reaches 15°C. Use the pump in an area where the temperature is within the range of 0 to 60°C.
- 13 Suction pressure is -0.03 to +0.03 MPa (-0.3 to +0.3kgf/cm²), and the suction port flow rate should be no greater than 2m/sec.
- 14 Avoid pulley, gear, and other drive systems that impart a radial or thrust load on the end of the pump shaft. Mount the pump so its pump shaft is oriented horizontally.
- 15 Provide a suction strainer with a filtering grade of about  $100 \mu m$  (150 mesh). For the return line to the tank, use a  $25 \mu m$  line filter.
- 16Manage hydraulic operating fluid so contamination is maintained at class NAS10 or lower. Take care to avoid contamination with water and other foreign matter, and watch out for discoloration. Whitish fluid indicates that air has contaminated the fluid, and brownish fluid indicates the fluid is dirty.
- 17 Contact your agent about using water- and glycol-based hydraulic operating fluids.
- 18 At startup, repeat the inching operation (start-stop) to prime the pump and bleed air from the pump and pipes. (This pump has no fluid supply port.)

(Continued on following page)

Factory Default Pressure Settings MPa{kgf/cm²}
2:3.5 {35.7}
3:3 {30.6}
4:5 {51 }
5:7 {71.4}

#### Sub Plate Number

Pump Model No.	Sub Plate Number	Motor kW
VDQ 44 44+ 00	MVD-1-115-10	0.75 to 1.5
VDC-1A-1A*-20	MVD-1-135-10	2.2 to 3.7
VDC-1A-2A*-20	MVD-1-115Y-10	0.75 to 1.5
	MVD-1-135Y-10	2.2 to 3.7
VDC-2A-*A*-20	MVD-2-135-10	2.2 to 3.7
VDG-ZA-"A"-20	MVD-2-160-10	5.5
VDC-2A-2A*-20	MVD-2-160Z-10	5.5

Note) See pages B-17 and B-18 for detailed dimensions.

- 19 Equip an air bleed valve in circuits where it is difficult to bleed air before startup. See page C-13 for more information.
- 20When centering the pump shaft, eccentricity with the motor shaft should be no greater than 0.05mm. Use a pump mounting base of sufficient ri-

gidity

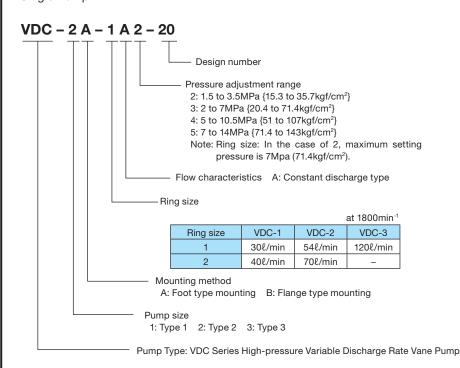
The angle error should be no greater than 1°.

- Inverter Drive Precautions
- 1 Set the revolution speed within the range of the pump specification revolution speed.

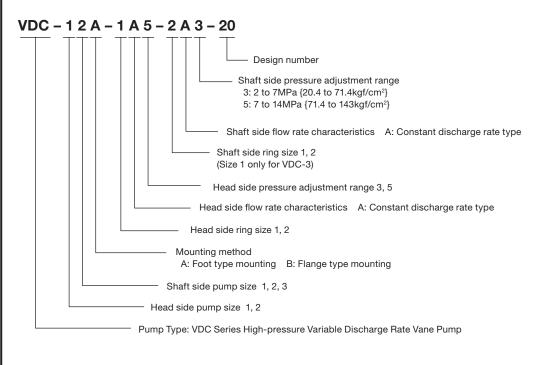
2 Changing the revolution speed may also affect the pump performance curves. Before using the inverter, check if the pressure and motor load factor are within the range of use.

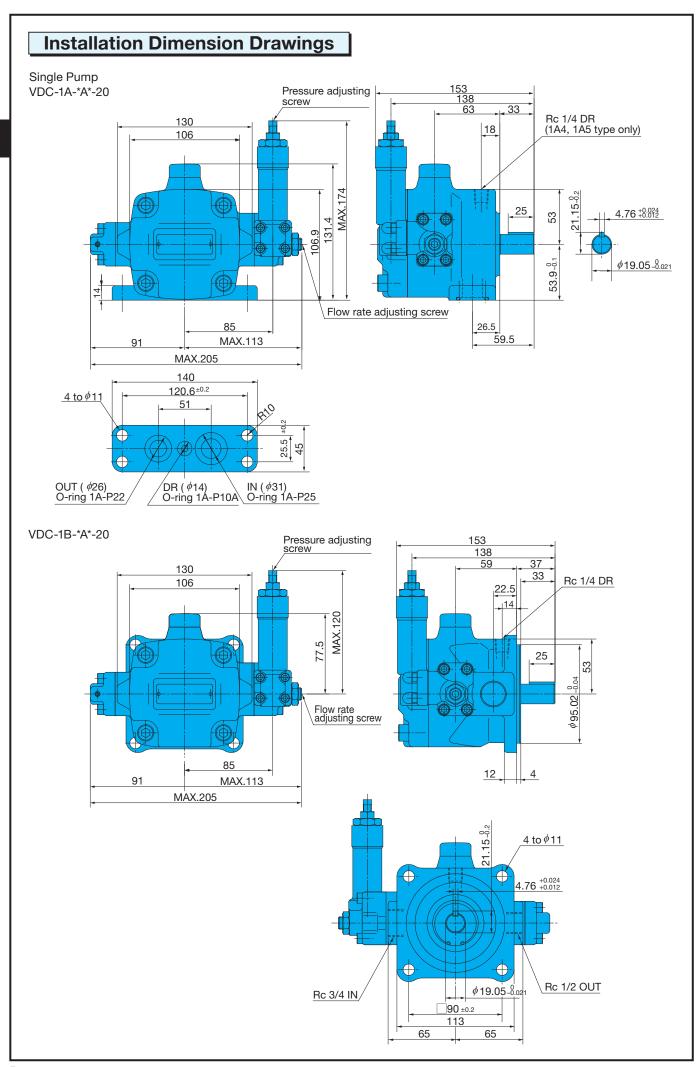
## **Explanation of model No.**

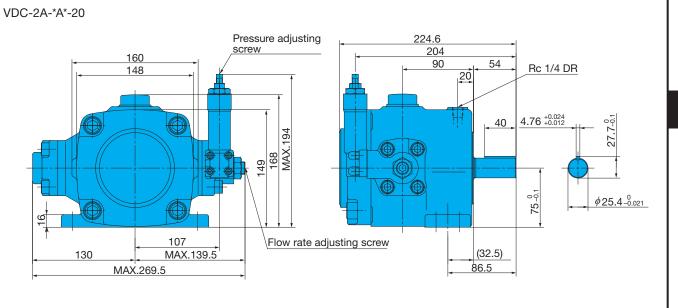
Single Pump

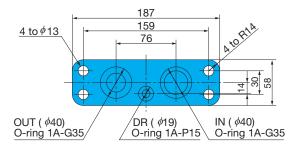


Double Pump



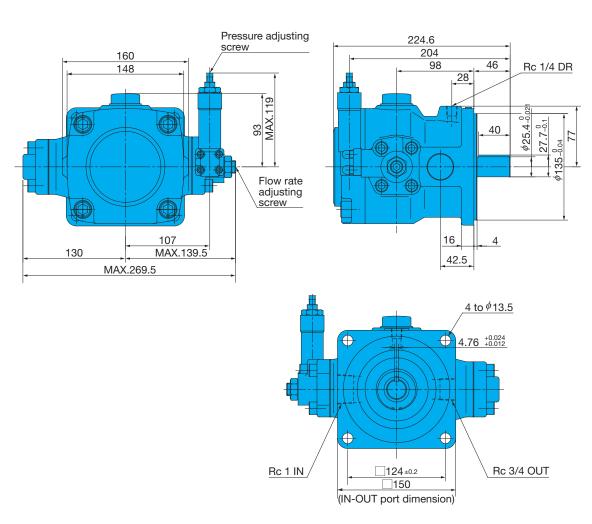


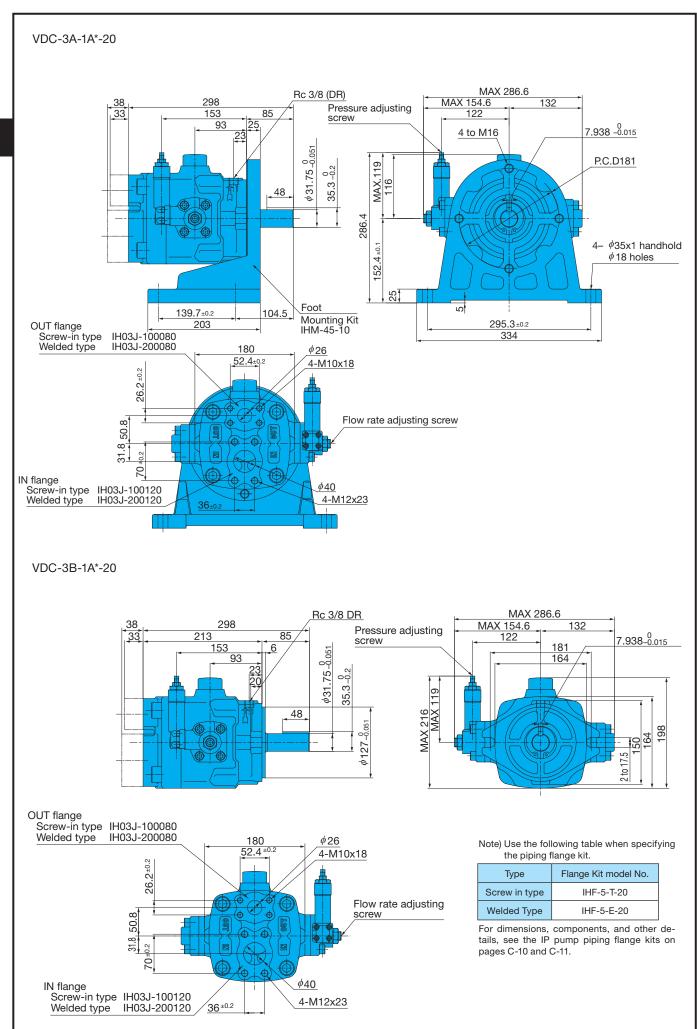




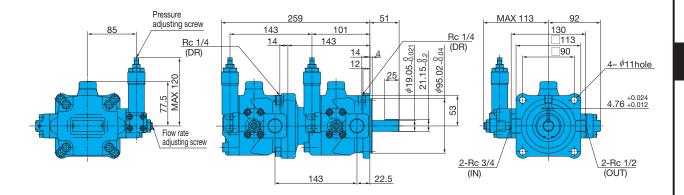
Note) O-ring 1A-\*\* refers to JIS B2401-1A-\*\*.

VDC-2B-\*A\*-20

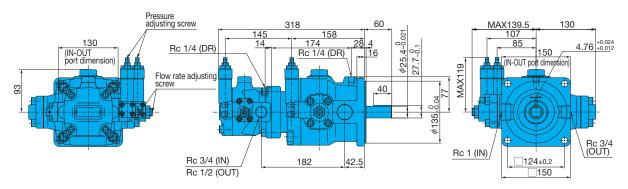




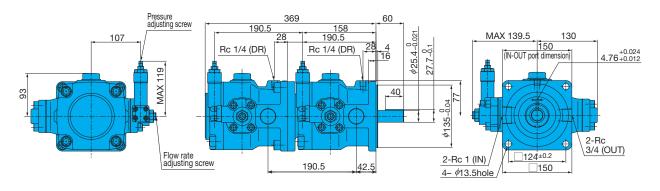
#### Double Pump VDC-11B-\*A\*-\*A\*-20



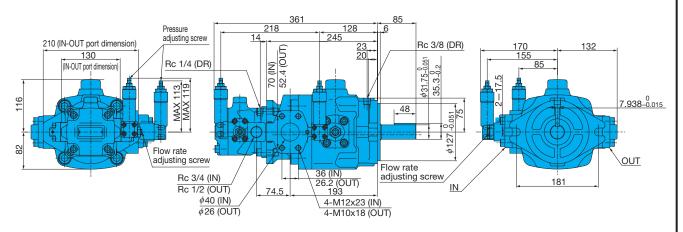
VDC-12B-\*A\*-\*A\*-20



VDC-22B-\*A\*-\*A\*-20

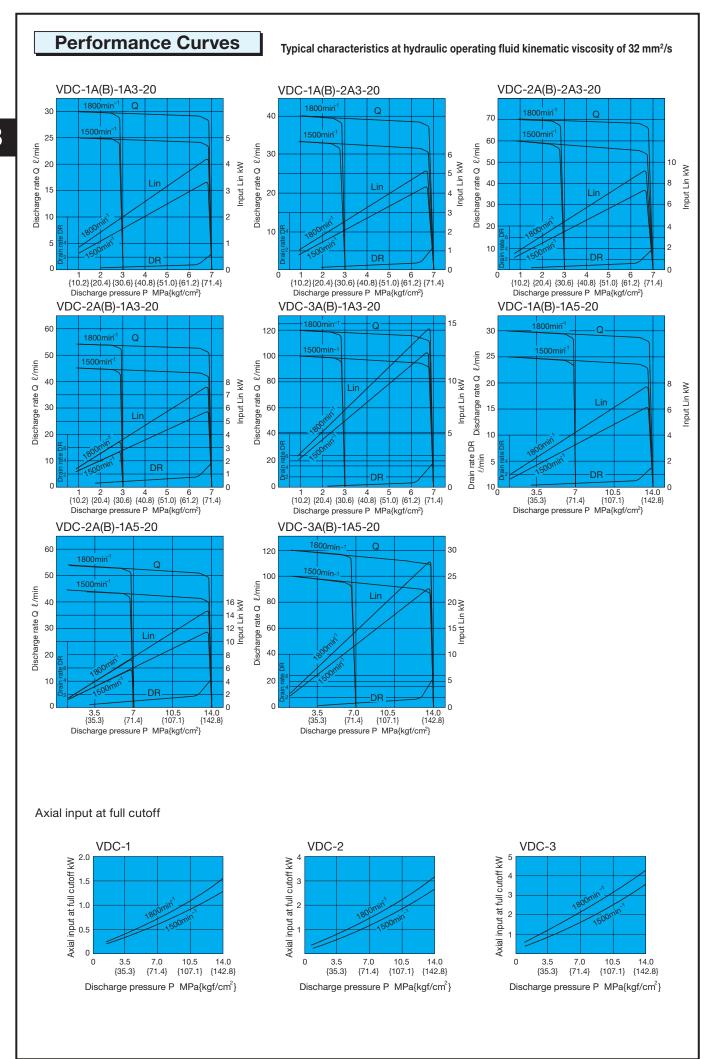


VDC-13B-\*A\*-\*A\*-20

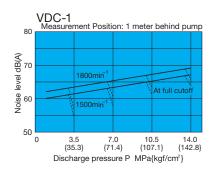


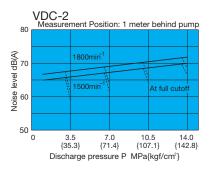
Note) 1. VDC-\*\*A has the foot mounting kit shown on page B-36 installed.

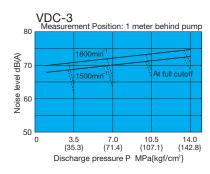
2. Rc-\* previously was PT\*.



#### Noise Characteristics

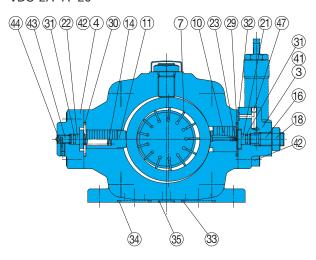


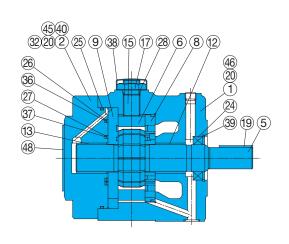




## **Cross-sectional Drawings**

VDC-1A-\*A\*-20 VDC-2A-\*A\*-20





58 59 50 51 53 61 60 49 57 52 54 56 55

Seal Component Table (VDC-1\*, VDC-2\*)

	Applicable Pump Model No.	VDC-1A-*-2	0	VDC-2A-*-2	0	
Part No.	Seal Kit Number	per VCBS-101A00		VCBS-102A00		
140.	Part Name	Part Number	Q'ty	Part Number	Q'ty	
24	Oil seal	TCV-224211-V	1	TCN-325211-V	1	
25	O-ring	S85(NOK)	1	NBR-70-1 G115	1	
26	O-ring	AS568-034	1	AS568-150	1	
27	O-ring	AS568-026	1	AS568-134	1	
28	O-ring	NBR-70-1 P14	1	NBR-70-1 P18	1	
29	O-ring	NBR-70-1 P22	1	NBR-70-1 G35	1	
30	O-ring	NBR-70-1 P20	1	NBR-70-1 G35	1	
31	O-ring	NBR-70-1 P5	2	NBR-70-1 P9	2	
32	O-ring	NBR-70-1 P6	4	NBR-70-1 P7	4	
33	O-ring	NBR-70-1 P25	1	NBR-70-1 G35	1	
34	O-ring	NBR-70-1 P22	1	NBR-70-1 G35	1	
35	O-ring	NBR-70-1 P10A	1	NBR-70-1 P15	1	
36	Backup ring	VCB34-101000	1	VCB34-102000	1	
37	Backup ring	VCB34-201000	1	VCB34-202000	1	
57	O-ring	NBR-70-1 P14	1	NBR-70-1 P14	1	
58	O-ring	NBR-90 P6	3	NBR-90 P6	3	

Note)	1. Oi	l seals	are	manı	ıfacture	d by	Nipp	on Oil	Seal	Indu	ıstry	Cc
	Lto	d. (NOŁ	<).									
	2 Th	o mate	oriala	and	hardno		f tha	O rina	conf	orm	with	110

<sup>2.</sup> The materials and hardness of the O-ring conform with JIS B2401.

3. For VDR-\*B-\*-20, the seal kit number becomes VDBS-10\*B00, without the 33, 24, and 35 O-rings.

				40	Screw
				41	Screw
	B 111	D . N .	l B . M	42	Screw
rt No.	Part Name	Part No.	Part Name	43	Screw (stopper)
1	Body (1)	19	Key	44	Screw
2	Body (2)	20	Pin	45	Plug
3	Cover (1)	21	Holder	46	Plug
4	Cover (2)	22	Holder	47	Pole
5	Shaft	23	Orifice	48	Nameplate
6	Ring	24	Oil seal	49	Valve body
7	Vane	25	O-ring	50	Spool
8	Plate (S)	26	O-ring	51	Holder
9	Plate (H)	27	O-ring	52	Plunger
10	Piston (1)	28	O-ring	53	Spring
11	Piston (2)	29	O-ring	54	Retainer
12	Bearing	30	O-ring	55	Screw
13	Bearing	31	O-ring	56	Nut
14	Spring	32	O-ring	57	O-ring
15	Thrust screw	33	O-ring	58	O-ring
16	Screw	34	O-ring	59	Plug
17	Nut	35	O-ring	60	Plug

36 Backup ring

18 Nut

Part Name

Backup ring

Snap ring

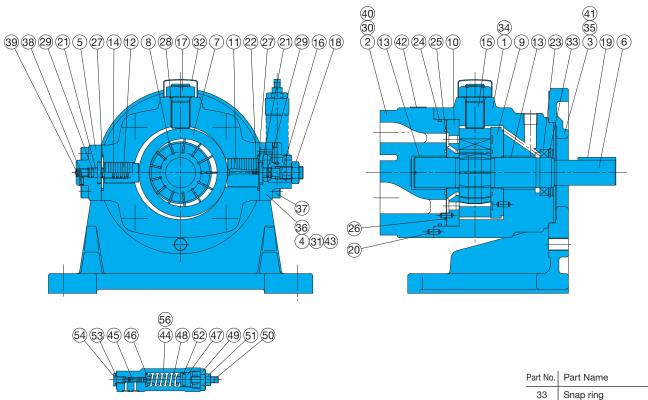
Сар

61 Screw

Part No.

38

39



### Seal Component Table (VDC-3\*)

·				
Applicable Pump Model No.	VDC-3A(B)-*-20			
Seal Kit Number	VCBS-103B00			
Part Name	Part Number	Q'ty		
Oil seal	TCN-385811-V	1		
O-ring	NBR-70-1 G130	1		
O-ring	AS568-154(NBR-90)	1		
O-ring	AS568-151(NBR-90)	1		
O-ring	NBR-70-1 G40	2		
O-ring	NBR-70-1 P22	1		
O-ring	NBR-70-1 P9	2		
O-ring	NBR-70-1 P7	2		
O-ring	NBR-70-1 P7	2		
O-ring	NBR-70-1 P14	1		
O-ring	NBR-90 P6(NBR-90)	3		
	Seal Kit Number Part Name Oil seal O-ring	Seal Kit Number         VCBS-103B0           Part Name         Part Number           Oil seal         TCN-385811-V           O-ring         NBR-70-1 G130           O-ring         AS568-154(NBR-90)           O-ring         AS568-151(NBR-90)           O-ring         NBR-70-1 G40           O-ring         NBR-70-1 P22           O-ring         NBR-70-1 P9           O-ring         NBR-70-1 P7           O-ring         NBR-70-1 P7           O-ring         NBR-70-1 P14		

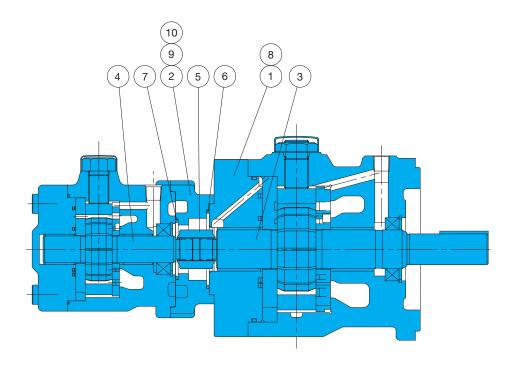
Note) 1. Oil seals are manufactured by Nippon

Part No.	Part Name	Part No.	Part Name
1	Body (1)	17	Nut
2	Body (2)	18	Nut
3	Mounting	19	Key
4	Cover (1)	20	Pin
5	Cover (2)	21	Holder
6	Shaft	22	Orifice
7	Ring	23	Oil seal
8	Vane	24	O-ring
9	Plate (S)	25	O-ring
10	Plate (H)	26	O-ring
11	Piston (1)	27	O-ring
12	Piston (2)	28	O-ring
13	Bearing	29	O-ring
14	Spring	30	O-ring
15	Thrust screw	31	O-ring
16	Screw	32	Cap

33	Snap ring
34	Screw
35	Screw
36	Screw
37	Screw
38	Screw (stopper)
39	Screw
40	Plug
41	Washer
42	Nameplate
43	Pole
44	Valve body
45	Spool
46	Holder
47	Plunger
48	Spring
49	Retainer
50	Screw
51	Nut
52	O-ring
53	O-ring
54	Plug
55	Plug
56	Screw

Oil Seal Industry Co. Ltd. (NOK).

2. The materials and hardness of the O-ring conform with JIS B2401.



Part No.	Part Name
1	Body (2)
2	Body (3)
3	Shaft (S)
4	Shaft (H)
5	Joint
6	O-ring
7	O-ring
8	Screw
9	Screw
10	Screw

Note) In the case of a double pump, use single pump parts in addition to the 10 parts listed above.

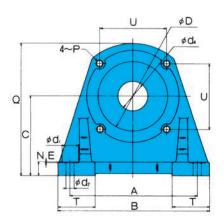
### List of Sealing Parts

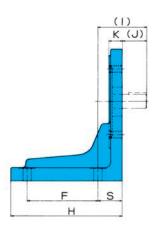
_												
	Part	Part Name -	VDC-11	A-*-*-20	VDC-12	A-*-*-20	VDC-22	A-*-*-20	VDC-13A-*-*-20			
	No.		Part Number	Q'ty	Part Number	Q'ty	Part Number	Q'ty	Part Number	Q'ty		
	6	O-ring	-		NBR-70-1 G60	1	NBR-70-1 G60	1	-			
	7	O-ring	NBR-70-1 G85	1	NBR-70-1 G45	1	NBR-70-1 G60	1	NBR-70-1 G85	1		

Note) 1. See the description of the single pump for seal parts that are not included in the list. 2. The materials and hardness of the O-ring conform with JIS B2401.

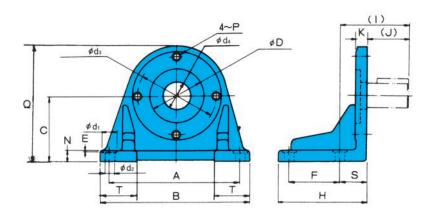
## **Foot Mounting Installation Measurement Chart**

For VDC-11A, VDC-12 and VDC-22 (for double pump)





For VDC-3A and VDC-13A



Foot Mounting	Applicable Pump		Acces	sories		Dimensions mm								
Kit Model No.	Model No.	Bolt	Q'ty	Washer	Q'ty	А	В	С	Е	F	Н			
VCM-11-20	VDC-1 VDC-11	TH-10×30	4	WS-B-10	4	171.45	204	107.95	1	95.25	150			
VCM-22-20	VDC-2 VDC-12 VDC-22	TH-12×35	4	WS-B-12	4	235	267	139.7	1	127	193			
IHM-45-10	VDC-3 VDC-13	TB-16×40	2	WP-16	2	295.3	334	152.4	1	139.7	203			

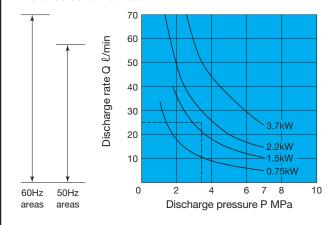
Foot Mounting		Dimensions mm														
Kit Model No.	(1)	(J)	K	N	Р	Q	S	Т	U	φD	$\phi  d_1$	$\phi  d_2$	<i>φ</i> d₃	$\phi  d_4$	kg	
VCM-11-20	66.5	33	18	18	M10	180	32.5	50	90	95.02	22	11	_	40	6.5	
VCM-22-20	84.5	40	20	20	M12	232	44.5	57.5	124	135	22	14	_	40	12.0	
IHM-45-10	104.5	60	25	25	M16	259	44.5	61	_	127	35	18	181	86	13.5	

#### **Uni-pump Specifications** (CE mark standard compliant) Single Pump Double Pump UVC - 1 A - 2 A 2 - 1.5 - 4 - 40 <u>UVC - 11 A - 2 A 2 - 2 A 2 - 3.7 - 4 - 40</u> Design number – Desian number Number of motor poles: 4(P) Number of motor poles: 4(P) Motor output (kW) Motor output (kW) 1.5, 2.2, 3.7 0.75, 1.5, 2.2, 3.7 -Shaft side pump pressure adjustment range 2: 1.5 to 3.5MPa Pressure adjustment range 2: 1.5 to 3.5MPa {15.3 to 35.7kaf/cm<sup>2</sup>} {15.3 to 35.7kaf/cm2} 3: 2.0 to 7.0MPa 3: 2.0 to 7.0MPa {20.4 to 71.4kgf/cm²} {20.4 to 71.4kgf/cm²} 4: 5 to 10.5MPa Shaft side pump flow rate characteristics {51 to 107kgf/cm<sup>2</sup>} A: Constant discharge type Flow characteristics A: Constant discharge type Shaft side pump ring size None: $30\ell/\min$ at $1800\min^{-1}$ Ring size None: $30\ell/\min_{2}$ at $1800\min^{-1}$ Head side pump pressure adjustment range: Same as the shaft side pump A: Foot type mounting Head side pump flow rate characteristics Pump size 1: VDC-1B(20D) A: Constant discharge type 2: VDC-2B(20D) Head side pump ring size Pump Type: VDC Series Uni-pump None: 30ℓ/min 2 : 40ℓ/min at 1800min<sup>-1</sup>

#### Specifications

•										
Model No.	Maximum Working Pressure	Maximum Flow	Rate ℓ/min (A*)	Maximum Flow Rate ℓ/min (2A*)						
woder No.	MPa{kgf/cm²}	50Hz	60Hz	50Hz	60Hz					
UVC- 1A	7 {71.4}	25	30	33	40					
UVC- 2A	7 {71.4}	45	54	58	70					
UVC-11A	7 {71.4}	25-25	30-30	33-33	40-40					

#### Motor selection curves



#### Selecting a motor

A: Foot type mounting
Pump size 11: VDC–11B(20D)
Pump Type: VDC Series Uni-pump

The area under a motor output curve in the graph to the left is the operating range for that motor under the rated output for that motor. Example:

To find the motor that can produce pressure of 3.5MPa and a discharge rate of 25.0 ℓ/min. Selection Process

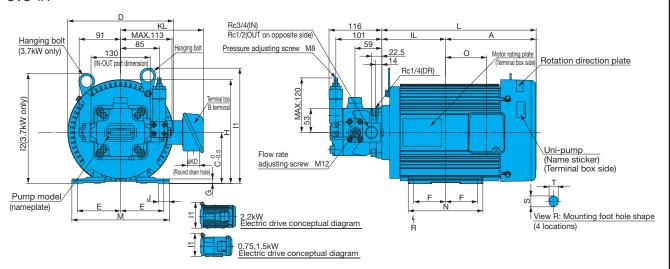
Since the intersection of the two broken lines from a pressure of 3.5MPa and discharge rate of 25.0 l/min intersect in the area under the 2.2kW curve, it means that a 2.2kW motor should be used. In the case of a double pump configuration, select a motor that is larger than the total power required by both pumps.

<sup>\*</sup> Select a uni-pump that has a pressure and flow rate that is within the range of the drive so that the drive will not overload.

<sup>\*</sup> When the startup current of the uni-pump becomes higher for the IE1 motor, breakers may need to be changed.

### **Installation Dimension Drawings**

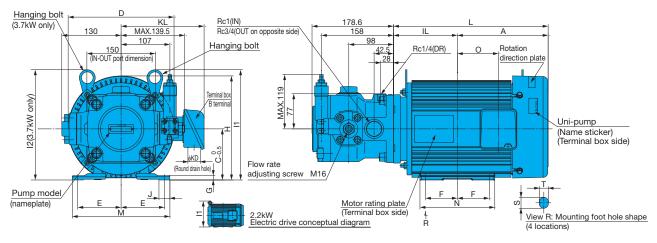
#### UVC-1A



Uni-pump		Motor Dimensions [mm]														Frame	Output kW	Weight			
On pamp	Α	IL	С	D	Е	F	G	Н	11	12	J	L	М	N	S×T	$\phi$ KD	KL	0	No.	(4 poles)	kg
UVC-1A-A2-0.75-4-40	137	105	80	152	62.5	50	4.5	160	193	-	47.5	242	165	130	25×10	27	137	65	80M	0.75	28.5
UVC-1A-A2-1.5-4-40																					
UVC-1A-A3-1.5-4-40	160.5	118.5	90	183	70	62.5	4.4	183	204	_	22	279	165	152.5	16×10	27	142	68	90L	1.5	31.5
UVC-1A-2A2-1.5-4-40																					
UVC-1A-A2-2.2-4-40				206	80																
UVC-1A-A3-2.2-4-40	179 1	133	100			70	7	203	226	-	39	312 206	170 14×12	14×12	27	153	83	100L	2.2	45.5	
UVC-1A-2A2-2.2-4-40																					
UVC-1A-A3-3.7-4-40																					
UVC-1A-A4-3.7-4-40	400	, , ,	440			70	40		٥٥٥	0.40							400	00	44014		40.5
UVC-1A-2A2-3.7-4-40	199	140	112	233	95	70	10	228	253	242	24	339	214	164	14×12	27	182	90	112M	3.7	49.5
UVC-1A-2A3-3.7-4-40																					

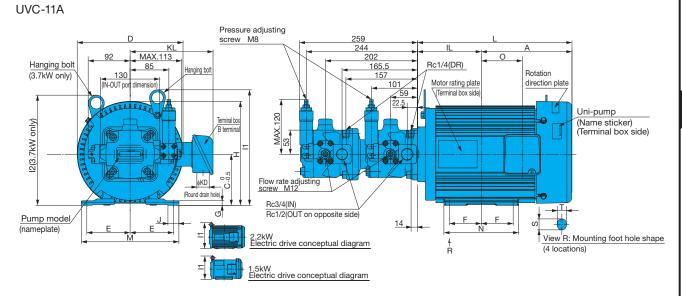
- 1. Standard drive motor is the fully enclosed fan-cooled F type.
- 2. Standard voltage for drive motor is 200 VAC, 50/60 Hz or 220 VAC, 60 Hz.
- 3. Standard terminal box is B terminal (right side viewed from pump).
- 4. See page A-21 for the characteristics of the drive motor for the unipump (domestic standard 3 rating).

### UVC-2A



Uni-pump											Frame	Output kW	Weight									
On-pump	Α	IL	С	D	Е	F	G	Н	l1	12	J	L	М	N	S×T	$\phi$ KD	KL	0	No.	(4 poles)	kg	
UVC-2A-A2-2.2-4-40	170	100	100	000	00	70	_	000	000		00	010	000	170	11 10	07	150		1001	0.0	C4	
UVC-2A-A3-2.2-4-40	179	133	100	206	80	70		203	226	_	39	312	206	170	14×12	27	153	83	100L	2.2	61	
UVC-2A-A2-3.7-4-40																						
UVC-2A-A3-3.7-4-40	400								1 !	0.40		000	39 214		14×12		400		44014	0.7	05	
UVC-2A-2A2-3.7-4-40	199	140	112	233	95	70	10	228	253	242	24	339		164		27	182	90	112M	3.7	65	
UVC-2A-2A3-3.7-4-40																						

- 1. Standard drive motor is the fully enclosed fan-cooled F type.
- 2. Standard voltage for drive motor is 200 VAC, 50/60 Hz or 220 VAC, 60 Hz.
- 3. Standard terminal box is B terminal (right side viewed from pump).
- 4. See page A-21 for the characteristics of the drive motor for the unipump (domestic standard 3 rating).



Uni-pump		Motor Dimensions [mm]															Tallie	Output kW	weight		
- 1 1-	Α	IL	С	D	Е	F	G	Н	11	12	J	L	М	Ν	S×T	$\phi$ KD	KL	0	No.	(4 poles)	kg
UVC-11A-A2-A2-1.5-4-40																					
UVC-11A-A2-A3-1.5-4-40	160.5	118.5	90	183	70	62.5	4.4	183	204	_	22	279	165	152.5	16×10	27	142	68	90L	1.5	42
UVC-11A-A3-A3-1.5-4-40																					
UVC-11A-A2-A2-2.2-4-40				206																2.2	
UVC-11A-A2-A3-2.2-4-40	179	133	100		80	70	7	203	226	_	39	312	206	170	14×12	27 1	153	83	100L		56
UVC-11A-A3-A3-2.2-4-40	179	133	100				l '	203	220	_	39	012	200				155	03			30
UVC-11A-2A2-2A2-2.2-4-40																					
UVC-11A-A2-A2-3.7-4-40																					
UVC-11A-A2-A3-3.7-4-40																					
UVC-11A-A3-A3-3.7-4-40	199	140	112	233	95	70	10	228	253	242	24	339	214	164	14×12	27	182	90	112M	3.7	60
UVC-11A-2A2-2A2-3.7-4-40							"														
UVC-11A-2A2-2A3-3.7-4-40																					

- 1. Standard drive motor is the fully enclosed fan-cooled F type. 2. Standard voltage for drive motor is 200 VAC, 50/60 Hz or 220 VAC, 60 Hz.
- 3. Standard terminal box is B terminal (right side viewed from pump).
- 4. See page A-21 for the characteristics of the drive motor for the unipump (domestic standard 3 rating).