

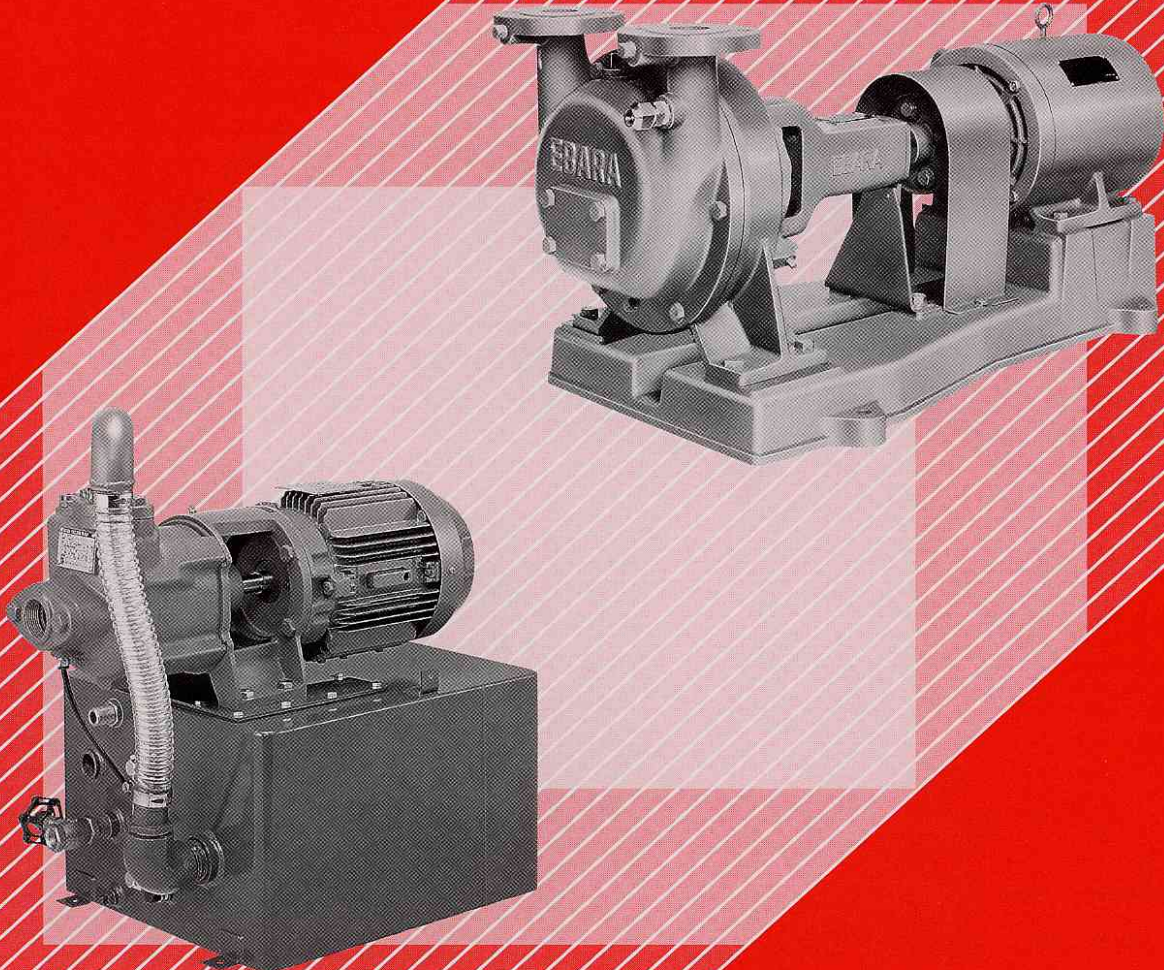


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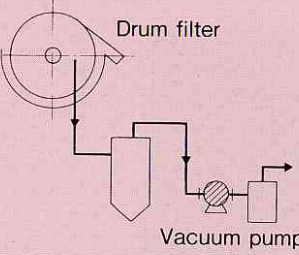
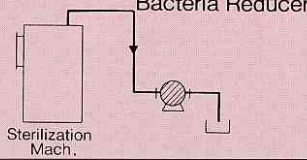
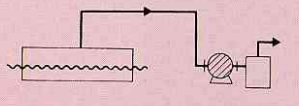

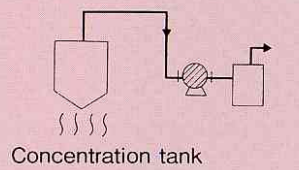
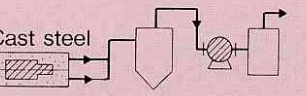
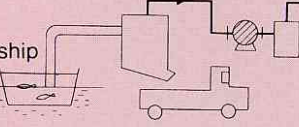
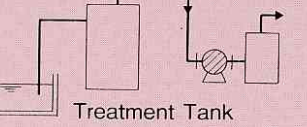
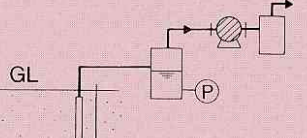
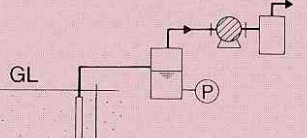
CF4201UE

WATER RING VACUUM PUMPS

Model **NVD•NV**



Applications

Applications of water ring pump			
APPLICATION	EXAMPLES	APPLICATION	EXAMPLES
Vacuum dehydration 	Vacuum filter (water treatment) belt filter drum filter dying dehydrator Product filtering process for starch, aluminum	Medical Equipment 	Bacteria Reduction Waste Suction (for operation) Saliva Suction (Dental)
Vacuum air extraction 	Plastic Production Air Extraction PCB Extraction Cable Extraction Freezing Extraction Process, dehydration	Air Volume Measurement Laboratories 	Carburetor Testing for automobiles Water Flow Volume Measurement Device
Vacuum drying, concentration 	Vacuum Dryer (Low Temperature) Vacuum Concentration Can Condensation of Food	Vacuum Molding Vacuum dissolution 	V-Process Molding
Vacuum handling 	Fish handling Dust conveying	Syphon 	Vacuum Tank Suction, Sewage Treatment
		Pump Priming Waste Oil Reclamation 	Pump Installation Waste oils Reclamation
		General Engineering 	Well-Point Engineering Process Foul Water Drain for tunnel construction sites

Specifications

Size&Model	20~32 NVD	40~65 NV
Temperature	Air -10°C~50°C	
Maximum vacuum rate	-93kpa (-700mmHg) (When feed water is 15°C)	
Construction: System	Water ring	Water ring
Shaft seal	Mechanical Seal	Gland Packing
Bearing	Sealed Ball Bearing (inside motor)	Sealed Ball Bearing
Connection	Special Flange	JIS 10K (thin type)
Materials Casing	Cast Iron	Cast Iron
Rotor	Bronze	Bronze
Shaft	304 stainless steel	403 stainless steel
Motor Number of poles	2Poles	4,6Poles

Standard Accessories

● φ20-32NVD

- Feed water tank..... 1
- Companion flange with bolts..... 1set

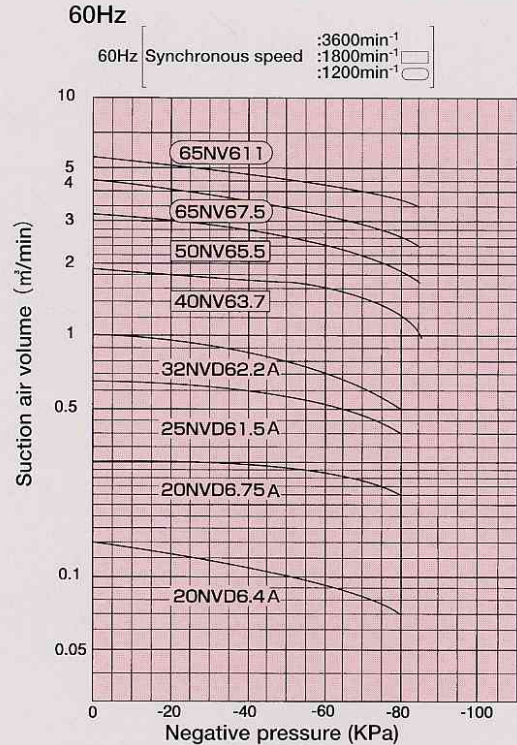
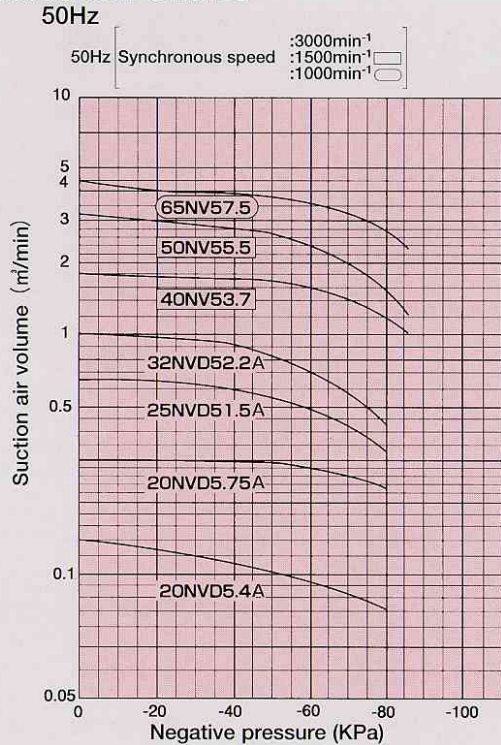
Features

1. Water ring type which performs well even if liquid is mixed with air.
 2. Rotary type with no contacting parts except for bearings and shaft seal provides for efficient operation and maintenance, with less chance for malfunctions.
 3. Great flexibility permitted for layouts due to compact light weight construction.
 4. Stable operation possible under high vacuum conditions.
 5. Type NVD combines pump and feed water tank in one unit so that water is automatically supplied to the vacuum pump to reduce noise.
- Also available, an exclusive feed water tank for Type NV.

● φ40-65NV

- Feed water tank..... 1
- Common base..... 1
- Coupling..... 1set
- Coupling guard..... 1
- Companion flange with bolts..... 1set

Selection Charts



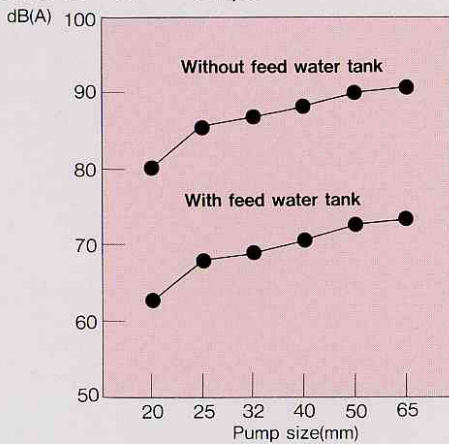
Symbols: 20 NVD 5 . 4 A

Motor output: kW
Frequency 50 Hz: 5
60 Hz: 6

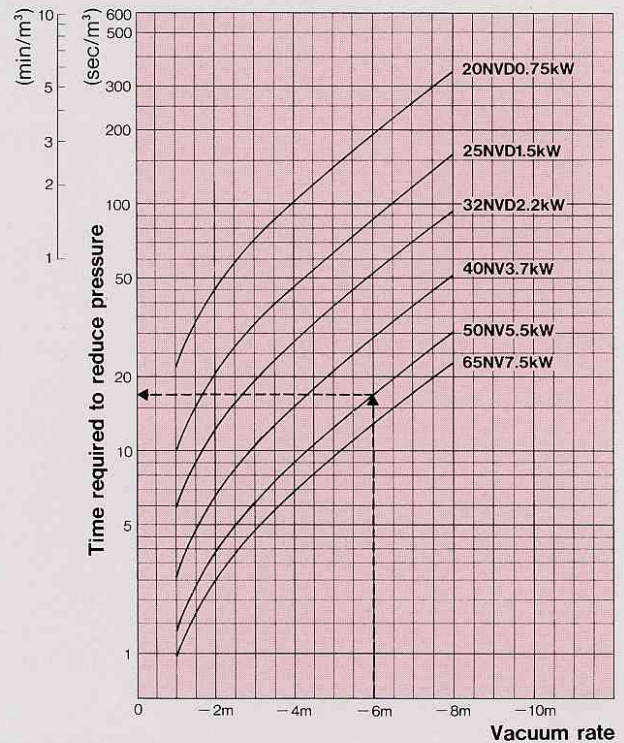
Model
Size: mm

Noise Data

Shown in the diagram given below are noise rates measured at 1m from the feed water tank outlet, when the vacuum rate of the water-ring vacuum pump in operation is at $-54 \sim -67\text{kpa}$

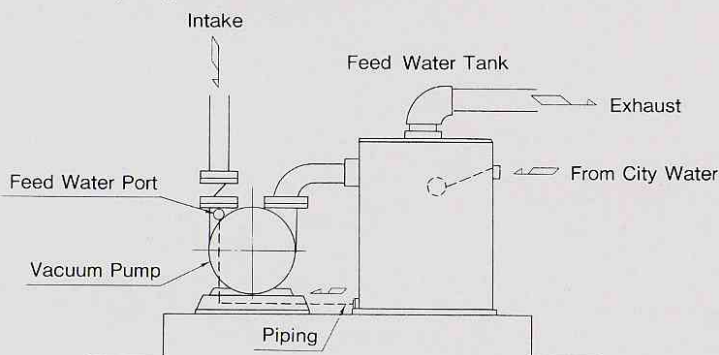


Time Required



Installation

Follow the diagram below when connecting piping to vacuum pump with feed water tank.



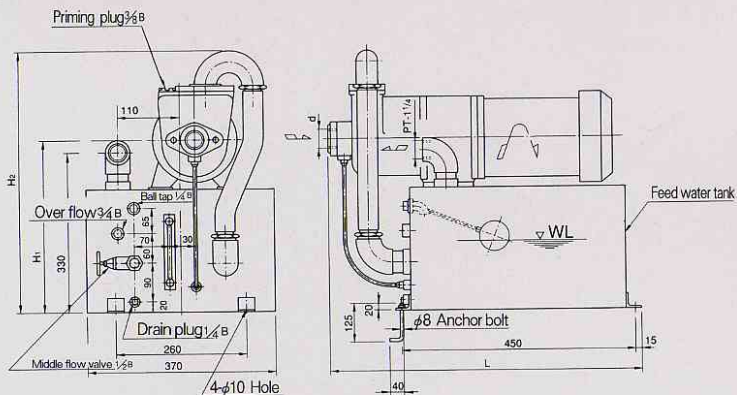
[Question]

How long will it take to reduce the pressure of air in a 10m^3 container to -6m using a pump of 50 NV 5.5kW capacity?

[Answer]

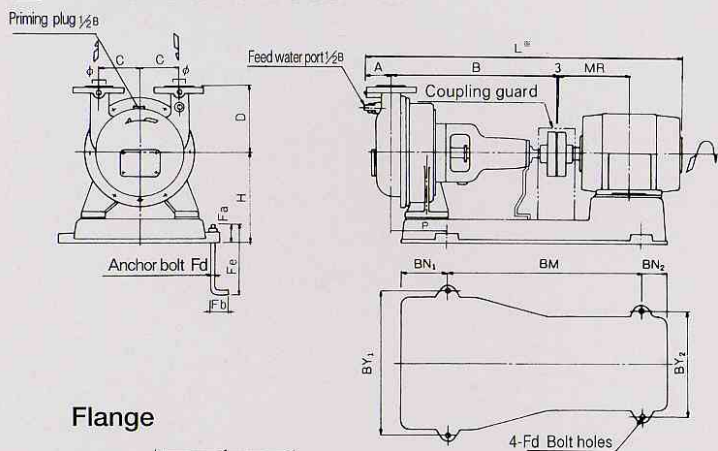
Intersecting point of -6m and 50 NV 5.5kW reads $17\text{sec}/\text{m}^3$.
Therefore, the required time should be $17\text{sec}/\text{m}^3 \times 10 = 170$ seconds = 2 minutes 50 seconds.

Dimensions Model NVD

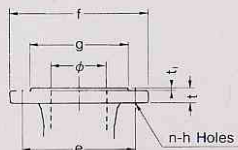


										Unit:mm	
Frequency Hz	Model	Output kW	d	L	H ₁	H ₂	Tank cap. ℓ	Weight (Mass)kg			
50	20NVD5.4A	0.4	Rc ³ / ₄	537	345	545	25	40			
	20NVD5.75A	0.75	Rc ³ / ₄	556		565		46			
	25NVD51.5A	1.5	Rc1	591	370	565		54			
	32NVD52.2A	2.2	Rc1 ¹ / ₄	623		590		58			
60	20NVD6.4A	0.4	Rc ³ / ₄	537	345	535	25	39			
	20NVD6.75A	0.75	Rc ³ / ₄	558		555		45			
	25NVD61.5A	1.5	Rc1	603	370	565		52			
	32NVD62.2A	2.2	Rc1 ¹ / ₄	634		590		56			

Dimensions Model NV

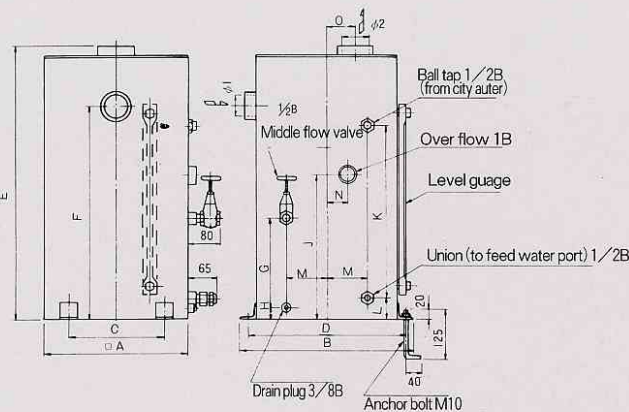


Flange



Unit:mm

Model	φ	g	e	f	t	n	h
40NV	40	81	105	140	18	2	4
50NV	50	96	120	155	18	2	4
65NV	65	116	140	175	18	2	4



Feed water tank

Unit:mm

Model	Pump	φ ₁	φ ₂	□ A	B	C	D	E	F	G
NWT-5	40,50NV	Rp2	Rp2 ¹ / ₂	350	430	230	390	675	535	225
NWT-10	65NV	Rp2 ¹ / ₂	Rp3	440	520	280	480	820	655	305

Model	Pump	H	J	K	L	M	N	O	Net cap. ℓ	Weight(Mass) kg
NWT-5	40,50NV	25	360	430	50	100	50	80	45	32
NWT-10	65NV	25	495	565	50	140	90	100	100	52

Note: Open middle flow valve and lower water temperature in tank by supplying water when the water temperature is over 40 degrees centi-grade for prolonged period operation.

										Unit:mm														
Frequency Hz	Model	Output kW	Pole	Pump								Weight kg	Motor		Common base				Anchor bolt				Total weight (Mass) kg	
				φ	A	B	C	D	H	L*	P		Frame No.	MR	BN ₁	BN ₂	BM	BY ₁	BY ₂	Fd	Fℓ	Fa		Fb
50	40NV53.7	3.7	4P	40	70	454	110	180	250	861	149	44	112M	200	130	70	540	400	290	M12	250	50	50	109
	50NV55.5	5.5	4P	50	77.5	513	115	180	265	984.5	228	52	132S	239	150	75	600	400	350	M16	315	65	63	143
	65NV57.5	7.5	6P	65	87.5	513	125	240	295	1131.5	213	87	160M	323	150	190	620	440	400	M16	315	65	63	221
60	40NV63.7	3.7	4P	40	70	473	100	160	230	880	183	39	112M	200	130	60	540	290	290	M12	250	50	50	95
	50NV65.5	5.5	4P	50	77.5	533	105	160	230	1004.5	228	47	132S	239	130	150	540	350	350	M12	250	50	50	130
	65NV67.5	7.5	6P	65	87.5	530.5	120	210	290	1149	250.5	76	160M	323	170	140	660	440	440	M16	315	65	63	215
	65NV611	11	6P	65	87.5	513	125	240	295	1175.5	213	87	160L	345	150	190	620	440	400	M16	315	65	63	239

Note: Dimensions marked * of TEFC Motors are different from the above list.

*All specifications subject to change without notice.

In this catalog, the particulars in () are in accordance with the International System of Units(SI) and given for reference only.



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