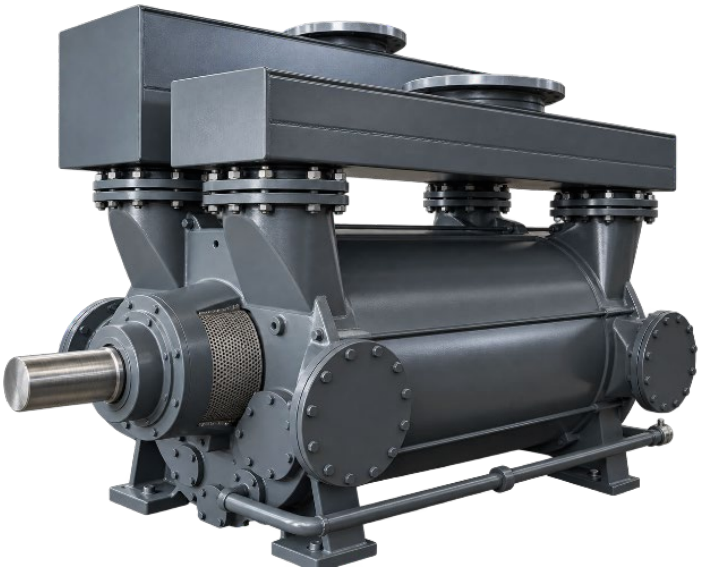
LIQUID RING VACUUM PUMPS

NBE SERIES

Pumps. Systems. Service. Support. — One Source.

SINGLE-STAGE PORT PLATE LIQUID RING VACUUM PUMP & COMPRESSOR

MODELS: NBE1, NBE3 & NBE4 ALL MODELS



Drop-in replacement for Nash* / Siemens* L200 2BE series pumps and compressors — an ideal upgrade for better efficiency or a 2BE flat plate replacement.

— FIT

Drop-in replacement for classic Siemens* 2BE1, 2BE3 & Nash* 2BE4 series; parts and repair kits available.

— MATERIALS

Standard cast iron construction with Teflon packing; optional 304 or 316 stainless steel.

— CONFIGURATION

Bare pump, direct drive, or V-belt systems; optional factory-installed mechanical seals.

— WARRANTY

Two-year factory warranty against manufacturer's defects.

Built for high-capacity duty. Proven in environmental, mining, and food applications.

Our NBE series vacuum pumps are manufactured to be a drop-in replacement for the Nash* / Siemens* L200 2BE series pumps and compressors. This series is an ideal fit for industrial market customers looking to upgrade to better efficiency or find a 2BE flat plate type vacuum pump replacement.

CAPACITY RANGE	POWER RANGE	MAX VACUUM	MODELS
170–22,500	**5–1000 HP**	**28" HgV**	**3 Series**
CFM capacity range	Motor power range	Maximum vacuum	NBE1, NBE3 & NBE4

Overview / Features / Notes

SPECIFICATION SUMMARY

Type	Single-Stage Port Plate
Service	Vacuum Pump & Compressor
Models	NBE1, NBE3 & NBE4 All Models
Power Range	5–1000 HP
Capacity Range	170–22,500 CFM
Max Vacuum	28" HgV

CONSTRUCTION

Our 10-1000 HP liquid ring vacuum pumps are designed as drop-in replacements for NBE vacuum pumps. These vacuum pumps cover an extensive array of applications with the series capacity range of 170 to 18,750 CFM. The NBE Series provides long lasting service and superior performance in environmental, mining, food, and other high-reliability, high-capacity applications. We offer the NBE1-103 to NBE1-705, NBE3-300 to NBE3-720, and NBE4-300 to NBE4-720 models, providing a vast array of selection.

FEATURES

- **Drop-in replacement for classic Siemens* 2BE1, 2BE3 & new Nash 2BE4 series**
- **Standard construction is Cast Iron with Teflon Packing.**
- **Optional 304 or 316 Stainless Steel construction.**
- **Optional factory-installed mechanical seals.**
- **Parts and repair kits available to fit Siemens 2BE1, 2BE3 & Nash* 2BE4 Series**
- **Available in bare pump, direct drive, or V-belt systems.**
- **Two-year factory warranty against manufacturer's defects.**

NOTES

NES Company is proud to offer our single-stage flat plate NBE Series liquid ring vacuum pumps. These new pumps have been designed to be drop-in replacements for classic Nash* / Siemens* 2BE1 & 2BE3 & 2BE4 Series pumps. NES Company Inc. NBE Series vacuum pumps are factory performance tested and include a 2-year warranty against manufacturer's defects.

FULL TECHNICAL DATA

The following pages cover model-by-model performance data, variation and application tables, material construction, pump dimensions, exploded views, and composite performance curves. **Contact NES** at info@nescompany.com or 800-297-3550 for application support.

Technical Data / Performance by Model

VACUUM PUMP & COMPRESSOR — ALL MODELS

Model	Replaces Siemens L200	Max Vacuum ["Hg]	Speed [RPM]	Capacity [CFM] @ 15" HgV (500 mbar)	Motor Power [HP]	Inlet [mm]	Discharge [mm]	Mounting Hole Size [mm]	Max Seal Water Usage [GPM]	Seal Water Size [mm]	Pump Weight Dry [lbs.]
NBE1-101	2BE1-101	28					***				221
NBE1-102	2BE1-102	28					***				331
NBE1-103	2BE1-103	28	1300	171	9.387	50	50	15	6.164	G3/4"	353
			1450	188	11.399						
			1625	218	13.41						
			1750	230	14.885						
			2190	277	21.456						
NBE1-151	2BE1-151	28					***				485
NBE1-152	2BE1-152	28					***				507
NBE1-153	2BE1-153	28					***				
NBE1-202	2BE1-202	28	790	341	16.0923	100	100	24	9.246	G1"	992
			880	383	18.4391						
			980	430	21.7916						
			1100	483	26.8204						
			1170	500	30.8435						
			1300	536	37.586						
NBE1-203	2BE1-203	28	790	515	22.7974	100	100	24	11.448	G1"	1124
			880	560	26.8204						
			980	662	33.5255						
			1100	706	40.2307						
			1170	765	45.5947						
			1300	795	56.3229						
NBE1-252	2BE1-252	28	565	706	33.5255	125	125	28	19.373	G1 1/4"	2006
			660	53	40.2307						
			740	970	63.028						
			820	1059	59.005						
			880	1148	69.7331						
			920	1177	76.4382						
NBE1-253	2BE1-253	28	565	1001	48.2768	125	125	28	22.895	G1 1/4"	2293
			660	1221	60.346						
			740	1383	71.0742						
			820	1516	85.8254						
			880	1633	99.2356						
			920	1692	107.9523						
NBE1-303	2BE1-303	28	472	1472	60.346	150	Side:125 / Top:150	35	37.425	25 FLG	***
			500	1530	63.6985						
			530	1619	71.0742						
			590	1813	87.1664						
			660	2031	100.5766						
			710	2178	120.692						
			740	2266	128.7381						
			790	2407	150.1944						
NBE1-305	2BE1-305	25	472	1766	60.346	150	Side:125 / Top:150	35	36.104	25 FLG	***
			500	1884	67.0511						
			530	2001	73.7562						
			590	2207	87.1664						

Model	Replaces Siemens L200	Max Vacuum ["Hg]	Speed [RPM]	Capacity [CFM] @ 15" HgV (500 mbar)	Motor Power [HP]	Inlet [mm]	Discharge [mm]	Mounting Hole Size [mm]	Max Seal Water Usage [GPM]	Seal Water Size [mm]	Pump Weight Dry [lbs.]
			660	2443	107.2817						
			710	2590	124.715						
			740	2707	134.1022						
			790	2855	154.2175						
			372	2048	73.7562						
			420	2148	87.1664						
			472	2413	104.5997						
NBE1-353	2BE1-353	25	500	2560	115.3279	200	Side:150 / Top:200	35	49.312	32 FLG	***
			530	2696	120.692						
			590	3002	158.2406						
			660	3349	202.4943						
			372	2354	80.4612						
			420	2649	93.8715						
			472	2949	113.9869						
NBE1-355 / NBE1-356	2BE1-355 / 2BE1-356	25	500	3119	127.3971	200	Side:150 / Top:200	35	47.992	32 FLG	***
			530	3286	134.1022						
			590	3584	167.6277						
			660	4002	207.8584						
			330	2943	113.9869						
			372	3237	134.1022						
			420	3649	164.9457						
NBE1-403	2BE1-403	28	472	4120	207.8584	250	Side:200 / Top:250	42	70.446	40 FLG	***
			530	4603	268.204						
			565	4885	308.435						
			330	3531	120.692						
			372	3673	147.5124						
			420	4414	174.3328						
NBE1-405 / NBE1-406	2BE1-405 / 2BE1-406	25	472	4944	214.5635	250	Side:200 / Top:250	42	64.723	40 FLG	***
			530	5444	268.2044						
			565	5812	308.435						
			266	3885	147.5124						
			298	4238	181.038						
			330	4697	201.1533						
NBE1-503	2BE1-503	28	372	5262	241.3839	***	***	***	104.789	***	***
			420	6004	308.435						
			472	6604	395.6014						
			266	4485	147.5124						
			298	5121	179.6969						
NBE1-505 / NBE1-506	2BE1-505 / 2BE1-506	25	330	5650	210.5404	***	***	***	93.818	***	***
			372	6180	260.1582						
			420	7028	319.1632						
			236	5650	214.5635						
			266	6180	257.4762						
			298	6639	301.7299						
NBE1-603	2BE1-603	28	330	7910	355.3708	***	***	***	93.782	***	***
			372	8687	469.3577						
			398	9182	549.819						
			236	6816	218.5866						
			266	7628	278.9325						
NBE1-605 / NBE1-606	2BE1-605 / 2BE1-606	25	298	8511	328.5504	***	***	***	93.782	***	***
			330	9217	391.5784						

Model	Replaces Siemens L200	Max Vacuum ["Hg]	Speed [RPM]	Capacity [CFM] @ 15" HgV (500 mbar)	Motor Power [HP]	Inlet [mm]	Discharge [mm]	Mounting Hole Size [mm]	Max Seal Water Usage [GPM]	Seal Water Size [mm]	Pump Weight Dry [lbs.]
			372	10383	480.0858						
			398	11053	549.819						
			210	8193	321.8452						
			236	9005	375.4861						
NBE1-703	2BE1-703	28	266	10418	455.9474	***	***	***	176.116	***	***
			298	11583	576.6394						
			330	12537	697.3314						
			197	9500	295.0248						
			210	10312	348.6657						
NBE1-705 / NBE1-706	2BE1-705 / 2BE1-706	25	236	11513	415.7168	***	***	***	184.041	***	***
			266	12784	506.9063						
			298	14267	616.8701						
			330	15327	744.2671						
			450	1400	58						
			490	1550	65						
			560	1790	78						
NBE3-300 / NBE3-306	2BE3-300 / 2BE3-306	24	630	1980	90	6"	6"	36	24.656	1 1/4" FLG	***
			690	2140	103						
			740	2290	118						
			810	2490	140						
			450	1910	80						
			490	2100	88						
			560	2400	108						
NBE3-320 / NBE3-326	2BE3-320 / 2BE3-326	25	630	2690	128	6"	6"	36	33.462	1 1/4" FLG	***
			690	2890	148						
			740	3020	165						
			810	3200	190						
			300	2472	80.4613						
			340	2884	105.9407						
			390	3296	109.9638						
			440	3679	123.374						
NBE3-400	2BE3-400	25	490	4061	147.5124	250	250	42	43.589	50 FLG	***
			530	4414	190.4251						
			570	4591	214.5625						
			610	5003	244.066						
			300	3267	87.1664						
			340	3914	134.1022						
			390	4444	166.2867						
			440	5003	198.4712						
NBE3-420	2BE3-420	25	490	5533	233.3378	250	250	42	59.439	50 FLG	***
			530	5915	252.1121						
			570	6327	295.0248						
			610	6769	333.9144						
			230	4414	150.1944						
			260	5238	168.9688						
			300	5945	217.2455						
NBE3-500	2BE3-500	25	340	6769	254.7942	300	300	42	80.573	50 FLG	***
			380	7416	301.7299						
			420	8093	355.3708						
			470	9064	462.6525						
NBE3-520	2BE3-520	25	230	5297	174.3328	300	300	42	97.744	50 FLG	***

Model	Replaces Siemens L200	Max Vacuum ["Hg]	Speed [RPM]	Capacity [CFM] @ 15" HgV (500 mbar)	Motor Power [HP]	Inlet [mm]	Discharge [mm]	Mounting Hole Size [mm]	Max Seal Water Usage [GPM]	Seal Water Size [mm]	Pump Weight Dry [lbs.]
			260	6357	207.8584						
			300	7298	261.4993						
			340	8240	308.435						
			380	9123	368.781						
			420	9947	429.127						
			470	11006	36.40874						
			200	6357	201.1533						
			230	7530	268.2044						
			260	8534	303.0709						
NBE3-600	2BE3-600	25	290	9417	332.5734	350	350	48	111.834	80 FLG	***
			320	10300	415.7168						
			350	11183	469.2577						
			400	12655	603.4598						
			200	7652	241.3839						
			230	9123	308.435						
			260	10477	368.781						
NBE3-620	2BE3-620	25	290	11477	435.8321	350	350	48	136.05	80 FLG	***
			320	12507	502.8832						
			350	13537	569.9343						
			400	15303	724.1518						
			180	8829	281.6146						
			210	10594	362.0759						
			240	12301	455.9474						
			270	13537	522.9985						
NBE3-670	2BE3-670	25	300	14832	603.4598	350	350	48	160.266	80 FLG	***
			320	15774	60.5109						
			330	16363	704.0365						
			370	18128	858.254						
			170	11036	368.781						
			190	12802	455.9743						
			210	14126	509.5883						
NBE3-720	2BE3-720	25	240	15892	603.4598	400	400	48	91.526	80 FLG	***
			270	17657	704.0365						
			300	19717	838.1387						
			340	22072	1039.2919						
			450	1410	55						
			490	1550	61						
			560	1780	78						
NBE4-300 / NBE4-306	2BE4-300 / 2BE4-306	24	630	1990	90	***	***	***	***	***	***
			690	2125	105						
			740	2290	118						
			810	2490	140						
			450	1900	80						
			490	2100	90						
			560	2400	105						
NBE4-320 / NBE4-326	2BE4-320 / 2BE4-326	24	630	2690	128	***	***	***	***	***	***
			690	2880	145						
			740	3025	165						
			810	3200	190						
NBE4-400 / NBE4-406	2BE4-400 / 2BE4-406	24	300	2225	83	***	***	***	***	***	***
			327	2450	93						

Model	Replaces Siemens L200	Max Vacuum ["Hg]	Speed [RPM]	Capacity [CFM] @ 15" HgV (500 mbar)	Motor Power [HP]	Inlet [mm]	Discharge [mm]	Mounting Hole Size [mm]	Max Seal Water Usage [GPM]	Seal Water Size [mm]	Pump Weight Dry [lbs.]
			360	2750	108						
			400	3050	123						
			450	400	148						
			514	3850	180						
			539	4000	190						
			610	4500	240						
NBE4-420 / NBE4-426	2BE4-420 / 2BE4-426	24	300	2900	115	***	***	***	***	***	***
			327	3250	130						
			360	3650	145						
			400	4050	165						
			450	4550	200						
			514	5050	240						
			539	5250	265						
			610	4750	325						
NBE4-500 / NBE4-506	2BE4-500 / 2BE4-506	24	229	4000	145	***	***	***	***	***	***
			257	4550	175						
			277	4950	190						
			300	5400	215						
			327	5850	240						
			360	6200	275						
			400	7000	320						
			420	7350	350						
			470	8150	425						
NBE4-520 / NBE4-526	2BE4-520 / 2BE4-526	25	229	4600	180	***	***	***	***	***	***
			257	5350	200						
			277	5800	220						
			300	6350	256						
			327	6950	280						
			360	7550	320						
			400	8200	380						
			420	8600	420						
			470	9200	520						
NBE4-600 / NBE4-606	2BE4-600 / 2BE4-406	25	200	5750	210	***	***	***	***	***	***
			225	6600	50						
			257	7600	300						
			277	8200	340						
			300	8750	375						
			327	9450	425						
			355	10200	475						
			400	11400	590						
NBE4-620 / NBE4-626	2BE4-620 / 2BE4-626	25	200	6650	260	***	***	***	***	***	***
			225	7650	300						
			257	8950	350						
			277	9600	380						
			300	10400	440						
			327	11150	500						
			355	11850	580						
			400	12900	725						
NBE4-670 / NBE4-676	2BE4-670 / 2BE4-676	25	180	7400	325	***	***	***	***	***	***
			200	8500	350						
			225	9800	380						

Model	Replaces Siemens L200	Max Vacuum ["Hg]	Speed [RPM]	Capacity [CFM] @ 15" HgV (500 mbar)	Motor Power [HP]	Inlet [mm]	Discharge [mm]	Mounting Hole Size [mm]	Max Seal Water Usage [GPM]	Seal Water Size [mm]	Pump Weight Dry [lbs.]
			257	11400	460						
			277	12350	525						
			300	13200	600						
			327	14200	680						
			370	15300	825						
NBE4-720 / NBE4-726	2BE4-720 / 2BE4-726	25	164	9000	375	***	***	***	***	***	***
			180	10100	400						
			200	11550	450						
			225	13250	525						
			257	15250	650						
			277	16300	740						
			300	17450	825						
			340	18750	1000						

*** For more information, please contact your NES representative.

Variation / Application Tables

VARIATION TABLE

Variations	Particulars
Metallurgy	Standard Cast Iron
	Stainless Steel 304 cladded
	Stainless Steel 316L cladded
	Duplex Steel cladded
	Bronze cladding
Direction	Clockwise
	Counter-Clockwise Rotation
Purpose	Vacuum Pump
	Compressor
Integrated Gear	Available as integrated and non-integrated
Shaft	Single Extended
	Double extended
Sealing	Standard Available as Gland Packing
	Available with Single Seal
	Available with Single Cartridge Seal
	Available with Dual Cartridge Seal and Seal Pot
Configuration	Once Through
	Partial Recovery
	Full Sealant Recovery
Other System Configuration	Simplex
	Duplex
	Triplex
	Quadruplex

APPLICATION TABLE

Applications
Power plants
Exhaust condensers
Drying
Exhausting
Filtering
Paper Making Process

Materials / Dimensions

MATERIAL CONSTRUCTION

Housing & Heads	Cast Iron Standard Stainless steel 304 Stainless Steel 316
Rotor	
Port Plate	
Shaft	
Seal	Teflon packing seal standard

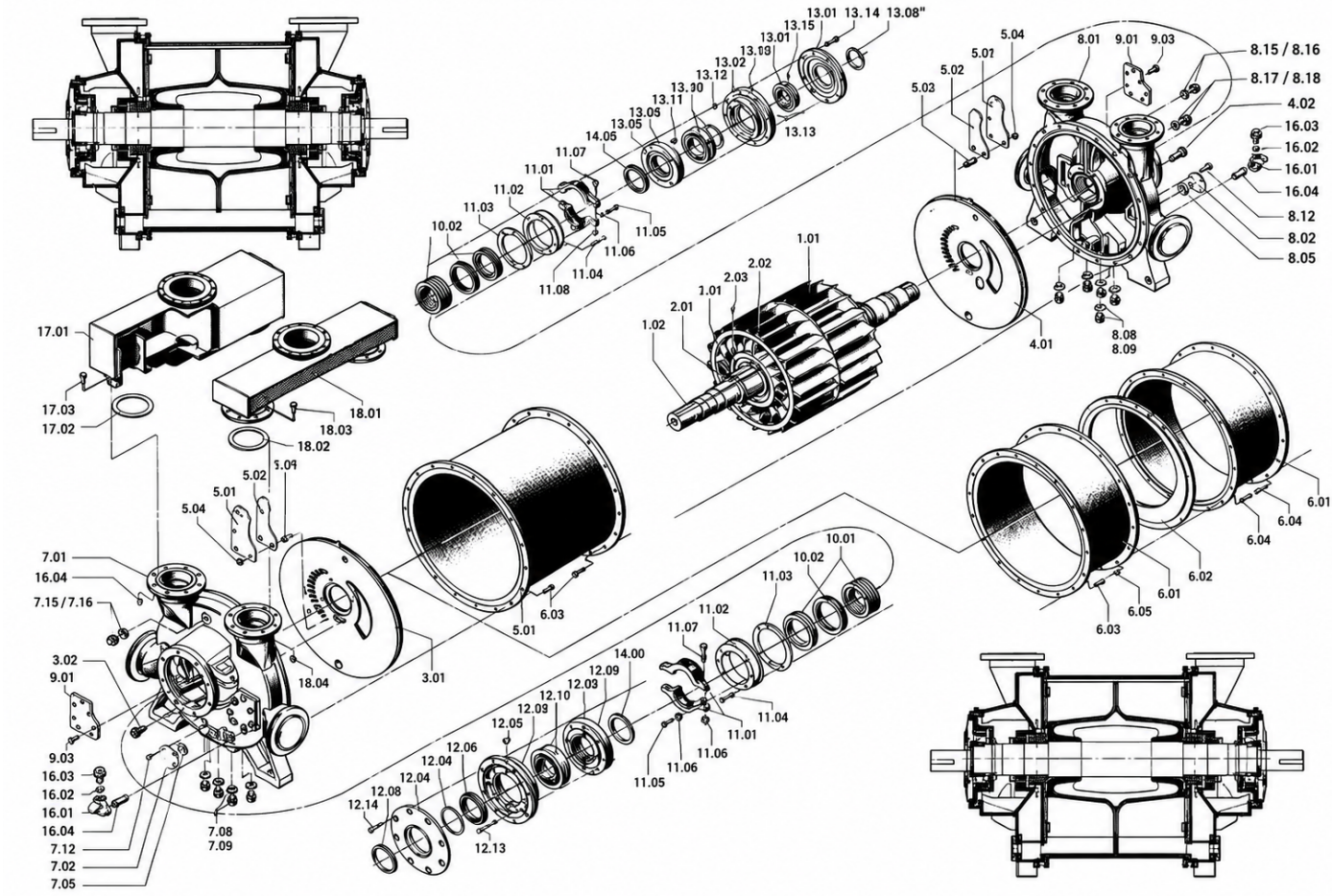
PUMP LENGTH, HEIGHT & WIDTH — NBE1 / NBE3 / NBE4

Model	Length (Inches)	Height (Inches)	Width (Inches)
NBE1-103	32	14	20
NBE1-202	39	24	28
NBE1-203	44	24	28
NBE1-252	49	30	32
NBE1-253	55	30	32
NBE1-303	63	36	40
NBE1-305	67	36	40
NBE1-353	69	42	46
NBE1-355	75	42	46
NBE1-403	80	50	54
NBE1-405, 406	80	50	54
NBE1-503	**	**	**
NBE1-505, 506	**	**	**
NBE1-603	**	**	**
NBE1-605, 606	**	**	**
NBE1-703	**	**	**
NBE1-705, 706	**	**	**
NBE3/4-300, 306	73.8	35.6	38.2
NBE3/4-320, 326	83.0	35.6	38.2
NBE3/4-400, 406	92.9	45.7	50.6
NBE3/4-420, 426	104.3	45.7	50.6
NBE3/4-500, 506	114.7	57.1	60.7
NBE3/4-520, 526	124.5	57.1	60.7
NBE3/4-600, 606	123.8	67.8	70.9
NBE3/4-620, 626	135.4	67.8	70.9
NBE3/4-670, 676	147.6	73.0	75.4
NBE3/4-720, 726	155.3	78.1	82.5

**For more information, please contact your NES representative.

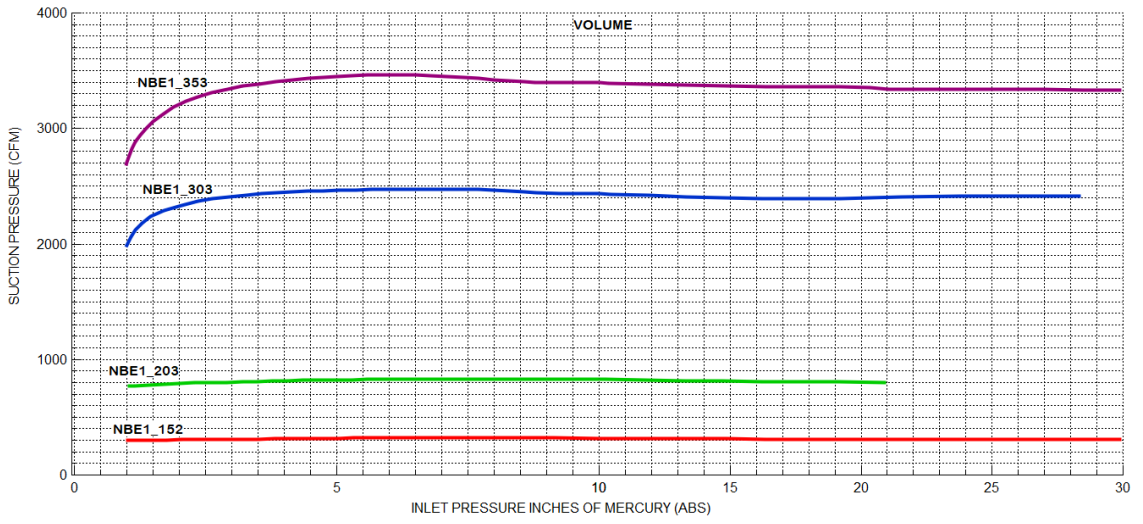
Exploded View / Reference Drawings

EXPLODED VIEW — NBE3 & NBE4

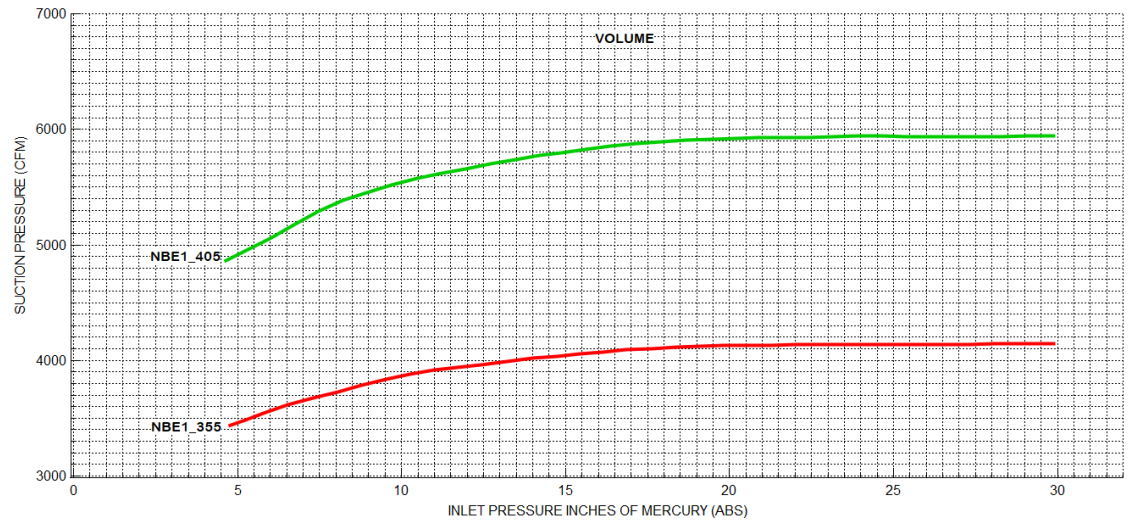


Composite Curves / NBE1

COMPOSITE CURVE: VOLUME, NBE1 (NBE1-152, 203, 303, 353)

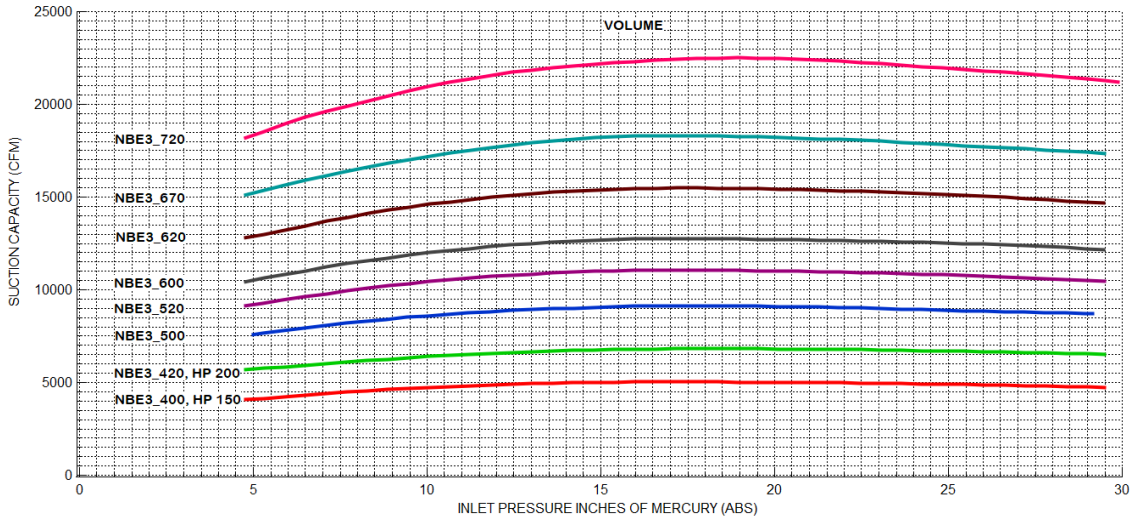


COMPOSITE CURVE: VOLUME, NBE1 (NBE1-355, 405)

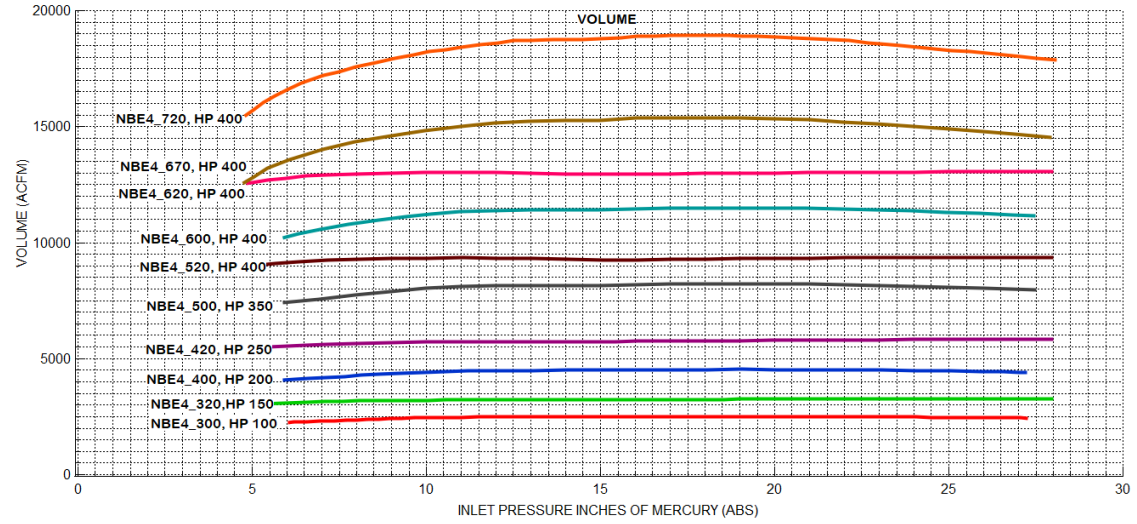


Composite Curves / NBE3 & NBE4

COMPOSITE CURVE: VOLUME, NBE3



COMPOSITE CURVE: VOLUME, NBE4



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