

NL Series

Liquid Ring Vacuum Pumps

Models: NL200, NL300, NL400, NL700, NL1000, NL1500, NL2000, NL3000, NL4000, NL6000, NL9000, NL14000



Description: Single-Stage Liquid Ring Vacuum Pump

Type: Dual Cone

Models: NL400, NL700, NL1000,
NL1500, NL2000, NL3000, NL4000,
NL6000, NL9000, NL14000

Power Range: 25-550 HP

Capacity Range: 300-10,000 CFM

Max Vacuum: 28" Hg

OVERVIEW

NES Company Inc. NL Series single stage/dual cone vacuum pumps are designed to be drop-in replacements for the Nash* Classic CL Series. Available models include NL- 400, 700, 1000, 1500, 2000, 3000, 4000, 6000, 9000, and 14000 (up to 10,000 CFM). Standard Construction is Cast Iron with Teflon packing. NES NL Series vacuum pumps are performance-tested and include a 2-year warranty against manufacturer's defects.

FEATURES

- **Drop-in replacement** for classic Nash* CL 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 Nash* CL Series
- Available in bare pump, direct drive or V-belt systems
- 2-year factory warranty against manufacturer's defects.



CONSTRUCTION

Available in NL- 400, 700, 1000, 1500, 2000, 3000, 4000, 6000, 9000, and 14000 (up to 10,000 CFM). Standard construction is cast iron with Teflon packing with options for Stainless Steel 304 / 306 / Bronze Cladding. The NL Series is designed to be a drop-in replacement with direct internal and external part interchangeability with the Nash* Classic CL Series.

NOTES

NES Company is proud to offer our single stage/dual cone NL Series liquid ring vacuum pumps. These conical lobe liquid ring vacuum pumps have been designed to be drop-in replacements for classic Nash* CL Series pumps. NES pumps are factory performance tested and include a 2-year warranty against manufacturer's defects.

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GENERAL TECHNICAL DATA

[illegible]

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NES
COMPANY

NL2001	19.5	450	1600	75	6 FL	5 FL	10 - 60	1 NPT	2934	3230
		500	1790	100						
		550	1940	100						
		590	2090	125						
		640	2200	150						
NL2002	24.5	450	1450	75						
		500	1700	75						
		550	1950	100						
		590	2050	100						
		640	2210	125						
NL2003	27	470	1140	75						
		500	1300	75						
		550	1500	75						
		590	1700	100						
		640	1740	100						
NL3001	19.7	400	2550	125	8 FL	6 FL	10 - 70	1 NPT	4850	5340
		450	2800	125						
		500	3000	150						
		530	3200	200						
NL3002	24.5	400	2350	125						
		450	2780	125						
		500	3075	150						
		530	3200	200						
NL3003	27.5	400	1400	100						
		450	1620	125						
		500	2100	125						
		530	2280	150						
NL4001	17.5	300	3190	125	10 FL	8 FL	30 - 100	1 – 1/2 NPT	8400	9408
		327	3500	150						
		360	3850	150						
		400	4300	200						
		450	4800	250						
NL4002	24	327	3195	150						
		360	3500	200						
		400	3800	200						
		450	3390	250						
NL4003	27	327	2400	125						
		360	2980	125						
		400	3190	200						
		450	3700	200						
NL6001	18	257	4900	200	12 FL	10 FL	40 - 140	1 – 1/2 NPT	14000	15000
		377	5400	250						
		300	6000	250						
		327	6500	300						
		360	7000	350						
NL6002	22.5	277	5100	250						
		300	5600	250						
		327	6200	300						
		360	6850	350						
NL6003	26.5	277	3400	200						
		300	4000	250						
		327	4400	300						
		360	4950	350						

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NL9001	18	215	7150	250	14 FL	12 FL	50 - 200	2 NPT	19000	21300						
		240	7900	300												
		257	8750	350												
		277	9250	400												
		300	9900	400												
NL9002	23	240	7500	350												
		257	8200	400												
		277	8900	400												
		300	9550	400												
NL9003	27	257	6750	350												
		277	7500	400												
		300	8100	400												
NL14001	17.5	240	11600	400							18 FL	14 FL	80 - 300	3 NPT	31000	-
		257	12600	400												
		277	14000	400												
		300	14900	400												
NL14002	24.5	240	11550	400												
		257	12450	400												
		277	14000	400												
		300	14800	400												
NL14003	26.5	257	9950	400												
		277	11150	400												
		300	12000	400												

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Variation Table

Variations	Particulars
Metallurgy	Standard Cast Iron
	Stainless Steel 304
	Stainless Steel 316L
	Duplex Steel
	Bronze
Direction	Clockwise
	Counter- Clockwise Rotation
Purpose	Vacuum Pump
	Compressor
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

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Vacuum pump Length, Height, Breadth, Key way, Shaft diameter

Model	Length (Inches)	Height (Inches)	Breadth (Inches)	Key Way (Inches)		Shaft diameter (Inches)
NL200	25	8/3/2004	10/3/2004	5/16 x 5/32		1.375 ± 0.005
NL300	32	16	13-1/2	3/8 x 3/16		1.500 ± 0.0005
NL400	35-1/2	18	15-1/2	3/8 x 3/16		1.625 ± 0.001
NL700	40-3/8	19-3/4	19-1/2	1/2 x 1/4		2.000 ± 0.001
NL1000	47-7/8	26	24	5/8 x 5/16		2.750 ± 0.001
NL1500	54-7/8	54-1/2	30	3/4 x 3/8		3.000 ± 0.001
NL2000	59-3/8	23	33	7/8 x 7/16		3.625 ± 0.001
NL3000	68	33-1/4	39-1/2	1 x 1/2		4.000 ± 0.001
NL4000	91-3/4	50-1/4	47-5/8	Single Belt or Coupling	1-1/4 x 5/8	5.000
				Double Coupling	1-1/4 x 5/8	5.250
NL6000	99-1/2	53-1/2	57-3/4	Single Belt	1-1/2 x 3/4	5.938
				Single Coupling	1-1/4 x 5/8	4.875
				Double Coupling	1-1/2 x 3/4	6.438
NL9000	108	64	69-1/2	1-1/2 x 3/4		6.875 ± 0.001
NL14000	139-1/2	100-1/2	71-1/2	2 x 3/4 x 11		8.250 ± 0.002

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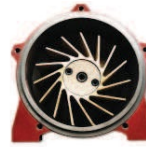
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Application table

Variation	Applications
Deep Vacuum	Central Vacuum Systems
	Deaeration
	Drying
	Evaporating
	Autoclaves
	Evaporating
	Priming
	Forming
	Fiber Setting
	Gas Stripping
	Molding
	Power Plants
	Container Filling
Water Handling	Filtering
	Extruder Venting
	Eviscerating
	Foods & Fats

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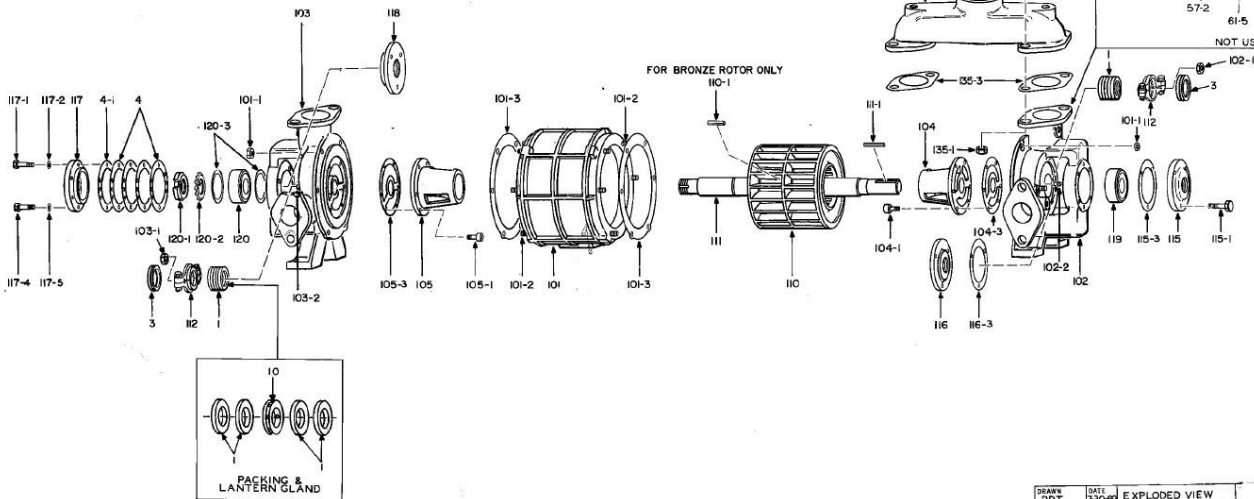
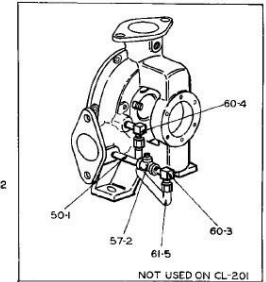


NES
COMPANY

Exploded View NL 2000

INDEX NO.	QTY.	PART NAME	INDEX NO.	QTY.	PART NAME
1	10 RIMS	PACKING SLIM LAMINATED	112	2	GLASS ASSY.
3	4	SHIN	113	1	CAP OUTER D.E.
	2	SLIM LAMINATED	115-1	1	SCRIP CAP OUTER D.E.
* 10-1	1	GLASS LANTERN	115-3	1	GASKET CAP OUTER D.E.
10-1	1	GLASS LANTERN	116-3	1	CAP INNER D.E.
10-1	12	NU-STRO BODY	117-1	1	GASKET CAP INNER D.E.
10-2	1	NU-STRO GLAND D.E.	117-3	1	SCRIP CAP OUTER D.E.
10-3	1	GASKET BODY	117-4	1	SCRIP CAP INNER D.E.
10-4	1	NU-STRO GLAND D.E.	117-5	1	SCRIP CAP OUTER S.I.E.
10-5	1	NU-STRO GLAND D.E.	118-1	1	CAP INNER I.E.
10-6	1	HEAD, I.E.	118-2	1	BEARING BALL I.E.
10-7	1	NU-STRO I.E.	119-1	1	SCREW BEARING I.E.
10-8	1	HEAD, I.E.	120-1	1	SCREW BEARING I.E.
10-9	1	NU-STRO I.E.	120-2	1	SCREW BEARING I.E.
10-10	1	SCREW CO. HO. D.E.	121-1	1	MANIFOLD, INLET
10-11	1	GASKET CO. HO. D.E.	121-2	1	MANIFOLD, INLET
10-12	1	SCREW CO. HO. D.E.	135-1	1	SCRIP CAP MANIFOLD
10-13	1	GASKET CO. HO. D.E.	135-2	1	SCRIP CAP MANIFOLD
10-14	1	SCREW CO. HO. D.E.	135-3	1	SCRIP CAP MANIFOLD
10-15	1	GASKET CO. HO. D.E.	135-4	1	SCRIP CAP MANIFOLD
* 110-1	1	KEY/ROTARY	27-2	2	CHECK VALVE
111	1	SHAFT	28-1	1	FLUOW-TUBE
* 112	1	KEY/SHAFT EXT.	28-2	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-3	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-4	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-5	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-6	1	FLUOW-TUBE
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	1	KEY/SHAFT EXT.	28-176	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-177	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-178	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-179	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-180	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-181	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-182	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-183	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-184	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-185	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-186	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-187	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-188	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-189	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-190	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-191	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-192	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-193	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-194	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-195	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-196	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-197	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-198	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-199	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-200	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-201	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-202	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-203	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-204	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-205	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-206	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-207	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-208	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-209	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-210	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-211	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-212	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-213	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-214	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-215	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-216	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-217	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-218	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-219	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-220	1	FLUOW-TUBE
	1	KEY/SHAFT EXT.	28-221	1</	

REVISIONS					
ZONE	SYM.	DESCRIPTION	DATE	BY	APPD
	A	REVISED INDEX NOS. FOR PLACARDS	2-10-69	WJG	(LW)
	B	REVISED CONES	1-14-69	WJG	TS
213 2-2	C	ITEM 34 REMOVED	1-14-69	WJG	CGD



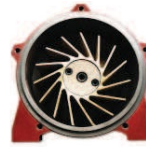
DRAWN RDT	DATE 7-30-69	EXPLODED VIEW 451-00200 SERIES VACUUM PUMP		DWG. SIZE D	14-2228
CHECKED CPH	Aug 59				
APP'D, DESIGN LWS	1/669				
APPRO. APP'N.		SCALE 1/2"	WT. LBS.	REV.	

14-22280

NL Series

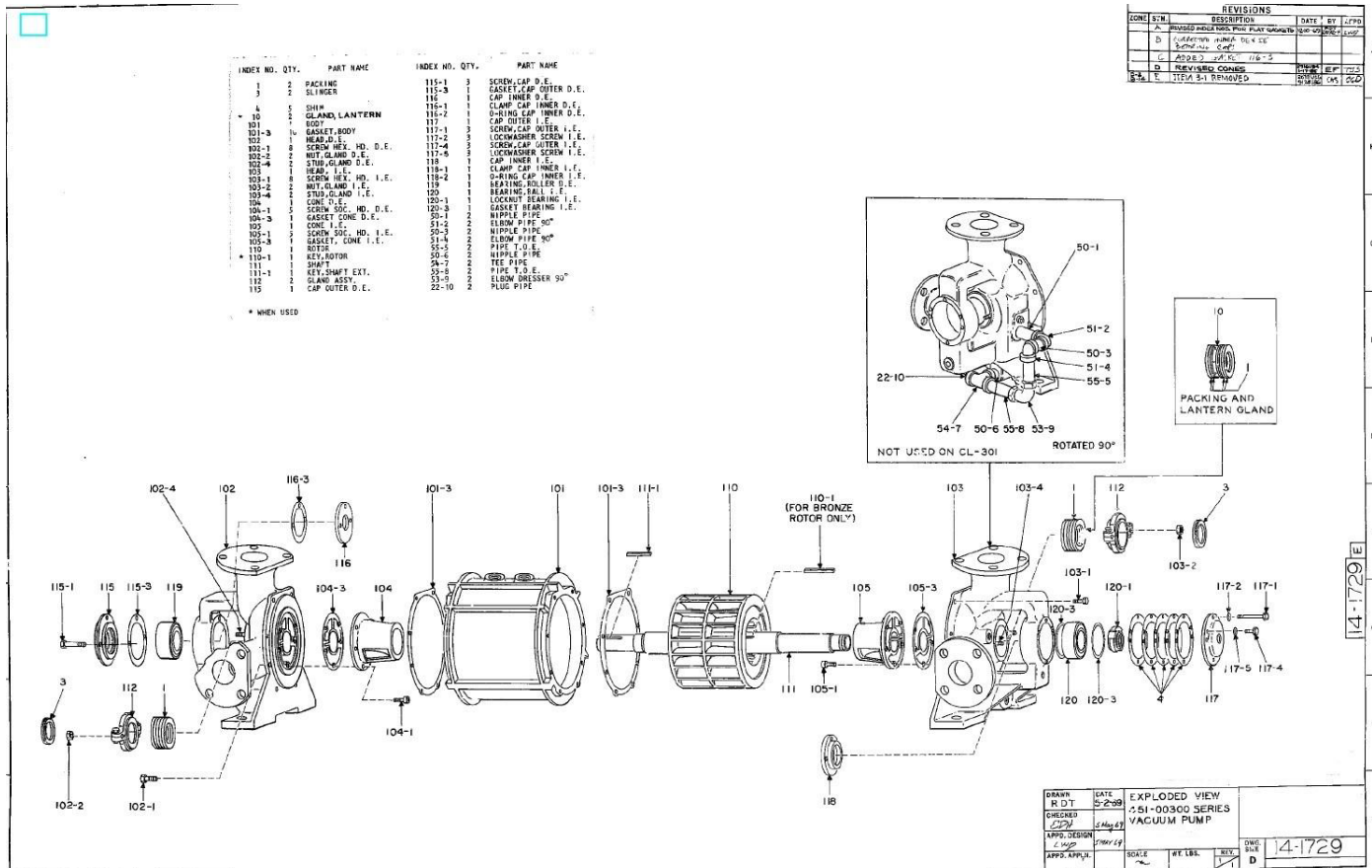
Liquid Ring Vacuum Pumps

Models: NL200, NL300, NL400, NL700, NL1000, NL1500, NL2000, NL3000, NL4000, NL6000, NL9000, NL14000



NES COMPANY

Exploded View NL 300



Exploded View NL 400

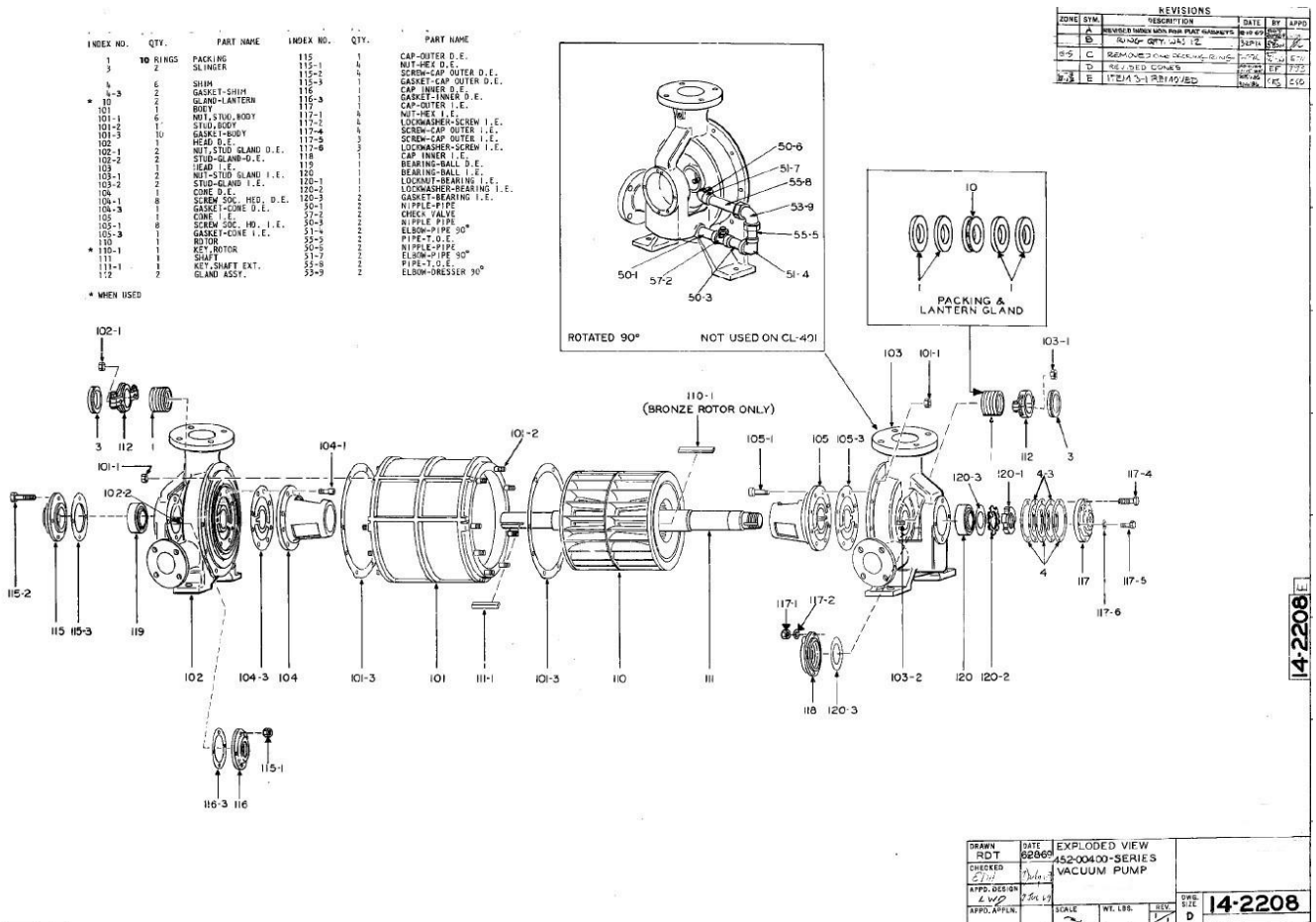
NL Series

Liquid Ring Vacuum Pumps

Models: NL200, NL300, NL400, NL700, NL1000, NL1500, NL2000, NL3000, NL4000, NL6000, NL9000, NL14000



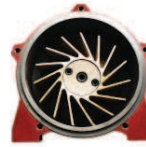
NES COMPANY



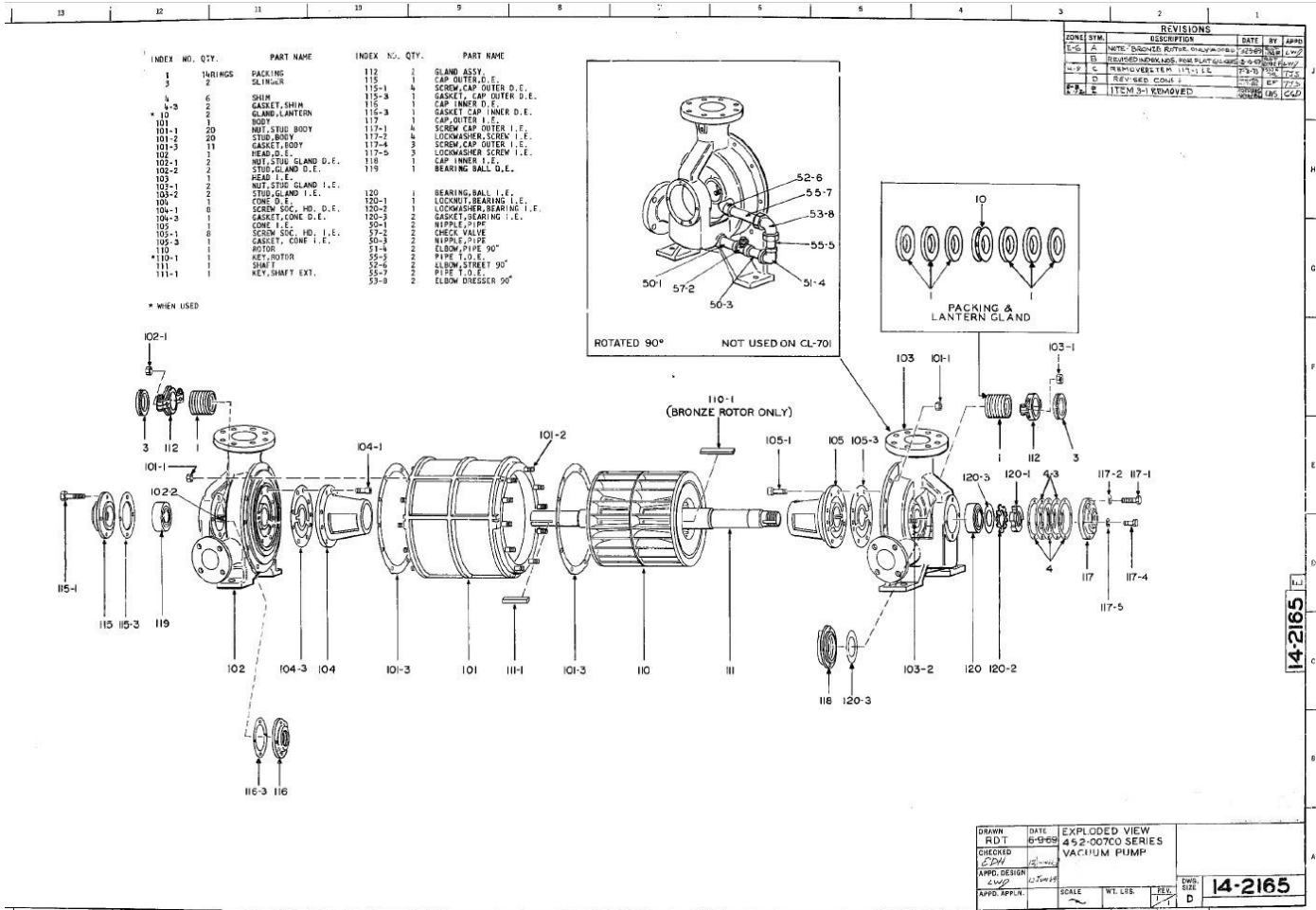
NL Series

Liquid Ring Vacuum Pumps

Models: NL200, NL300, NL400, NL700, NL1000, NL1500, NL2000, NL3000, NL4000, NL6000, NL9000, NL14000



NES COMPANY

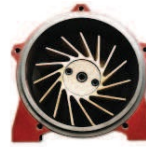


Exploded View NL 1000

NL Series

Liquid Ring Vacuum Pumps

Models: NL200, NL300, NL400, NL700, NL1000, NL1500, NL2000, NL3000, NL4000, NL6000, NL9000, NL14000

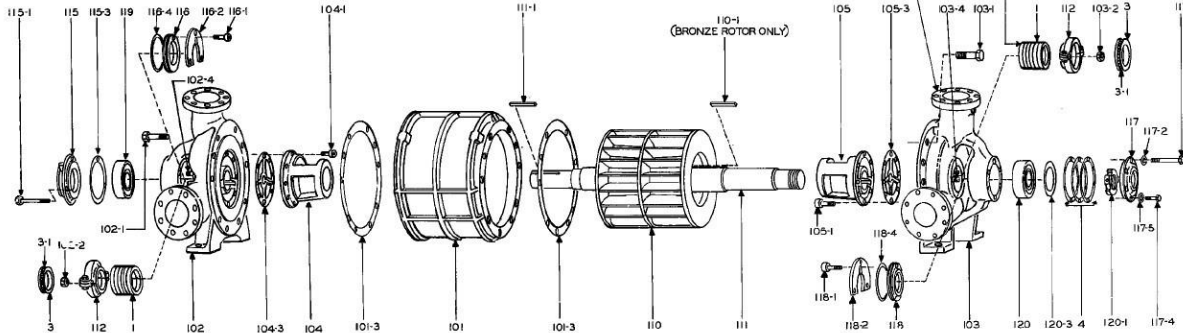
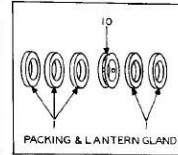
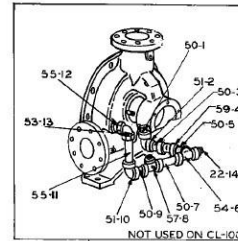


NES COMPANY

INDEX NO.	QTY.	PART NAME	INDEX NO.	QTY.	PART NAME
1	12	RINGS	116	1	CAP INNER D.E.
2	1	SLINGER	116-1	1	SCREW/CAP INNER D.E.
3	1	SPRING, SLINGER	116-2	1	CLAMP, CAP INNER D.E.
4	1	SHIM	116-4	1	O-RING, CAP INNER D.E.
10	1	GLAND, LANTERN	117	1	CAP OUTER I.E.
101	1	ROTOR	117-1	1	SCREW/CAP OUTER I.E.
101-3	1	GASKET	117-2	1	LOCOWASHER SCREW I.E.
102	1	HEAD D.E.	117-4	1	SCREW/CAP OUTER I.E.
102-1	10	SCREW, HEAD D.E.	117-6	1	LOCOWASHER SCREW I.E.
102-2	1	NUT, GLAND D.E.	118	1	CAP INNER I.E.
102-4	1	TUB, GLAND D.E.	118-1	1	SCREW/CAP INNER I.E.
103	1	HEAD I.E.	118-2	1	CLAMP, CAP INNER I.E.
103-1	10	SCREW, HEAD I.E.	118-4	1	O-RING, CAP INNER I.E.
103-2	1	NUT, GLAND I.E.	119	1	SCREW/CAP INNER I.E.
103-4	1	TUB, GLAND I.E.	120	1	BEARING BALL I.E.
104	1	CONE D.E.	120-1	1	LOCKWASHER BEARING I.E.
104-1	1	SCREW, CONE D.E.	120-3	1	GASKET BEARING I.E.
104-2	1	NUT, GLAND D.E.	120-4	1	CLAMP, PIPE 90°
104-3	1	GASKET, CONE I.E.	120-5	1	RIPPLE, PIPE 90°
104-4	1	SCREW, CONE I.E.	120-6	1	ELBOW, PIPE 45°
105	1	SCREW, CONE I.E.	120-7	1	RIPPLE, PIPE 90°
105-1	1	SCREW, CONE I.E.	120-8	1	RIPPLE, PIPE 90°
105-2	1	GASKET, CONE I.E.	120-9	1	PIPE T. O.E.
105-3	1	SCREW, CONE I.E.	120-10	1	PIPE T. O.E.
105-4	1	SCREW, CONE I.E.	120-11	1	ELBOW, DRESSER 90°
105-5	1	SCREW, CONE I.E.	120-12	1	PLUG, PIPE
105-6	1	SCREW, CONE I.E.			
105-7	1	SCREW, CONE I.E.			
105-8	1	SCREW, CONE I.E.			
105-9	1	SCREW, CONE I.E.			
105-10	1	SCREW, CONE I.E.			
105-11	1	SCREW, CONE I.E.			
105-12	1	SCREW, CONE I.E.			
105-13	1	SCREW, CONE I.E.			
105-14	1	SCREW, CONE I.E.			
105-15	1	SCREW, CONE I.E.			
105-16	1	SCREW, CONE I.E.			
105-17	1	SCREW, CONE I.E.			
105-18	1	SCREW, CONE I.E.			
105-19	1	SCREW, CONE I.E.			
105-20	1	SCREW, CONE I.E.			
105-21	1	SCREW, CONE I.E.			
105-22	1	SCREW, CONE I.E.			
105-23	1	SCREW, CONE I.E.			
105-24	1	SCREW, CONE I.E.			
105-25	1	SCREW, CONE I.E.			
105-26	1	SCREW, CONE I.E.			
105-27	1	SCREW, CONE I.E.			
105-28	1	SCREW, CONE I.E.			
105-29	1	SCREW, CONE I.E.			
105-30	1	SCREW, CONE I.E.			
105-31	1	SCREW, CONE I.E.			
105-32	1	SCREW, CONE I.E.			
105-33	1	SCREW, CONE I.E.			
105-34	1	SCREW, CONE I.E.			
105-35	1	SCREW, CONE I.E.			
105-36	1	SCREW, CONE I.E.			
105-37	1	SCREW, CONE I.E.			
105-38	1	SCREW, CONE I.E.			
105-39	1	SCREW, CONE I.E.			
105-40	1	SCREW, CONE I.E.			
105-41	1	SCREW, CONE I.E.			
105-42	1	SCREW, CONE I.E.			
105-43	1	SCREW, CONE I.E.			
105-44	1	SCREW, CONE I.E.			
105-45	1	SCREW, CONE I.E.			
105-46	1	SCREW, CONE I.E.			
105-47	1	SCREW, CONE I.E.			
105-48	1	SCREW, CONE I.E.			
105-49	1	SCREW, CONE I.E.			
105-50	1	SCREW, CONE I.E.			
105-51	1	SCREW, CONE I.E.			
105-52	1	SCREW, CONE I.E.			
105-53	1	SCREW, CONE I.E.			
105-54	1	SCREW, CONE I.E.			
105-55	1	SCREW, CONE I.E.			
105-56	1	SCREW, CONE I.E.			
105-57	1	SCREW, CONE I.E.			
105-58	1	SCREW, CONE I.E.			
105-59	1	SCREW, CONE I.E.			
105-60	1	SCREW, CONE I.E.			
105-61	1	SCREW, CONE I.E.			
105-62	1	SCREW, CONE I.E.			
105-63	1	SCREW, CONE I.E.			
105-64	1	SCREW, CONE I.E.			
105-65	1	SCREW, CONE I.E.			
105-66	1	SCREW, CONE I.E.			
105-67	1	SCREW, CONE I.E.			
105-68	1	SCREW, CONE I.E.			
105-69	1	SCREW, CONE I.E.			
105-70	1	SCREW, CONE I.E.			
105-71	1	SCREW, CONE I.E.			
105-72	1	SCREW, CONE I.E.			
105-73	1	SCREW, CONE I.E.			
105-74	1	SCREW, CONE I.E.			
105-75	1	SCREW, CONE I.E.			
105-76	1	SCREW, CONE I.E.			
105-77	1	SCREW, CONE I.E.			
105-78	1	SCREW, CONE I.E.			
105-79	1	SCREW, CONE I.E.			
105-80	1	SCREW, CONE I.E.			
105-81	1	SCREW, CONE I.E.			
105-82	1	SCREW, CONE I.E.			
105-83	1	SCREW, CONE I.E.			
105-84	1	SCREW, CONE I.E.			
105-85	1	SCREW, CONE I.E.			
105-86	1	SCREW, CONE I.E.			
105-87	1	SCREW, CONE I.E.			
105-88	1	SCREW, CONE I.E.			
105-89	1	SCREW, CONE I.E.			
105-90	1	SCREW, CONE I.E.			
105-91	1	SCREW, CONE I.E.			
105-92	1	SCREW, CONE I.E.			
105-93	1	SCREW, CONE I.E.			
105-94	1	SCREW, CONE I.E.			
105-95	1	SCREW, CONE I.E.			
105-96	1	SCREW, CONE I.E.			
105-97	1	SCREW, CONE I.E.			
105-98	1	SCREW, CONE I.E.			
105-99	1	SCREW, CONE I.E.			
105-100	1	SCREW, CONE I.E.			

* WHEN USED

ZONE	SYM.	DESCRIPTION	DATE	BY	APPROV.
A		REVISED INDEX FROM PREVIOUS EDITION			
B		REVISED CONE			



DRAWN	R.D.T.	DATE	5/2/76	EXPLODED VIEW
CHECKED	C.W.	DATE	5/2/76	452-0000 SERIES
APPROVED	C.W.	DATE	5/2/76	VACUUM PUMP
APPROV. APPL.		SCALE	WT. LBS.	14-2207

142207

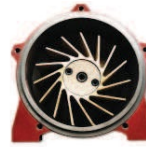
Models: NL200, NL300, NL400, NL700, NL1000, NL1500,
NL2000, NL3000, NL4000, NL6000, NL9000, NL14000

DIMENSIONS ARE IN INCHES		DRAWN	DATE	EXPLODED VIEW 452-01500 SERIES VACUUM PUMP
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE		CHECKED	17-1-60	
FRACTIONS: 1/16, 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8		APPROVED	17-1-60	
DECIMALS: .001, .002, .003, .005, .010, .015, .020, .030, .040, .050, .060, .070, .080, .090, .100, .125, .150, .175, .200, .250, .300, .350, .400, .450, .500, .550, .600, .650, .700, .750, .800, .850, .900, .950, 1.000		APPROVED	17-1-60	
MATERIAL		APPROVED	17-1-60	
SCALE		WT. LBS.	REV.	SIZE D
14-7647				

NL Series

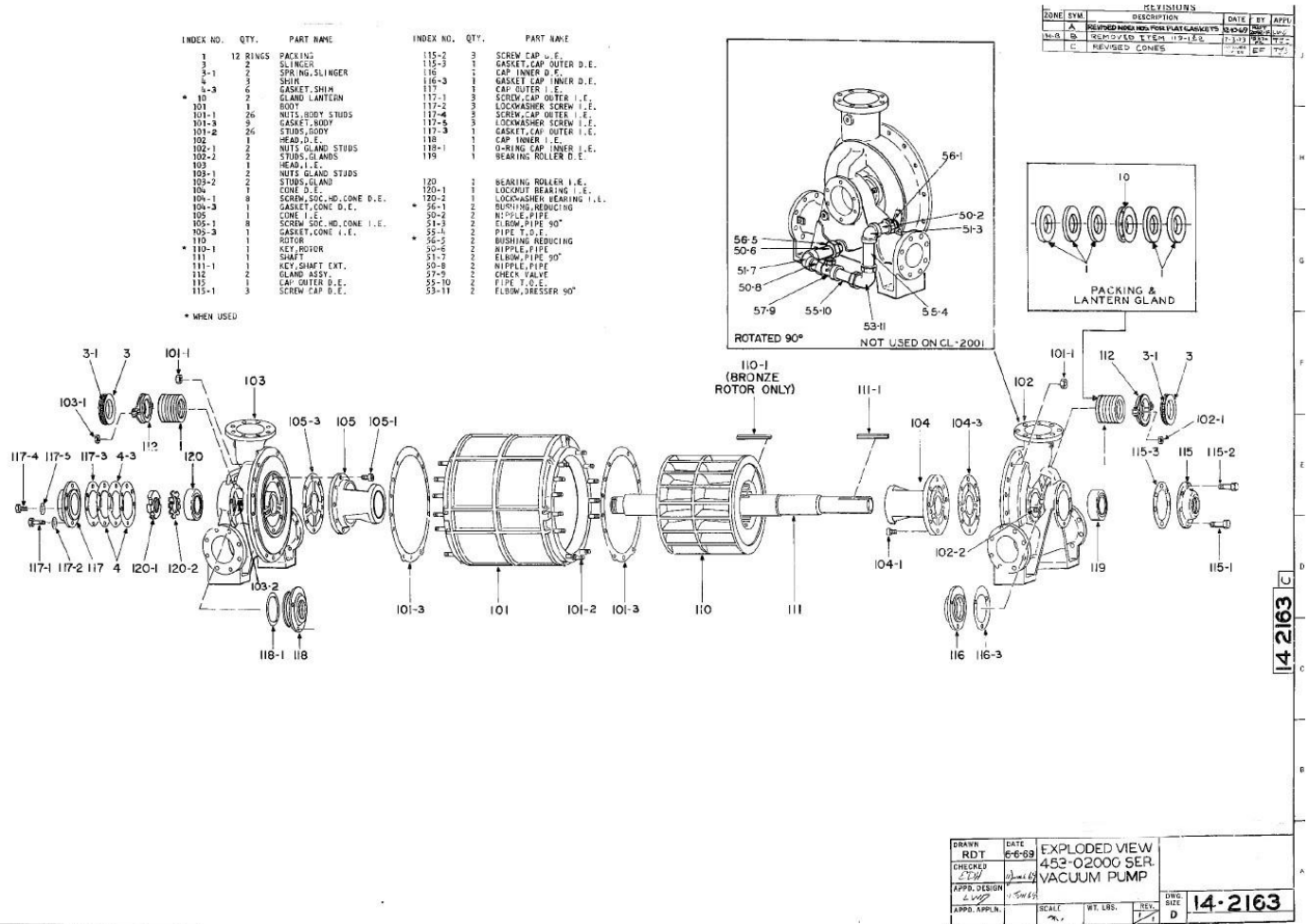
Liquid Ring Vacuum Pumps

Models: NL200, NL300, NL400, NL700, NL1000, NL1500, NL2000, NL3000, NL4000, NL6000, NL9000, NL14000



NES COMPANY

Exploded View NL 2000

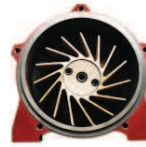


NES
COMPANY

REVISIONS		DATE	BY	APPROV
1	ADDED ROTOR SET SCREWS			

INDEX NO.	QTY.	PART NAME	INDEX NO.	QTY.	PART NAME
1	12	NUTS	112	2	GLAND ASSY.
2	1	WASHER	113	1	CAP OUTER D.E.
3-1	2	SPRING SLINGER	113-1	3	NUT SCREW CAP D.E.
4	1	GASKET	113-2	1	SCREW CAP D.E.
4-3	0	GASKET, DRIVIS	113-4	1	NUT SCREW CAP D.E.
5	1	WASHER	113-5	1	SCREW CAP D.E.
6	2	OILERS	113-9	1	GASKET CAP OUTER D.E.
* 10	2	GLAND LANTERN	113-10	1	CAP INNER D.E.
24	2	BREATHER	113-11	1	CASSET CAP INNER D.E.
101-1	20	NUT STD BODY	117	3	CAP OUTER I.E.
101-3	13	NUT STD BODY	117-1	3	NUT SCREW CAP I.E.
101-2	20	STD BODY	117-2	1	LOCWASHER SCREW I.E.
102	1	NUT STD HEAD D.E.	117-4	1	SCREW CAP I.E.
102-1	1	GASKET STD D.E.	117-5	1	NUT SCREW CAP I.E.
102-2	19	STD HEAD D.E.	117-6	1	LOCWASHER SCREW I.E.
102-3	1	NUT STD HEAD D.E.	117-7	1	SCREW CAP I.E.
102-4	2	NUT STD GLAND D.E.	117-8	1	LOCWASHER SCREW I.E.
102-5	2	WASHER GLAND D.E.	117-10	1	SCREW CAP I.E.
102-6	2	NUT GLAND D.E.	118	1	LOCWASHER SCREW I.E.
103	1	HEAD I.E.	119	1	LOCWASHER SCREW I.E.
103-1	1	NUT STD HEAD I.E.	119-1	1	BEARING ROLLER D.E.
103-2	20	GASKET STD I.E.	119-2	1	LOCANUT BEARING D.E.
103-3	2	STD HEAD I.E.	119-3	1	LOCWASHER BEARING D.E.
103-4	1	NUT STD GLAND I.E.	120	1	LOCANUT BEARING I.E.
103-5	2	WASHER GLAND I.E.	120-1	1	LOCWASHER BEARING I.E.
103-6	1	STD GLAND I.E.	120-2	2	CHEK VALVE
104	0	CONE D.E.	120-3	1	NUT PIPE
104-1	0	SCREEN SEE NB. CONE D.E.	120-4	1	ELBOW STREET 90°
105	1	GASKET CONE D.E.	120-5	1	NUT PIPE
105-1	1	CONE I.E.	120-6	1	PIPE T.D.E.
105-2	1	SCREEN SEE NB. CONE I.E.	120-7	1	ELBOW STREET 90°
105-3	1	GASKET CONE I.E.	120-8	1	PIPE T.D.E.
110	1	ROTOR	120-9	1	ELBOW STREET 90°
* 110-1	1	KEY ROTOR	120-10	1	PIPE T.D.E.
111	1	SCREW	120-11	1	ELBOW STREET 90°
111-1	1	KEY EXT. D.E.	120-12	1	PIPE T.D.E.
* 111-2	1	KEY EXT. I.E.	120-13	1	ELBOW STREET 90°
* 110-2	1	KEY EXT. I.E.	120-14	1	PIPE T.D.E.

INDEX NO.	QTY.	PART NAME	INDEX NO.	QTY.	PART NAME
112	2	GLAND ASSY.	120-15	1	PIPE T.D.E.
113	1	CAP OUTER D.E.	120-16	1	ELBOW STREET 90°
113-1	3	NUT SCREW CAP D.E.	120-17	1	PIPE T.D.E.
113-2	1	SCREW CAP D.E.	120-18	1	ELBOW STREET 90°
113-4	1	NUT SCREW CAP D.E.	120-19	1	PIPE T.D.E.
113-5	1	SCREW CAP D.E.	120-20	1	ELBOW STREET 90°
113-9	1	GASKET CAP OUTER D.E.	120-21	1	PIPE T.D.E.
113-10	1	CAP INNER D.E.	120-22	1	ELBOW STREET 90°
113-11	1	CASSET CAP INNER D.E.	120-23	1	PIPE T.D.E.
117	3	CAP OUTER I.E.	120-24	1	ELBOW STREET 90°
117-1	3	NUT SCREW CAP I.E.	120-25	1	PIPE T.D.E.
117-2	1	LOCWASHER SCREW I.E.	120-26	1	ELBOW STREET 90°
117-4	1	SCREW CAP I.E.	120-27	1	PIPE T.D.E.
117-5	1	NUT SCREW CAP I.E.	120-28	1	ELBOW STREET 90°
117-6	1	LOCWASHER SCREW I.E.	120-29	1	PIPE T.D.E.
117-7	1	SCREW CAP I.E.	120-30	1	ELBOW STREET 90°
117-8	1	LOCWASHER SCREW I.E.	120-31	1	PIPE T.D.E.
117-10	1	SCREW CAP I.E.	120-32	1	ELBOW STREET 90°
118	1	LOCWASHER SCREW I.E.	120-33	1	PIPE T.D.E.
119	1	LOCWASHER SCREW I.E.	120-34	1	PIPE T.D.E.
119-1	1	BEARING ROLLER D.E.	120-35	1	PIPE T.D.E.
119-2	1	LOCANUT BEARING D.E.	120-36	1	PIPE T.D.E.
119-3	1	LOCWASHER BEARING D.E.	120-37	1	PIPE T.D.E.
120	1	LOCANUT BEARING I.E.	120-38	1	PIPE T.D.E.
120-1	1	LOCWASHER BEARING I.E.	120-39	1	PIPE T.D.E.
120-2	2	CHEK VALVE	120-40	1	PIPE T.D.E.



NES
COMPANY

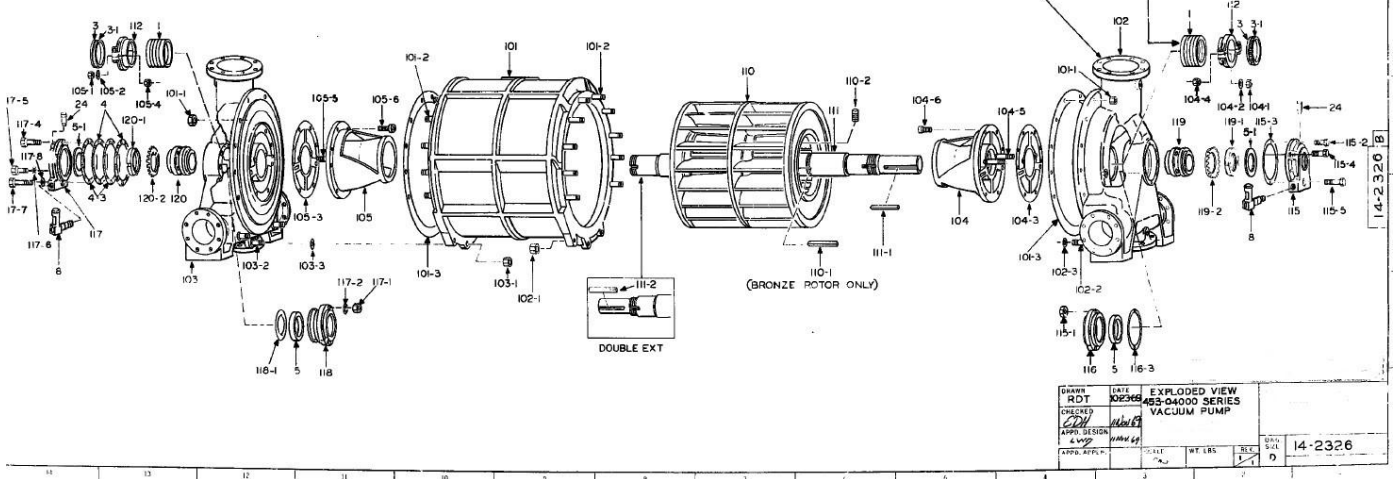
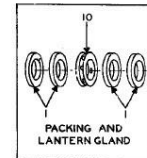
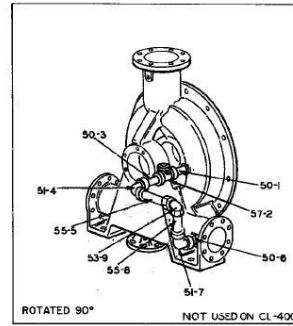
Liquid Ring Vacuum Pumps

Models: NL200, NL300, NL400, NL700, NL1000, NL1500,
NL2000, NL3000, NL4000, NL6000, NL9000, NL14000

Exploded View NL 4000



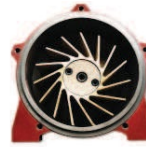
INDEX NO.	QTY.	PART NAME	INDEX NO.	QTY.	PART NAME
1	10	RINGS	111	1	SHAFT
2	1	PACKING	112	1	KEY, D. 1.5"
3	2	SPRINGS, LONG	111-2	1	KEY EXT. 1.5"
4	1	SHIM	113	1	WASHER, 1/2" X 1.5"
4-3	6	CARBS, SHIMS	115	1	CAP OUTER D.E.
5	1	WASHER, 1/2" X 1.5"	116	1	WASHER, 1/2" X 1.5"
6	2	BEARER	117	1	SCREW CAP D.E.
* 7	8	BEARER, LANTERN	118	1	CAP OUTER D.E.
* 8	1	OUTER	115-8	2	SCREW CAP OUTER D.E.
* 9	1	BEARER	116-8	2	SCREW CAP OUTER D.E.
10-1-2	20	MIL STD BODY	116	1	CAP OUTER D.E.
10-1-3	2	STD BODY	117	1	CAP INNER D.E.
10-1-3	1	GASKET, STD	117-1	1	WASHER, 1/2" X 1.5"
10-1-3	1	HEAT SHIELD	117-2	1	LOCKWASHER, SCREW 1/4"
10-2-1	3	MIL STD BODY D.E.	117-3	1	LOCKWASHER, SCREW 1/4"
10-2-1	3	STD BODY D.E.	117-4	1	LOCKWASHER, SCREW 1/4"
10-2-1	16	HEAD 1/4"	117-5	1	LOCKWASHER, SCREW 1/4"
10-2-1	1	HEAD 1/4"	117-6	1	LOCKWASHER, SCREW 1/4"
10-2-1	1	STD HEAD 1/4"	117-7	1	LOCKWASHER, SCREW 1/4"
10-2-1	1	STD HEAD 1/4"	117-8	1	LOCKWASHER, SCREW 1/4"
10-2-1	1	GASKET, STD	117-9	1	CAP
10-2-1	1	CONG D.E.	118-1	1	CHAMF CAP INNER 1/4"
10-2-1	1	CONG D.E.	118-2	1	BEARING, 1/2" X 1.5"
10-2-2	2	WASHER, LONG D.E.	119	1	LOCKWASHER, BEARING 1/4"
10-2-2	1	LOCKWASHER, BEARING 1/4"	120	1	LOCKWASHER, BEARING 1/4"
10-2-6	2	MIL CONG D.E.	120	1	BEARING, 1/2" X 1.5"
10-2-6	1	LOCKWASHER, BEARING 1/4"	120-1	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-2	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-3	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-4	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-5	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-6	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-7	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-8	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-9	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-10	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-11	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-12	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-13	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-14	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-15	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-16	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-17	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-18	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-19	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-20	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-21	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-22	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-23	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-24	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-25	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-26	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-27	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-28	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-29	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-30	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-31	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-32	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-33	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-34	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-35	1	LOCKWASHER, BEARING 1/4"
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10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-39	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-40	1	LOCKWASHER, BEARING 1/4"
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10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-42	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-43	1	LOCKWASHER, BEARING 1/4"
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10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-45	1	LOCKWASHER, BEARING 1/4"
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10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-66	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-67	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-68	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-69	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-70	1	LOCKWASHER, BEARING 1/4"
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10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-79	1	LOCKWASHER, BEARING 1/4"
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10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-81	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-82	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-83	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-84	1	LOCKWASHER, BEARING 1/4"
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10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-109	1	LOCKWASHER, BEARING 1/4"
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10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-127	1	LOCKWASHER, BEARING 1/4"
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10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-140	1	LOCKWASHER, BEARING 1/4"
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10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-142	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-143	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-144	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-145	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-146	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-147	1	LOCKWASHER, BEARING 1/4"
10-2-6	1	SCREW, SCG, 1/4 CONG D.E.	120-148	1	LOCKWASHER,



NL Series

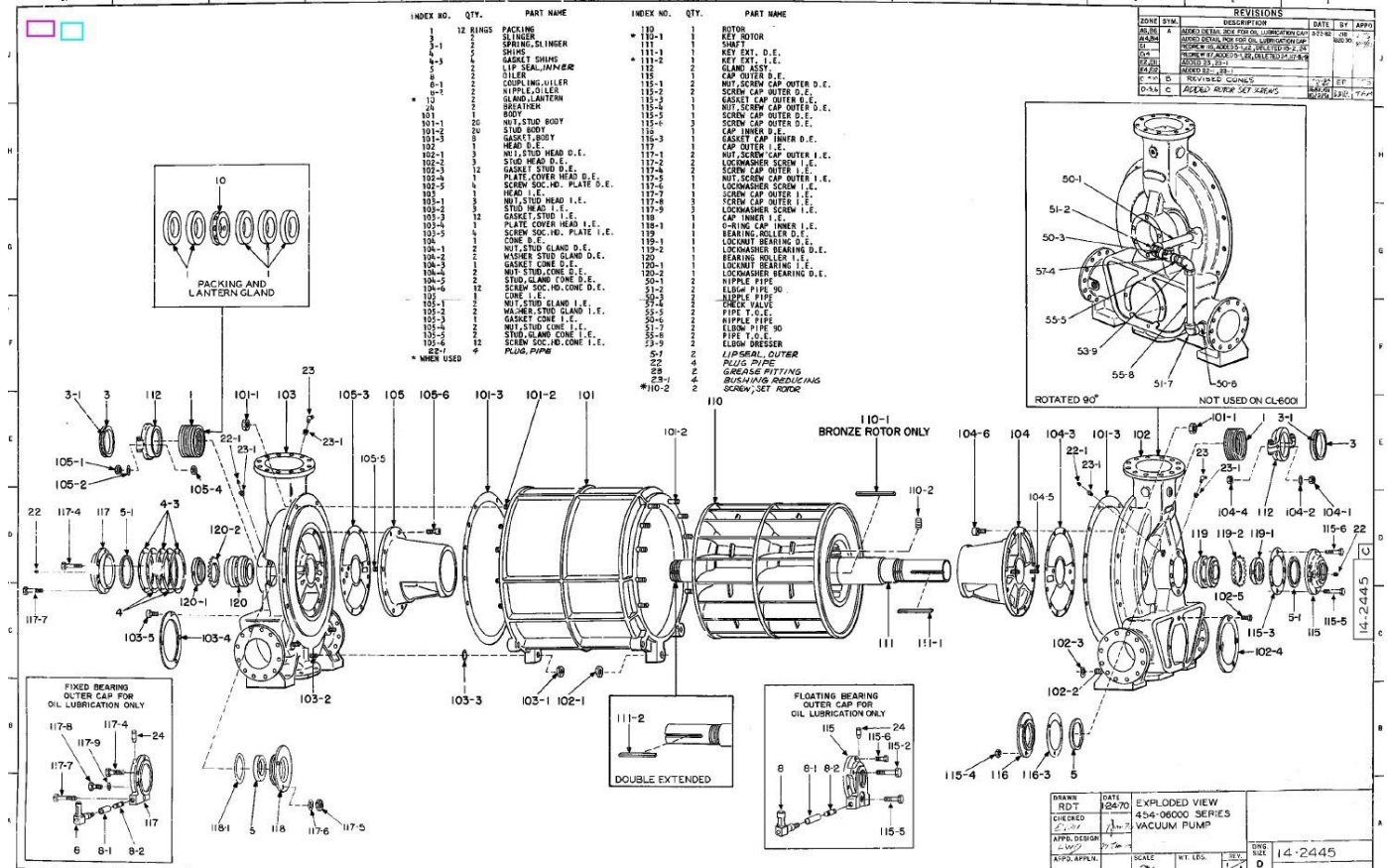
Liquid Ring Vacuum Pumps

Models: NL200, NL300, NL400, NL700, NL1000, NL1500,
NL2000, NL3000, NL4000, NL6000, NL9000, NL14000



NES
COMPANY

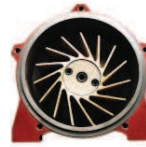
Exploded View NL 6000



NL Series

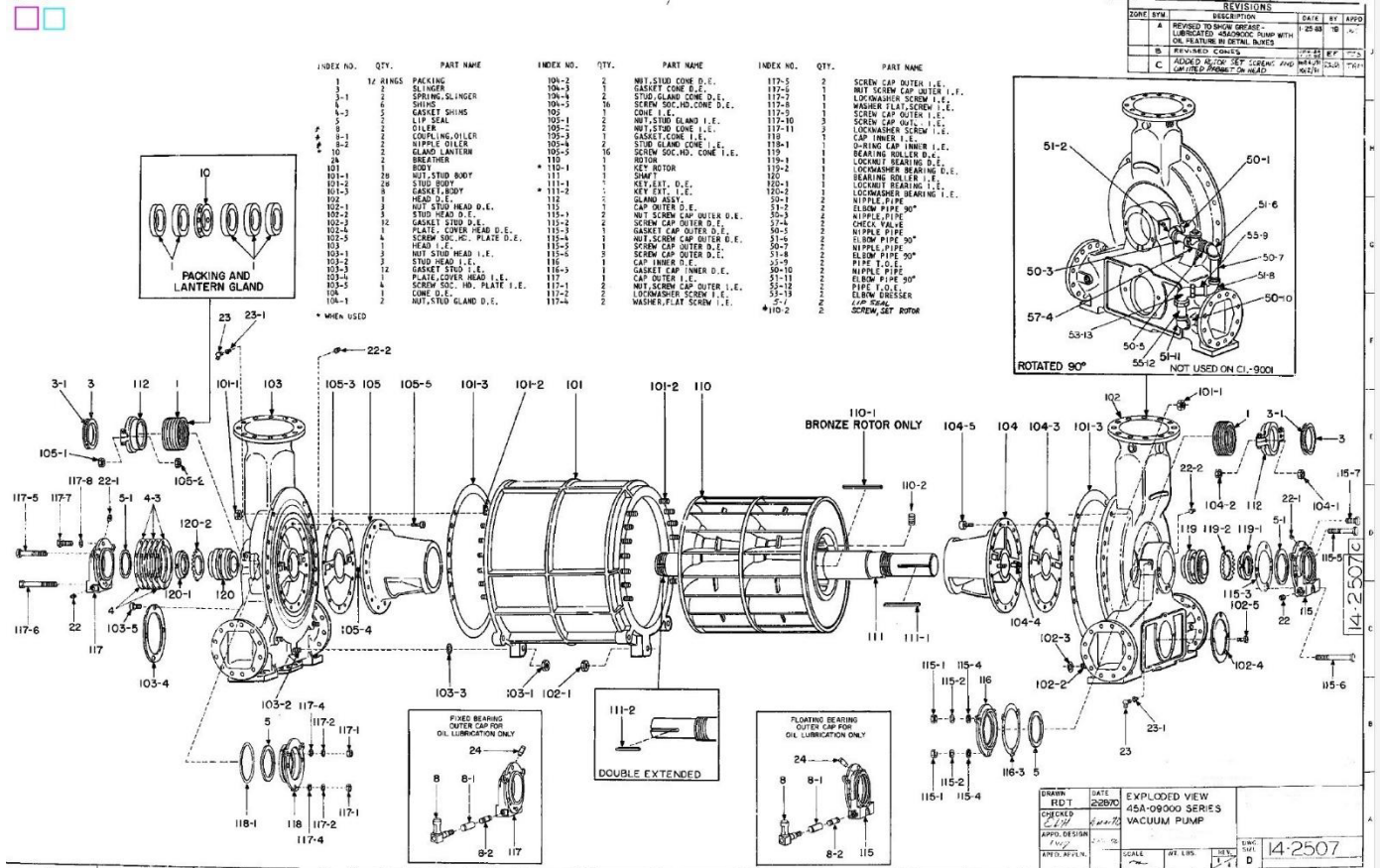
Liquid Ring Vacuum Pumps

Models: NL200, NL300, NL400, NL700, NL1000, NL1500, NL2000, NL3000, NL4000, NL6000, NL9000, NL14000



NES COMPANY

Exploded View NL 9000



The NES COMPANY logo features a stylized red and black circular emblem on the left, resembling a camera lens or a stylized 'N'. To its right, the text 'NES' is written in large, bold, red capital letters with a black outline, and 'COMPANY' is written below it in smaller, bold, black capital letters.

Models: NL200, NL300, NL400, NL700, NL1000, NL1500,
NL2000, NL3000, NL4000, NL6000, NL9000, NL14000

[illegible]

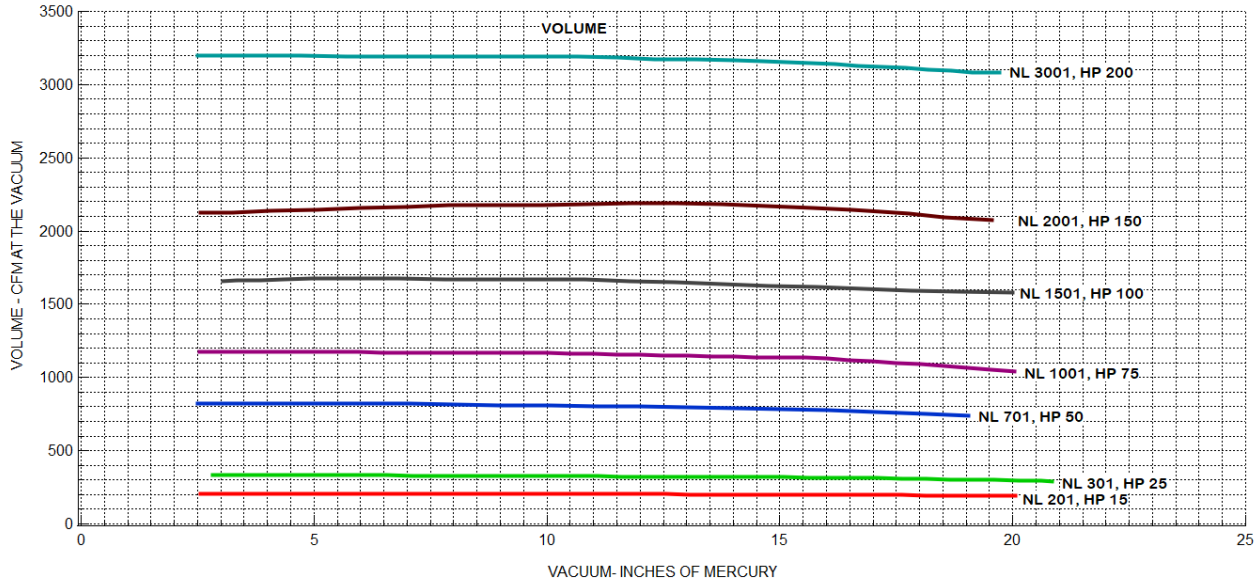
NL Series

Liquid Ring Vacuum Pumps

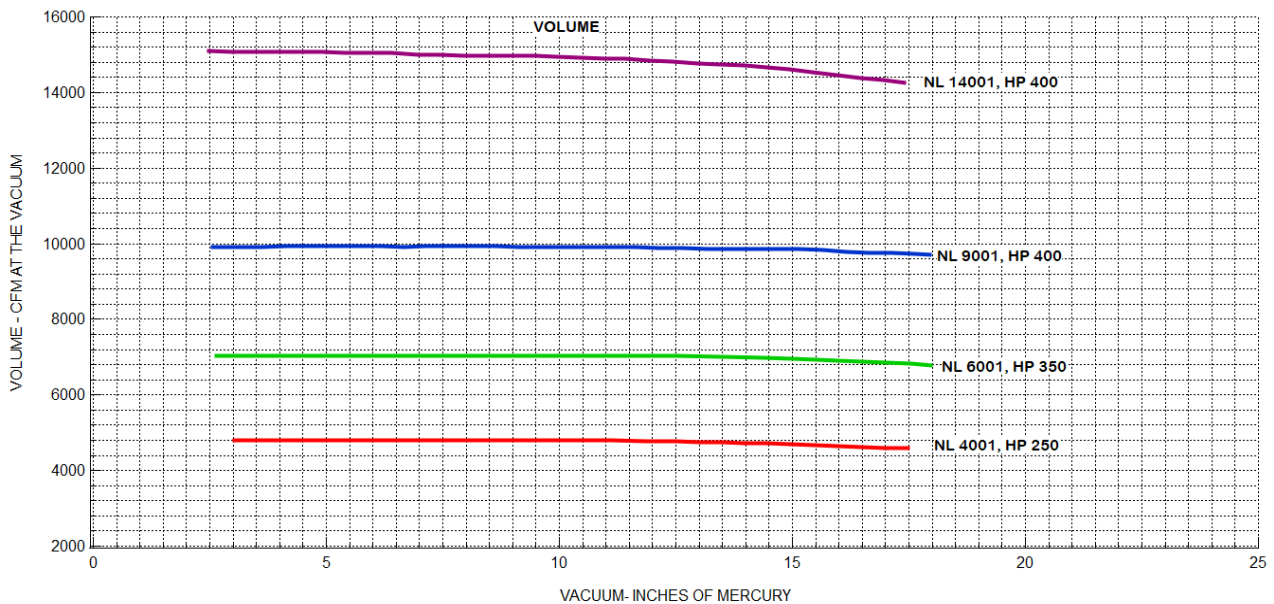
Models: NL200, NL300, NL400, NL700, NL1000, NL1500, NL2000, NL3000, NL4000, NL6000, NL9000, NL14000



Composite Curve 201 - 3001



Composite Curve 4001 - 14001



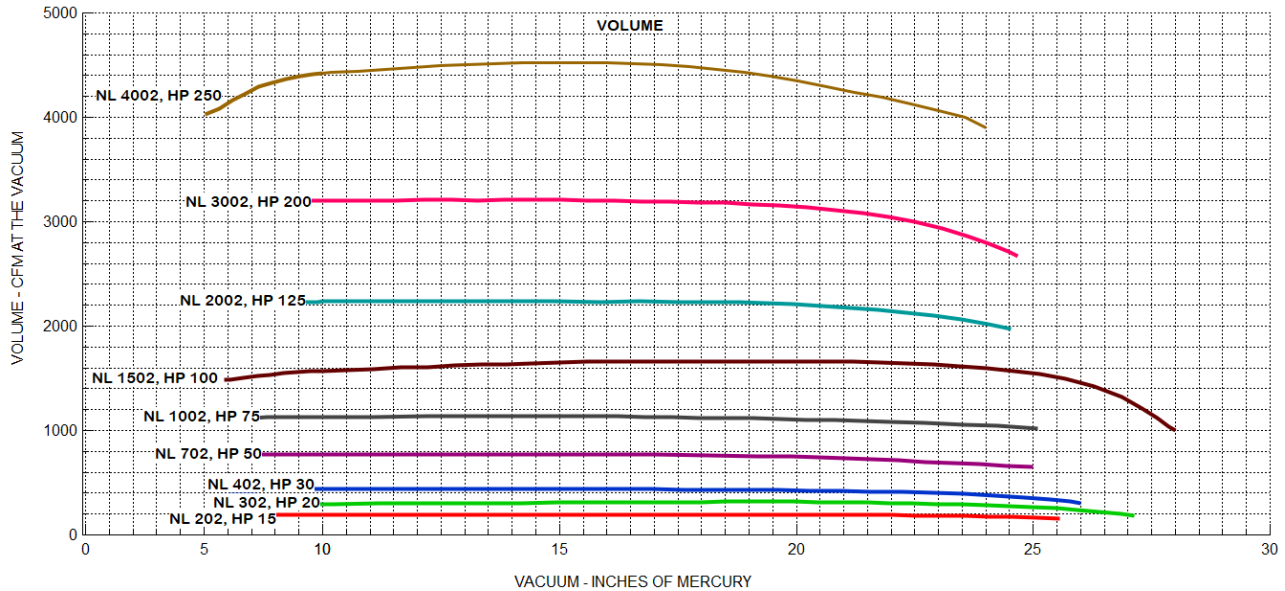
NL Series

Liquid Ring Vacuum Pumps

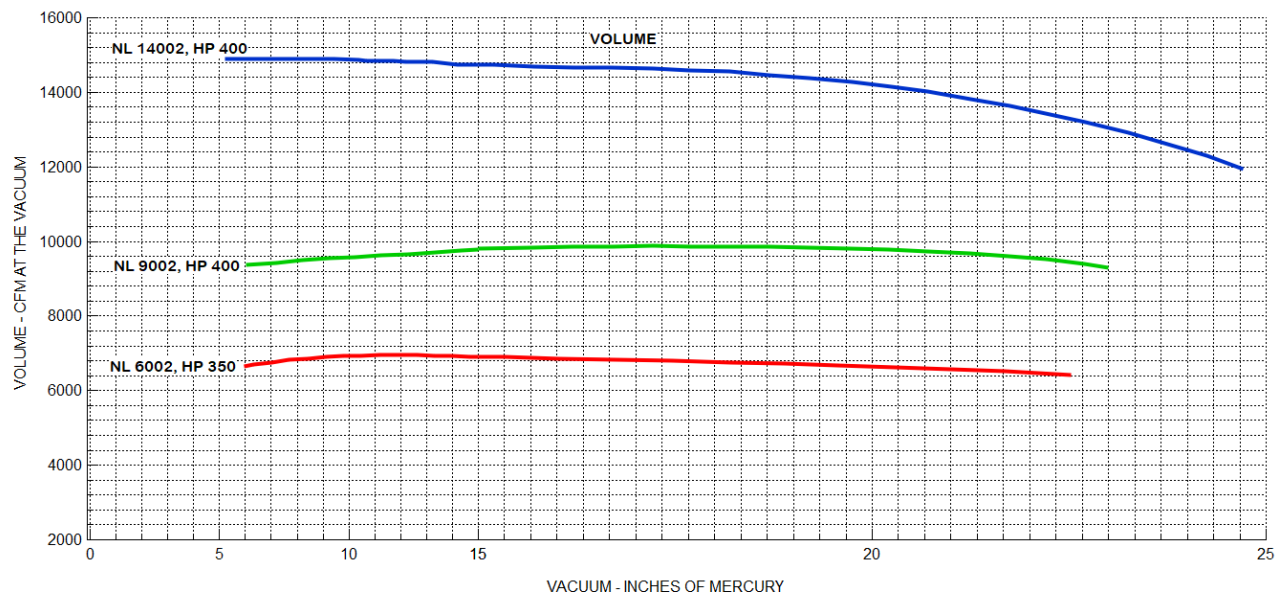
Models: NL200, NL300, NL400, NL700, NL1000, NL1500,
NL2000, NL3000, NL4000, NL6000, NL9000, NL14000



Composite Curve 202 - 4002



Composite Curve 6002 - 14002



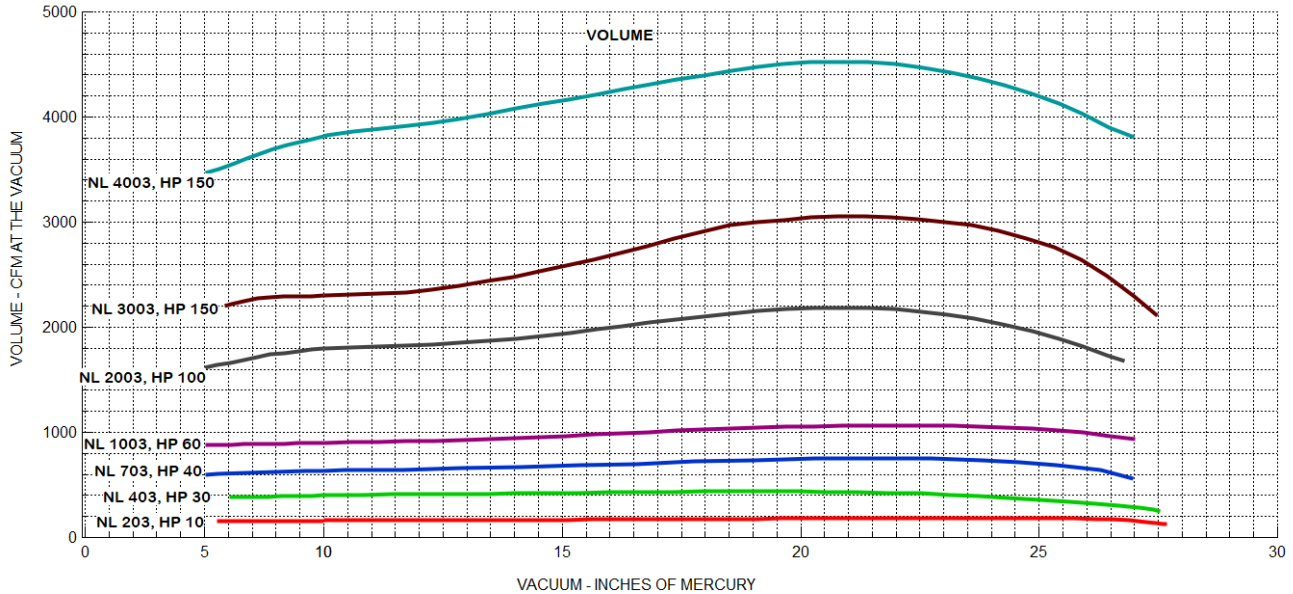
NL Series

Liquid Ring Vacuum Pumps

Models: NL200, NL300, NL400, NL700, NL1000, NL1500,
NL2000, NL3000, NL4000, NL6000, NL9000, NL14000



Composite Curve 203 – 4003



Composite Curve 6003 - 14003

