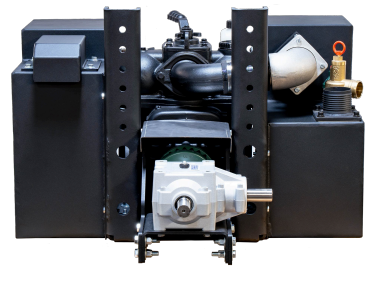
B1100 Spartan Pack

393 CFM | 28.2 HP | 1200 RPM | ISO 150 OIL

Owner's Manual

The B1100 Spartan Pump Pack is engineered with the high-performance Battioni Ballast 11000 rotary vacuum pump at its core. Designed for demanding heavy-duty applications, the Ballast 11000 features an advanced Crash Protection System with a sliding flange mechanism. This innovative technology safeguards the pump's housing and rotor from damage in the event of vane failure, ensuring consistent reliability and operational efficiency under the most challenging conditions.



Built in Secondary • Muffler Exhaust • Flushing Kit • Auto Lube System • Oil Tank
Two Year Warranty

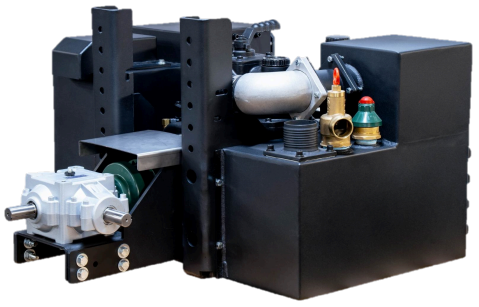
Chandler Vac. | 4180 West Sunset Avenue, Springdale, AR, 72762 | 1-800-342-0887

B1100 Spartan Pack

Spec Sheet

Features

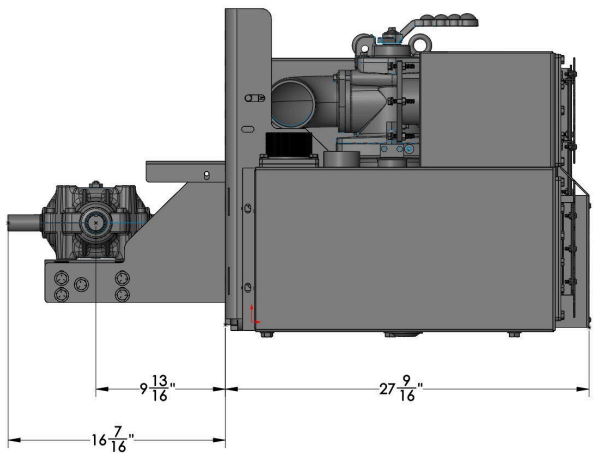
- Built in Flushing Kit
- Secondary
- Muffler
- Oil Tank
- Couplings and Gearbox
- Two Year Warranty
- 2” Pressure Relief & 1-1/2” Vac Relief
- Exterior Oil Level Indicator
- Crash Protection System

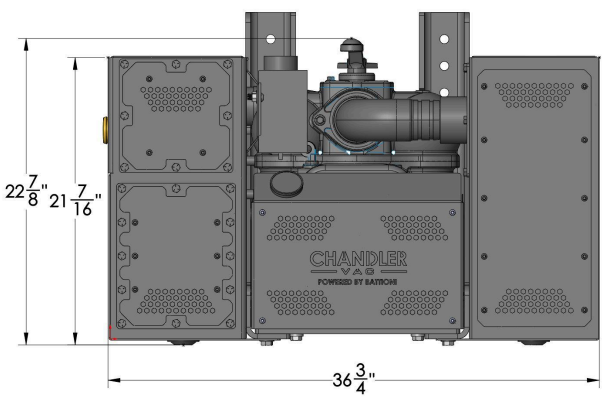


Right Angle Drive

Built In Flushing Kit For Easy Maintenance

Weight	720 lbs	Air Flow - Free Air	393 CFM
Max Working Pressure	36 PSI (2.5 Bar)	Operating Speed	1200 RPM
Shaft Size / Key Size	32 mm/ 8 mm	Horse Power @ Max Vac	28.2 HP





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About Us

CHANDLER VAC

Welcome to Chandler VAC, your trusted partner in the liquid transportation industry. With a legacy of excellence spanning over four decades, we have established ourselves as a leading global provider of high-quality liquid transportation parts. From man-ways and pump packages to blower pumps, jetter units, valves, and more, our extensive product catalog caters to a wide range of needs from a diverse customer base worldwide.

Founded on the principles of distinguished customer care and unparalleled product quality, Chandler VAC has been at the forefront of driving innovation and setting industry standards. Our commitment to delivering superior products and exceptional service has remained unwavering since our inception.

Headquartered in Springdale, AR, Chandler Equipment was established in 1978 as an agriculture equipment distributor. Over the years, our dedication to excellence led us to expand our offerings to include a broad range of products and services. Today, we proudly manufacture and supply a comprehensive array of liquid transportation components, truck accessories, and supplies for the energy industry.

At Chandler VAC, we take pride in our ability to manufacture top-quality products that not only meet but exceed our customers' expectations. Our team of experts is driven by a passion for innovation and a commitment to improving the lives of our customers through our innovative solutions.

As a major North American and worldwide distributor of Battioni Pagani Vacuum Pumps and Blowers and Metaltecnica valves, we are uniquely positioned to provide our customers with access to industry-leading products. As of 2024, we are the exclusive United States and United Mexican States distributor for Metaltechnica Zanolo and Battioni products.

We understand the importance of staying ahead of the curve in a rapidly evolving industry. That's why we're dedicated to continually expanding our product range and incorporating the latest technology into our manufacturing processes. Our state-of-the-art facility allows us to stock a wide variety of products and replacement parts, ensuring prompt and efficient service. From product selection to delivery, no one takes care of you like Chandler VAC.

At Chandler VAC, our mission is simple: to get the job done. Whether you're in need of reliable liquid transportation parts, truck accessories, or custom fabrication services, you can trust Chandler VAC to deliver quality products and exceptional service every time. Thank you for choosing Chandler VAC as your partner in success.

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Warranty Registration

REGISTER YOUR PUMP PACK

1. Scan the QR Code.
2. Fill out the form online and click submit.
3. That's it. Your package has been registered.

WARRANTY INFO

The one 2 year period shall begin the day the product is shipped from our facility at Chandler Equipment. If we are provided an authentic copy of the original resale invoice the 2 year warranty will start from the day the vehicle was originally sold. The package must be used in an application for which it was intended. Damage caused by improper use or lack of proper maintenance voids the warranty. Manufacturer's liability under this, or any other warranty whether expressed or implied, is limited to repair of or at the manufacturers' option, replacement of parts which are shown to have been defective when shipped.Manufacturer's liability for incidental and consequential damage is hereby excluded to the full extent permitted by law. Equipment must be installed by a trained and qualified installer according to guidelines established by Chandler Equipment Inc.

WARRANTY PROCEDURE

When making a warranty claim please first contact your dealer or Chandler Equipment directly. When making a claim please provide the Serial number on the pump. You will also be asked for specifications such as RPMs, PTO info, truck transmission specs, etc.

DISCLAIMER

All information in this manual is based on data at the time of publication of this document. It is up to the owner and operator to stay up to date with any changes to Chandler Equipment's policies. It is also up to the owner/operator to ensure all product is being operated correctly and maintained. Failures caused by improper run time, overheating, etc are not covered by the warranty.

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Warning

It is the installer's and end user's responsibility to ensure that operators are trained and running the unit correctly. Improper operation of these units can lead to serious injury or death. Ensure ALL users are properly trained and the units are not being used outside their intent.

These units are meant to pass air only and are not intended to be used to transfer water, gases, or any other liquid. These units are not meant to be used with any flammable gases, liquids, chemicals or any other flammable substances. It is also not to be used with any toxic substances.

Please read this manual thoroughly and play close attention to any section containing a warning symbol depicted below.

This manual MUST be read in its entirety before operating the equipment. Do not let any unauthorized individual operation the unit.

Before servicing or troubleshooting any issues please ensure the equipment is locked out and that accidental startup cannot occur. This unit and its associated components can operate at high temperatures that can cause burns. Please ensure the unit and components have cooled before conducting maintenance or trouble shooting.

Do not remove or plug the pressure reliefs on the units. Do NOT operate the pump without the proper pressure relief valves. Do not come in contact with vacuum or pressure anywhere on the unit with a body part.

Use proper lifting equipment to move the pump package. Improper lifting can cause damage to the equipment and injury. Do NOT disconnect equipment or components while the unit is under pressure or vacuum.

Make sure to wear safety glasses and all other protective equipment while operating or servicing the unit.

Chandler equipment will not be held liable for misuse of application of the pump unit. NEVER exceed the recommended level of pressure.

Operation Start

Start-Up

- The vacuum pump must be started in a neutral (free air) condition to prevent damage. Before starting the pump, verify the following:
  - The rotary vane vacuum pump does not have a dedicated start button. To start the pump, simply engage the motion transfer from the power take-off (P.T.O.) system. The specific engagement method will depend on the version of the rotary vane vacuum pump you are using.

    Before starting, always ensure that the vacuum pump is adequately supplied with oil for internal lubrication. Refer to the diagram below for proper oil level reference.
- All drain valves on the secondary and muffler are fully closed.

Oil Level
Indicator

Operation Checks

Initial Checks

During initial start-up, perform the following checks:

- Ensure there is no excessive vibration or abnormal mechanical noise. These may indicate installation or internal component issues.
- Visually inspect both front and rear oil dripper sight glasses to confirm proper oiling rates.
- Use the oil rate reference chart below to verify that the pump is receiving oil at the correct drip rates depending on its operating condition.

Model	Total Drops/min under vacuum max	Total drops/min air flow free air	r/h at max vacuum	r/h air flow free air
BALLAST 3500	25 - 30	12 - 15	63	32
BALLAST 4500	25 - 30	12 - 15	63	32
BALLAST 6000	30 - 40	12 - 20	80	40
BALLAST 7500	40 - 50	20 - 25	100	50
BALLAST 9000	50 - 60	25 - 30	120	60
BALLAST 1100	50 - 60	25 - 30	120	60
BALLAST 13500	50 - 60	25 - 30	120	60

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Operation Information

Operating Info

The BAL-1100-SPA vacuum pump is designed for durable, long-term operation when used within its specified parameters.

Caution: The pump must not be operated at or above 320°F (160°C) for more than 15 minutes. Extended operation at this temperature can lead to accelerated wear, increased oil consumption, and potential mechanical damage requiring heavy maintenance.

To ensure optimal performance and longevity, monitor operating temperature during use and take corrective action as needed to maintain safe thermal conditions.
The BALLAST pump is equipped with a sliding flange system designed to prevent internal damage if foreign objects enter the space between the rotor and the pump body (except on versions G and GA).

To take advantage of this protection system, follow this critical safety step before starting the pump:
Ensure that the rotor has not dropped accidentally by verifying alignment between the machined cut on the flange and the corresponding cut on the pump body, as illustrated in Figure 6 below.

Flange slot

Cut for aligning flange with pump body

The rotary vane vacuum pumps of the BALLAST series are designed for continuous-duty operation at -0.70 bar vacuum. This is made possible by an ambient air injection cooling system that filters incoming air and directs it—through a non-return valve—into the compression side of the pump, effectively reducing internal temperatures.

These pumps are intended for semi-industrial applications that do not require extreme hydrostatic pressure or very high vacuum levels, but do demand longer operational durations than conventional systems. Important: To maintain optimal cooling performance, regularly clean the air injection filters using compressed air.

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Maintenance

Technical Assistance

For technical assistance and the supply of spare parts and accessories, please contact Chandler VAC.

Periodic Maintenance

The following maintenance schedule outlines the required servicing intervals for the BALLAST series vacuum pump:

Servicing to be Carried Out	How to Proceed	Frequency
Clean final filter	Remove the final filter from the left housing (see image below) and clean it thoroughly	Minimum once per week
Check oil circulation	Inspect the level sigh glasses	Once a day
Check oil level in tank	Use the oil level on outside of tank	Once a week
Check wear of blades	Remove threaded plug	Every 300 working hours
Check over-pressure and vacuum regulator valves	Remove valves	Once a month
Wash oil tank	Remove tank	Once a year
Wash body internally	Put in oil + diesel oil (lubricate with oil after washing)	Whenever sewage enters or after long inactivity
Wash lubrication pump	Use a brush and compressed air	Once a year or after inactivity
Check overflow valves	Remove valves	Once a month
Wash and suck the filter cartridge	Remove the filter cartridge	Once a week
Wash the Ballast valve filter	Disassemble the filter	Once a month
Diesel flush the pump	Use the supplied flush kit built into the package	Minimum once per week

Blade & Filter Inspection

Inspection of Blades

To check the condition and wear of the blades in the rotary vane vacuum pump, follow these steps:

- Remove the threaded inspection plug (see Figure 11);
- Rotate the rotor until a blade lines up with the inspection hole;
- Compare the height of the blade with the reference ring on the rotor;
- Replace the entire set of blades if the blade height is below the reference ring.

Figure 11

Inspection of Filter

The image below highlights the location of the final filter housing for weekly cleaning:

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Troubleshooting

Problem	Cause	Remedy
Little Vacuum or Pressure	Blades are worn	Replace Blades
	Some blades are jammed in rotor	Disassemble the rotary blades vacuum pump, clean and wash the rotor, the blades, and the body.
	Air infiltration or leakage from system	Eliminate infiltration
	Undulated cylinder	Smooth or replace the body
	Reversing gear incorrectly positioned	Position reversing gear correctly
	Flange assembly too tight	Add a gasket to the back flange
	Movement of sliding flange	Replace the pins supplied between body and flange for alignment
	Check the operation of the cap valve on the suction duct	Unblocking
Overheating	Excessive pressure	Reduce Pressure
	Excessive rate of revs	Reduce rate of revs
	Excessive operating time	Reduce operating time
	Excessive rate of revs	Reduce rate of revs
	Blades are too long	Trim blades to correct size
	Lack of lubrication	Check oil level in tank, oil pump operation setting of oil tap
	Suction filter cartridge clogged	Wash and blow the filter cartridge
	Ballast filter clogged	Wash and blow the filter
Beating Against External Surface	Rate of revs too low	Increase rate of revs
	Excessive/ short and or not suitable lubrication oil	Wash and blow the filter
Leakage of Sewage From the Discharge Elbow	Malfunctioning of valves	Check valves
Smoke Emitting From the Discharge Elbow	Excessive lubrication	Adjust lubrication
Insufficient Lubricating Oil Circulation (For Versions with Automatic Lubrication)	Suction of air from the fittings	Replace the fittings
	Air in oil pump chamber	Fill pump chamber with oil

Troubleshooting Continued

Problem	Cause	Remedy
P.T.O. Does Not Rotate	Broken blades	Replace blades (check if rotor pin is bent)
	Foreign body in rotary blades vacuum pump	Remove foreign body
No Suction/ Compression	Excessive pressure	Reduce Pressure
	Reversing gear incorrectly positioned	Position reversing gear correctly
	Rotary blades vacuum pump rotates in wrong direction	Reverse direction of rotation
	All blades jammed	Disassemble the rotary blades vacuum pump, clean and wash the rotor, the blades, and the body.
	Blades protrude from the rotor slots anomalously	Disassemble the rotary blades vacuum pump, clean and wash the rotor, the blades, and the body.
	Rubber ball closes overflow valve	Increase passage of air inside valve
Locking of Handle	Foreign liquid in filling pump	Remove and clean with diesel oil
	Non-use	Lift handle with lever

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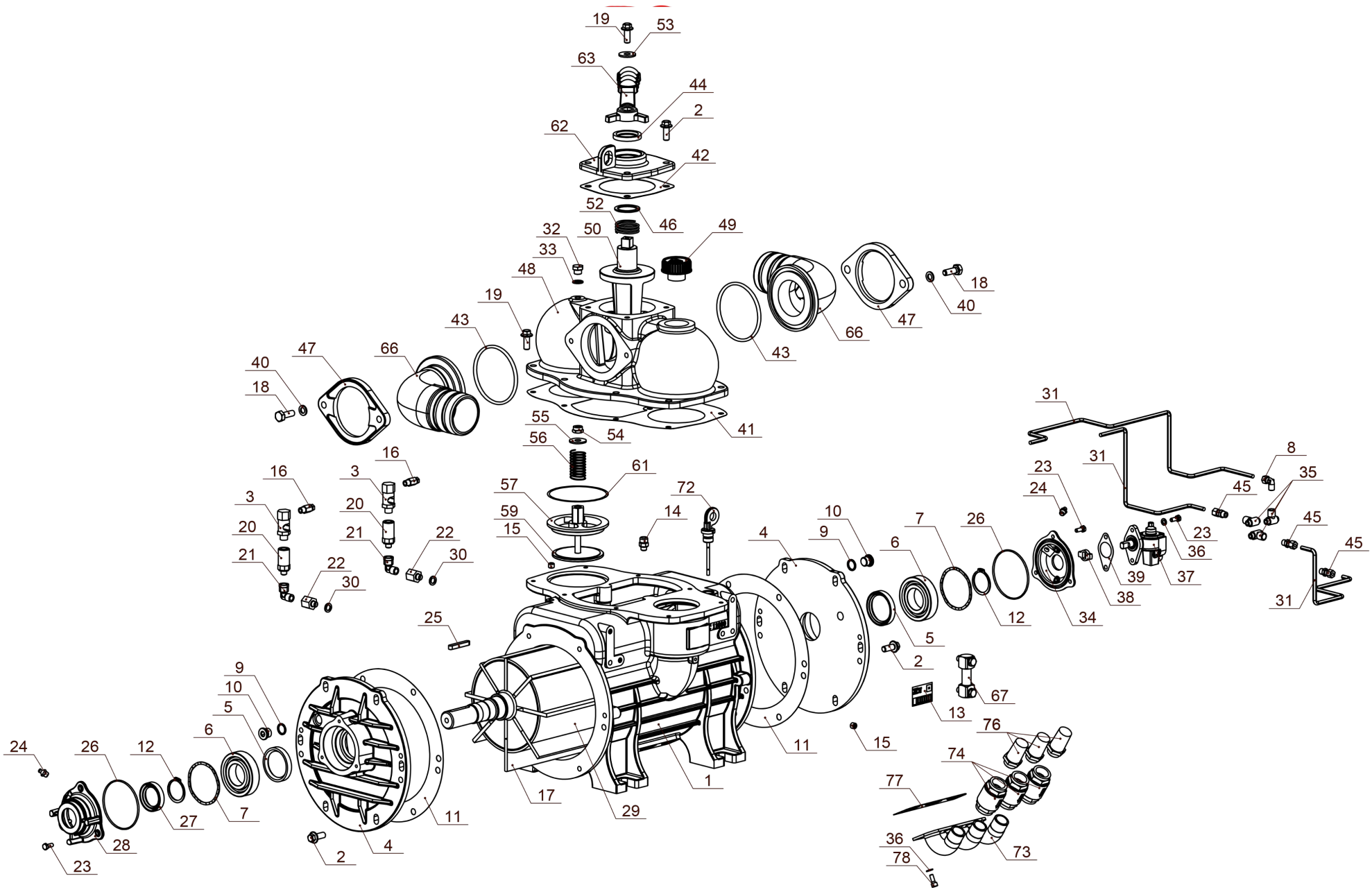
Pump Breakdown



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Pump Parts List

Code	Description	Quantity
1	HOUSING - BALLAST 11000 LA	1
2	SCREW - M 10X25 TEF - FL/ZIGR 8.8	16
3	CHECK LIGHT - D 1/8"	2
4	FRONT & BACK FLANGE MEC 9000-11000-13500	2
5	OIL SEAL - 48X62X10 DCV - FKM	2
6	BALL BEARING - 6208	2
7	COMPRESSION & THRUST RING D80	2
8	CURVED FITTING 1/8"X6X90°	1
9	ALUMINIUM WASHER - D 16X20X1,5	2
11	PLUG - D 16X1	2
12	BODY GASKET MEC 9-11-13500	2
13	CIRCLIP - D 40 E	2
14	THERMO LABEL	1
15	PLUG - M 10X1 WITH AIR RELEASING	1
16	PLUG - D 1/8"	3
17	CONNECTOR D 1/8" X 6	2
18	LONG LIFE BLADE MEC 11000 370X60X6,5	8
19	SCREW - M 10X35 TE	4
20	SCREW - M 8X25 TEF - FL/ZIGR 8.8	9
21	EXTENSION 1/4" GAS	2
22	CURVED FITTING M/F 1/4" GAS	2
23	REDUCTION F/M - 1/4"/1/8"	2
24	SCREW - M 6X16 TE	8
25	LUBRICATOR - M 10X1	2
26	KEY -8X7X50	1
27	SEAL RING - OR 2337 LF PUMP	2
28	OIL SEAL - 35X52X10	1
29	FRONT COVER - MEC 5-13500/P AL	1
30	ROTOR - BALLAST 11000/P	1
31	ALUMINUM WASHER 10X16X1,5	2
32	OIL DELIVERY HOSES - BALLAST 11000 P SX	1
33	PLUG - D 1/4" GAS	1
34	ALUMINUM WASHER - D 1/4" GAS	1
35	OIL PUMP SUPPORT BACK COVER - MEC L.A.	1
36	CURVED FITTING 1/8" F	3
37	SMOOTH WASHER - D 6	7
38	OIL PUMP - LA 2 WAYS AL SX IIS	1
39	CONNECTOR JOINT - L.F.	1
40	OIL PUMP GASKET - L.A.	1
41	SMOOTH WASHER - D 10	4
42	MANIFOLD GASKET MEC 9-11-13500	1
43	MANIFOLD COVER GASK-MEC 9_13500-STAR-WPT	1
44	SEAL RING - OR 189 STAR UL	2
45	OIL SEAL - 35X50X7	1
46	FITTING 1/8"X6	3
47	TEFLON WASHER REV.GEAR MEC 9-11-13500	1
48	FLANGE FOR ELBOW - STAR D80	2
49	MANIFOLD MEC 9000-11000-13500	1
50	BLACK PLUG - D 2" GAS	1
51	REVERSING GEAR MEC 9-13500	1
52	SPRING - MEC 9-11-13500	1
53	WASHER - D 10X28X4 - DIN 6340	1

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Pump Parts List Continued

Code	Description	Quantity
54	SELF-LOCKING NUT - M 10X1 VARGAL	1
55	BLANK WASHER - D 10X40	1
56	SPRING FOR POPPET VALVE BALLAST	1
57	FLANGE GUIDE FOR POPPET VALVE BALLAST	1
59	POPPET VALVE - BALLAST	1
61	POPPET V. LOCK GASKET - BALLAST 9-13500	1
62	MANIFOLD COVER - MEC 9_13500-STAR-WPT/UL	1
63	HANDLE SQUARE CONNECTION	1
66	REVOLVING ELBOW - MEC 9_13500-STAR D 76	2
67	OIL LEVEL INDICATOR MEC 9000-11000-13500	1
72	OIL LEVEL ROD - MM 18X55	1
73	DUCT BALLAST 11000-13500	1
74	UNIDIRECTIONAL VALVE D 3/4" BALLAST	3
76	AIR FILTER - ONE-WAY VALVE 3/4"	3
77	GASKET BALLAST2 MEC 11000-13500	1
78	SCREW - M 6X16 TCEI	4
	REBUILD KIT - BALLAST 11000	**1**
	SEAL KIT BALLAST 9000-11000-13500	1
	LONG LIFE BLADE MEC/BALLAST 11000	8

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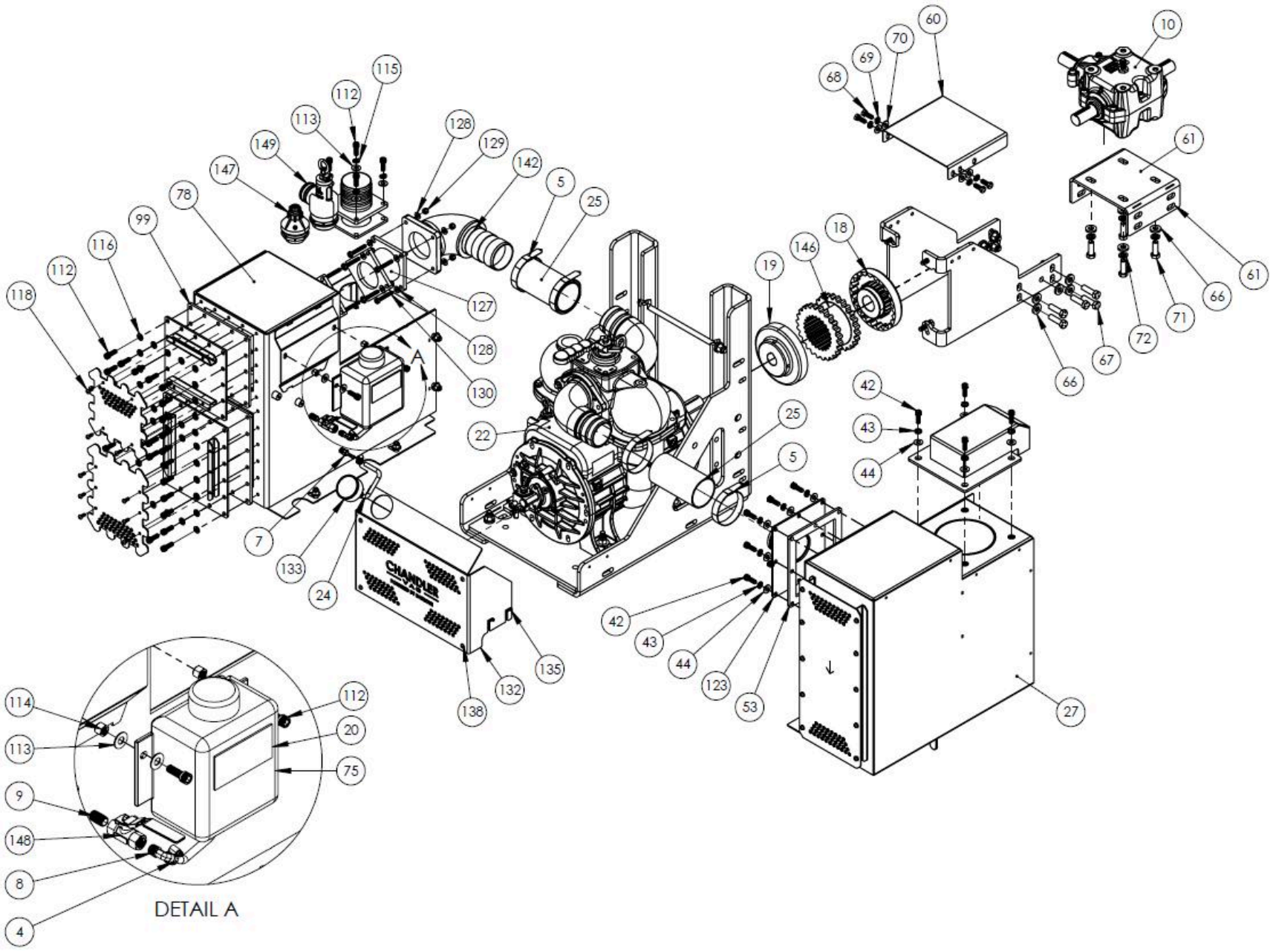
Pump Package Breakdown



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Pump Package Parts List

Code	Part Number	Quantity
1	1004-1501	1
2	1004-1502	1
3	1181-0042	1
4	2760-0025	4
5	CPC-0400-SS	4
6	1054-1018	1
7	1054-1020	1
8	1055-0150	1
9	2760-0084	1
10	1006-0000-CH	4
11	1000-0104	12
12	1000-0112	18
13	1000-0113	4
14	1000-0120	4
15	1000-0153	4
16	1000-0154	6
17	1000-0155	4
18	1005-0023	1
19	1005-0034	1
20	1004-1110	1
21	1004-1154	1
22	BAL1100-CCW	1
23	1004-1151	1
24	1004-1151	1
25	4688-1734	2
26	1002-3150	1
27	1002-3150-RIGHT	1
28	1002-3150-LEFT	1
29	1002-3150-TOP	1
30	1002-3150	1
31	1002-3150-EXUASTFLANGE	1
32	1002-3150-CROSS	1
33	1002-3150-BACK	1
34	1002-0002-TANKFLANGE	1
35	1002-3150-EXUAST	1
36	1002-3150-BAFFLEPLATE	1
37	1002-3150-PANELMNT	2
38	1002-3150-PANEL	1
39	1002-0014	1
40	1037-5000	1
41	1021-0010	1
42	1000-0210	12
43	1000-0212	12
44	1000-0211	12
45	1000-0381	12
46	1000-0110	10
47	1000-0168	5
48	1000-0118	5
49	1000-0384	5
50	1000-0383	10
51	1000-0116	10
52	5500-4610	10

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Pump Package Parts List Continued 1

Code	Part Number	Quantity
53	1002-2008-INLETGASKET	1
54	1004-0005	1
55	1004-0005-RSIDE	1
56	1004-0005-LSIDE	1
57	1004-1005	1
58	1004-1005-SIDE	1
59	1004-1005-RSIDE	1
60	1004-1005-SHIELD	1
61	1004-1005-GMNT	1
62	4026102909	4
63	1000-2017	4
64	1000-2007	4
65	1000-0104	10
66	1000-0112	24
67	1000-0270	10
68	1000-0138	4
69	1000-0118	4
70	1000-0110	4
71	1000-0153	4
72	1000-0120	4
73	1004-1100	1
74	1004-1100-BASE	1
75	1004-1150-RESERVOIR	1
76	1008-0150-SECONDARY	1
77	1008-0150-LEFT	1
78	1008-0150-TOP	1
79	1008-0150-BACK	1
80	1008-0150-RIGHT	1
81	1008-0150-MNT	1
82	1008-0150-BAFFLE	1
83	1008-0150-BTMMNT	2
84	1008-0150-FILTERMNT	2
85	1008-0150-FILTERPLATE	1
86	1008-0150-CAGEPLATE	1
87	1008-0150-FPANEL	1
88	1008-0150-BTMPANEL	1
89	1008-0116	2
90	1007-1016	1
91	ELEMENT BASE-5.5IN	2
92	1545002900	1
93	1007-1017	1
94	1090-0001	1
95	1076-0000	1
96	1008-0150-TAB	4
97	1090-0000-RUBBERSEAT	1
98	1008-2008-CAGEGASKET	1
99	1008-2011-FILTERGASKET	1
100	1008-2006-INNLETGASKET	1
101	1002-0002-TANKFLANGE	1
102	HM-0300-ZP	1
103	1037-5000	1
104	1055-0034	2

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Pump Package Parts List Continued 2

Code	Part Number	Quantity
105	1055-0042	1
106	1055-0090	1
107	3IN PIPE-2IN	1
108	3IN PIPE-1.5	1
109	1000-0138	4
110	1000-0118	4
111	1000-0168	4
112	1000-0210	40
113	1000-0211	8
114	1000-0102	7
115	1000-0212	4
116	1000-0213	34
117	5500-4010	10
118	5500-4610	10
119	1008-0150-CAGESIDE	4
120	1000-0139	5
121	1000-0110	9
122	2006-1100	1
123	1002-3150-INLETPLATE	1
124	HM-0300-ZP	1
125	2012-1100 IR	1
126	1008-0116	2
127	3IN PIPE-2.375	1
128	1000-0109	16
129	1000-0101	8
130	1000-0134	8
131	BAL-1100-COVER	1
132	BAL-1100-COV	1
133	1026-0150	1
134	1004-BAL-1100-PANEL	1
135	1181-0044	4
136	1000-0108	4
137	1000-0116	4
138	5500-4610	4
139	5500-0004	4
140	5500-4010	4
141	1852103800	1
142	1627102800	1
143	1610101100-1	1
144	4026350706-1	4
145	4026102808	4
146	1005-0019	1
147	1035-0000 MZ	1
148	1038-0025	1
149	1050-0000-MZ	1