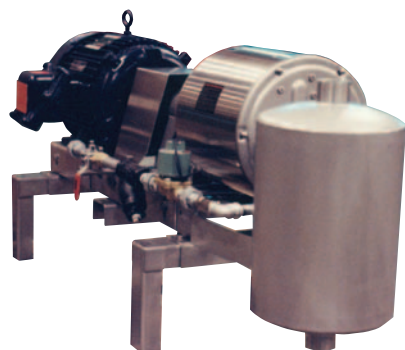


Replace Cast Iron and Bronze liquid ring vacuum pumps with stainless steel, and still stay in budget...



Close-Coupled Pump & Motor.
Most Economical.



Pedestal Pump with Motor & Coupling.
Most Versatile.

STANDARD, FACTORY ASSEMBLED PACKAGES FOR FAST, ECONOMICAL INSTALLATION.

Basic Packages include:

- Stainless steel, liquid ring vacuum pumps, close-coupled or pedestal mounted.
- Stainless steel bases with 6 inch legs for easy cleaning underneath.
- Stainless steel separator/mufflers.
- Service liquid lines.

Just locate near a drain and make external piping and wiring connections.

Lyco Wausau is a USA company that has specialized in making stainless steel, liquid ring vacuum pumps since 1973. We sell worldwide for food, pharmaceutical, chemical, medical, laboratory and general industrial applications where corrosion resistance is beneficial.

- ... Lyco Wausau stainless steel pumps have a proven record of performance for over 30 years.
- ... Lyco Wausau stainless steel pumps and all spare parts are factory stocked for fast shipment.
- ... Lyco Wausau stainless steel pumps are among the easiest in the industry to field repair.
- ... Lyco Wausau stainless steel pumps have a limitless life with proper maintenance.

Lyco Wausau is a unique source for operators, distributors and OEM's looking for economical, stainless steel, liquid ring vacuum pumps that can ship fast.

Reasons to Consider **LYCO**Wausau Liquid Ring Vacuum Pumps



①
Single-Stage, Close-Coupled Pump and Motor. Models 101 & 102.



②
Single-Stage, Pedestal Pump. Models 501 & 502.

Standard construction is 316L stainless steel. Stainless steel components include the rotor, cylinder body, porting cover and shaft.

Stainless steel can increase longevity and eliminate problems even in applications where cast iron pumps are commonly used. For example, Lyco Wausau pumps tolerate frequent acid clean-up and descaling, and they will not lock up from rust after sitting idle.

Low speed operation (1750 RPM) allows longer life for bearings and seals when compared with pumps that run at twice that speed (3,500 RPM).

Low service liquid requirements of 1.5-3 GPM (Water) are standard, and reductions of 50% and 100% are available with recirculation options.

Conversely, Lyco Wausau offers an option for greatly increasing water flow for condensing applications.

Lyco Wausau offers two discharge port options:

Medium Vacuum Models 101 & 501, with a completely open discharge port. Many pumps in the industry only offer variable discharge ports with holes and valves that can clog in especially dirty vacuum applications.

High Vacuum Models 102 & 502, with a Lyco Wausau variable discharge port that includes large holes and a flapper valve to minimize clogging problems.

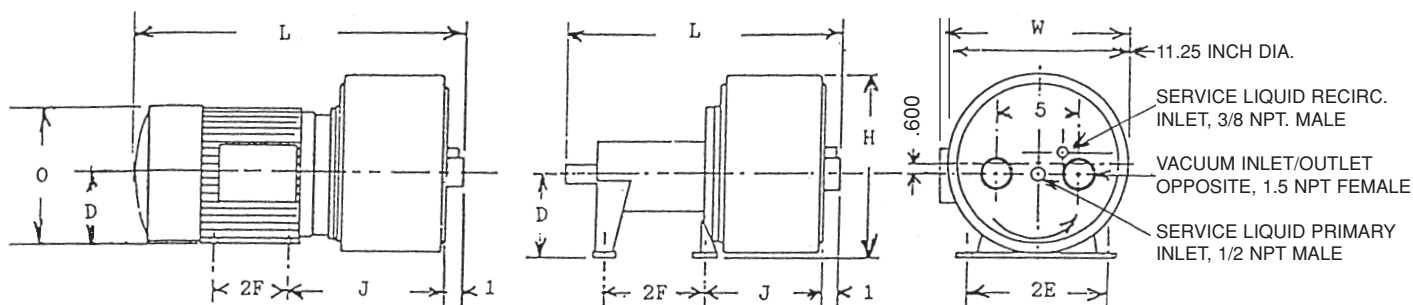
Lyco Wausau pumps feature a higher tolerance for drawing in solids

because of a strategically located, 1/2" drain that can be used to flush out solids periodically or continuously.

The smooth, polished stainless steel exterior design of Lyco Wausau pumps offer easier cleaning and attractive appearance.

Lyco Wausau pumps are 100% factory run tested.

Trial pumps are available from Lyco Wausau. Try one at no risk.



Close-Coupled Models 101 & 102 (*1):

HP	RPM	VOLTAGE	FRAME	L	O	W	H	D	2E	2F	J	PUMP WGT	SHIP WGT
-40	3	1750	230/460/60/3	182TCZ TEFC	19 3/4	9 1/2	13 3/4	10 1/4 (*2)	4 1/2	7 1/2	5 1/2	80	90
-80	5	1750	230/460/60/3	184TCZ TEFC	22 1/4	9 1/2	13 3/4	10 1/4 (*2)	4 1/2	7 1/2	5 1/2	94	105
-120	7.5	1750	230/460/60/3	213TCZ TEFC	27 3/4	10 1/2	13 3/4	11 1/2	5 1/4	8 1/2	5 1/2	152	200
-160	10	1750	230/460/60/3	215TCZ TEFC	30 3/4	10 1/2	13 3/4	11 1/2	5 1/4	8 1/2	7	180	230

Pedestal Models 501 & 502 (*1):

-40	3	1750(*3)		17		11 1/4	11 1/2	5 1/4	8 1/2	7	5 1/2	78	90
-80	5	1750(*3)		18 3/4		11 1/4	11 1/2	5 1/4	8 1/2	7	8 1/4	85	95
-120	7.5	1750(*3)		20 3/4		11 1/4	11 1/2	5 1/4	8 1/2	7	10 1/4	90	105
-160	10	1750(*3)		23 3/4		11 1/4	11 1/2	5 1/4	8 1/2	7	11 1/4	98	115

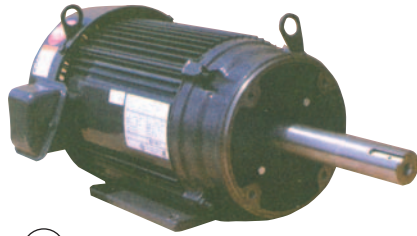
*1) Dimensions in inches and weight in pounds.

*2) Motor must be mounted minimum of 3/4" above base to provide clearance for pump head.

*3) Next size larger motor required with 1750 RPM motors with 1.00SF (Service Factor).

More Reasons to Consider **LYCO**Wausau Pumps

Close-coupled pumps—Models 101 & 102—feature heavy-duty, energy-efficient motors with:



Motor for Closed-Coupled.
Models 101 & 102.

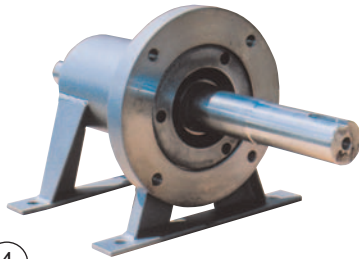
Exclusive, stainless steel (316) heavy-duty shafts: 3 & 5HP (1.25" diameter) and 7.5 & 10HP (1.75" diameter). Most other makes in the industry offer smaller-diameter, mild-steel shafts.

Exclusive, oversized, double-row ball bearings: 7.5 & 10HP models. Most other makes offer smaller, single-row bearings.

Exclusive, energy efficient, EPACT & NRCAN, 4-Pole, totally enclosed motors built by USA manufacturer Emerson Motor Company (U.S. Electrical Motors). Many other makes are built off-shore and use foreign motors.

Versatile "World Motor" specifications:

- 1750 RPM: 230/460/60/3, 1.25SF & 208/60/3, 1.00SF
- 1460 RPM: 190/380/50/3, 1.00SF
- Class F insulation, "Insulife 1000"



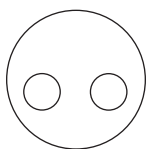
Bearing Housing for Pedestal.
Models 501 & 502.

Pedestal pumps—Models 501 & 502—feature heavy-duty bearing housings with:

Exclusive, stainless steel (316) heavy-duty shafts: 3 & 5HP (1.25" diameter) and 7.5 & 10HP (1.75" diameter). Most other makes in the industry offer smaller-diameter shafts.

Exclusive, oversized, double-row ball bearings on all models. Most other makes offer smaller, single-row bearings.

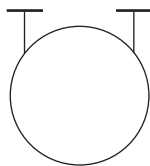
Greater versatility because the choice of motors is unlimited, and these models can be belt driven.



Lyco Pumps with
Front Face
Connections.



Other Makes with
Top Connection.



Vacuum inlet and outlet connections are located in the front face of the pump which allows:

Partial draining through the outlet when the pump is shut down. This allows longer life and less maintenance by eliminating both flooded and dry start-ups which cause damaging stress. Pumps with top inlet and outlet connections are vulnerable to these problems.

Easier replacement of other pumps with front-face connections such as the older Nash designs.

Lyco Wausau vacuum pumps are easy to maintain:



Simple Design, Easy to Field Service.

Disassembly and reassembly can be quickly done in the field without losing important clearances. Users report that Lyco Wausau vacuum pumps are among the easiest in the industry to service. A service video is available for field training.

A factory rebuild program is available. Pricing depends on the rebuild requirements. Major repairs rarely exceed half the price of a new pump. These rebuilt pumps look new and have a new-pump warranty.

Special pricing for standby pumps is available to owners of Lyco Wausau vacuum pumps.

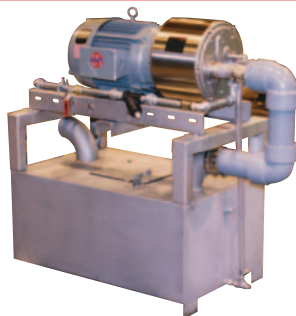
StainlessSteel, Simplex, Single-Stage Packages for Fast Installation, Low Water Usage and Quiet Operation

8



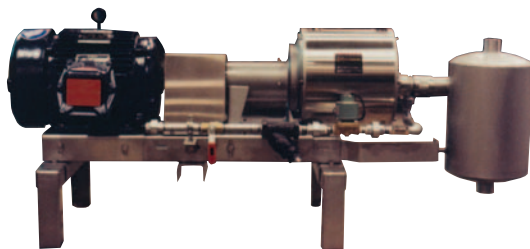
Closed-Coupled Pump & Motor Package. Water Usage is 1.5-3 Gallons per Minute. Models 101 & 102BLMS.

9



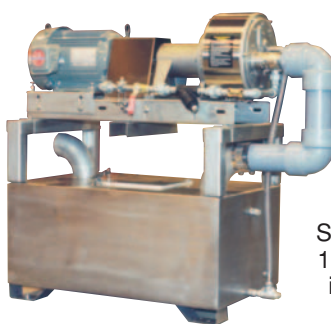
Close-Coupled Pump & Motor Package with Standard, Stainless Steel Tank for 100% Recirculation. Water Usage is 1-2 Gallons per Hour. Models 101 & 102BLRS.

10



Pedestal Pump Package with Stainless Steel Coupling Guard, Coupling and Motor. Water Usage is 1.5-3 Gallons per Minute. Models 501 & 502BLMS.

11



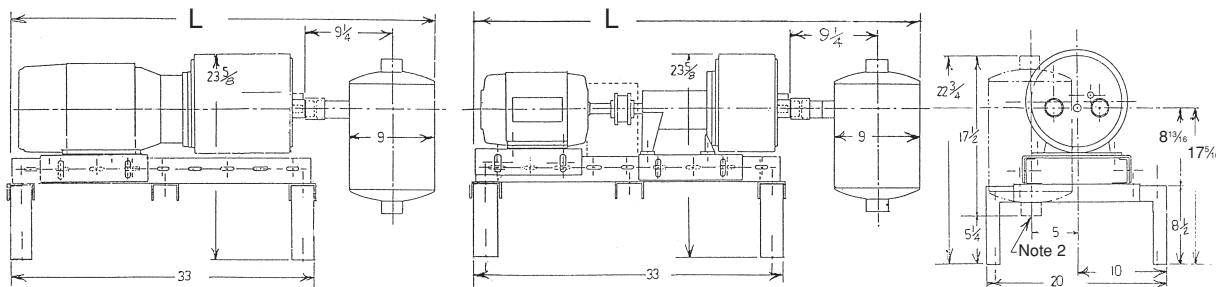
Pedestal Pump Package with Standard, Stainless Steel Tank for 100% Recirculation. Water Usage is 1-2 Gallons per Hour. Models 501 & 502BLRS.

Simplex, vacuum pump packages include standard, stainless steel bases with 6" legs and stainless steel separator/mufflers. Also included are service liquid lines with hand valve, strainer, solenoid valve, water flow controller and piping. Internal stainless steel pump parts are 316 and outside stainless steel parts are 304.

Water consumption is 1.5-3GPM (2GPM Nominal). This can be reduced with a water saver option which provides 50% recirculation.

Simplex, vacuum pump packages with 100% recirculation. Standard bases mount on top of a standard, 35-gallon, stainless steel, recirculation tank. Tanks include stainless steel float valve for automatic make-up water control. Pumps include a stainless steel, inlet check valve. Also included are service liquid lines with hand valve, strainer, water flow controller and piping for easy pump priming and optional primary water usage. These tanks can also be added to Lyco Wausau pump packages in the field.

All of these packages are quiet enough that you can easily carry on a conversation right next to them.



Close-Coupled Pump Packages w/o Recirculation Tank, Models 101 & 102BLMS, and w/ Recirculation Tank, Models 101 & 102BLRS (*1):

	HP	RPM	LGTH (L)	WDTH (W)	HGHT(H) W/O REC. TNK.	HGHT(H) W/REC. TNK. (*3)	WGT	SHIP WGT	ADD FOR REC. TNK
-40	3	1750	46%	20	23%	39%	150	200	115
-80	5	1750	46%	20	23%	29%	170	220	115
-120	7.5	1750	46%	20	23%	39%	225	275	115
-160	10	1750	46%	20	23%	39%	250	300	115

Pedestal Pump Packages w/o Recirculation Tank, Models 501 & 502BLMS, and w/ Recirculation Tank, Models 501 & 502BLRS (*1):

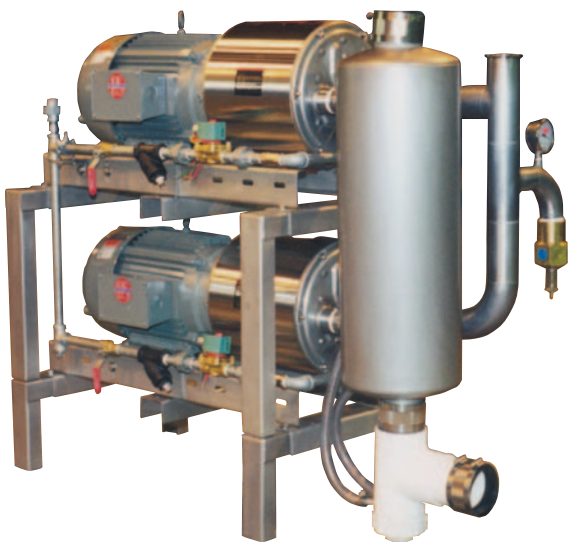
	HP	RPM	LGTH (L)	WDTH (W)	HGHT(H) W/O REC. TNK.	HGHT(H) W/REC. TNK. (*3)	WGT	SHIP WGT	ADD FOR REC. TNK
-40	3	1750	48	20	23%	39%	235	285	115
-80	5	1750	50	20	23%	39%	255	305	115
-120	7.5	1750	54	20	23%	39%	310	375	115
-160	10	1750	58	20	23%	39%	335	450	115

*1) Dimensions in inches and weight in pounds.

*2) Separator/muffler connections, top and bottom: 2" OD tube.

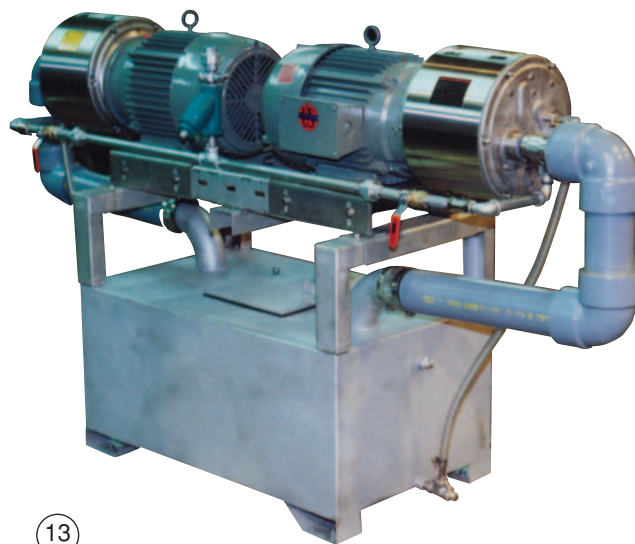
*3) Recirculation tank overall dimensions: 33(L) x 20(W) x 16(H).

StainlessSteel, Duplex, Single-Stage Packages, up to 20HP, for Fast Installation, Low Water Usage and Quiet Operation



12

Duplex, Close-Coupled Pump & Motor Package with Optional, Stainless Steel Intake Manifold, and with 50% Recirculation Water Saver which Reduces Water Usage from 4-6 to 2-3 Gallons per Minute. Models 101 & 102DBLLMMS.



13

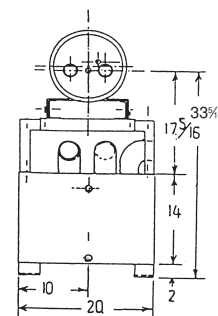
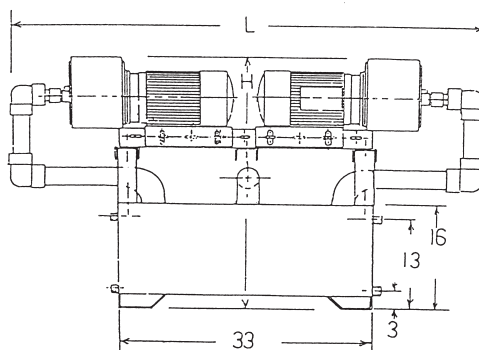
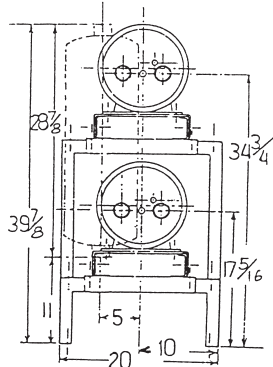
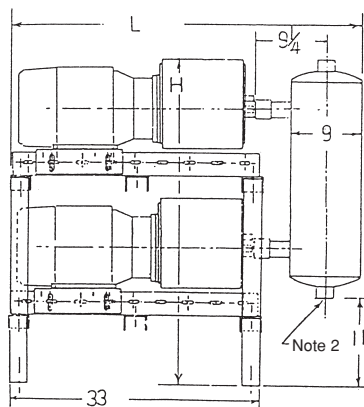
Duplex, Close-Coupled Pump & Motor Package with Standard, Stainless Steel Tank for 100% Recirculation. Water Usage is 2 to 4 Gallons per Hour. Models 101 & 102DBLRS.

Duplex, vacuum pump packages are composed of Lyco Wausau simplex packages stacked two high or mounted back to back. Standard bases are designed for this module arrangement. Packages include a stainless steel, duplex separator/muffler and service liquid line.

Water usage can be reduced with a 50% water saver option or a 100% recirculation option that uses a 35 gallon tank. Central, recirculation systems are often used in installation with multiple duplex packages.

Duplex pump packages offer stand-by maintenance advantages. First, some capacity remains available when one pump is removed for service. Second, all Lyco Wausau pumps are compact and light enough to be easily removed and returned to a maintenance shop for bench repair or to the Lyco Wausau factory. If a spare pump is kept on hand, down time is minimized and emergency repairs eliminated.

Special pricing for standby pumps is available to Lyco Wausau owners.



Vertical Duplex Package w/o Recirculation Tank
Models 101 & 102DBLLMMS (*1):

	HP	LGTH	WDTH	HGHT	WGT	SHIP
		(L)	(W)	(H)		WGT
-80	6 (2-3)	46%	20	41	300	350
-160	10 (2-5)	46%	20	41	340	390
-240	15 (2-7.5)	46%	20	41	450	500
-320	20 (2-10)	46%	20	41	500	550

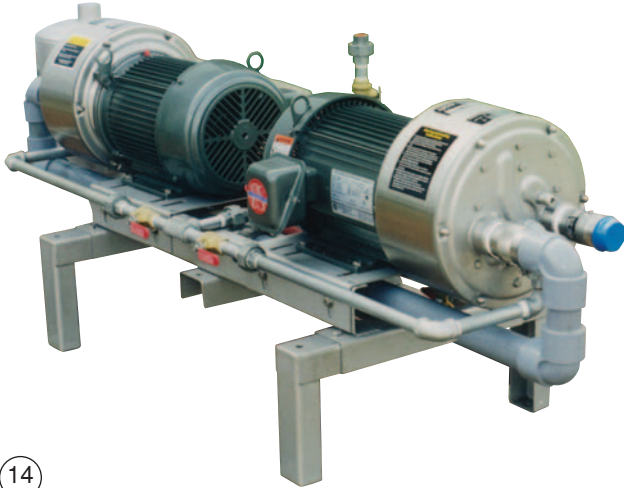
Horizontal Duplex Packages w/ Recirculation Tank
Models 101 & 102DBLRS (*1):

	LGTH	WDTH	HGHT	WGT	SHIP
	(L)	(W)	(H)		WGT
	55 1/2	20	39%	350	400
	60 1/2	20	39%	375	425
	74 1/2	20	39%	490	540
	80 1/2	20	39%	550	600

*1) Dimensions in inches and weight in pounds.

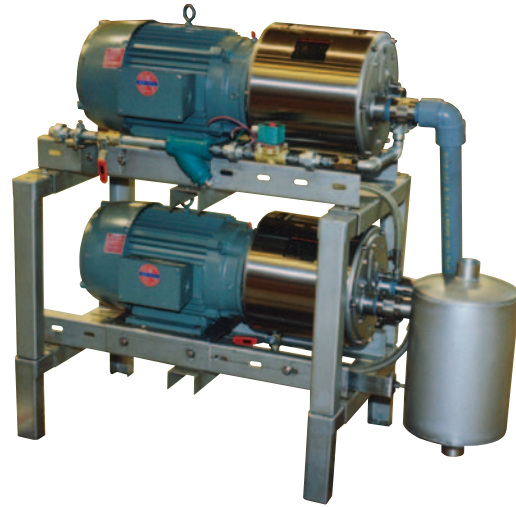
*2) Separator/muffler connections, top and bottom: 3/4" OD tube.

StainlessSteel, Two-Stage Packages for Higher Vacuums, Fast Installation, Low Water Usage and Easy Maintenance



14

Two-Stage, Horizontal Package with Two Close-Coupled Pumps Piped in Series. Model 102TBLMS.



15

Two-Stage, Vertical Package with Two Close-Coupled Pumps Stacked Two High and Piped in Series. Model 102TBLLMS.

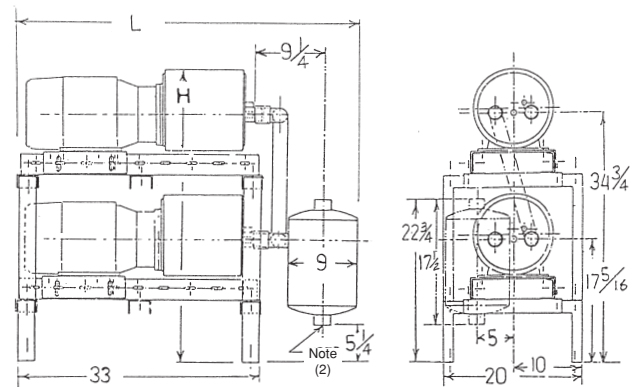
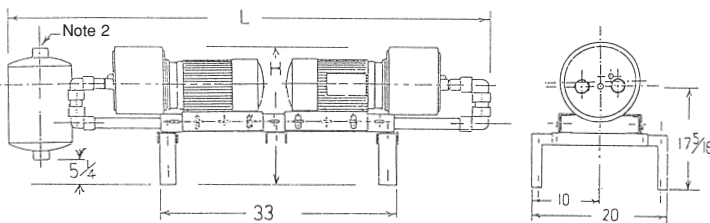
Two-stage vacuum pump packages include two, single-stage pumps mounted either back to back or stacked two high on standard, stainless steel bases and piped in series. These packages include a stainless steel separator/muffler and a service liquid line. Internal stainless steel pump parts are 316 and external stainless steel parts are 304. They are completely factory assembled for easy handling and fast installation on the job.

Although these packages use two, single-stage pumps instead of one two-stage pump, they take up little floor space, operate quietly, have low service liquid requirements (2-3GPM Water) and are easier to field service.

They are easier to field service because they can be disassembled and reassembled more quickly without losing important clearances. Also, they can be more easily removed to a maintenance shop for bench repair when compared to the bulk and weight of a single, 15 or 20HP, two-stage pump. **Special pricing for stand-by pumps is available to Lyco Wausau owners.**

Pricing usually compares favorably with other makes when complete stainless steel construction is considered, including pumps, bases and separator/mufflers.

Field conversion from a Lyco Wausau single-stage package to a two-stage package can be easily done and conversion parts are available for doing this.



Two-Stage Horizontal Packages

Model 102TBLMS (*1):

	MOTOR		LGTH	WIDTH	HGHT	WGT	SHIP
	HP	BHP	(L)	(W)	(H)		WGT
40-40	6 (2-3)	6	62 1/4	20	23 3/4	245	295
80-80	10 (2-5)	9	67 1/4	20	23 3/4	279	329
120-120	15 (2-7.5)	13	81 1/4	20	23 3/4	392	442
160-160	20 (2-10)	18	87	20	23 3/4	445	495

Two-Stage Vertical Packages

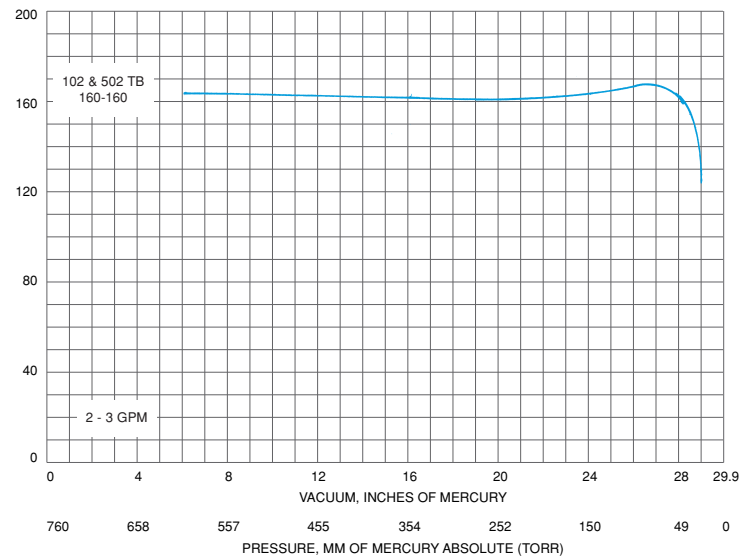
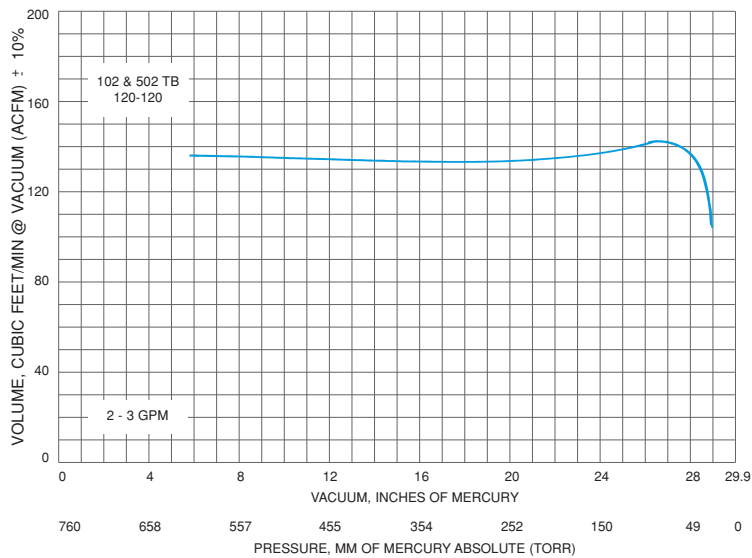
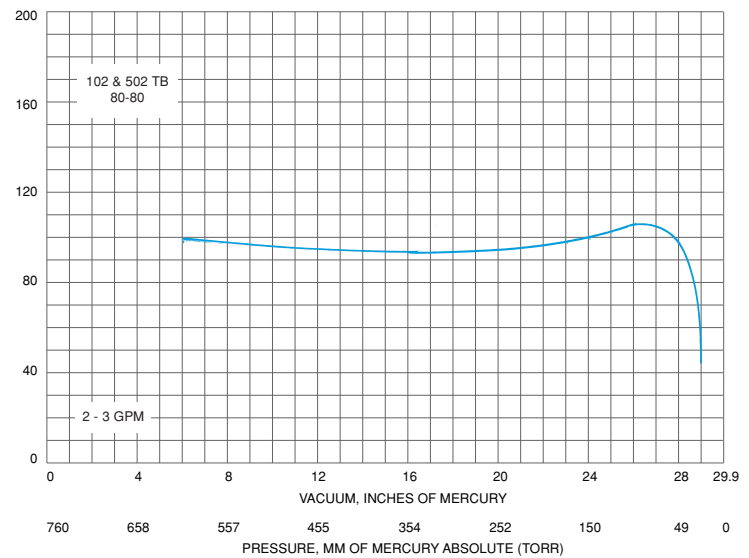
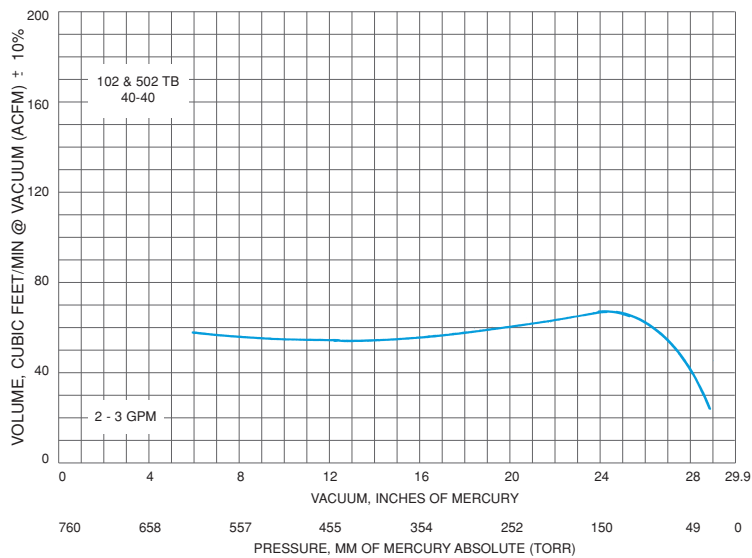
Model 102TBLLMS (*1):

	MOTOR		LGTH	WIDTH	HGHT	WGT	SHIP
	HP	BHP	(L)	(W)	(H)		WGT
40-40	6 (2-3)	6	62 1/4	20	41	280	330
80-80	10 (2-5)	9	67 1/4	20	41	320	370
120-120	15 (2-7.5)	13	81 1/4	20	41	430	480
160-160	20 (2-10)	18	87	20	41	480	530

*1) Dimensions in inches and weight in pounds.

*2) Separator/muffler connections, top and bottom 2" OD tube.

Performance of Two-Stage, Stainless Steel, Liquid Ring Vacuum Pump Packages



NOTE: All Performance Curves are based on 29.9" Hg. atmospheric pressure, dry entering air and 60°F water as the service liquid.

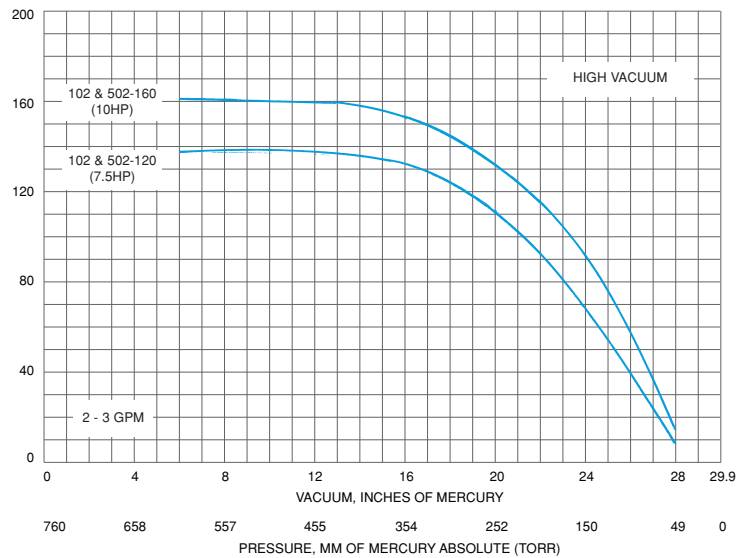
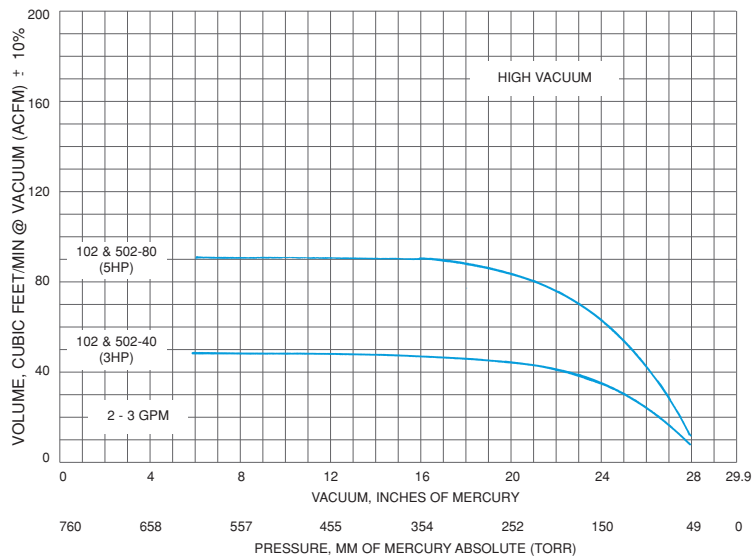
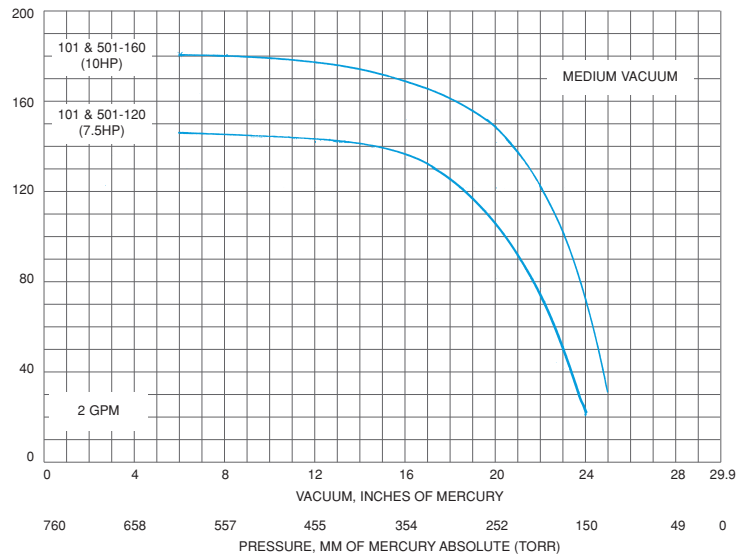
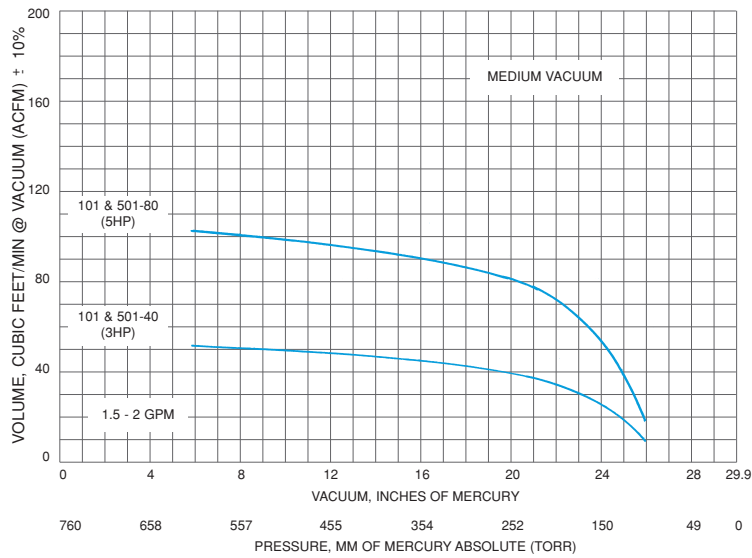
IMPORTANT FACTORS IN COMPARING LIQUID RING VACUUM PUMP PERFORMANCE:

To make a true comparison of performance, it is important to know whether catalogue data is based on "Dry Air" or "Saturated Air". Data based on "Saturated Air" can be about 10% higher than with "Dry Air", and for this reason many in the industry use this approach. Lyco Wausau data is based on "Dry Air", and when compared with these others, can be increased by about 11%.

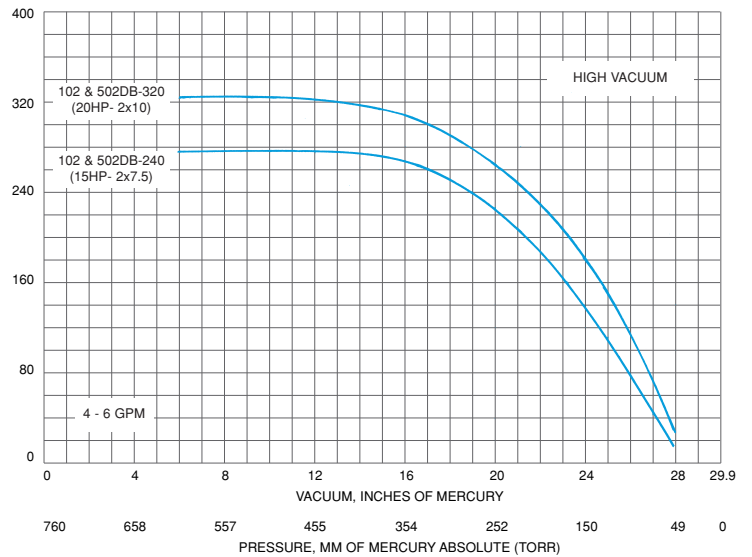
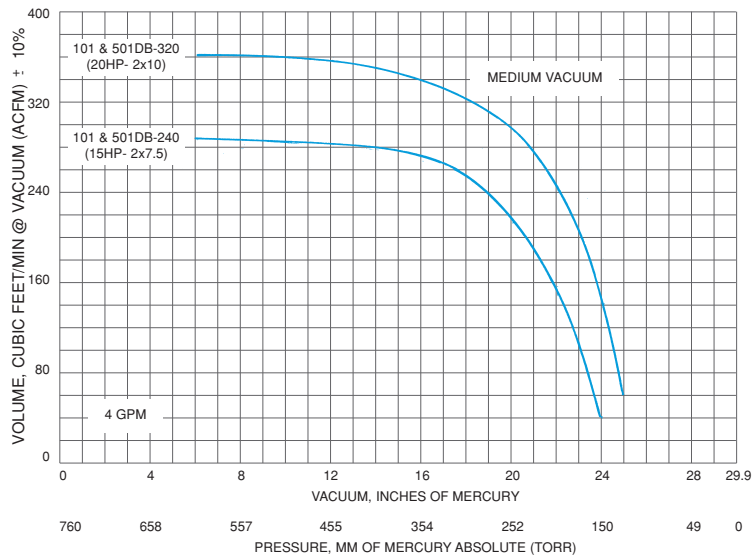
Most others provide a derate factor for stainless steel construction since their catalogue data is based on standard, cast iron models. This derate factor, often 10%, is the result of their need for wider clearances to avoid galling. Lyco Wausau performance, based on Lyco Wausau standard models, do not need to be derated, and when compared with these others can be increased by about 11%.

When comparing Lyco Wausau performance with others that publish both "Saturated Air" data, and also require derating for stainless steel, the adjustment can be significant. These others must be derated a total of almost 20%, or Lyco Wausau performance increased by almost 25%.

Performance of Simplex, Single-Stage, Stainless Steel, Liquid Ring Vacuum Pumps

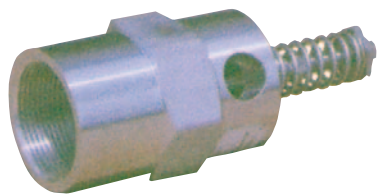


Performance of Duplex, Single-Stage, Stainless Steel, Liquid Ring Vacuum Pump Packages

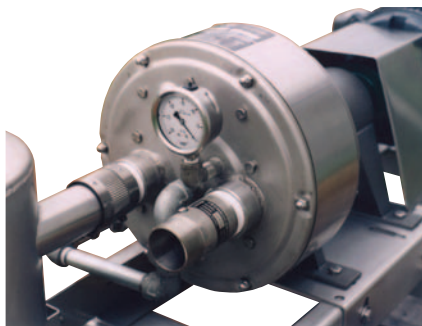


NOTE: All Performance Curves are based on 29.9" Hg. atmospheric pressure, dry entering air and 60°F water as the service liquid.

StainlessSteel Options and Accessories



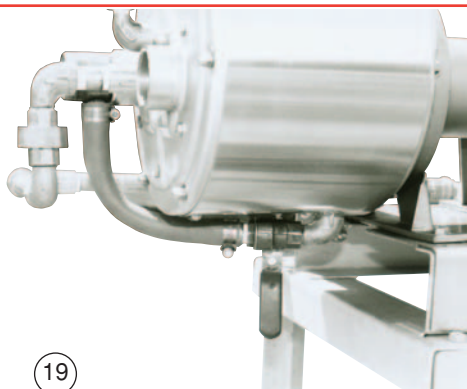
16 Stainless Steel, Adjustable, Vacuum Relief Valve.



17 Stainless Steel Vacuum Gage and Inlet Check Valve. Both Screw into Front Face of Pump.



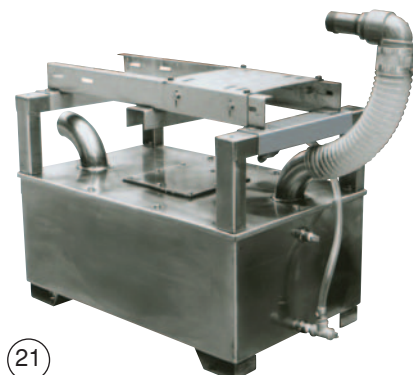
18 Stainless Steel, Duplex Manifold with Optional Vacuum Gage and Relief Valve, and 50% Water Saver which Attaches to Bottom of Separator/Muffler.



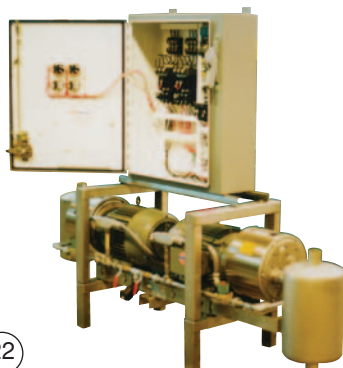
19 Drain Piping for Greatly Increasing Water Flow Through Pump for Condensing Applications.



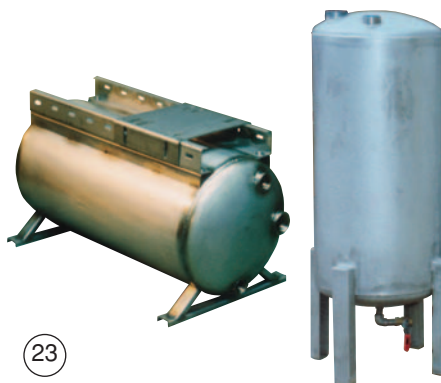
20 Water Flow Controller Screws into the Front Face of Pump. Ordered Separately or with Fully Assembled Service Liquid Line.



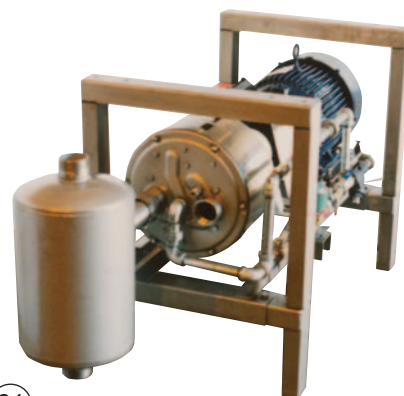
21 Stainless Steel, 35 Gallon Tank for 100% Service Liquid Recirculation and for Field Mounting.



22 Controls for Single-Stage, Simplex and Duplex Packages and for Two-Stage Packages.



23 Stainless Steel, 30 Gallon, Horizontal and Vertical Vacuum Tanks and Knock-Outs.



24 Stainless Steel, Stacking Legs for Saving Floor Space.

Material Options:

Lyc0 Wausau has specialized exclusively in manufacturing stainless steel, liquid ring vacuum pumps for over 30 years. Hastelloy and Titanium special options are available, but cast iron and bronze are not.

Standard materials used in shaft seal, O-Rings, gaskets and body seals are compatible with most chemicals. Optional materials are available for all other chemicals.

	Standard	Options		Standard	Options
Shaft Seal	Type 21*		O-Rings	Buna N	Viton, EPDM, or Teflon
Bel lows & Cups	Buna N	Viton or EPDM	Cover Caskets	Neoprene	Viton, EPDM, or Teflon
Faces	Carbon/Ceramic	Carbon/Nirosist	Body Seals	Noryl	PET or Tefzel
Metal Parts	Stainless Steel				

* Type 8 Shaft Seal available as an option

StainlessSteel Options and Accessories



(25)

Single-Stage Package with 30 Gallon, Stainless Steel, Vacuum Tank, Control Panel, Separator/Muffler and Service Liquid Line. Models 101 & 102BTMSC.



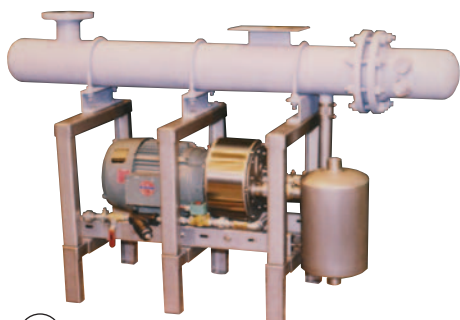
(26)

Single-Stage Package with Standard Base, Control Panel, Separator/Muffler and Service Liquid Line. Models 101 & 102BLMSC.



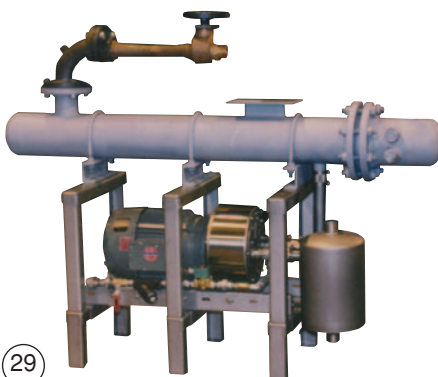
(27)

Single-Stage, Duplex Package with Control Panel, Separator/Muffler and Service Liquid Line. Models 101 & 102DBLMSC.



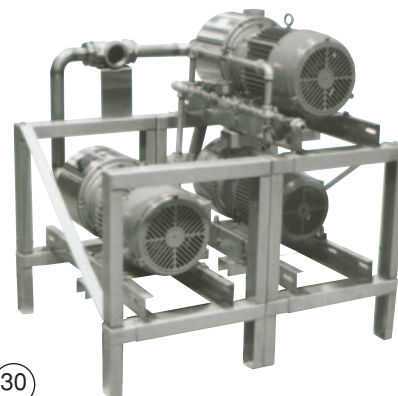
(28)

Hybrid Package with Single-Stage Pump, Condenser, Separator/Muffler and Service Liquid Line. Models 101 & 102BLMS-C.



(29)

Hybrid Package with Single-Stage Pump, Condenser, Steam Jet, Separator/Muffler and Service Liquid Line. Models 101 & 102BLMS-CJ.



(30)

Multi-Pump Package, either Single or Two-Stage with Pumps, Inlet Manifold, Separator/Muffler and Service Liquid Line.

WARRANTY

LYCO WAUSAU, INC. EXPRESSLY WARRANTS TO ORIGINAL BUYERS THAT ANY PARTS OF ITS MANUFACTURE PROVEN TO BE DEFECTIVE WITHIN A PERIOD OF TWO YEARS (24 MONTHS) FROM DATE OF SHIPMENT WILL BE REPAIRED, OR REPLACED FREE OF CHARGE AT THE MANUFACTURER'S OPTION AFTER RECEIVING AND INSPECTING THEM AT THE LYCO WAUSAU FACTORY. BUYERS ARE RESPONSIBLE FOR COST OF TRANSPORTATION BOTH WAYS. WARRANTY IS FOR PARTS ONLY AND DOES NOT INCLUDE PUMP DISASSEMBLY AND ASSEMBLY LABOR. **CONSEQUENTIAL DAMAGES OR ANY IMPLIED WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE ARE NOT COVERED.** ELECTRIC MOTOR AND CONTROL WARRANTIES ARE COVERED DIRECTLY THROUGH THE MANUFACTURERS OF THESE COMPONENTS, AND SERVICE CAN BE OBTAINED THROUGH THEIR LOCAL, AUTHORIZED REPAIR SHOP.

LYCO Wausau
STAINLESS STEEL VACUUM PUMPS

LycO Wausau, Inc.
350 S 86th Ave
Wausau WI 54401
Phone: 715-845-7867 (PUMP)
Fax: 715-842-8228 (VACU)