



HOFFMAN



LAMSON

by Gardner Denver

CENTRAL VACUUM SYSTEMS

FLUX RECOVERY SYSTEMS

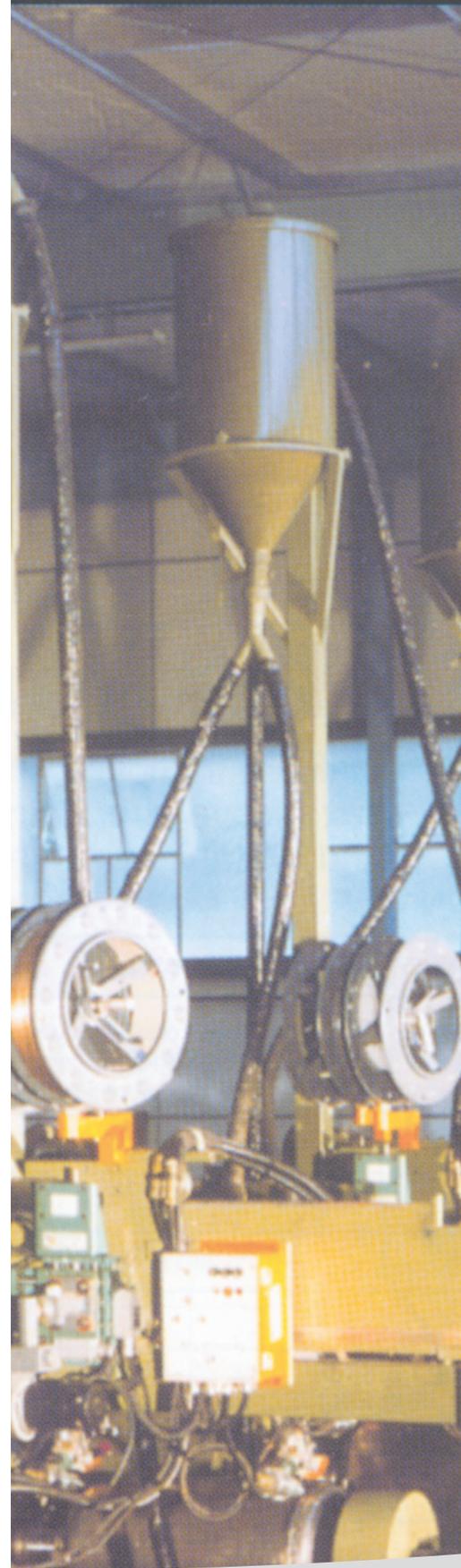


The largest manufacturer of blowers/exhausters in the world merged the experience of Lamson®, Hoffman® and Invincible®, creating the most comprehensive line of Engineered Vacuum Products in the world - the Hoffman & Lamson brand.

Three companies, each with over 100 years of experience, creating a world of possibilities for the ever-expanding needs of the vacuum marketplace. No other company has the capability, reputation and dedicated engineering staff to deliver the most advanced, efficient and dependable highquality products available today than Hoffman & Lamson. In addition to flux recovery, Hoffman & Lamson's vacuum expertise includes general housekeeping, pneumatic conveying, product reclamation and hazardous dust control.

Today, it is no longer enough to buy a vacuum system at the best price that will merely do the job. A Hoffman & Lamson Engineered Vacuum System is designed to do more. Our field representatives and application engineers will consider other variables, such as efficiency, convenience, future requirements, healthy work environment and even compliance with regulations. An engineered vacuum system will result in optimum performance and capability at the lowest operational expense possible.

Not only does Hoffman & Lamson offer continuous and intermittent-duty flux recovery systems, but also rugged portables, pre-engineered stationary systems and custom-designed engineered central vacuum systems to service an entire facility. Vacuum producers can be cast or fabricated, and controls can be provided to protect your vacuum system and even integrate it into a distributed control system. A complete line of Smooth Flow™ tubing and fittings simplify installation and reduce piping loss. Accessories include a complete line of hoses and tools for any requirement, as well as numerous valves, separators and filters to increase the efficiency of your system.



WELDING FLUX RECOVERY SYSTEMS

Hoffman & Lamson's Invincible line has provided dependable flux recovery systems for industry. Some firms extensively engaged in welding have installed large quantities of these systems; in some cases, 100 and more. Our flux recovery systems are available in six horsepower ranges and offer cost saving advantages for virtually any submerged arc welding operation, regardless of size or type. The sturdy induction motors deliver years of continuous service with a minimum of maintenance. All units are carefully designed to resist the abrasive nature of welding flux. Special inlets and rubber baffles are used, and the vacuum producer is a separate unit from the collectors. The Invincible flux recovery systems are compact, lightweight and easy to install. The variety of models and flexibility of design eliminates the need for custommade installations in most cases.

Our flux recovery systems recover all unused flux from the work, remove slag or fused particles and return the slag-free flux to the hopper of the welder, all in one continuous, automatic operation. When equipped with a primary separator, our systems will completely remove flux flour, eliminating porosity in the weld.

Hoffman & Lamson flux recovery systems do the whole job automatically and more efficiently than the old manual method of salvage and screening. Silicosis hazard is dramatically reduced.

By removing the fine dust (flux flour) during the recovery process, our flux recovery systems are responsible for cleaner welds, reducing welding rejects and increasing production speed.

ENGINEERED SYSTEMS

A central system provides unbeatable flexibility, offering multiple pick-up points for welding flux, as well as the capability to power the factory and office cleaning operations. Gardner Denver can also furnish the tubing and fittings you'll need, including straight runs, bends, Y's and couplings. We can also provide filters, silencers, valves, timers, programmable controllers and both standard and specialized pick-up tools. Finally, Gardner Denver has the engineering expertise to make sure your system is as efficient and capable as you expected.



Flux Recovery Systems

600 Series

- Powered by a ¾ hp slow speed ball bearing induction-type motor
- Three stage centrifugal vacuum producer
- Aluminum sections and impellers
- Lightweight
- Designed for continuous service
- Can recover ten pounds of flux per minute with its 1½” ID hose.

300 Series

- Powered by a 3 hp induction-type motor
- Three stage centrifugal vacuum producer specifically designed for intermediate flux recovery operations
- Adjustable multiple V-belt drive
- Sealed and pre-lubricated oversized ball bearings
- Can recycle 31 pounds of flux every minute with a 25 ft. 2” hose at a 10 ft. vertical rise

400 Series

- Powered by a 1¾ hp induction-type motor
- Four stage centrifugal vacuum producer
- Aluminum sections and impellers
- Designed for continuous service

800 Series

- Powered by a 5 hp induction-type motor
- Four stage centrifugal vacuum producer specifically designed for medium-duty flux recovery operations
- Adjustable multiple V-belt drive
- Lightweight
- Sealed and pre-lubricated oversized ball bearings
- A large, 3,600in² inverted filter insures complete and positive separation.

700 Series

- Powered by a 7½ or 10 hp induction-type motor
- Designed for the largest flux recovery jobs
- Heavy-duty
- Four stage centrifugal vacuum producer
- Aluminum sections and impellers



Flux Recovery Selection Guide

USEFUL FORMULA

$\frac{1}{2} \text{ ABL} = \text{Cubic Feet per Minute}$
1728

A = Height of Flux Bed

B = Width of Flux Bed

C = Length of Travel, Inches per Minute

Cubic Feet Per Minute x 90 = Pounds Per Minute Usage

90 = Pounds Per Cubic Foot

3/4 HP				
MODEL #			690	682
Recovery Capacity with 8' Vertical Rise (lbs. per min.)	1½" Hose (ID)	10'	10	10
		15'	8	8
		25'	6	6
Height (inches)			46	30
Width (inches)			19	17
Length (inches)			38	36
Weight (lbs.)			165	100

5HP					
MODEL #			09F	890	882
Recovery Capacity with 10' Vertical Rise (lbs. per min.)	2" Hose (ID)	10'	84	84	84
		15'	58	58	58
		25'	47	47	47
		50'	36	36	36
Height (inches)			54½	60	68
Width (inches)			23	26	19
Length (inches)			50	67	80
Weight (lbs.)			460	520	500

1¾ HP					
MODEL #			460F	490	482
Recovery Capacity with 10' Vertical Rise (lbs. per min.)	1½" Hose (ID)	10'	25	25	25
		15'	22	22	22
		25'	15	15	15
Height (inches)			44	56	56
Width (inches)			20½	26	17
Length (inches)			40	56	72
Weight (lbs.)			315	340	300

7¾ HP					
MODEL #			300F	390	382
Recovery Capacity with 10' Vertical Rise (lbs. per min.)	2" Hose (ID)	10'	115	115	115
		15'	85	85	85
		25'	70	70	70
		50'	52	52	52
Height (inches)			54½	60	68
Width (inches)			23	26	19
Length (inches)			54	71	80
Weight (lbs.)			550	610	590

10 HP					
MODEL #			300F	90	382
Recovery Capacity with 10' Vertical Rise (lbs. per min.)	2" Hose (ID)	10'	125	125	125
		15'	95	95	95
		25'	78	78	78
		50'	58	58	58
Height (inches)			54½	60	68
Width (inches)			23	26	19
Length (inches)			54	81	80
Weight (lbs.)			570	630	610

COMPACT 4000 SERIES FLUX RECOVERY UNIT

Known for years by industry as “Redheads”, today the 4000 Series are now generally blue. The 4000 Series units can reclaim all unused flux, remove slag or fused particles and return clean flux to the hopper of the welder - all in one fast, continuous operation. 4000 Series universal type motors are made for intermittent operation with a minimum of maintenance. They are designed with special inlets and rubber baffling to resist the abrasive nature of welding flux. Total separation precedes the vacuum producer. Just fill the tank with flux to the bottom of the slag screen. The welder flux hopper will fill at the same time. Additional flux can easily be introduced into the system without interrupting the weld, using a convenient fill tube built into the unit for this purpose.

FLUX RECOVERY TOOLS



CAST IRON NON-SLOTTED HAND TOOL



STEEL CREVICE TOOL



HEAVY-DUTY SMOOTH RUBBER HOSE



BUTTERFLY VALVE



INLET



MODEL 4002

DESCRIPTION	PART #
15" steel crevice tools are designed for intermittent use with 4000 Series "Redheads"	AFW1096
Rugged cast iron flux recovery tools mount behind the arc.	AFW1108 - 1½" AFW1109 - 2"
Butterfly valve with 2" MNPT. Manually operated	AFW2378
1½" Return Hose Connection	AFW3345
2" Return Hose Connection	AFW3346

DIA.	WT/FT IN LBS	BEND RADIUS	TEMP RANGE °F	10'	15'	25'	50'
1.5"	0.71	3"	0° to 212°	AFW7315101	AFW7315151	AFW7315251	AFW7315501
2.0"	0.88	4"		AFW7320101	AFW7320151	AFW7320251	AFW7320501
2.5"	1.12	5"		AFW7325100	AFW7325150	AFW7325250	AFW7325500
3.0"	1.32	6"		AFW7330100	AFW7330150	AFW7330250	AFW7330500

PRIMARY SEPARATORS

To insure efficient separation of reusable flux from slag and flux flour, many systems utilize a dual separator system. The Primary Separator isolates slag and fused particles and enhances the removal of flux flour. It also acts as a collection hopper for unfused flux.

For the ultimate in separation efficiency for finer flux grades, a cyclone baffle on the separator cover creates a circular flow as flux enters. This air motion allows reusable fine flux to settle, insuring complete separation from flux flour.

When ordering a complete separator tank, use the number indicated by (*). Specific part numbers are listed under each complete tank number and may be used to order replacement parts. Heated models of all separators are available for humid locations.

ITEM #	PARTS LIST	PRIMARY TANK COMPLETE	
		*9120	*9220
1	Tank only with 1½" Inlet	AFW2597	-
2	Tank only with 2" inlet	-	AFW3329
3	Tank cover with gasket	AFW3323	AFW3323
4	Tank cover gasket	AFW2408	AFW2408
5	Rubber baffle	AFW3324	AFW3324
6	Slag screen	AFW2367	AFW2367
7	Butterfly valve	AFW2378	AFW2378

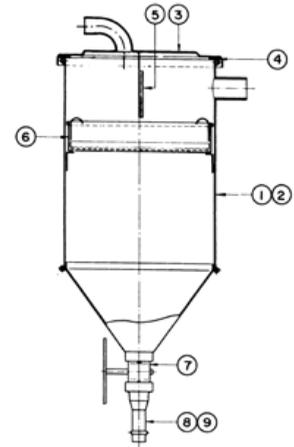
16" Primary Separator Tank for Model 790 & 890

16" Primary Separator Tank for Model 300, 382, 460, 460-x, 482, 482-x

ITEM #	PARTS LIST	PRIMARY TANK COMPLETE			
		*8111	*8112	*8211	*8212
1	Tank only with 1½" Inlet	AFW2415	AFW2415	-	-
2	Tank only with 2" inlet	-	-	AFW3276	AFW3276
3	Tank cover with gasket	AFW3280	AFW3280	AFW3280	AFW3280
4	Tank cover gasket	AFW2373	AFW2373	AFW2373	AFW2373
5	Rubber baffle	AFW3286	AFW3286	AFW3286	AFW3286
6	Slag screen	AFW2366	AFW2366	AFW2366	AFW2366
7	Butterfly valve	AFW2378	AFW2378	AFW2378	AFW2378
8	Return hose connection 1½"	AFW3345	-	AFW3345	-
9	Return hose connection 1½"	-	AFW3346	-	AFW3346

16" Primary Separator Tank for Model 690

ITEM #	PARTS LIST	PRIMARY TANK COMPLETE
		*7120
1	Tank only with 1½" Inlet	AFW3312
2	Tank cover with gasket	AFW380
3	Tank cover gasket	AFW2373
4	Rubber baffle	AFW3286
5	Slag screen	AFW2366
6	Butterfly valve	AFW2378

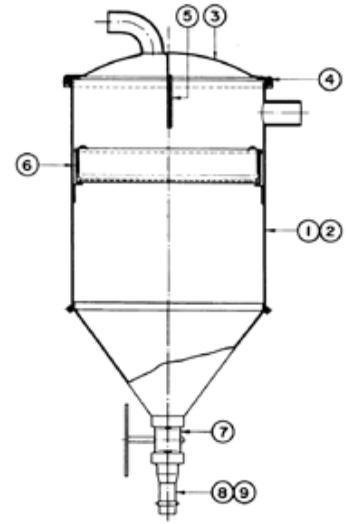


16" Primary Separator Tank for Model 682

ITEM #	PARTS LIST	PRIMARY TANK COMPLETE
		*7111
1	Tank only with 1½" Inlet	AFW3312
2	Tank cover with gasket	AFW3319
3	Tank cover gasket	AFW2373
4	Rubber baffle	AFW3286
5	Slag screen	AFW2366
6	Butterfly valve	AFW2378
7	Return hose connection 1½"	AFW3345

18" Primary Separator Tank
for Model 700, 782, 809F & 882

ITEM #	PARTS LIST	PRIMARY TANK COMPLETE			
		*9111	*9112	*9211	*9212
1	Tank only with 1½" Inlet	AFW2597	AFW2597	-	-
2	Tank only with 2" inlet	-	-	AFW3329	AFW3329
3	Tank cover with gasket	AFW3330	AFW3330	AFW3330	AFW3330
4	Tank cover gasket	AFW2408	AFW2408	AFW2408	AFW2408
5	Rubber baffle	AFW3286	AFW3286	AFW3286	AFW3286
6	Slag screen	AFW2467	AFW2467	AFW2467	AFW2467
7	Butterfly valve	AFW2378	AFW2378	AFW2378	AFW2378
8	Return hose connection 1½"	AFW3345	-	AFW3345	-
9	Return hose connection 2"	-	AFW3346	-	AFW3346



16" Primary Separator Tank
for Model 390

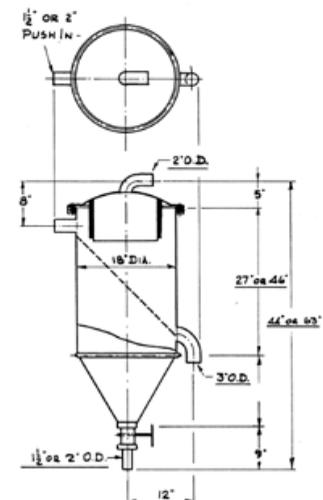
ITEM #	PARTS LIST	PRIMARY TANK COMPLETE	
		*8120	*8220
1	Tank only with 1½" Inlet	AFW2415	-
2	Tank only with 2" inlet	-	AFW3276
3	Tank cover with gasket	AFW3235	AFW3235
4	Tank cover gasket	AFW2373	AFW2373
5	Rubber baffle	AFW3238	AFW3238
6	Slag screen	AFW2366	AFW2366
7	Butterfly valve	AFW2378	AFW2378

16" Primary Separator Tank
for Model 490 & 490-x

ITEM #	PARTS LIST	PRIMARY TANK COMPLETE	
		*7130	*7230
1	Tank only with 1½" Inlet	AFW3312	-
2	Tank only with 2" inlet	-	AFW3313
3	Tank cover with gasket	AFW3235	AFW3235
4	Tank cover gasket	AFW2373	AFW2373
5	Rubber baffle	AFW3238	AFW3238
6	Slag screen	AFW2366	AFW2366
7	Butterfly valve	AFW2378	AFW2378

OPTIONAL SLANT SCREEN FLUX RECOVERY SYSTEM

Prevents jamming and handles heavy slag accumulation. The slag screen is installed in an auxiliary slag collection tank at a 45° angle to prevent slag accumulation and costly blockage. Slag particles slide down into the holding tank, increasing collection capacity. The slant screen can be added to an existing flux recovery system or specified on a new unit. Rubber covered slag screens are recommended, except for fine flux, where a cyclone baffle is acceptable. Made for 18" diameter separators

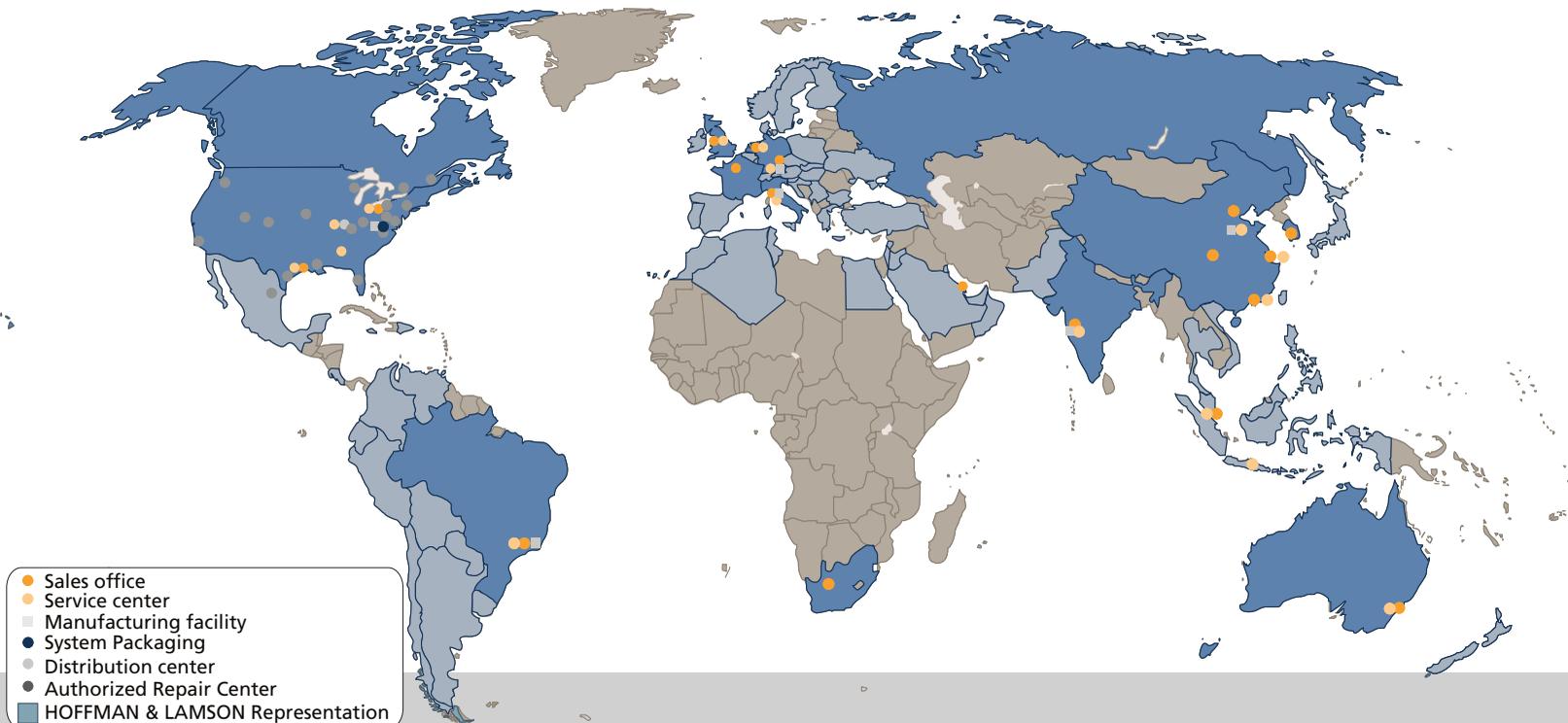


HOFFMAN & LAMSON Service & Support

- Global Network of Service and Parts Distribution Centers
- Inspections, Site Audits, and Preventative Maintenance Planning
- Inventory of OEM Parts, Exchange & Remanufactured Units
- Performance & Efficiency Upgrades
- Engineering Services
- Operator & Maintenance Training
- Customer Support Agreements



Located where and when you need them, our global network of HOFFMAN & LAMSON CERTIFIED™ Service & Distribution Centers provide factory trained technicians and OEM parts for expert level repairs that restore performance and return your HOFFMAN & LAMSON equipment to service as quickly as possible.



OUR PRICING IS COMPETITIVE.
OUR PERFORMANCE IS GUARANTEED.

Our HOFFMAN & LAMSON CERTIFIED Guarantee ensures like new performance on all remanufactured blowers and includes a factory warranty on all parts, workmanship, upgrades, and repairs.



HOFFMAN® & LAMSON® Products & Systems



HOFFMAN & LAMSON Multistage Centrifugal Blowers

HOFFMAN & LAMSON Multistage Centrifugal Blowers are the ideal solution for processes that require uniform pressure, pulse-free flow, and oil-free operation. With designs optimized for 60 and 50 Hz markets, we offer efficient performance backed by a history of reliable operations.



HOFFMAN REVOLUTION™ High Speed Centrifugal

The HOFFMAN REVOLUTION High Speed Centrifugal Blower utilizes advanced centrifugal engineering technologies that deliver up to 45% energy savings, provide increased reliability with little or no maintenance, and come factory pre-wired and tested in an ergonomically designed sound enclosure for plug-and-play operation.



Controls & Energy Management

Considering an efficiency upgrade? HOFFMAN & LAMSON upgrades and High Speed Centrifugal Blower solutions deliver increased efficiency and improved reliability.



Support, Service & OEM Parts

Restore blower performance and maintain system reliability with HOFFMAN & LAMSON OEM Service, support, and parts - available through our global network of HOFFMAN & LAMSON CERTIFIED™ Service & Distribution Centers.



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