

SANITARY LIQUID TRAP MAGNETS

APPLICATION:

Engineered to remove ferrous contaminants from liquid and slurry lines. Efficiently remove tramp iron before maintenance and product contamination problems occur. The benefits of this magnetic separator can be experienced in most cases with no appreciable pressure drop or reduction in flow rates. All units incorporate a sump type housing to trap non-ferrous particles. Liquid Traps may be installed horizontally, vertically, or on an angle without affecting their magnetic efficiency.

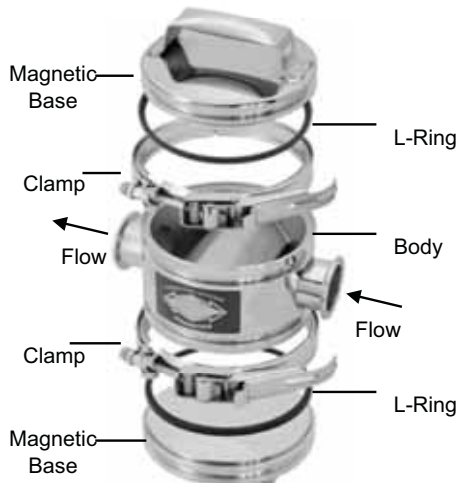
Metal trash and fines, including work-hardened stainless steel as small as 0.0001 inches are captured by powerful, rare-earth, neodymium magnets and held in-place until cleaned. Powered by proprietary, easy to clean, tube or plate circuits that operate to pressures of 750 PSI and temperatures of 500° F.

SANITARY LIQUID TRAP MAGNETS



OPTION: Plate Style Liquid Trap Magnets See page 3

LIQUID PLATE TRAP MAGNETS



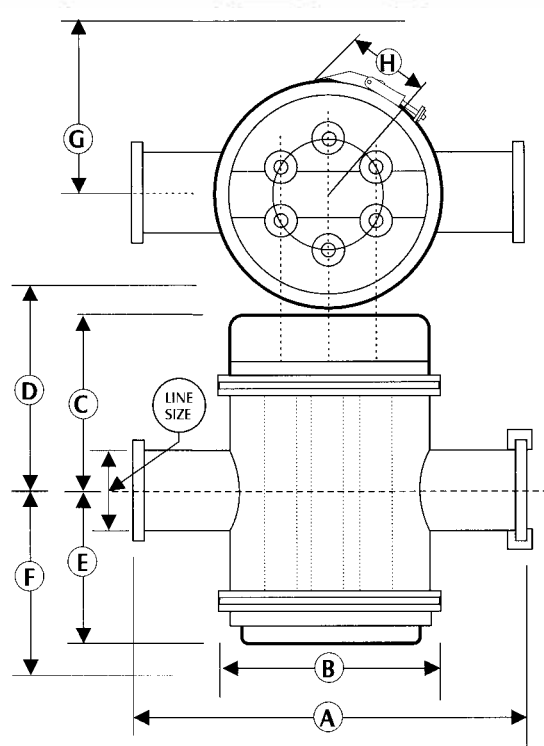
STANDARD SANITARY LIQUID TRAP MAGNETS

OPERATION:

As liquids or slurries are pumped through the Liquid Trap, ferrous contaminants adhere to the strategically placed magnetic tubes. The design and construction allow the tramp iron to work around the downstream side of the tubes where it is safely out of the product flow and washoff is prevented. Cleaning is achieved by removing the quick release clamp and removing the magnet assembly from the housing. The housing is designed not only to house the magnetic tubes, but also to act as a sump. Unwanted non-magnetic particles tend to gravitate to the bottom of the enclosure. Additionally, the sump bottom is attached by a quick release clamp to ease cleaning of the entire unit.

SELECTING THE PROPER LIQUID TRAP:

Use Chart 1 to classify your products viscosity. Choose the correct size Liquid Trap from Chart 2 by matching the Liquid Trap's listed capacity with your system's maximum pumping capacity using your product's group number. Line reducers (expanders) may be used if you choose.



D & F = Removal Clearance

CHART 1

Select a group that best matches your particular product, realizing temperature and liquid percentages vastly affect viscosity.

GROUP 1: Fluid and Strained Products:
Beverages, thin soups, juices, jellies, light sauces, custards, thin salad dressings.

GROUP 2: Pulped Products:
Apple sauce, creamed corn, pumpkin, cranberries, medium sauces, syrups, thick salad dressings.

GROUP 3: Viscous or Heavy Products:
Thick puddings, hot processed or creamed cheese, baby foods, frozen slush, heavy sauces, thin batters, heavy purees.

GROUP 4: Very Viscous Products:
Meat emulsions, minced meat, thick batters, meat spreads, similar very viscous products.

CHART 2
Maximum Effective Capacity in Gallons Per Minute
(Liters Per Minute)
and Maximum Recommended Line Working Pressures in PSI
(Bar)

LINE SIZE	MAXIMUM PRESSURE	GROUP 1	GROUP 2	GROUP 3	GROUP 4
1.5" - 2" (40, 50)	200(13.8)	120(455)	84(320)	42(160)	18(70)
2.5" - 3" (65, 75)	200(13.8)	200(760)	140(530)	70(265)	30(115)
4" (100)	200(13.8)	270(1020)	189(715)	95(360)	41(155)

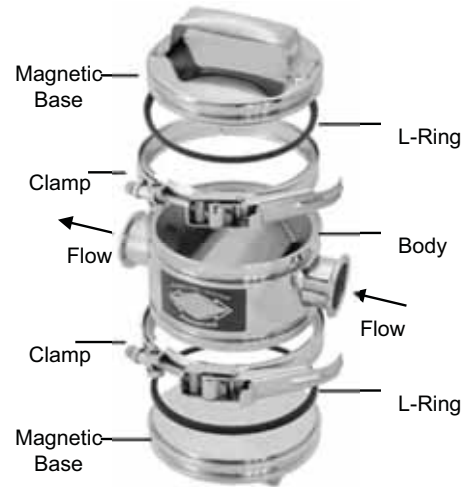
CHART 3
LIQUID TRAP: Dimensions and Weights (metric)

LINE SIZE	A	B	C	D	E	F	G	H	NET WT. LB.	SHIP WT. LB.
1.5", 2" (40) (50)	10 (254)	7 (178)	4.3 (108)	8.3 (210)	4.3 (109)	4.8 (122)	8.5 (216)	5 (127)	23.4 (10.6)	28 (13)
2.5", 3" (65) (75)	12 (305)	8.9 (225)	5.1 (130)	10.3 (260)	5.1 (130)	5.5 (140)	10 (254)	6 (152)	38.5 (17.5)	48 (22)
4" (100)	12 (304)	8.9 (225)	5.9 (150)	12.8 (324)	5.9 (150)	6.3 (160)	10 (254)	6 (152)	49.7 (22.6)	59 (27)

PLATE STYLE LIQUID TRAP MAGNETS

APPLICATION:

These magnetic separators are typically used when processing fragile solids such as fruit preserves, cooked meats, cottage cheese, or sinewy products where they are placed in front of pumps, screens, or mills to protect equipment from damage, or in front of fillers to ensure product quality.



Specific Model and Sizing

Refer to Tables A, B, and C. Use Table "A" to select your application's product viscosity. Use Table B to match your application's product viscosity with pumping capacity to select model or line size. When operating at or close to a Liquid Trap's upper flow capacity we recommend moving up to the next size.

Table A. Product Viscosity

Class 1	Class 2	Class 3	Class 4
Fluids and Strained Products	Pulped Products	Viscous Products	Very Viscous Products
thin salad dressings, thin soups, warm jellies, clear broths, beverages, juices, light sauces	applesauce, pulped fruits and vegetables, custards, syrups, cranberries, hot preserves, baby foods	pumpkin filling, chopped foods, creamed cheese, frozen slush, heavy sauces, batters, heavy purees	nut butters, slow flowing products, cooled products, minced meat, thick batters, pet foods

**Table B. Maximum Pressures in Pounds per Square Inch (Bar)
Maximum Flow Capacity in Gallons Per Minute (Liters Per Minute)**

MODEL	LINE SIZE	MAXIMUM PRESSURE	MAXIMUM FLOW CAPACITY			
			CLASS 1	CLASS 2	CLASS 3	CLASS 4
NSLP 115	1 1/2" - 2"	200 (13.8)	58 (220)	41 (154)	23 (88)	12 (44)
	2 1/2" - 3"	180 (12.4)	75 (284)	53 (199)	30 (114)	15 (57)
NDLP 120	6"	75 (5.2)	315 (1192)	221 (835)	126 (477)	63 (238)
NDLP 125	1.5" - 2"	200 (13.8)	115 (435)	81 (305)	46 (174)	23 (87)
	2.5" - 3"	180 (12.4)	190 (719)	133 (503)	76 (288)	38 (144)
	4"	180 (12.4)	210 (795)	147 (556)	84 (318)	42 (159)

Table C. Food Grade L-ring Gaskets

PROPERTY	EPDM(Std.)	BUNA-N	VITON
Temperature Range	-50 to 400°F	-20 to 225°F	-15 to 400°F
Acid resistance	fair	good	excellent
Alkali resistance	good	fair	good
Veg. Oil resistance	poor	excellent	excellent
Steam, to 350°F	good	poor	poor

INDUSTRIAL LIQUID TRAP MAGNETS

For industrial application requirements please refer to our Industrial Liquid Trap Data Sheet.

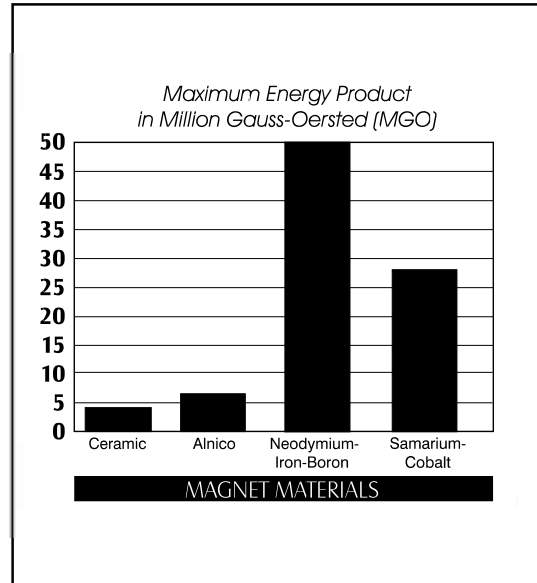


CONSTRUCTION:

- Highest grade of magnet material with choices including Neodymium-Iron-Boron (rare-earth), Samarium-Cobalt (rare-earth), Ceramic, and Alnico.
- 100% Stainless Steel Construction
- Liquid tight with food grade O-rings
- Easy access for inspection and maintenance
- Tri-clamp, Bevel-seat (Acme thread), or weld end inlet and outlets
- Sanitary construction

OPTIONS:

- Special alloy construction
- Special inlet/outlet connectors
- Operating pressures up to 750 PSI



For technical assistance or to order

1-800-SUREMAG™

1-800-787-3624

900 S. Glaspie Street
Oxford, MI 48371
(248) 628-3808
Fax: (248) 628-3844

www.puritanmagnets.com

E-Mail: magnet@puritanmagnetics.com

©1995 Puritan Magnetics, Inc.

Data Sheet #2251 / Rev. 08/09