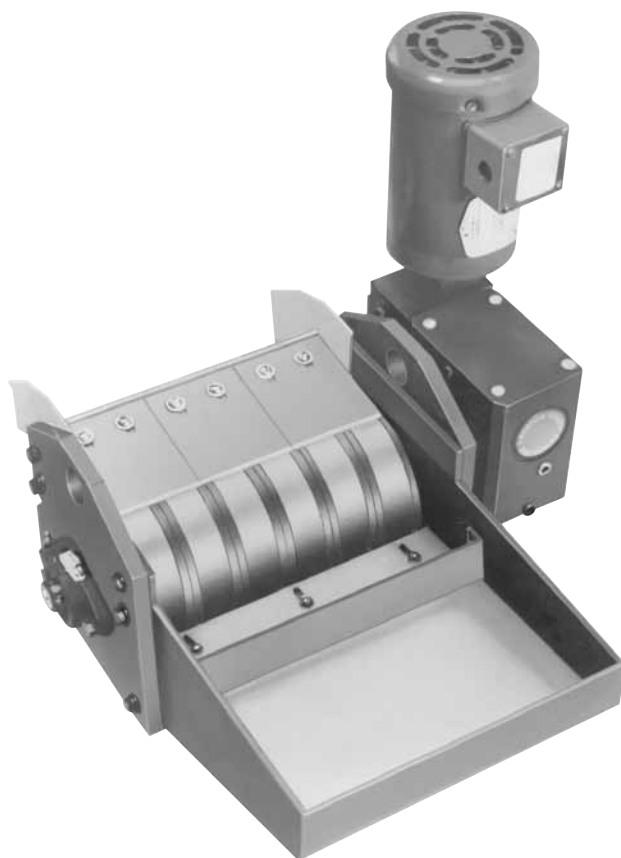




# COOLANT CLEANERS

## PERMANENT MAGNETIC AND RARE EARTH

*Smooth-faced and extended-pole  
Coolant Cleaners extend the  
life of cutting tools, grinding  
wheels, pumps and coolant fluids.*



### FEATURES & BENEFITS

- Cleaner coolant with a longer service life
- Lengthened tool life
- Machine accuracy maintained
- Reduced machine downtime
- Lower cost per workpiece
- Reduced pump wear
- Easy installation in restricted space
- Can be used on new or existing machines
- Available in different capacities, different types
- Low initial cost
- Virtually no maintenance costs

Eriez Coolant Cleaners are designed for use with surface grinders, gear grinders, honing and lapping machines, broaches, milling and drilling machines, face grinders, oil reclaiming machines...

wherever clean coolant is needed.

ONLY FROM ERIEZ

Industry's demands for higher production rates and closer tolerances at lower costs spurred development of the new Eriez Coolant Cleaners. These cleaners keep machine tools running longer and more accurately with lower costs per unit produced.



This page intentionally left blank



## PERMANENT-MAGNETIC COOLANT CLEANERS

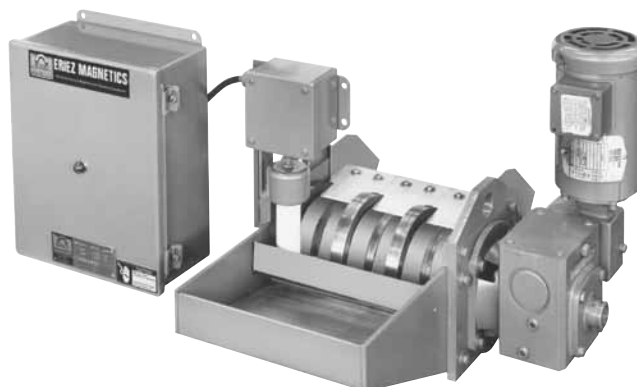
### INDEXING MODELS IS AND IE

Indexing Coolant Cleaners from Eriez, available with either a smooth-faced or extended-pole roll, are used when both ferrous and non-ferrous contaminants are present. No replaceable filter medium is required.

The magnetic roll, under which the coolant flows, rotates intermittently. The magnetically attracted material builds up a mass of fine hair-like particles between the magnetic roll and the housing. This accumulation serves as a filter medium to entrap fine non-magnetic particles such as grinding wheel scale or other coolant contaminants.

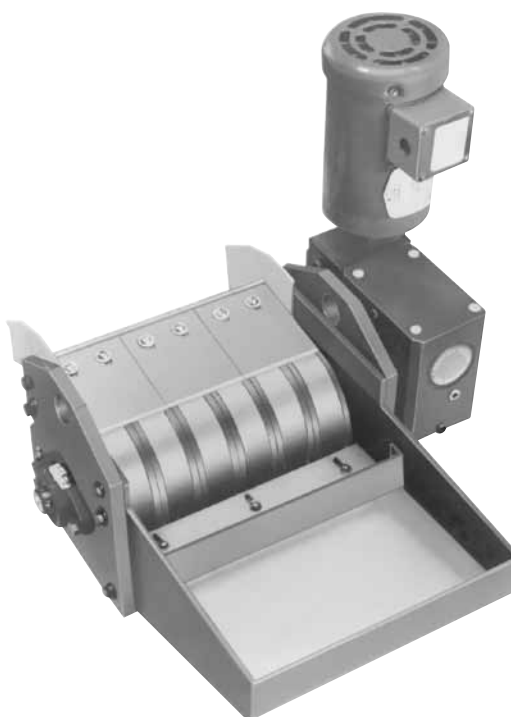
The mass of magnetically-held materials accumulates until it restricts the passageway between the magnetic roll and the housing, causing coolant to back up into the sump. The rising coolant level activates a pressure-type level switch; the magnetic roll is then automatically indexed forward, which moves the packed filter plug from the restricted passageway and permits coolant to once more

flow through the magnetic field. The amount of roll movement can be adjusted within a range of 1/4 to 1-1/4 inches (6 to 32 mm); the frequency of movement is controlled by flow and feed conditions, so the Coolant Cleaner operates at maximum efficiency under varying conditions. A phosphor-bronze scraper blade removes the accumulation of fines from the magnetic roll at the discharge point.



### CONTINUOUSLY ROTATING MODELS CS AND CE

The second type of Eriez Coolant Cleaner, the continuously rotating model, is also furnished with either smooth-faced or extended-pole rolls. These units are designed for use where little or no non-magnetic material is contaminating the coolant. Coolant fluid is gravity fed to the Eriez cleaner where it flows under the magnetic roll. The roll's powerful permanent-magnetic field reaches out and captures ferrous contamination in the fluid. Since the roll surface is revolving against the current flow, large and small ferrous particles clinging tightly to its surface are carried upward out of the liquid. Coolant fluid drains back down into the hopper as ferrous particles are removed by the scraper blade. Chips, grindings and other contamination are scraped off the drum and deposited on the inclined scraper blades. Chips will build up on the scraper blade and slowly move to the discharge lip which slopes down to a waiting receptacle.



## FEATURES

- STRONG MAGNETIC ROLL**  
 A specially designed magnetic circuit, using magnet materials that will never lose their attractive force, gives positive removal of ferrous particles. At the maximum operating distance from the face of the roll, where removal is most difficult, Eriez' five-inch (127 mm) diameter rolls are 28 percent stronger than a major competitor's.
- TWO TYPES OF ROLLS**  
 For normal conditions, a smooth-faced roll is used; for an even more powerful magnetic field, best for removing micron-sized particles, extended-pole plates are provided.
- ADJUSTABLE GAP**  
 The distance at which the contaminated coolant flows past the magnetic roll is controlled by an adjustable plate. The Coolant Cleaner can be quickly and easily "fine tuned" to individual requirements of flow rate and percent of separation desired.
- ADJUSTABLE BAFFLE**  
 An easily adjusted baffle in the incoming coolant sump controls turbulence to provide a constant, even flow to the magnetic roll.
- DRY DISCHARGE**  
 Eriez rolls have a radial magnetic circuit; this causes the swarf to form rings around the circumference of the roll and allows coolant to drain back into the sump. In addition, the scraper blade which removes contaminants from the magnetic roll is installed at a slight incline, further facilitating drainage. This produces a discharged material which is virtually liquid-free.
- STANDARD LOAD HEIGHT**  
 Eriez Coolant Cleaners have a load height of either 6-1/2 or 10-3/4 inches (165 or 273 mm), making them easy to install in restricted spaces.
- STANDARD MOTOR**  
 An off-the-shelf direct-drive motor which can be mounted on either side

of the cleaner is positioned out of the splash area to extend motor life.

- ADAPTABLE DESIGN**  
 The roll, scraper blades, pressure switch, adjustable gap plate and indexer-control enclosure are interchangeable from one model to another. By adding and substituting parts, an existing Coolant Cleaner can easily be converted from one model to another.
- LIFT LUGS**  
 For easy movement when necessary, lift lugs are provided on the housing.

## EIGHT MODELS, NINE SIZES

Choose from a total of 36 standard Coolant Cleaners to match the requirements of flow rate, viscosity and degree of separation desired:

### Models CS5 and CS8

Continuously rotating roll; smooth face

### Models CE5 and CE8

Continuously rotating roll; extended-pole plates

### Models IS5 and IS8

Indexing roll; smooth face

### Models IE5 and IE8

Indexing roll; extended poles

These models come in nine magnetic-roll widths ranging from 7 to 70 inches (178 to 1780 mm).

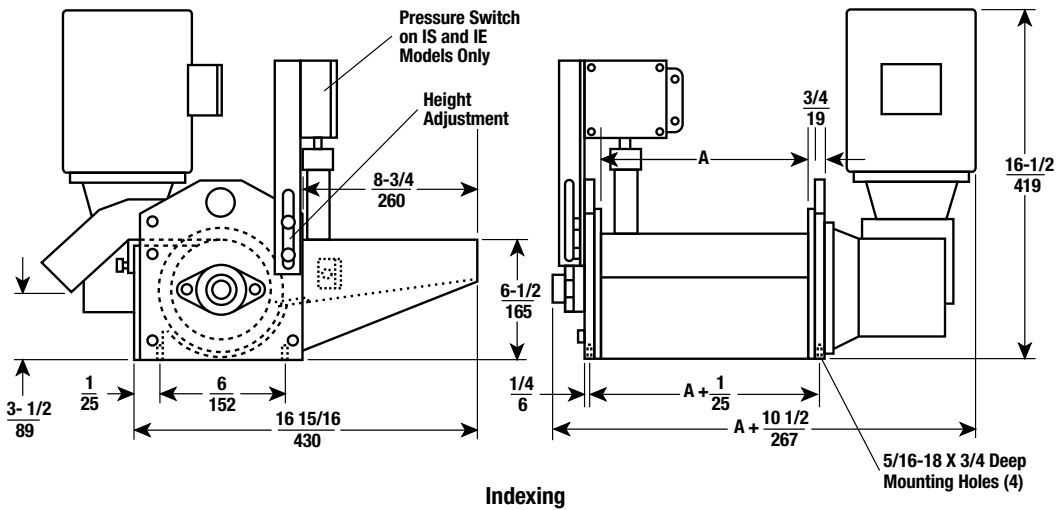
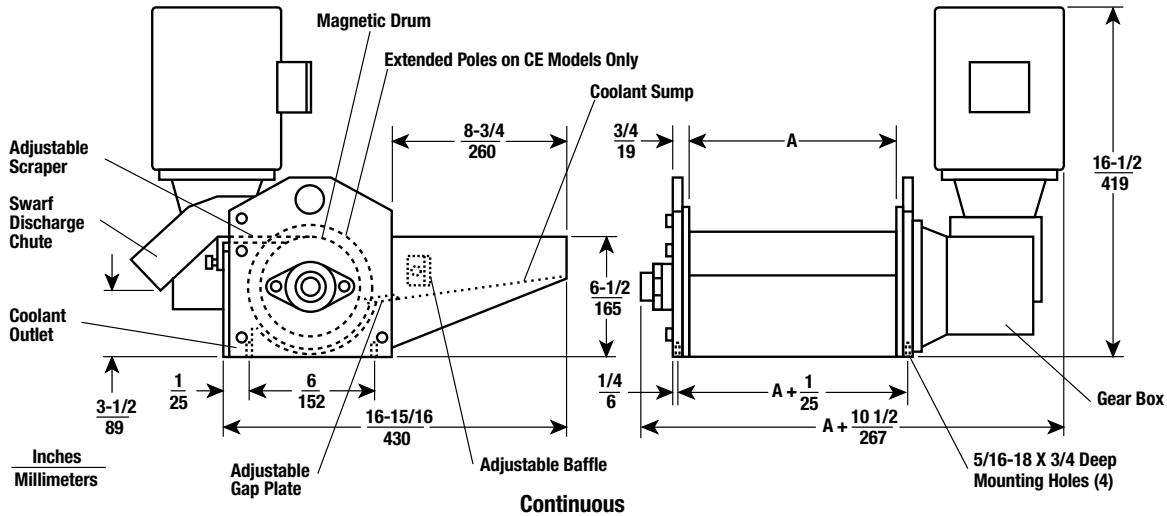
## MAXIMUM FLOW RATES

MODEL	For optimum separation derate by 20-25%					
	Type Coolant		NR--Not Recommended			
	Water Soluble		Oil 40 SSU		Oil 100 SSU	
	GPM	LPM	GPM	LPM	GPM	LPM
CS5-7	21	79	13	49	11	42
CS5-10	30	114	19	72	16	61
CS5-13	39	148	25	95	21	79
CS5-20	60	227	38	144	32	121
CS5-27	81	307	51	193	43	163
CE5-7	17	64	11	42	7	26
CE5-10	24	91	15	57	10	38
CE5-13	31	117	20	76	13	49
CE5-20	48	182	30	114	20	76
CE5-27	65	246	41	155	27	102
IS5-7	11	42	7	26	NR	
IS5-10	15	57	10	38	NR	
IS5-13	20	76	13	49	NR	
IS5-20	30	114	20	76	NR	
IS5-27	41	155	27	102	NR	
IE5-7	8	30	6	23	NR	
IE5-10	12	45	8	30	NR	
IE5-13	16	61	10	38	NR	
IE5-20	24	91	16	61	NR	
IE5-27	32	121	22	83	NR	
CS8-21	180	681	85	322	70	265
CS8-35	300	1135	142	537	117	443
CS8-49	420	1590	198	749	163	617
CS8-70	600	2271	283	1071	233	882
CE8-21	144	545	68	257	56	212
CE8-35	240	908	114	431	94	356
CE8-49	336	1272	158	598	130	492
CE8-70	480	1817	226	855	186	704
IS8-21	95	360	45	170	NR	
IS8-35	158	598	75	284	NR	
IS8-49	222	840	105	397	NR	
IS8-70	317	1200	150	568	NR	
IE8-21	72	272	36	136	NR	
IE8-35	120	454	60	227	NR	
IE8-49	168	636	84	318	NR	
IE8-70	240	908	120	454	NR	

\* Rates shown are based on physical capacity. Lower rates may be required depending upon turbulence, amount of contaminants present and the degree of separation desired.

# PERMANENT-MAGNETIC COOLANT CLEANERS

## SPECIFICATIONS / SERIES 5



MODELS CS5, CE5, IS5 and IE5

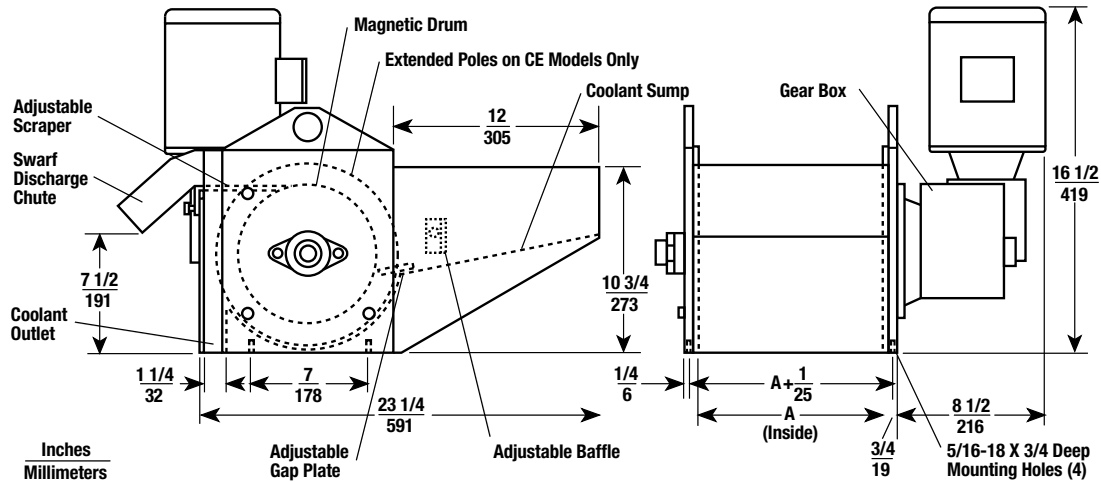
Model Number	Dimension		WEIGHTS							
	A		Model CS		Model CE		Model IS		Model IE	
	in	mm	lb	kg	lb	kg	lb	kg	lb	kg
7	7	178	110	50	116	53	135	61	141	64
10	10-1/2	267	130	59	138	63	155	70	163	74
13	13-3/4	349	150	68	161	73	175	79	186	84
20	20-1/2	521	195	88	212	96	220	100	237	108
27	27-1/4	692	235	107	257	117	260	118	282	128

**Power Requirements:** 1/4 HP, 230/460V, 3 PH, 60 cy; 0.65 amp @ 460V. Control (for Models IS and IE only): NEMA 12 enclosure, 10" x 12" x 5" (254 x 305 x 127 mm); Weight: 25 lbs (11 kg). Specify voltage for models IS and IE.

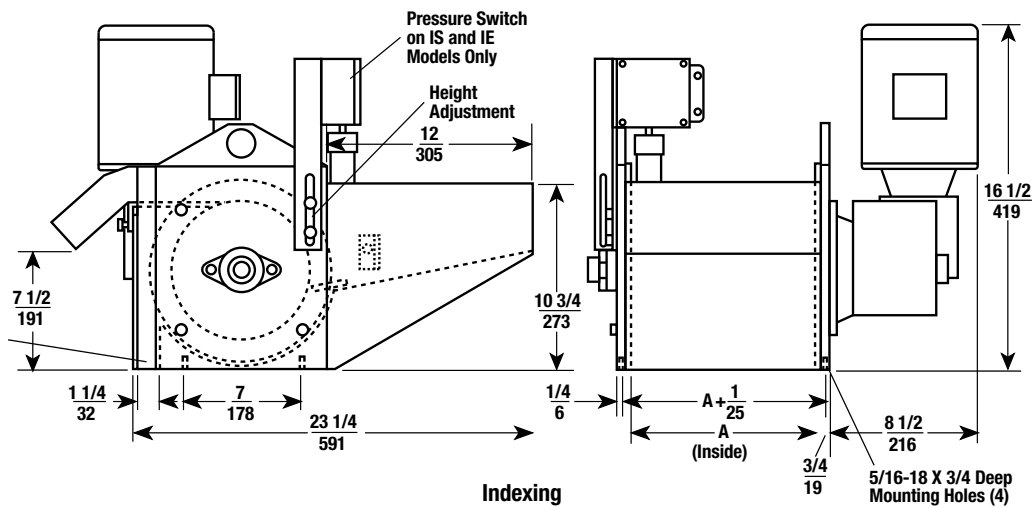
*Dimensions and specifications are subject to change without notice.*

# PERMANENT-MAGNETIC COOLANT CLEANERS

## SPECIFICATIONS / SERIES 8 - SINGLE ROLL



Continuous



Indexing

Model Number	Dimension		WEIGHTS							
			Model CS		Model CE		Model IS		Model IE	
	in	mm	lb	kg	lb	kg	lb	kg	lb	kg
21	22	559	360	163	370	168	385	175	395	179
35	36	914	550	249	560	254	575	261	585	265

**NOTE:** Motor can be mounted in either the 3, 9 or 12 o'clock position on all Series 5 and Series 8 Coolant Cleaners.

Motors normally mounted as shown can be mounted on opposite side – optional.

Scraper normally mounted as shown can be mounted at 30° downslope. Also, 45° downslope option for Series 8.

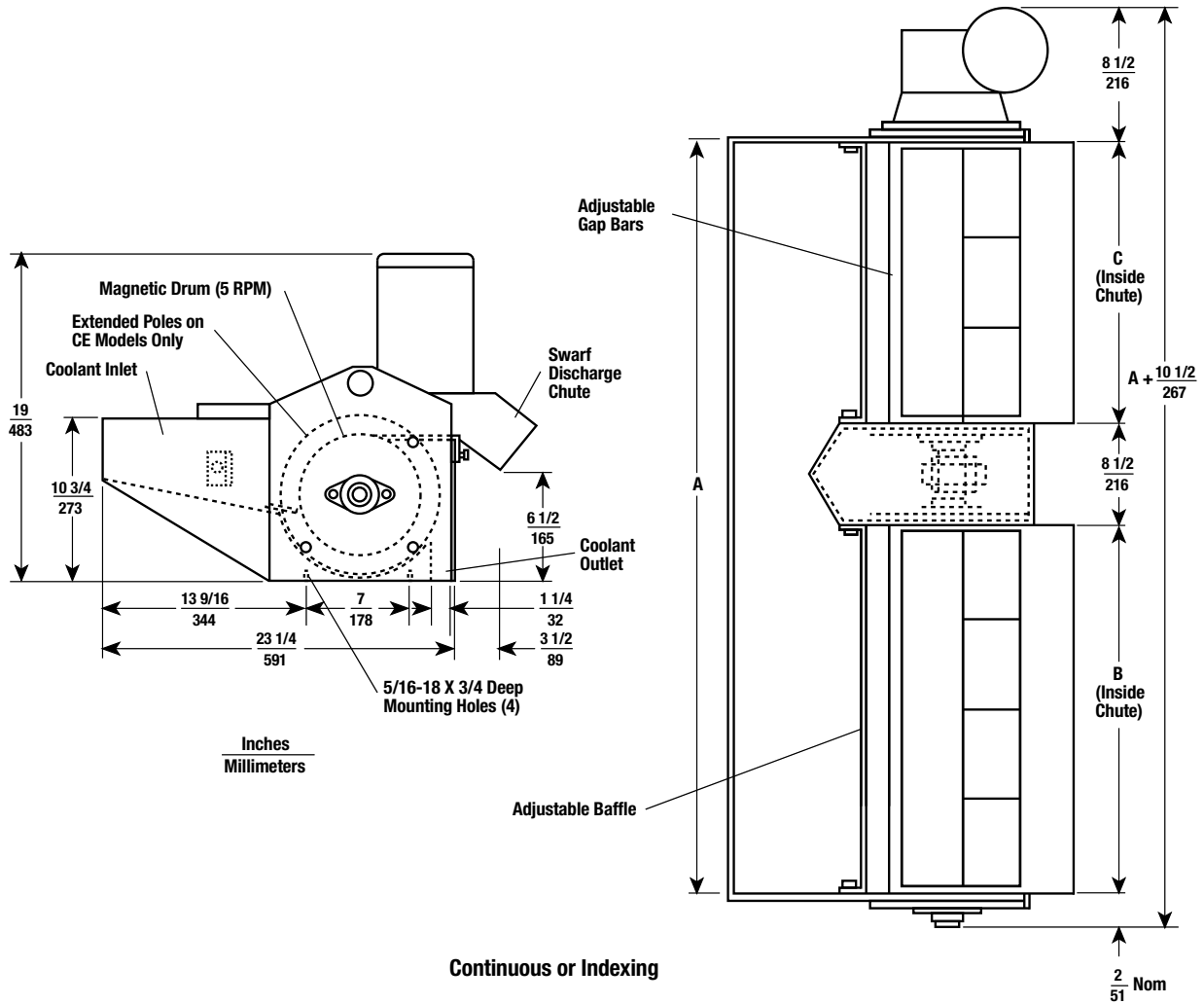
Motorized automatic scraper is available for all units.

**Power Requirements:** 1/4 HP, 230/460V, 3 PH, 60 cy; .65 amp @ 460V. Control (for Models IS and IE only): NEMA 12 enclosure, 10" x 12" x 5" (254 x 305 x 127 mm); Weight: 25 lbs (11 kg). Specify voltage for models IS and IE.

*Dimensions and specifications are subject to change without notice.*

# PERMANENT-MAGNETIC COOLANT CLEANERS

## SPECIFICATIONS / SERIES 8 - DUAL ROLL



### MODELS CS8, CE8, IS8 and IE8

Model Number	Dimension						WEIGHTS							
	A		B		C		Model CS		Model CE		Model IS		Model IE	
	in	mm	in	mm	in	mm	lb	kg	lb	kg	lb	kg	lb	kg
49	59	1499	28-3/4	730	21-3/4	552	775	351	790	358	800	361	815	370
70	80	2023	35-3/4	908	35-3/4	908	1075	487	1100	499	1100	499	1125	510

**Power Requirements:** 1/4 HP, 230/460V, 3 PH, 60 cy; .65 amp @ 460V. Control (for Models IS and IE only): NEMA 12 enclosure, 10" x 12" x 5" (254 x 305 x 127 mm); Weight: 25 lbs (11 kg). Specify voltage for models IS and IE

*Dimensions and specifications are subject to change without notice.*



This page intentionally left blank





# RARE-EARTH COOLANT CLEANERS

*Superior removal of fine, ferrous contaminants from coolants extends the life of pumps, cutting tools and grinding wheels. Developed for the metalworking and specialty industrial markets.*

## PRINCIPLE OF OPERATION

Eriez Xtractor Rare-Earth Coolant Cleaner utilizes a powerful magnetic field designed to maximize capture and remove fine ferrous particles from a coolant. Its unique magnetic-circuit design makes the separator much stronger than all other conventional permanent-magnetic separators, which use alnico or barium ferrite elements. Available in four sizes, the unit will handle up to 30 gallons per minute of water-soluble coolant per foot of drum width (4 lpm per cm of width). Each model is powered by a standard TEFC 230/460V, 60 Hz, 3-phase motor.

Eriez Xtractor Rare-Earth Coolant Cleaners utilize a powerful magnetic-circuit design to maximize magnetic-field strength. The resulting high field provides the most effective separation response of any drum-type magnetic separator.

In operation, liquid contaminated with fine-ferrous particles enters the sump area and flows past a counter-rotating magnetic drum. Particles attracted to the drum are held tight and lifted to the top, where a mechanical-discharge mechanism moves them to a discharge chute. Cleaner liquid is discharged from the bottom of the separator.

The effectiveness of all magnetic separators depends on the magnetic susceptibility and concentration of the contaminants, as well as the viscosity of the liquid. However, the power source for the Xtractor Coolant Cleaner, Erium® 3000 (a high-quality rare-earth permanent magnetic material), develops magnetic fields many times stronger than conventional ceramic or alnico magnets, with no increase in size. The additional strength improves the removal of moderately magnetic particles or very fine iron from a wide range of coolants and other liquids.

### GENERAL INDUSTRY

Eriez Xtractor Rare-Earth Coolant Cleaner can be used in any open process to remove fine-ferrous contaminant from a slurry.

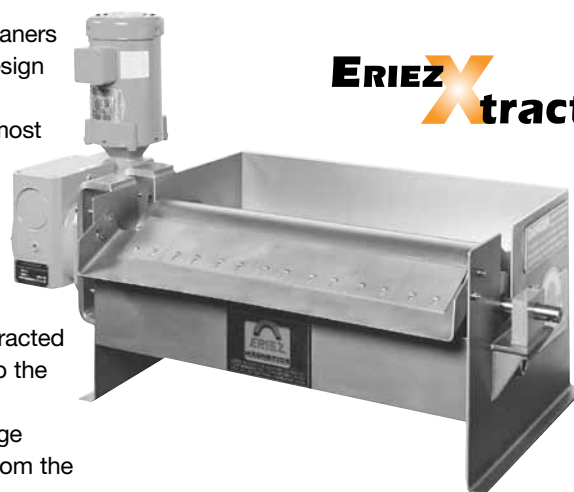
### METALWORKING

Eriez Xtractor Rare-Earth Coolant Cleaners remove grinding swarf to help machine tools run longer and maintain accuracy. Suitable for use with surface grinders, gear grinders, honing and lapping machines, broaches, milling and drilling machines, face grinders...wherever coolant cleaning is needed.

### FEATURES

- Unique radial-circuit design
- Deep magnetic field
- Removes particles as small as 3-microns
- Field strengths in excess of 5,000 gauss
- Improved separation effectiveness
- Adjustable discharge mechanism
- Self-cleaning
- Continuous operation
- Low maintenance

**ERIEZ**Xtractor



### PAINT

The Xtractor Rare-Earth Coolant Cleaner can be used to remove ferrous contaminant from aluminum paint processing lines to help ensure the paint does not appear to "rust" once applied.

### PRIMARY METALS

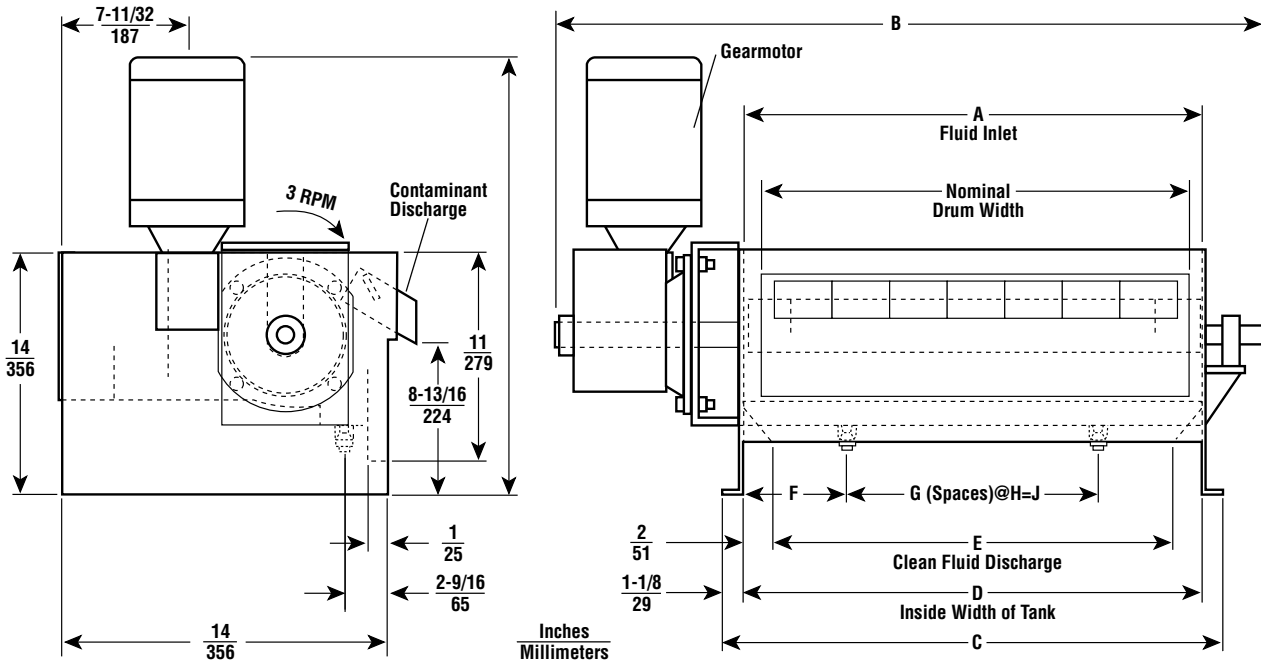
Eriez Xtractor Rare-Earth Coolant Cleaner is used in the steel industry to remove moderately magnetic mill scale from rolling-mill cooling water.



## TYPICAL APPLICATIONS

# RARE-EARTH COOLANT CLEANERS

## SPECIFICATIONS



*Model Number	Drum Width	Drive	**Flow Rate	Shipping Weight		A	B	C	D	E	F	G	H	J	K
RES-11	11 in	1/4 hp	30 gpm	250 lb	in	12-7/8	27-3/8	15-1/8	12-7/8	8-7/8	6-7/16	—	—	—	25-1/8
	280 mm	.19 kw	114 lpm	114 kg	mm	327	695	384	327	225	164	—	—	—	638
RES-25	25 in	1/4 hp	60 gpm	365 lb	in	26-7/8	41-3/8	29-1/8	26-7/8	22-7/8	6-15/16	1	13	13	25-1/8
	635 mm	.19 kw	227 lpm	166 kg	mm	683	1051	740	683	581	176	1	330	330	638
RES-36	36 in	1/3 hp	90 gpm	470 lb	in	37-7/8	52-3/8	40-1/8	37-7/8	33-7/8	6-15/16	2	12	24	25-1/8
	915 mm	.25 kw	341 lpm	213 kg	mm	962	1330	1019	962	860	176	2	305	610	638
RES-47	47 in	1/2 hp	120 gpm	630 lb	in	48-7/8	63-3/8	51-1/8	48-7/8	44-7/8	6-7/16	3	12	36	26-7/16
	1195 mm	.37 kw	454 lpm	286 kg	mm	1241	1610	1299	1241	1140	164	3	305	914	672

\* Each model is powered by a standard TEFC 230/460V, 60 Hz, 3-phase motor.

\*\* Rates shown are based on physical capacity. Lower rates may be required depending upon turbulence, amount of contaminants present and the degree of separation desired.

Dimensions and specifications are subject to change without notice.

## ERIEZ TECHNICAL CENTER



Eriez products represent quality, durability, and a long-standing commitment to leadership in technology. A major expression of that commitment is the Eriez Technical Center, industry's most complete magnetic and vibratory testing facility.

Located in Erie, Pennsylvania, adjacent to Eriez world headquarters, the Technical Center is equipped with more than 100 types of permanent magnetic electromagnetic, vibratory, screening, electronic metal detection equipment and eddy current separator.

This equipment is used to separate, purify, concentrate, move, feed, and recover a variety of materials. Testing services range from feasibility studies to complete flowsheet development.



*Eriez Technical Center offers many different types of magnetic separators to simulate wet or dry processes for practically every application.*



*Note: Some safety warning labels or guarding may have been removed before photographing this equipment.*

Eriez and Eriez Magnetics are registered trademarks of Eriez Manufacturing Co., Erie, PA  
©2009 Eriez Magnetics • All Rights Reserved

**Web Site: <http://www.eriez.com>**

**e-mail: [eriez@eriez.com](mailto:eriez@eriez.com)**

Telephone 814/835-6000 • 800/345-4946 • Fax 814/838-4960 • International Fax 814/833-3348

HEADQUARTERS: 2200 Asbury Road, P.O. Box 10608, Erie, PA 16514-0608 U.S.A.

MANUFACTURING: Australia • Brazil • Canada • China • India • Japan • Mexico • South Africa • United Kingdom • United States

**World Authority in Advanced Technology for Magnetic, Vibratory and Inspection Applications**

