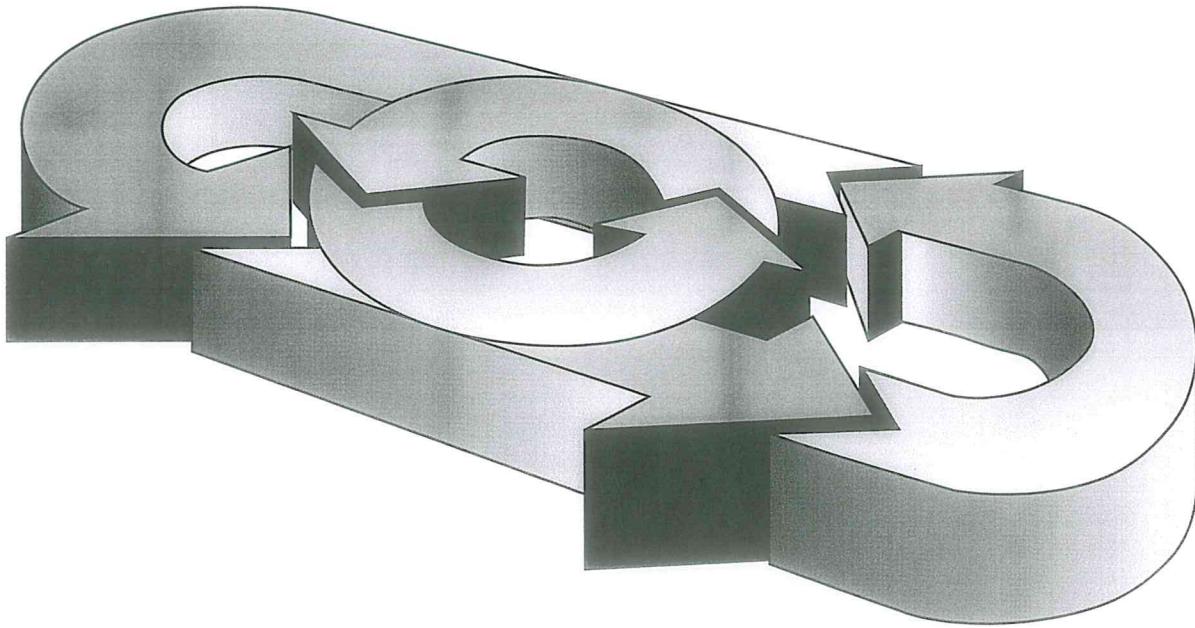


# Metaullics Systems

---

## M-Series™ Circulation Pumps Product Specifications



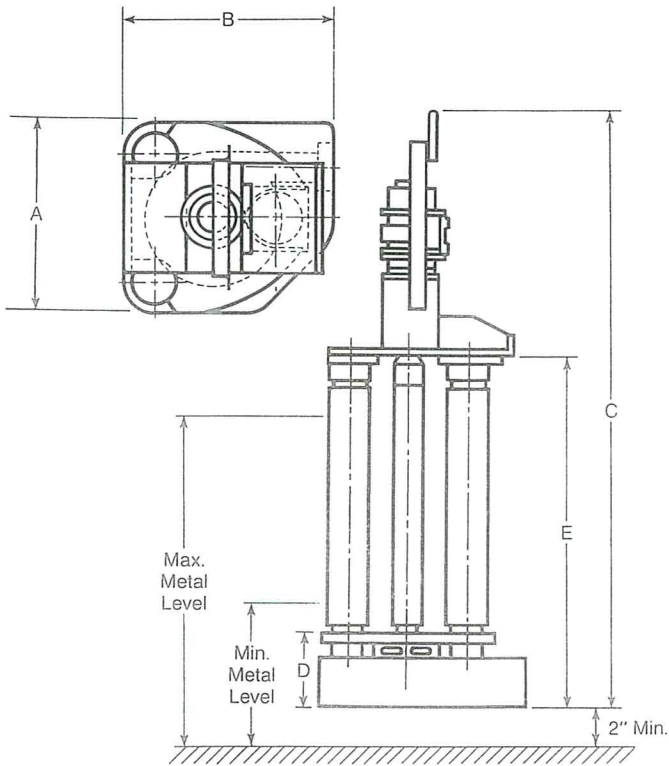
Circulation Systems for Aluminum

Metaullics Systems Division  
 31935 Aurora Road  
 Solon, Ohio 44139  
 Telephone: 216 349-8800  
 Telefax: 216 349-8877

## M-Series™ Circulation Pumps

### Product Specifications

#### Pump Dimensions



Model	A		B		C*			
	in.	(mm)	in.	(mm)	With Air Motor	Electric Motor		
M-12SD	11 $\frac{1}{8}$	(289)	11 $\frac{1}{8}$	(295)	45 $\frac{5}{16}$	(1151)	62	(1575)
M-28CSD	14 $\frac{3}{8}$	(365)	15 $\frac{3}{8}$	(400)	63	(1600)	74	(1880)
M-30CSD	20 $\frac{7}{8}$	(530)	23	(584)	66 $\frac{3}{8}$	(1686)	84 $\frac{15}{16}$	(2157)
M-42CSD	33	(838)	33	(838)	—	—	86	(2184)

Model	D		E*		Min. Furnace Well Size	
	in.	(mm)	in.	(mm)	in.	(mm)
M-12SD	2 $\frac{3}{4}$	(70)	25 $\frac{3}{4}$	(654)	18x18	(457x457)
M-28CSD	5 $\frac{1}{2}$	(140)	36 $\frac{1}{4}$	(921)	24x24	(610x610)
M-30CSD	8 $\frac{1}{4}$	(210)	40 $\frac{3}{8}$	(1032)	30x30	(762x762)
M-42CSD	9 $\frac{1}{4}$	(235)	40 $\frac{3}{8}$	(1038)	36x36	(914x914)

#### Metal Level

Model	Minimum in. (mm)	Maximum* in. (mm)
M-12SD	8 (203)	23 (584)
M-28CSD	9 (229)	33 (838)
M-30CSD	12 (305)	36 $\frac{1}{2}$ (927)
M-42CSD	13 (330)	35 $\frac{1}{2}$ (902)

#### Pump Specifications

Model	Flow Rate Maximum		Maximum Recommended Furnace Size	
	lb/min	(kg/min)	lbs.	(kg.)
M-12SD	950	(431)	20,000	(9,072)
M-28CSD	3000	(1361)	60,000	(27,216)
M-30CSD	6000	(2722)	120,000	(54,431)
M-42CSD	11,000	(4990)	220,000	(99,790)

#### Air Motors

Model	Air Requirements for Maximum Output		Type of Air Motor	Pump Weight lbs. (kg)	Maximum R.P.M.
	PSI (kPa)	SCFM (m3/min)			
M-12SD	90 (620)	120 (3.40)	800	150 (68)	1800
M-28CSD	90 (620)	180 (5.10)	1600	200 (91)	1200
M-30CSD	90 (620)	180 (5.10)	1600	500 (227)	1200

#### Electric Motors

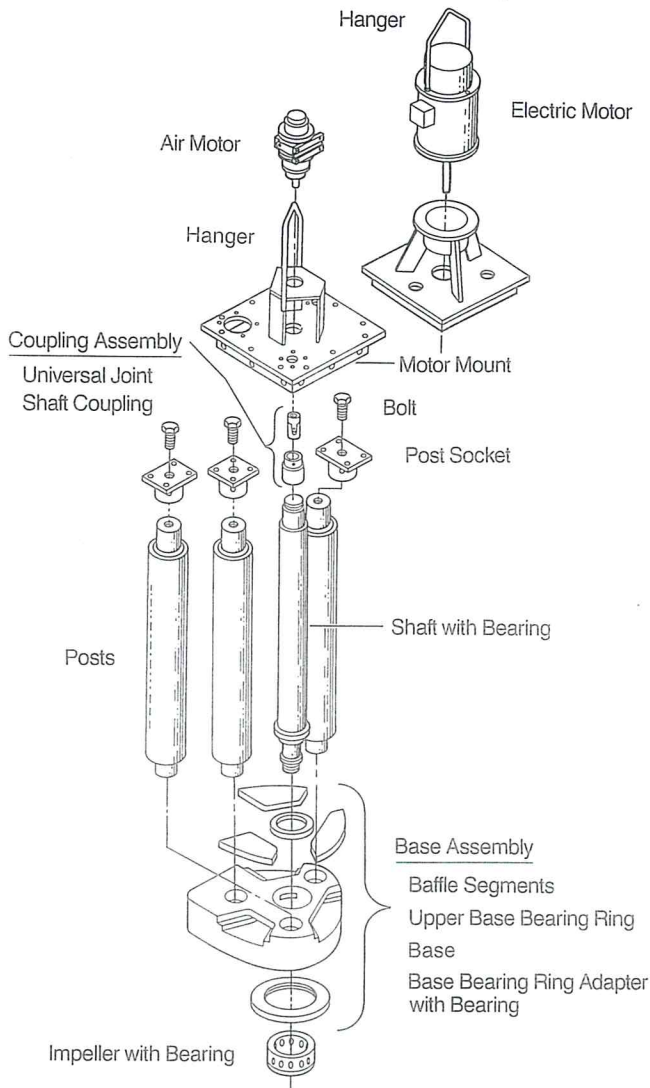
Model	Electrical Requirements			Pump* Weight lbs. (kg)	Maximum R.P.M.
	Voltage Volts	Phase	Current Amps		
M-12SD	460	3	5	225 (102)	1800
M-28CSD	460	3	11	425 (193)	1200
M-30CSD	460	3	22	900 (409)	1200
M-42CSD	460	3	33.5	1400 (635)	1000

\*For standard length pumps. Longer and shorter than standard are available in 6" increments.

Note: Maximum R.P.M. may not be attainable with a standard air motor.

Note: These specifications are for Aluminum as the molten metal.

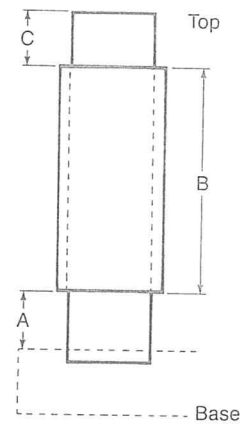
# Metallics M-28CSD Circulation Pump



## M-28CSD Pump Parts

Part	Part No.
Air Motor, 1600	500-0191
Electric Motor	500-0170
Motor Mount (Air)	528-0002
Motor Mount (Electric)	528-0067
Post Socket (Air & Electric)	528-0014
Hanger (Electric)	511-0079
Coupling Assembly (Air & Electric)	528-0090
Shaft Coupling (Air & Electric)	528-0091
Universal Joint (Air & Electric)	528-0085
*Post, Std. Lg., 27" Sleeve	528-0011
*Shaft, Std. Lg., 27" Sleeve	528-0009
Impeller, 8 Hole	528-0018
Base Assembly	528-0028
Base	528-0027
Upper Base Bearing Ring	500-0073
Baffle Segment	528-0006
Base Bearing Ring Adapter w/ Ring	528-0020
*See Table	

### Sleeve Locations for Posts, Risers, & Shafts



Part	Part No.	Length	A	B	C
Post	528-0011	Std.	1/4"	27"	3 1/4"
	528-0034	6" STS	1/4"	18"	6 1/4"
	528-0036	12" STS	1/4"	12"	6 1/4"
Shaft	528-0009	Std.	1/8"	27"	3 5/8"
	528-0046	6" STS	1/8"	18"	6 5/8"
	528-0048	12" STS	1/8"	12"	6 5/8"

**Note:** Sleeve location determined by maximum and minimum bath levels.