

Euclid Type SSR—1.3 to 101 Amperes

Features

The Type SSR Industrial Power Resistor series consists of two different types of units: a hexwound unit and an edgewound unit. Both types feature continuous resistive elements supported on porcelain insulated core strips.

- Rugged shock-resisting, non-breakable construction.
- Resistor assembly floats in slotted insulators.
- Corrosion resistant materials.
- Negligible temperature coefficient of resistance.
- Assembled resistor banks provide double insulation to ground.
- Individual resistor units in an assembled bank can be replaced without disrupting adjacent units.
- A variety of standard mounting frames, brackets, and enclosures.
- Assembled frames have identical mounting dimensions to old style assemblies. (Rod bolt mount)

Description

Hexwound Resistors

For relatively light current applications, the Hexwound resistors provide 13 different current ratings in the range of 1.3 to 7.2 amperes. For each rating the resistor units are available in five different coil lengths, enabling the resistors to be selected to precisely meet the application requirements.

The Hexwound resistors consist of four basic parts, each engineered to perform a specific function. The core strip provides convenience in mounting while providing rugged support for the resistive element.

The porcelain insulators are grooved to uniformly support each turn of the wirewound resistor element. Thus, each turn is insulated from each other and from the core strip.

The terminals of the Hexwound resistor are engineered to assure sound electrical as well as mechanical connections. The terminal securely clamps to two turns of the resistor element.

The resistive element of the hexwound resistor, like in all Euclid resistors, is a continuous element.

Edgewound Resistors

For heavier current requirements, the Edgewound resistors are available in 28 different current ratings, 8.5 amps through 101 amps without paralleling elements. The Edgewound units are available in five different lengths.

Edgewound resistors are constructed of a helical coil supported by patented porcelain insulators on a steel core strip. The porcelain insulators provide the turn-to-turn and turn-to-core strip insulation.

The resistive element is formed by edgewise winding stainless steel to form a continuous helix.

The standard end terminal provided with edgewound resistors is a welded terminal. This welded terminal provides sound electrical connection to the resistive element while providing a good terminal for external connections. Intermediate taps or adjustable terminals are clamp type and can be positioned to practically any turn on the resistor.

Application

These resistors are ideally suited for use in the secondary of AC wound rotor motors for accelerating, plugging, or speed regulating service. In the primary of the AC squirrel cage motors, these resistors serve as ballast resistors to eliminate the undesirable high torque and starting current associated with this type of motor.

Industrial Power Resistors are also used in conjunction with appropriate control equipment to accelerate, plug, or dynamic brake DC motors.

Other applications for resistors include: neutral grounding resistors, AC and DC dynamic braking, load banks, current limiting, and ballast for mercury vapor lamps. The rating versatility as well as the mounting flexibility, enable the resistors to be applied in other innumerable ways.

Frames and Enclosures

Euclid power resistors can be supplied factory mounted in a variety of galvanized steel frames and enclosures; standard frames, open frames, or mill frame. Covers consist of cane metal enclosed, ventilated weatherproof enclosed or totally enclosed nonventilated.

Standard frames are supplied with resistor assemblies unless otherwise specified.



Pricing Instructions & Examples

Unassembled Resistors

Order by:

- Part Numbers of Individual Resistor Coils
- Part Numbers of Adjustable Terminals
- Part Number of Mounting Sockets and Clips
- Catalog Numbers of Frame
- Catalog Numbers of Cover (if required)

3 - Part No. 69285-006 Coils	\$144 x 3 = \$432
3 - Part No. 17578-001 Adjustable Terminals . .	\$19 x 3 = \$57
6 - Part No. 69279-001 Mtg. Sockets & Clips . . .	No Charge*
1 - Cat. No. SSRS-35 Frame	\$156
1 - Cat. No. 1CM-35 Cover	\$250

Total — \$895

Assembled Resistors

When specified by the customer, the following factory services are available at no extra charge:

- Assembly of Coils into Frames
- Placement of one adjustable terminal per resistor coil, placed at the approximate ohmic value specified by the customer
- Assembly of cover to standard frame, if cover is required

3 - Part No. 69285-006 Coils	\$144 x 3 = \$432
3 - Part No. 17578-001 Adjustable Terminals . .	\$19 x 3 = \$57
(Placed at 2.69 on each coil)	
6 - Part No. 69279-001 Mtg. Sockets & Clips . . .	No Charge*
1 - Cat. No. SSRS-35 Frame	\$156
1 - Cat. No. 1CM-35 Cover	\$250

Total — \$895

Special Features

The following special services are available at a modest price addition:

- Resistor drawing, consisting of a connection diagram and Bill of Materials
- Placement of more than one adjustable terminal per resistor coil
- Interwiring between coils in a frame
- Interwiring between stacked frames

For any of the above features add 10% to component price. (Coils + Frames + Adjustable Terminals)

3 - Part No. 69285-006 Coils	\$144 x 3 = \$432
3 - Part No. 17578-001 Adjustable Terminals . .	\$19 x 3 = \$57
6 - Part No. 69279-001 Mtg. Sockets & Clips . . .	No Charge*
1 - Cat. No. SSRS-35 Frame	\$156

Sub Total — \$645

Interwiring Coils, and Placement of	\$64
Adjustable Terminal per drawing (Add 10%)	
1 - Cat. No. 1CM-35 Cover	\$250

Total — \$959

Engineered Resistor Assemblies

Hubbell Industrial Control's Engineering Staff will design resistor assemblies for your special application. Your inquiry should include (when possible) — Type of Equipment/Control Involved; Function to be Performed; Motor/Load Data including duty cycle, total ohmic value, tap locations, ampere rating, and special ambient conditions.

Note:

* — Mounting Sockets Must Be Specified On Purchase Order. Included in price of coils when coils are furnished with frame

Add the prefix "HC" before all Part Numbers.



Hexwound Resistor Coils

DISCOUNT CODE EK



AMP	Size 3			Size 4			Size 5			Siz			Size 7		
	Part No.	Ohms	List	Part No.	Ohms	List	Part No.	Ohms	List	Part No.	Ohms	List	Part No.	Ohms	List
1.5	69423-002	64.0	\$112	69424-002	87.0	\$131	69425-002	110.0	\$144	69426-002	133.0	\$162	69427-002	156.0	\$175
1.7	69423-003	51.0	\$112	69424-003	69.0	\$131	69425-003	87.0	\$144	69426-003	105.0	\$162	69427-003	123.0	\$175
2.0	69423-004	40.0	\$112	69424-004	55.0	\$131	69425-004	69.0	\$144	69426-004	83.0	\$162	69427-004	98.0	\$175
2.3	69423-005	32.0	\$112	69424-005	43.0	\$131	69425-005	55.0	\$144	69426-005	66.0	\$162	69427-005	77.0	\$175
2.7	69423-006	25.0	\$112	69424-006	34.0	\$131	69425-006	44.0	\$144	69426-006	53.0	\$162	69427-006	62.0	\$175
3.0	69423-007	20.0	\$125	69424-007	27.0	\$144	69425-007	34.0	\$156	69426-007	42.0	\$181	69427-007	49.0	\$200
4.0	69423-009	13.0	\$125	69424-009	17.0	\$144	69425-009	22.0	\$156	69426-009	26.0	\$181	69427-009	31.0	\$200
4.6	69423-010	10.2	\$125	69424-010	14.0	\$144	69425-010	18.0	\$156	69426-010	21.0	\$181	69427-010	25.0	\$200
5.2	69423-011	8.1	\$150	69424-011	11.0	\$175	69425-011	14.0	\$187	69426-011	17.0	\$212	69427-011	20.0	\$250
6.5	69423-012	6.3	\$150	69424-012	8.6	\$175	69425-012	11.0	\$187	69426-012	13.0	\$212	69427-012	15.0	\$250
7.2	69423-013	5.1	\$150	69424-013	6.9	\$175	69425-013	8.7	\$187	69426-013	10.5	\$212	69427-013	12.3	\$250

Edgewound Resistor Coils

DISCOUNT CODE EK



AMP	Size 3			Size 4			Size 5			Size 6			Size 7		
	Part No.	Ohms	List	Part No.	Ohms	List	Part No.	Ohms	List	Part No.	Ohms	List	Part No.	Ohms	List
5.5	69283-001	11.50	\$112	69284-001	15.60	\$131	69285-001	19.80	\$144	69286-001	24.00	\$162	69287-001	28.20	\$175
7	69283-002	7.77	\$112	69284-002	10.56	\$131	69285-002	13.40	\$144	69286-002	16.20	\$162	69287-002	19.05	\$175
8.5	69283-003	5.870	\$112	69284-003	7.980	\$131	69285-003	10.100	\$144	69286-003	12.200	\$162	69287-003	14.320	\$175
10	69283-004	4.470	\$112	69284-004	6.070	\$131	69285-004	7.680	\$144	69286-004	9.280	\$162	69287-004	10.900	\$175
11	69283-005	3.760	\$112	69284-005	5.170	\$131	69285-005	6.580	\$144	69286-005	8.000	\$162	69287-005	9.400	\$175
12	69283-006	3.070	\$112	69284-006	4.230	\$131	69285-006	5.380	\$144	69286-006	6.540	\$162	69287-006	7.680	\$175
13	69283-008	2.700	\$112	69284-008	3.720	\$131	69285-008	4.730	\$144	69286-008	5.750	\$162	69287-008	6.760	\$175
16	69283-010	2.080	\$112	69284-010	2.860	\$131	69285-010	3.640	\$144	69286-010	4.420	\$162	69287-010	5.200	\$175
18	69283-011	1.430	\$131	69284-011	1.960	\$150	69285-011	2.500	\$162	69286-011	3.040	\$187	69287-011	3.570	\$206
20	69283-012	1.310	\$131	69284-012	1.810	\$150	69285-012	2.300	\$162	69286-012	2.790	\$187	69287-012	3.290	\$206
22	69283-013	1.140	\$131	69284-013	1.570	\$150	69285-013	2.000	\$162	69286-013	2.430	\$187	69287-013	2.850	\$206
24	69283-014	0.945	\$131	69284-014	1.300	\$150	69285-014	1.650	\$162	69286-014	2.000	\$187	69287-014	2.360	\$206
27	69283-015	0.746	\$131	69284-015	1.020	\$150	69285-015	1.304	\$162	69286-015	1.580	\$187	69287-015	1.860	\$206
30	69283-016	0.571	\$131	69284-016	0.786	\$150	69285-016	1.000	\$162	69286-016	1.210	\$187	69287-016	1.430	\$206
34	69283-017	0.472	\$150	69284-017	0.650	\$175	69285-017	0.826	\$187	69286-017	1.000	\$212	69287-017	1.180	\$250
37	69283-018	0.428	\$150	69284-018	0.589	\$175	69285-018	0.750	\$187	69286-018	0.911	\$212	69287-018	1.070	\$250
40	69283-019	0.371	\$150	69284-019	0.510	\$175	69285-019	0.650	\$187	69286-019	0.789	\$212	69287-019	0.928	\$250
45	69283-020	0.290	\$150	69284-020	0.394	\$175	69285-020	0.499	\$187	69286-020	0.603	\$212	69287-020	0.708	\$250
50	69283-021	0.245	\$150	69284-021	0.334	\$175	69285-021	0.422	\$187	69286-021	0.511	\$212	69287-021	0.599	\$250
52	69283-022	0.226	\$150	69284-022	0.308	\$175	69285-022	0.390	\$187	69286-022	0.471	\$212	69287-022	0.553	\$250
56	69283-023	0.192	\$150	69284-023	0.262	\$175	69285-023	0.331	\$187	69286-023	0.400	\$212	69287-023	0.470	\$250
60	69283-024	0.180	\$175	69284-024	0.245	\$212	69285-024	0.310	\$225	69286-024	0.374	\$262	69287-024	0.440	\$300
64	69283-025	0.156	\$175	69284-025	0.212	\$212	69285-025	0.268	\$225	69286-025	0.324	\$262	69287-025	0.360	\$300
67	69283-026	0.145	\$175	69284-026	0.197	\$212	69285-026	0.249	\$225	69286-026	0.301	\$262	69287-026	0.354	\$300
70	69283-027	0.136	\$175	69284-027	0.186	\$212	69285-027	0.236	\$255	69286-027	0.286	\$262	69287-027	0.335	\$300
76	69283-028	0.110	\$175	69284-028	0.156	\$212	69285-028	0.191	\$255	69286-028	0.232	\$262	69287-028	0.272	\$300
82	69283-029	0.100	\$212	69284-029	0.136	\$250	69285-029	0.173	\$275	69286-029	0.209	\$312	69287-029	0.246	\$349
85	69283-030	0.087	\$212	69284-030	0.118	\$250	69285-030	0.150	\$275	69286-030	0.182	\$312	69287-030	0.214	\$349
94	69283-031	0.071	\$212	69284-031	0.097	\$250	69285-031	0.124	\$275	69286-031	0.150	\$312	69287-031	0.176	\$349
101	69283-032	0.060	\$212	69284-032	0.082	\$250	69285-032	0.105	\$275	69286-032	0.127	\$312	69287-032	0.150	\$349

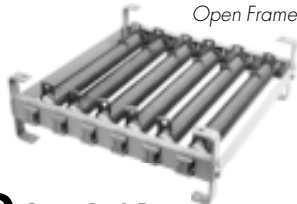
Add the prefix "HC" before all Part Numbers.

Ampere ratings are based on single coils operating in free air at a temperature rise not to exceed 300°C for Hexwound Resistor Coils or 375°C for Edgewound Resistor Coils.

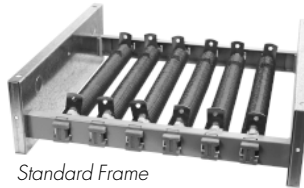
Frames DISCOUNT CODE EK

2 Coils		3 Coils		4 Coils		5 Coils		6 Coils		7 Coils	
Cat No.*	List Price	Cat No.*	List Price	Cat No.*	List Price	Cat No.*	List Price	Cat No.*	List Price	Cat No.*	List Price
Open Frames											
SSRO-2	\$150	SSRO-3	\$150	SSRO-4	\$175	SSRO-5	\$175	SSRO-6	\$200	SSRO-7	\$200
Standard Frames											
SSRS-2	\$156	SSRS-3	\$156	SSRS-4	\$187	SSRS-5	\$187	SSRS-6	\$218	SSRS-7	\$218
Universal Mill Frames											
Accepts nine (9) Size 3 Coils, Catalog No. SSRM-93, List Price \$312											

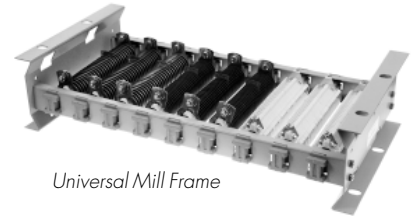
* — Complete catalog numbers by filling in resistor coil size after the listed catalog number.



Open Frame



Standard Frame

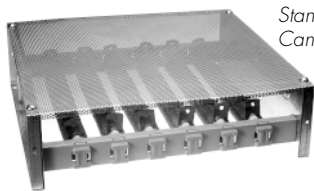


Universal Mill Frame

Covers DISCOUNT CODE EK

No. of Frames	2 Coils		3 Coils		4 Coils		5 Coils		6 Coils		7 Coils	
	Cat No.*	List Price	Cat No.*	List Price	Cat No.*	List Price	Cat No.*	List Price	Cat No.*	List Price	Cat No.*	List Price
Crane Metal												
1	1CM-2	\$250	1CM-3	\$250	1CM-4	\$281	1CM-5	\$281	1CM-6	\$312	1CM-7	\$312
2	2CM-2	\$312	2CM-3	\$312	2CM-4	\$374	2CM-5	\$374	2CM-6	\$437	2CM-7	\$437
3	3CM-2	\$374	3CM-3	\$374	3CM-4	\$468	3CM-5	\$468	3CM-6	\$562	3CM-7	\$562
4	4CM-2	\$473	4CM-3	\$473	4CM-4	\$562	4CM-5	\$562	4CM-6	\$686	4CM-7	\$686
5	5CM-2	\$499	5CM-3	\$499	5CM-4	\$655	5CM-5	\$655	5CM-6	\$811	5CM-7	\$811
Ventilated Weatherproof												
1	1VW-2	\$374	1VW-3	\$374	1VW-4	\$406	1VW-5	\$406	1VW-6	\$437	1VW-7	\$437
2	2VW-2	\$437	2VW-3	\$437	2VW-4	\$530	2VW-5	\$530	2VW-6	\$624	2VW-7	\$624
3	3VW-2	\$499	3VW-3	\$499	3VW-4	\$655	3VW-5	\$655	3VW-6	\$811	3VW-7	\$811
4	4VW-2	\$562	4VW-3	\$562	4VW-4	\$780	4VW-5	\$780	4VW-6	\$998	4VW-7	\$998
5	5VW-2	\$624	5VW-3	\$624	5VW-4	\$905	5VW-5	\$905	5VW-6	\$1,186	5VW-7	\$1,186
Totally Enclosed Non-Ventilated†												
1	1TE-2	\$312	1TE-3	\$312	1TE-4	\$343	1TE-5	\$343	1TE-6	\$374	1TE-7	\$374
2	2TE-2	\$374	2TE-3	\$374	2TE-4	\$468	2TE-5	\$468	2TE-6	\$530	2TE-7	\$530

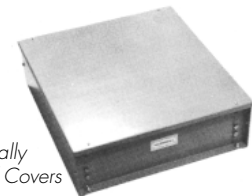
* — Complete catalog numbers by filling in resistor coil size after the listed catalog number.
 † — Derate resistor coil amps by 50% when using the Totally Enclosed Non-Ventilated Covers.



Standard Frame with Crane Metal Covers



Standard Frame with Ventilated Weatherproof Covers



Standard Frame with Totally Enclosed Non-Ventilated Covers

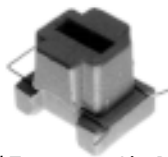
Terminals & Mounting Sockets

(Discount E32)

Part No.	Adjustable Terminals		Coil Type	List Price
	Rating Amps	Coil Type		
69430-001	1.3 – 7.2	Hexwound		\$19
17578-001	8.5 – 34	Edgewound		\$19
17577-001	37 – 101	Edgewound		\$19

Terminals & Additional Mounting Sockets

Edgewound End Terminal Modification –
 Code Letter A, Welded, short terminal, \$6 per Coil
 Mounting Socket & Clip – Part No. 69279-001, \$6 per set



Stainless Steel Coil Jumpers with Hardware (Discount E39)

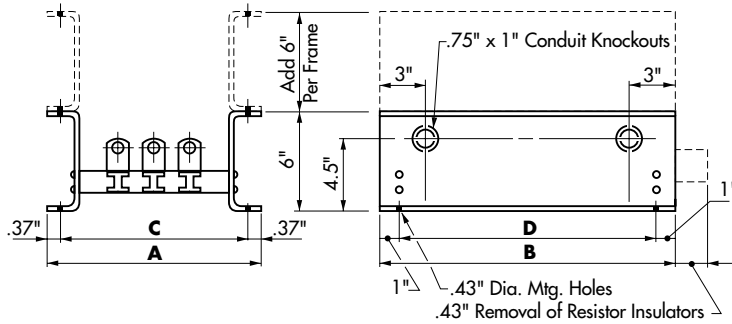
Part No.	Description	List Price
69129-001	2 Coils under 40 amps	\$28
69129-002	2 Coils over 40 amps	\$42
69129-003	3 Coils under 40 amps	\$42
69129-004	3 Coils over 40 amps	\$66
69129-005	4 Coils under 40 amps	\$48
69129-006	4 Coils over 40 amps	\$72

Add the prefix "HC" before all Part Numbers.

Notes — Consult factory for stainless steel or aluminum frame and cover pricing. See page 2 for pricing instructions.

Dimensions

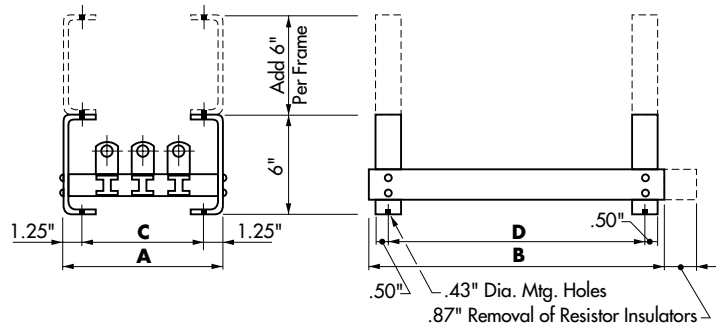
Standard Frame



Standard Frame Dimensions

No. of Coils	Coil Size	A	B	C	D
2	3	10.00"	13.12"	9.25"	11.12"
3	3	12.75"	13.12"	12.00"	11.12"
4	3	15.50"	13.12"	14.75"	11.12"
5	3	18.25"	13.12"	17.50"	11.12"
6	3	21.00"	13.12"	20.25"	11.12"
7	3	23.75"	13.12"	23.00"	11.12"
2	4	10.00"	16.06"	9.25"	14.06"
3	4	12.75"	16.06"	12.00"	14.06"
4	4	15.50"	16.06"	14.75"	14.06"
5	4	18.25"	16.06"	17.50"	14.06"
6	4	21.00"	16.06"	20.25"	14.06"
7	4	23.75"	16.06"	23.00"	14.06"
2	5	10.00"	19.00"	9.25"	17.00"
3	5	12.75"	19.00"	12.00"	17.00"
4	5	15.50"	19.00"	14.75"	17.00"
5	5	18.25"	19.00"	17.50"	17.00"
6	5	21.00"	19.00"	20.25"	17.00"
7	5	23.75"	19.00"	23.00"	17.00"
2	6	10.00"	21.93"	9.25"	19.93"
3	6	12.75"	21.93"	12.00"	19.93"
4	6	15.50"	21.93"	14.75"	19.93"
5	6	18.25"	21.93"	17.50"	19.93"
6	6	21.00"	21.93"	20.25"	19.93"
7	6	23.75"	21.93"	23.00"	19.93"
2	7	10.00"	24.87"	9.25"	22.87"
3	7	12.75"	24.87"	12.00"	22.87"
4	7	15.50"	24.87"	14.75"	22.87"
5	7	18.25"	24.87"	17.50"	22.87"
6	7	21.00"	24.87"	20.25"	22.87"
7	7	23.75"	24.87"	23.00"	22.87"

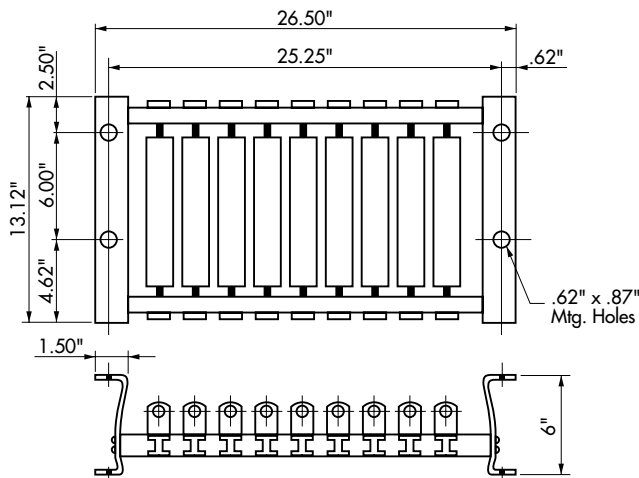
Open Frame



Open Frame Dimensions

No. of Coils	Coil Size	A	B	C	D
2	3	7.50"	13.18"	4.37"	11.12"
3	3	10.25"	13.18"	7.12"	11.12"
4	3	13.00"	13.18"	9.87"	11.12"
5	3	15.75"	13.18"	12.62"	11.12"
6	3	18.50"	13.18"	15.37"	11.12"
7	3	21.25"	13.18"	18.12"	11.12"
2	4	7.50"	16.12"	4.37"	14.06"
3	4	10.25"	16.12"	7.12"	14.06"
4	4	13.00"	16.12"	9.87"	14.06"
5	4	15.72"	16.12"	12.62"	14.06"
6	4	18.50"	16.12"	15.37"	14.06"
7	4	21.25"	16.12"	18.12"	14.06"
2	5	7.50"	19.06"	4.37"	17.00"
3	5	10.25"	19.06"	7.12"	17.00"
4	5	13.00"	19.06"	9.87"	17.00"
5	5	15.72"	19.06"	12.62"	17.00"
6	5	18.50"	19.06"	15.37"	17.00"
7	5	21.25"	19.06"	18.12"	17.00"
2	6	7.50"	22.00"	4.37"	19.93"
3	6	10.25"	22.00"	7.12"	19.93"
4	6	13.00"	22.00"	9.87"	19.93"
5	6	15.72"	22.00"	12.62"	19.93"
6	6	18.50"	22.00"	15.37"	19.93"
7	6	21.25"	22.00"	18.12"	19.93"
2	7	7.50"	24.93"	4.37"	22.87"
3	7	10.25"	24.93"	7.12"	22.87"
4	7	13.00"	24.93"	9.87"	22.87"
5	7	15.72"	24.93"	12.62"	22.87"
6	7	18.50"	24.93"	15.37"	22.87"
7	7	21.25"	24.93"	18.12"	22.87"

Universal Mill Frame



Accepts quantity of 9 - Size 3 Coils



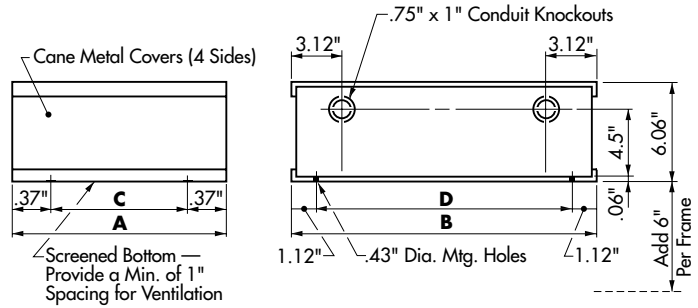
Dimensions

Standard Frame w/ Covers Dimensions

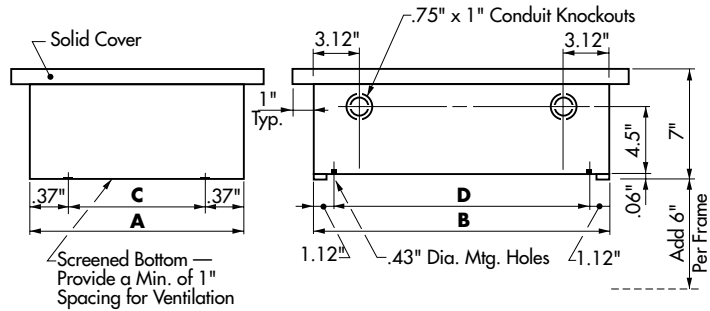
No. of Coils	Coil Size	A	B	C	D
2	3	10.00"	13.37"	9.25"	11.12"
3	3	12.75"	13.37"	12.00"	11.12"
4	3	15.50"	13.37"	14.75"	11.12"
5	3	18.25"	13.37"	17.50"	11.12"
6	3	21.00"	13.37"	20.25"	11.12"
7	3	23.75"	13.37"	23.00"	11.12"
2	4	10.00"	16.31"	9.25"	14.06"
3	4	12.75"	16.31"	12.00"	14.06"
4	4	15.50"	16.31"	14.75"	14.06"
5	4	18.25"	16.31"	17.50"	14.06"
6	4	21.00"	16.31"	20.25"	14.06"
7	4	23.75"	16.31"	23.00"	14.06"
2	5	10.00"	19.25"	9.25"	17.00"
3	5	12.75"	19.25"	12.00"	17.00"
4	5	15.50"	19.25"	14.75"	17.00"
5	5	18.25"	19.25"	17.50"	17.00"
6	5	21.00"	19.25"	20.25"	17.00"
7	5	23.75"	19.25"	23.00"	17.00"
2	6	10.00"	22.18"	9.25"	19.93"
3	6	12.75"	22.18"	12.00"	19.93"
4	6	15.50"	22.18"	14.75"	19.93"
5	6	18.25"	22.18"	17.50"	19.93"
6	6	21.00"	22.18"	20.25"	19.93"
7	6	23.75"	22.18"	23.00"	19.93"
2	7	10.00"	25.12"	9.25"	22.87"
3	7	12.75"	25.12"	12.00"	22.87"
4	7	15.50"	25.12"	14.75"	22.87"
5	7	18.25"	25.12"	17.50"	22.87"
6	7	21.00"	25.12"	20.25"	22.87"
7	7	23.75"	25.12"	23.00"	22.87"

Note: Derate resistor coil amps 50% when using Totally Enclosed Non-Ventilated Covers

Cane Metal Cover

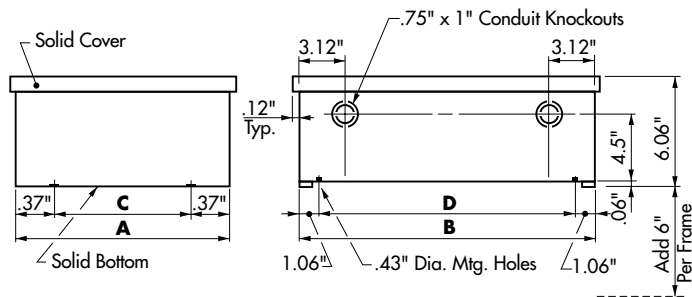


Ventilated Weatherproof Cover



Totally Enclosed Non-Ventilated Cover

Note: Derate resistor coil amps 50% when using Totally Enclosed Non-Ventilated Covers



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