

# CRANE CONTROL EQUIPMENTS

SINCE 1988

*A vital support of your Cranes*



- Established Since 1988
- Complete In-house Testing Facilities
- Approved with various Govt. agencies
- Computer Aided Design.
- Compatible with all other makes.
- AN ISO 9001-2015 Certified Company.
- CC Certified Company.





# An Introduction about us at Crane Control Equipments.

We are a leading **ISO 9001- 2015 & CE CERTIFIED COMPANY** established in the year **1988** manufacturing **Control Gear Equipment**, used in **EOT Cranes** , **Cane Unloaders** as well as **Grabbing Cranes** etc. which includes the following.

## STARTING RESISTORS

- AUTO MATIC ROTOR STARTER PANEL

## DYNAMIC BRAKING RESISTORS

- PUNCHED GRID RESISTANCE BOXES

## MASTER CONTROLLERS

- S.S.WIRE GRID RESISTANCE BOXES

## LEVER LIMIT SWITCHES

- ELECTRO HYDRAULIC THRUSTOR BRAKES

## ROTARY LIMIT SWITCHES

- ELECTRO HYDRAULIC THRUSTORS

## CURRENT COLLECTORS

- ELECTRO MAGNETIC BRAKES

## CABLE REELING DRUMS

- FLEXIBLE GEARED COUPLINGS

## CABLE TROLLEYS

- PENDANT PUSH BUTTON

We are also manufacturing Starting / Slip Resistors used for starting high capacity Slip ring Motors in industries such as Sugar Mills, Rolling Mills etc. as well as Dynamic Braking Resistors for AC Drives.

Our **USP** has been to provide excellent service to both **Crane manufacturers** as well as users and most of the Crane manufacturers are installing our products as **original equipment**.

**Our products are approved in both private as well as Government organisations.**

**We are in fact also a regular supplier to various Electricity Boards ,Railway Workshops and other government organisations all over India and our material is also being exported out side India.**

Our products are designed, based on the respective Indian Standards and hence can be interchanged with other brands provided of course if the other manufacturer has also followed the correct Indian Standards while designing and manufacturing his product. Also in our company we have an on going process of **R&D** for improving the Quality of our products.

Since we are regularly manufacturing the products at times we can even supply material at short notice there by reducing the down time of the **customer's system during maintenance or brake down.**

Supplying equipment at short notice does not mean that the equipment does not under go proper tests.

An in house testing facility and quality control department checks every product as per the relevant standards before it is despatched from our works.

In addition to the complete range of Control Gear Equipment and in keeping with our commitment to provide our customers with the best possible services, We also supply **SHROUDED BUS BAR CONDUCTORS** as well as **RADIO REMOTE CONTROLS & ANTI-COLLISION DEVICE** etc. so that at our factory where we have a single out let, we can provide our customer be it a Crane manufacturer or a Crane user this unique service:

**"The availability of complete range of  
Control Gear Products under one Roof"**

## A.C. ELECTROMAGNETIC BRAKES

### INTRODUCTION

**A.C. Drum Brakes** are suitable for single phase **A.C.** supply up to **440V** and are available for drum diameters of **100 mm** to **375 mm** and Braking Torques up to **69 kg-m**.

### CONSTRUCTION AND WORKING :

The shoes are of graded cast iron. Other components are of fabricated steel. The lever is hinged on the main arm, which is connected to the side arm through a tie rod, and is stressed by a pre-loaded compression spring. The compression of the spring can be adjusted to set the braking torque to desired value. The brake liners are of selected quality material and are riveted to the shoes by aluminum rivets.

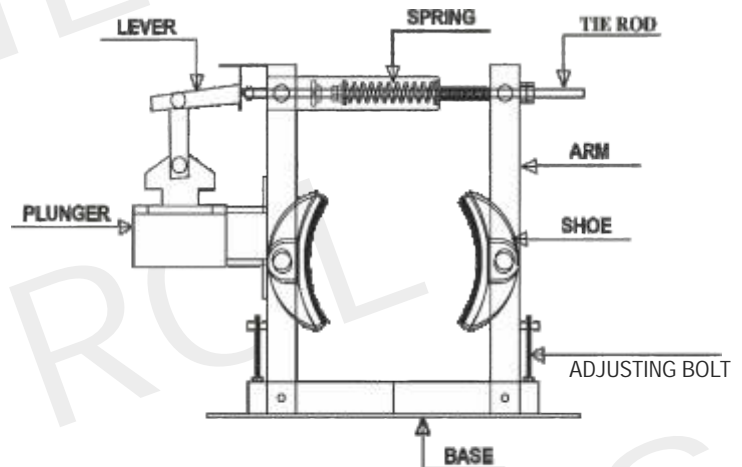
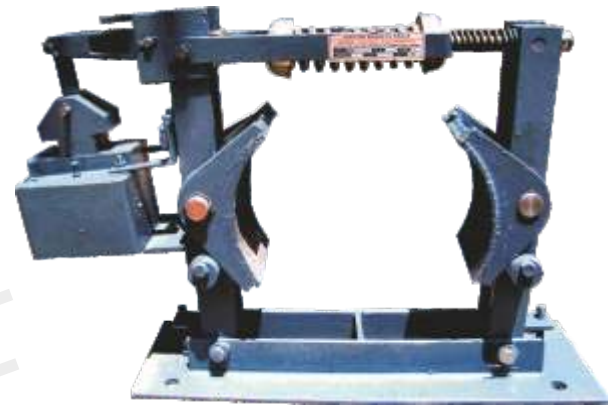
**A.C.** solenoid with laminated magnetic sheet steel houses a copper magnetizing coil which is impregnated with Class F materials. The plunger which is connected to the lever, is drawn in to the coil, when it is energized with **AC** source. This loads the spring and release the brake shoes from the brake drum. When the supply is cut off, the plunger is pulled out of the coil, and spring force clamps the brake shoes on the brake drum and the brake is applied.

### FEATURES :

1. The brake is Fail-safe. The brake is applied in absence of **A.C.** Current and is released when the supply is restored.
2. High quality brake lining material ensures consistent braking torque and reliable operation.
3. Clean environment working and less noise.
4. Braking torque can be adjusted easily and quickly.
5. Ease of maintenance.

### Notes

1. Brake type **EMS 4** denotes **A.C.** single phase **4"** drum diameter ( inch series )
2. Brake type **EMS 100** denotes **A.C.** single phase **100 mm** drum diameter ( metric series )
3. Brakes are made to suit the required Drum Diameter.
4. Coils are rated for operation on single phase, **400/ 440V, 50 cycles**,
5. Coils can be supplied with '**class B**' insulation.
6. Coil for higher ambient temperature upto **60°C** can be offered on Request,
7. Tolerance on indicated dimensions is  $\pm 2\text{mm}$ .
8. Higher braking torque can be adjusted for reduced **CDF Duty**.



### SELECTION OF BRAKE SIZE

Brake torque of **180 to 250%** of motor rated torque is sufficient for normal applications like Cranes, Hoists and other material handling equipments, For **CT** and **LT** drives, braking torque of **180 to 150%** of motor rated torque will ensure braking without excessive noise and mechanical jerk.

Rated Motor Torque is given by

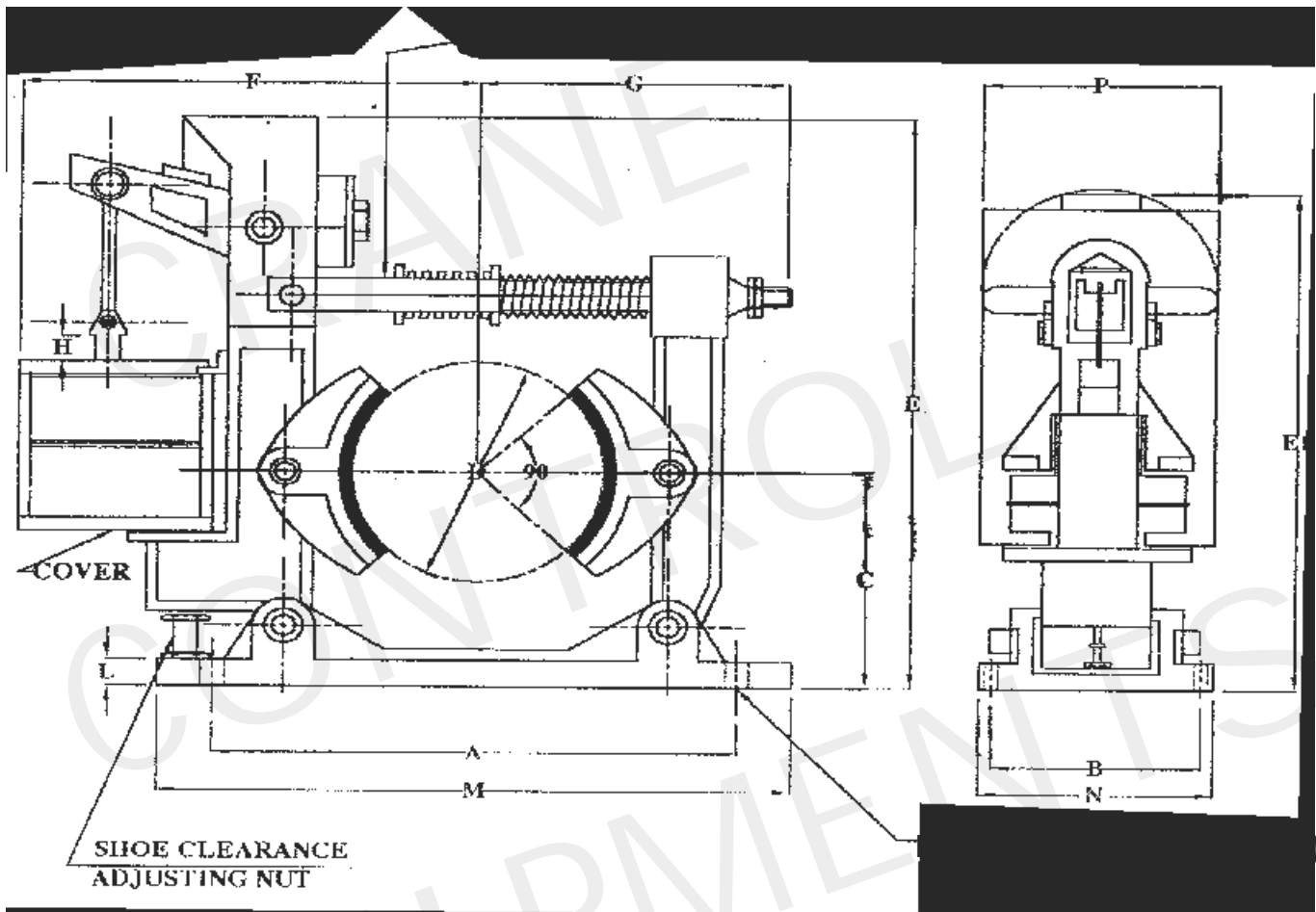
$$T = \frac{716.2 \times \text{HP}}{\text{RPM}} \quad \text{OR} \quad \frac{975 \times \text{KW}}{\text{RPM}}$$

Where, KW or HP is motor rated power and RPM is motor rated speed in revolutions per minute.

### Dimensional Details

Brake Type	Drum dia.		Braking Torque
	inch	mm	kg. M.
EMS - 4" EMS - 100	4	100	1.87
EMS - 6" EMS - 150	6	150	6.5
EMS - 8" EMS - 200	8	200	15
EMS - 10" EMS - 250	10	250	19.3
EMS - 12" EMS - 300	12	300	38.8
EMS - 15" EMS - 380	15	380	58.6

## A.C. ELECTROMAGNETIC BRAKES CHART



BRAKE TYPE	DRUM DIA-D	A	B	C	E (MAX)	E1 (MAX)	F (MAX)	G	H	J	K	L	M	N	O	WT.KG (APPX.)
EMS-4	4"	232	70	130	275	295	230	140	19	10	57	14	267	98	155	13.0
EMS-100	100MM															
EMS-6	6"	310	76	130	305	325	260	175	19	10	70	18	340	114	155	18.5
EMS-150	100MM															
EMS-8	8"	400	92	175	370	390	340	235	19	14	89	20	441	126	175	30.8
EMS-200	100MM															
EMS-10	10"	470	114	225	460	480	380	275	19	14	100	23	500	150	175	43.5
EMS-250	250MM															
EMS-12	12"	530	152	254	530	552	445	320	19	20	127	23	616	210	190	78.0
EMS-300	300MM															
EMS-15	15"	610	190	315	645	667	495	355	19	22	152	28	680	229	190	97.0
EMS-380	380MM															

### NOTES:-

- (1) BRAKE TYPE EMS 4 DENOTES AC SINGLE PHASE 4" DIA (INCH SERIES).
- (2) BRAKE TYPE EMS 100 DENOTES AC SINGLE PHASE 100 DIA (METRIC SERIES).
- (3) BRAKES ARE MADE TO SUIT EITHER INCH OR METRIC DRUM SIZE.
- (4) BRAKES ALTHOUGH ARE CALLED AC SINGLE PHASE BUT ARE OPERATED ON TWO PHASE 440 VOLTS AC SUPPLY.



## A.C. ELECTROMAGNETIC BRAKES CHART

BRAKE TYPE	DRUM DIA.	MAX. BRAKING TORQUE 50% COIL RATING		MAX. BRAKING TORQUE 100% COIL RATING		COIL POWER CONSUMPTION V. A	
		LB. FT	KG. CM	LB. FT	KG. CM	50%	100%
EMS - 4	4"	15.9		13.5		310	310
EMS - 100	100MM		200		187		
EMS - 6	6"	55		47		310	310
EMS - 150	150MM		760		650		
EMS - 8	8"	128		109		430	380
EMS - 200	200MM		1775		1500		
EMS - 10	10"	164		140		430	380
EMS - 250	250MM		2270		1930		
EMS - 12	12"	330		280		500	440
EMS - 300	300MM		4570		3880		
EMS - 15	15"	500		425		500	440
EMS - 380	380MM		6900		5860		

### NOTES :-

### CLASS 'A' INSULATED

- (1) COILS ARE RATED FOR OPERATION ON 400/440 VOLTS SINGLE PHASE AC 50 CYCLES.
- (2) BRAKE RATINGS AND COIL POWER CONSUMPTION GIVEN AT 40°C. AMBIENT.
- (3) COILS CAN BE SUPPLIED WITH CLASS 'B' INSULATION FOR OPERATION AT HIGHER AMBIENT TEMPERATURE UP TO 60°C.
- (4) COIL POWER CONSUMPTION INDICATED IS OVERATED VALUE AT AN OPERATION VOLTAGE OF 415 VOLTS AC SINGLE PHASE 50 CYCLES.

## RADIO REMOTE CONTROL



Durability, Reliability

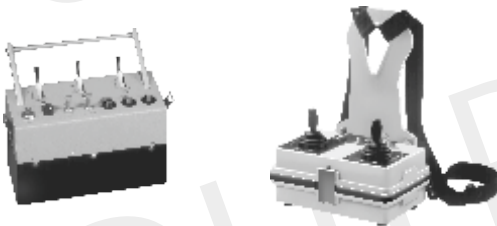
Easy to use, Safe to operate



Economical, Safe to operate



User friendly, Easy to Install



Flexible push button layout

Compact, Choice of colour



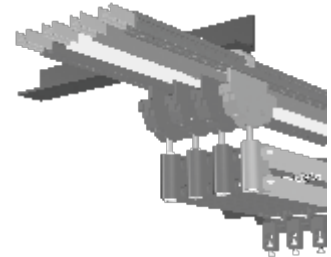
Designed as per requirement

Compatible with all CC models

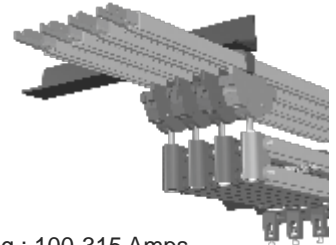


Handy / Compact Transmitter

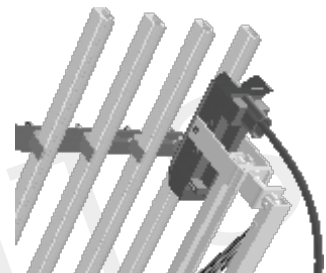
## INSULATED CONDUCTOR BAR



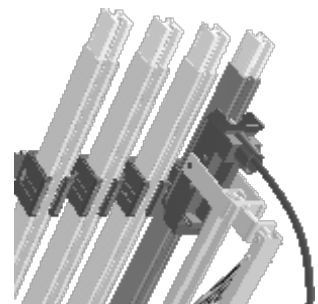
Rating : 60-400 Amps.



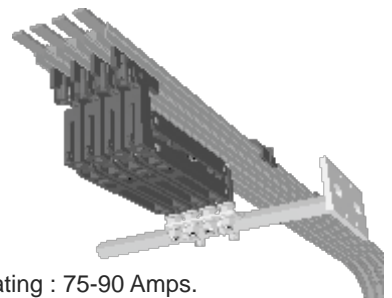
Rating : 100-315 Amps.



Rating : 60-150 Amps.



Rating : 500-1500 Amps.



Rating : 75-90 Amps.

# CRANE CONTROL EQUIPMENTS



ROTARY GEARED LIMIT SWITCH



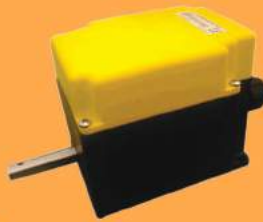
LEVER LIMIT SWITCH



COUNTER WT. LIMIT SWITCH



CROSS BAR LIMIT SWITCH



WORM DRIVE LIMIT SWITCH



DIFFERENTIAL LIMIT SWITCH



MASTER / CAM CONTROLLER



DUAL MASTER CONTROLLER



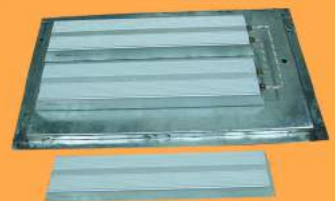
PENDANT PUSH BUTTON



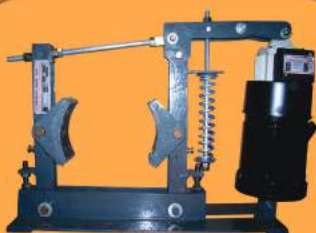
RESISTANCE BOX



DYNAMIC PUNCHED GRID TYPE



DBR MOULDED TYPE



ELECTRO HYDRAULIC  
THRUSTER BRAKE

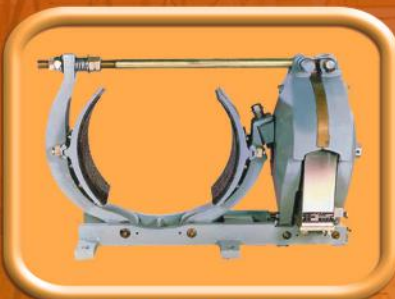


ELECTRO-HYDRAULIC THRUSTERS



A.C. ELECTROMAGNETIC BRAKE





D.C. ELECTRO - MAGNETIC BRAKE



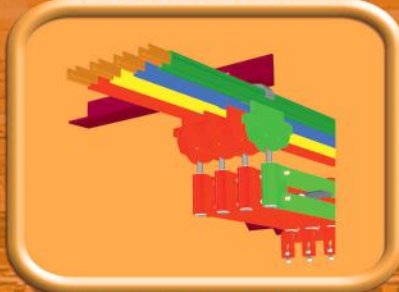
BRAKE DRUM COUPLING



FLEXIBLE GEARED COUPLING



RADIO REMOTE CONTROL



SHROUDED DSL



CURRENT COLLECTORS



DISC BRAKE



SNATCH BLOCK



RAIL CLAMPS



FLEXIBLE TRAILING CABLE



CABLE TROLLEYS



CABLE REELING DRUM

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