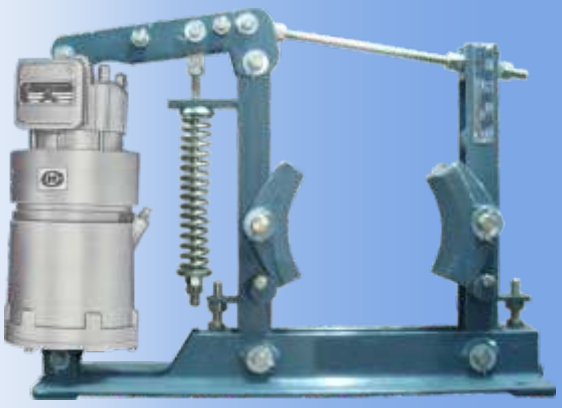
MFG. : EOT Cranes, H.O.T. Cranes, JIB Cranes,
Crane Control Gear Equipments & Power Transmission Equipments

MAGCO CRANES



For Details Contact:
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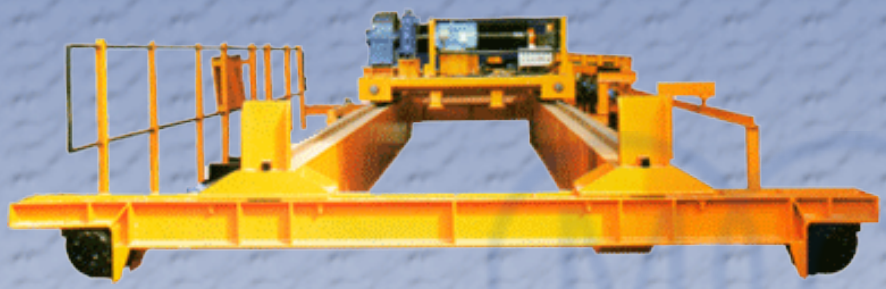
LIST OF PRODUCTS & SERVICES WE OFFER

E.O.T. CRANES
H.O.T. CRANES
WIRE ROPE HOISTS
JIB CRANES
CANE UN-LOADER
CONVERSION OF H.O.T. CRANE TO E.O.T. CRANE
CAPACITY UPGRATION OF CRANE & UNLOADER
SERVICING OF CRANES, HOISTS & CANE UN-LOADER
CENTRALISING OF CRANES & UN-LOADER
COMPLETE WIRING OF THE CRANES & UN-LOADER
ELECTRO HYDRAULIC THRUSTER BRAKE
ELECTRO MAGNETIC BRAKE
D.C. BRAKE
CREEP SPEED BRAKE
FOOT OPERATED BRAKE
THREE PHASE MAGNETIC BRAKE
ELECTRO HYDRAULIC THRUSTOR
FLEXIBLE COUPLING
GEARED COUPLING
TYRE COUPLING
CLUTCHES WITH RECTIFIER PANEL
DRUM CONTROLLER
MASTER CONTROLLER
SHUNT LIMIT SWITCH
GRAVITY LIMIT SWITCH
GEARED LIMIT SWITCH
COUNTER WEIGTH LIMIT SWITCH
GRAB DIFFERENTIAL LIMIT SWITCH
DRUM SWITCH
S.S. GRID TYPE RESISTANCE BOX
PUNCH GRID RESISTANCE BOX
TROLLEY WHEELS
CONTROL PANEL
WIRE ROPE DRUM
CURRENT COLLECTOR
CABLE TROLLEY
RADIO REMOTE CONTROL
GEAR BOX
ELECTRICAL CHAIN HOIST

MAGCO DOUBLE GIRDER EOT CRANES



We manufacture Overhead EOT Crane which is fabricated using optimum quality raw material and components like MS Sheets, MS angles, I beam, motors, brakes. Our range is designed in such way that can bear loads ranging up to 300 tones. These are extensively used in foundry, machine shop, engineering industry. We also offer customization on our range as per the specification of clients.

Some of the unique features include:

- High Performance
- Durable
- Sturdy
- Easy maintenance
- Corrosion resistance

Our range of EOT Cranes / SG EOT Cranes / DG EOT Cranes is developed using finest quality raw material and components such as MS Sheets, MS angles, I beam, motors, brakes. These are ideal for power house cranes where these cranes are used for maintenance. Our high performance product requires low maintenance and can be tailored as per the demand of clients.

Following are the unique attributes of EOT Cranes:

- Optimum design of the structure avoiding dead weight and reducing the cost of the equipment.
- Very much suitable for power house cranes where these cranes are used for maintenance.
- Economical Design by providing manual long and cross travel facility with a provision for using either an electric hoist or a motorized chain pulley block.
- Low head room which in turn reduces the cost of the shed / building.
- Customized design to match the budget of the customer.
- Highly Competitive Prices.

Double Girder Cranes:

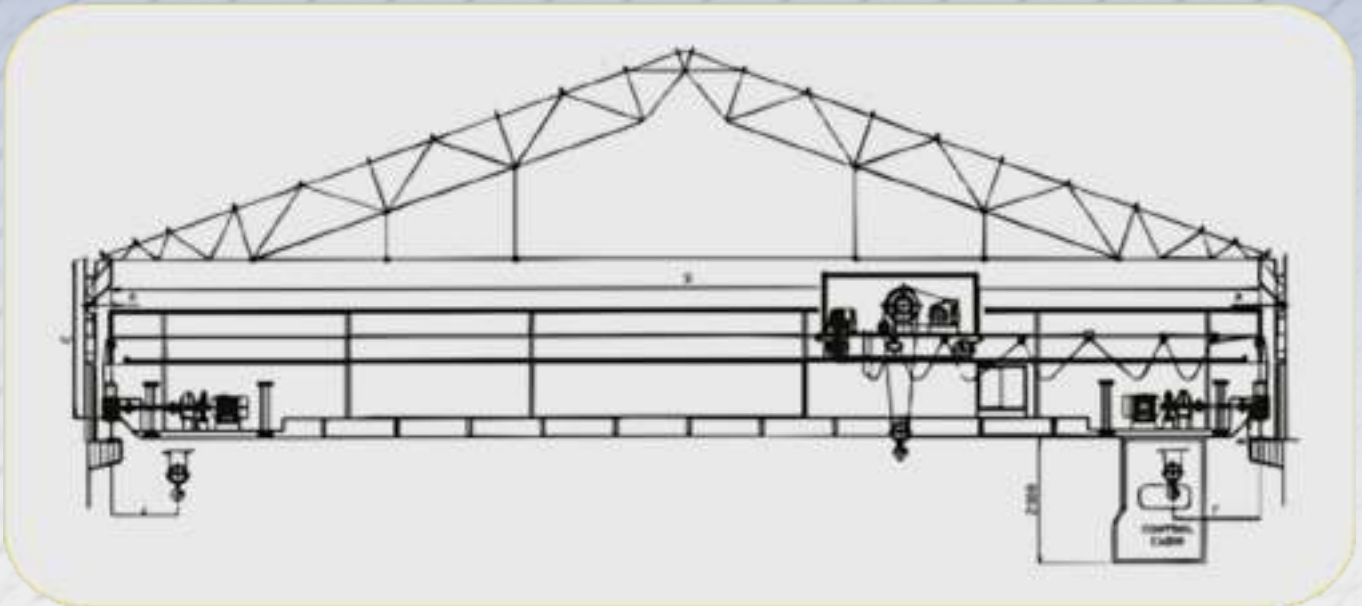
We are a well established manufacturer and exporter of EOT cranes with double girders, that find application for the purpose of lifting & transporting the loads over 10 T and for span of more than 25 m. Comprising of 2 torsion free box girders, these EOT cranes such as double girder EOT Cranes, traveling EOT Cranes, material handling EOT Cranes, etc., are compatible, when heavy loads and wide spans are required. These double girders EOT Cranes are offered by us in the load capacities of up to 100 T and with spans up to 50 M.

- Capacity: 0.5 Ton to 100 Ton
- Span: 3 meters to 30 meters
- Lift: 0.5 meters to 35 meters

MFG. : E.O.T. Cranes, H.O.T. Cranes, JIP Cranes, Crane Control Gear Equipments & Power Transmission Equipments

TECHNICAL PARAMETER FOR DOUBLE GIRDER EOT CRANES

S.W.L. (M.T.)	Span (mtrs.) 'S'	Head Room (mm) 'C'	Wheel Base (mm)	Hook Approach		End Clearance (mm) A	Wheel Load Per Wheel (Approx.)
				(mm) E	(mm) F		
5	10	1700	3600	950	850	260	6.2
	15	1700	3800	950	850	260	6.8
	20	1800	4000	950	850	260	8
7.5	10	1800	3600	1000	900	260	8.5
	15	1800	3800	1000	900	260	9.5
	20	1900	4000	1000	900	260	10
10	10	1900	3600	1100	1000	260	10
	15	1900	3800	1100	1000	260	11
	20	2100	4000	1100	1000	280	12
15	15	2400	3800	1100	1000	280	16
	20	2600	4200	1100	1000	280	17
20	15	2500	4000	1200	1000	320	19
	20	2700	4200	1200	1000	320	20
25	15	2700	4200	1250	1100	320	22
	20	3000	4400	1250	1100	320	23
30	15	2800	4400	1300	1100	320	26
	20	3000	4600	1300	1100	320	28
40	15	3200	4600	1400	1200	330	32
	20	3500	4800	1400	1200	330	34
50	15	4000	4800	1500	1250	360	37
	20	4500	5000	1500	1250	360	39
60	15	4200	5800	1700	1350	425	50
	20	4700	6000	1700	1350	425	52



MAGCO SINGLE GIRDER EOT CRANES

Single Girder EOT Cranes

Design: Compact dimensions, low weight, easy to operate and easy to maintain.

Motors: Motors will be Crane duty motors, squirral cage induction motors will be provided for heavy duty cranes as per the applications.

Gear Boxes: Precision flat helical / spur gear units in light alloy housings with case-hardened gears, high-grade surface treatment and permanent oil / grease lubrication.

Brakes: Electro Hydraulic Thrusters for all motions. DC/AC Electro Magnetic Brakes or additional brakes can be provided on request.

Limit Switches: To prevent over hoisting & over lowering of hook.

Push Button Stations: Extra light, handy, easy to operate, aluminum, fabricated from extruded section.

Soft Starts: Electric / Electronic soft start modules electrically coupled to the long travel drives to achieve jerk free, cushioned & smooth starts.

Maintenance Platform with Hand Railing: Easy, Simple & Safe maintenance of the Crane extended partially or totally along the girder.

We manufacture Overhead EOT Crane which is fabricated using optimum quality raw material and components like MS Sheets, MS angles, I beam, motors, brakes. Our range is designed in such way that can bear loads ranging up to 300 tones. These are extensively used in foundry, machine shop, engineering industry. We also offer customization on our range as per the specification of clients.

Some of the unique features include:

- High Performance
- Durable
- Sturdy
- Easy maintenance
- Corrosion resistance

Our range of EOT Cranes / SG EOT Cranes / DG EOT Cranes is developed using finest quality raw material and components such as MS Sheets, MS angles, I beam, motors, brakes. These are ideal for power house cranes where these cranes are used for maintenance. Our high performance product requires low maintenance and can be tailored as per the demand of clients.

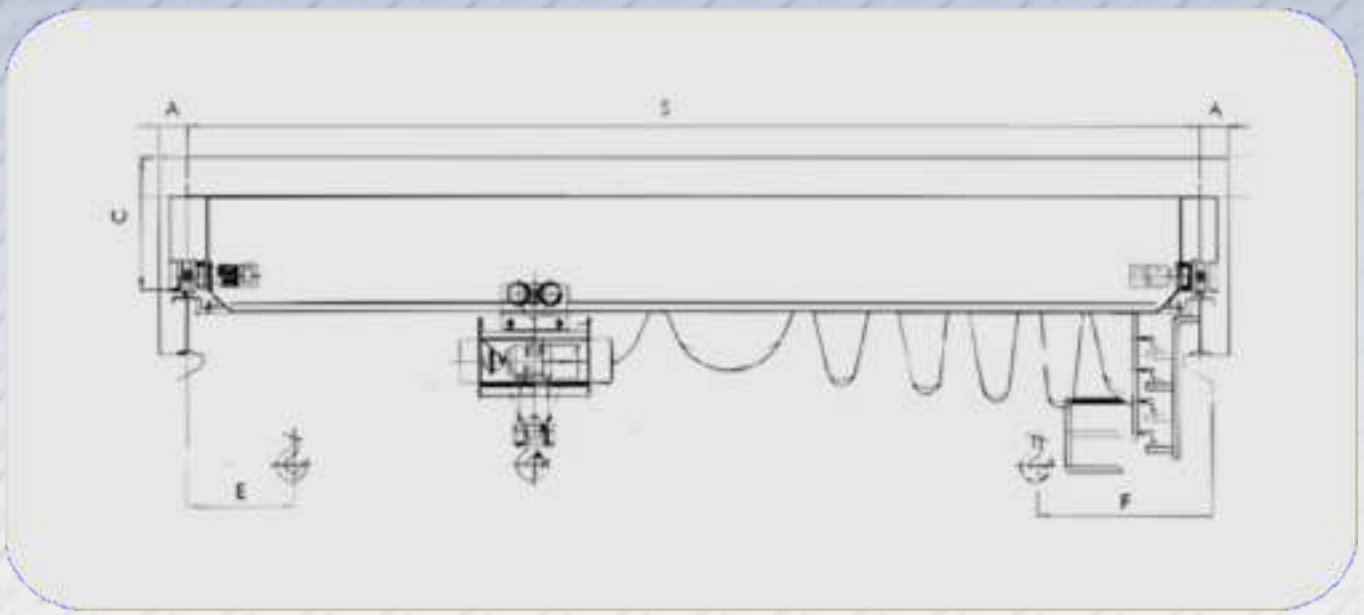
Following are the unique attributes of EOT Cranes:

- Optimum design of the structure avoiding dead weight and reducing the cost of the equipment.
- Very much suitable for power house cranes where these cranes are used for maintenance.
- Economical Design by providing manual long and cross travel facility with a provision for using either an electric hoist or a motorized chain pulley block.
- Low head room which in turn reduces the cost of the shed / building.
- Customized design to match the budget of the customer.
- Highly Competitive Prices.

MFG. : E.O.T. Cranes, H.O.T. Cranes, JIP Cranes, Crane Control Gear Equipments & Power Transmission Equipments

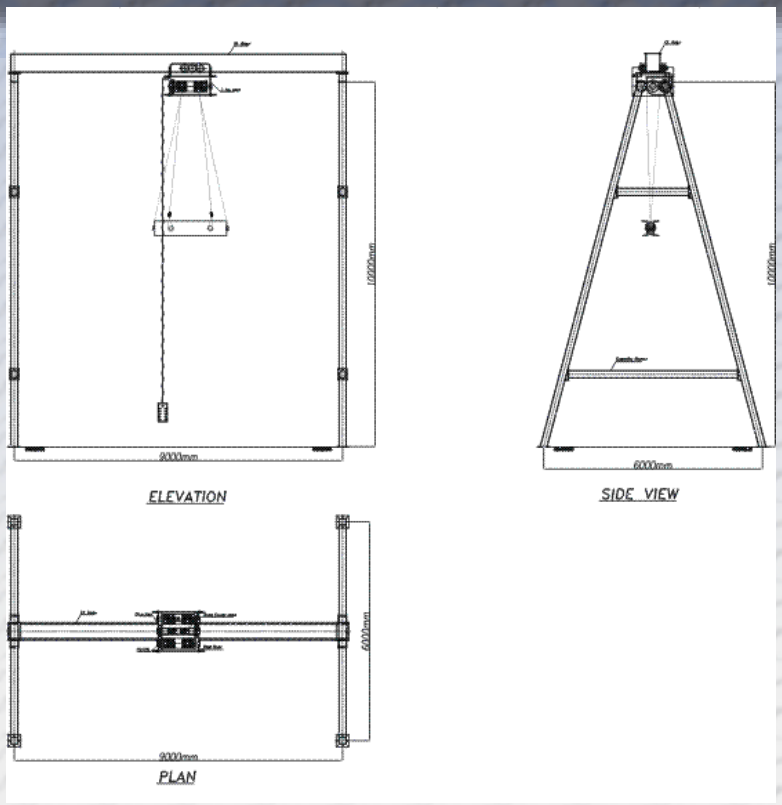
TECHNICAL PARAMETER FOR SINGLE GIRDER EOT CRANES

S.W.L. (M.T.)	Span (mtrs.) 'S'	Head Room (mm) 'C'	Wheel Base (mm)	Hook Approach (mm) E/F	End Clearance (mm) A	Wheel Load Per Wheel (Approx.)
1	5	750	1800	700	250	0.9
	10	850	2400	700	250	1.02
	15	900	2800	700	250	1.27
2	5	850	2000	700	270	1.6
	10	950	2400	700	270	1.7
	15	1050	2800	700	270	1.9
	20	1200	3600	700	270	2.3
3	5	850	1900	800	275	2.07
	10	950	2400	800	275	2.2
	15	1100	2800	800	275	2.6
	20	1300	3600	800	275	3.2
5	10	1000	2400	900	275	3.5
	15	1250	2800	900	275	4
	20	1350	3600	900	275	4.4
7.5	10	1100	2400	950	300	5.02
	15	1300	2800	950	300	5.5
	20	1500	3600	950	300	6.02
10	10	1200	2400	1000	300	6.5
	15	1400	2800	1000	300	7.1
	20	1550	3600	1000	300	7.6
20	10	1250	2500	1000	300	9.4
	15	1550	3000	1000	300	10.15
	20	1600	4000	1000	300	10.7



SINGLE GIRDER CLASS IV CANE UN-LOADER with Sling Bar

AGCO CRANES offers double girder class IV Cane Un-loader with Sling Bar Or Grab Bucket. The Cane Un-loader with Sling Bar or Grab Bucket. is used to unload cane from TRACTOR TROLLEYS & TRUCKS directly to the feeder table or cane carrier. The Cane Un-loader with Sling Bar Or Grab Bucket. This Crane usually runs only in cross travel motion through rails fitted on the Box Girder and capable to feed cane on all feeder table installed near the rails on one line. The Cane Un-loader with Sling Bar Or Grab Bucket is made in robust pipe or plate box fabricated trolley, structure housing, machinery and they have the capacity of 5, 10, 15 and 20 Ton capacities The Cane Un-loader with Sling Bar Or Grab Bucket are specially designed and manufactured for sugar industries these are manufactured with heavy duty components therefore these cane un-loaders come in the CLASS IV category as these are used for round the clock in the sugar industries The Cane Un-loader with Sling Bar Or Grab Bucket have always a very high speed so that the sugar industry can crush high volume of sugar cane.



MFG. : E.O.T. Cranes, H.O.T. Cranes, JIP Cranes, Crane Control Gear Equipments & Power Transmission Equipments

Duble girder class IV Cane Un-loader

MAGCO CRANES offers double girder class IV Cane Un-loader with Sling Bar Or Grab Bucket. The Cane Un-loader with Sling Bar or Grab Bucket. is used to unload cane from TRACTOR TROLLEYS & TRUCKS directly to the feeder table or cane carrier. The Cane Un-loader with Sling Bar Or Grab Bucket. This Crane usually runs only in cross travel motion through rails fitted on the Box Girder and capable to feed cane on all feeder table installed near the rails on one line. The Cane Un-loader with Sling Bar Or Grab Bucket is made in robust pipe or plate box fabricated trolley, structure housing, machinery and they have the capacity of 5, 10, 15 and 20 Ton capacities The Cane Un-loader with Sling Bar Or Grab Bucket are specially designed and manufactured for sugar industries these are manufactured with heavy duty components therefore these cane un-loaders come in the CLASS IV category as these are used for round the clock in the sugar industries The Cane Un-loader with Sling Bar Or Grab Bucket have always a very high speed so that the sugar industry can crush high volume of sugar cane.

Mechanical De Hooking System

The mechanical de hooking is a zero maintenance system as it is well design with all the high capacity components which has a long live. This mechanical de hooking system is design in such way that it requires only six second to de hook the sugarcane from the de hooking system directly in the cane carrier as this system therefore the electricity required is only for a period of six second for unloading propose that to with of the 2 HP or 4 HP motors instead of 25 HP or 15 HP.

<u>THE BIGGEST BENEFITS OF THIS SYSTEM ARE AS UNDER:</u>

1) YOU CAN SAVE UPTO 14 ELECTRICITY UNITS PER HOUR AS THE MOTOR CAPACITY IS BEEN REDUCED IN THIS SYSTEM BUT IT'S WORKING CAPACITY IS THE SAME AS PER YOUR EXISTING CANE UN- LOADERS.

2) YOU CAN SAVE AT LEAST 40 SECONDS OF TIMING ON EACH LOAD AS WITHOUT RESTING THE SUGAR CANE COMPLETELY ON THE FEEDER TABLE YOU CAN DE HOOK THE SUGAR CANE FROM IT EASILY WHICH HELPS YOU TO INCREASE THE CRUSHING CAPACITY.

This system is been Designed in keeping the view of the benefits to the sugar industry.

This system is value for money as you get the pay back in 1 season itself by saving the electricity, timing & wear n tear of your heavy machineries.

WE & SOME SUGAR FACTORIES HAVE FOUND THIS MECHANICAL DE HOOKING SYSTEM MUCH BETTER THAN THE HYDRAULIC DE HOOKING SYSTEM.

Features:

They are built to consistently high specifications conforming to IS 807 and 3177 most fabricated from Pipe/Rolled Steel Sections.
M.S. Gusset plates / thick base plate giving added rigidity to columnn.
Base plate readily drilled to take six / eight holding down bolts.
Jib arm fabricated from heavy section I beam for SMJC-1 and triangular truss construction or SMJC-2 & SMJC-3 type of jib cranes reduces deflection to acceptable limits.
Bearings: Double roller self aligned type bebarings with thrust & roller bearings to take care of horizontal and vertical loadings as well as radial thrust.
Swivelling: Through chain at the end of the jib arm and/or hand cranking for easy manual swivel, alternately electrically operated swivelling for SMJC-3 type jib crane, on request.
For positive full 360 degree rotation duly insulated brass swing springs with pantograph current collectors provided.

This topology of crane represents the ideal solution for the material handling, in the working area of the crane arm, in a specific workplace.

JIB CRANES WITH COLUMN

The jib cranes with column have the main pillar fixed on the ground.
The jib crane for the industry is used to serve workplaces and handle materials with medium / low weight. Normally up to 2000 kg.
The hoisting is realized with an electrical rope or chain hoist.
The transversal movements (through the jib arm and its rotation) are done manually by the operator; is possible install motors for the both movements.

JIB CRANES AT WALL

This cranes are bounded to an existing structure (columns, pillars, walls, etc). The operative characteristics are some of the jib cranes for industry.
The Bonfanti's cranes are developed and produced in the respect of the ISO 9001 norms (TUV).
The main features are:
CE certification
Hoisting capacity from 500 to 3000 kg (jib crane for industry); upto 40 metric ton (jib crane for ports).
Crane Arm length from 2 to 7 meters (stansard). Other dimensions are done on specific request.

MAGCO JIB CRANE

MAGCO GANTRY CRANES

Double Girder Gantry Crane

Single Girder Gantry Crane

Safe Working Load	5000 kg to 75,000 kg
Spans	6 m to 40 m
Heights of Lift	As per customer specifications.
Class of Duty / Standards	Class 2, Class 3, Class 4 as per IS 3177 / IS 807. Also available as per FEM, DIN, BS or any other applicable international standards.
Speeds	Selected depending on client specifications / applications / shed dimensions
Crane Control	From floor through Pendant Push Buttons Open Cabin / Totally Enclosed Cabin Radio Control
Drive System	Twin Drive with Squirrel Cage / Slip Ring Induction Motors, through totally enclosed, oil immersed, helical gearbox.
Motors	Foot mounted, IEC Frame Size, Crane Duty motors for Main Hoisting, Auxiliary Hoisting, Cross Travel and Long Travel.
Brakes	Electro Hydraulic Thrusters for all motions. DC/AC Electro Magnetic Brakes or additional brakes can be provided on request.
Power Supply System	To Hoist and Cross Travel through Trailing Cables To Crane through Cable Reeling Drum or any alternate system.

Goliath / Gantry Cranes are self propelled cranes running on rails installed at ground level. The above image shows two such cranes working in tandem.

Such cranes are used at:

Construction sites

Ports and harbors

Workshops where existing columns cannot bear the wheel loads of a bridge crane

Workshops with low roof tie height that might restrict the height of lift of a regular bridge crane

Locations where bay lengths are excessive

Locations where bay lengths do not remain constant

Sites / projects where crane itself needs to be relocated from one place to another

Locations where loads are to be shifted from points outside the crane span as in the case of an overhang on either side of the rails

In workshops where part utilization of shop bay is required (as in a tool room attached to a press shop), a Semi-Goliath/Gantry Crane is used. In such a configuration one end-carriage of the crane will travel on the regular gantry rail while the opposite end-carriage will travel on a rail mounted typically on the ground or at a lower elevation.

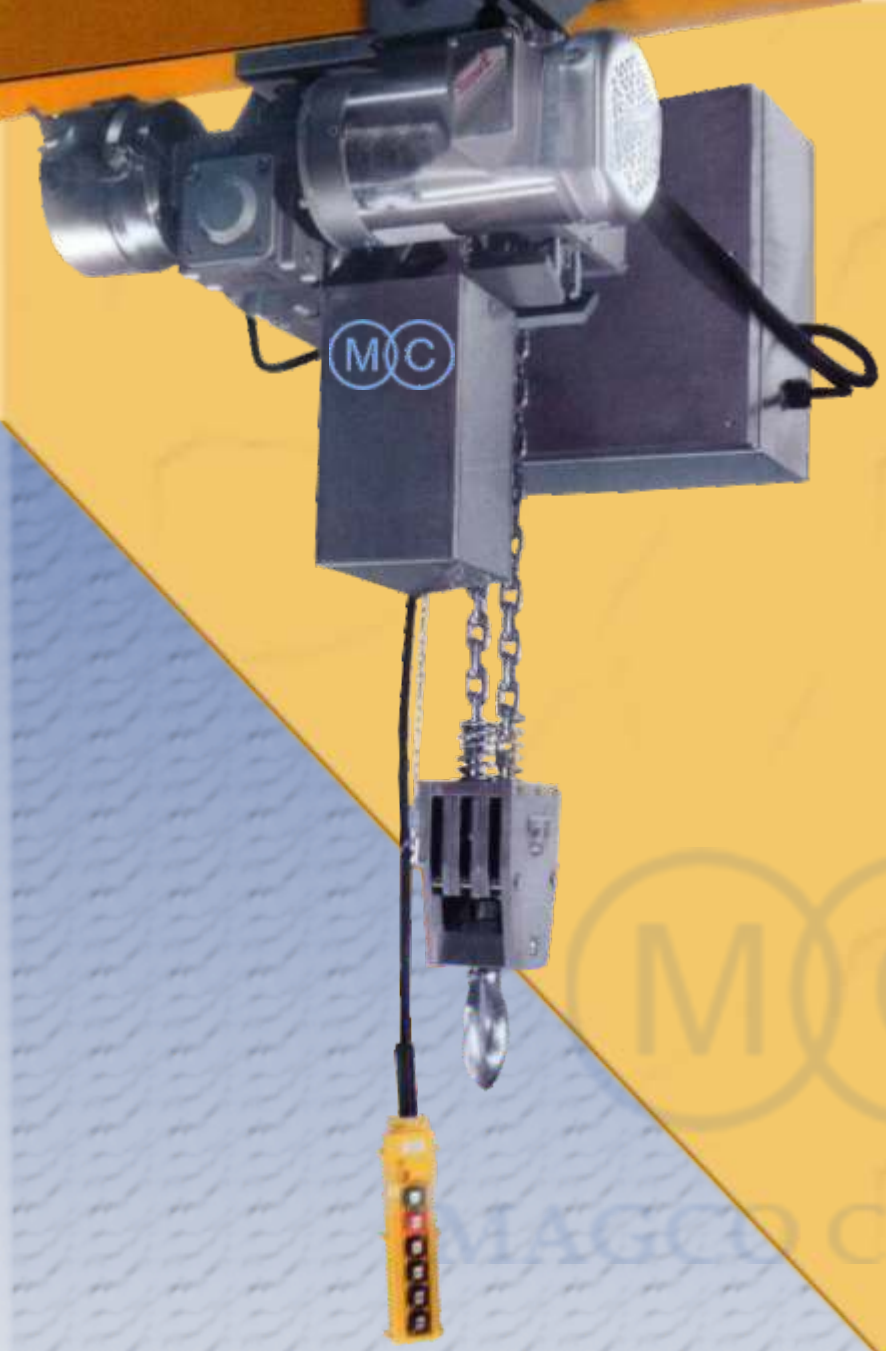
A Goliath/Gantry Crane is typically more expensive than an equivalent EOT Bridge Crane. However in almost all the relevant cases as mentioned above, a cost analysis shows that it is cheaper to go in for a Goliath / Gantry Crane as against a Bridge Crane. The cost analysis can be done by taking into consideration the following -

Cost of Gantry Girders that are required in case of a Bridge Crane

Cost of Columns required for supporting the above Gantry Girders

Difference in costs of civil foundation for columns (for Bridge Cranes) versus civil foundation for gantry rails (in Goliath / Gantry Cranes)

Difference in Down Shop Leads cost of Bridge Crane versus Cable Reeling Drum and Cable Cost for a Goliath / Gantry Crane Goliath / Gantry Cranes can be either of the Single Girder type or Double Girder type.



MAGCO ELECTRIC CHAIN HOIST

Magco Cranes is one of the oldest chain hoist manufacturers in the world, having been founded in 1985. The company offers many traditional material handling products, as well as specialized and customized products.

Stainless Steel Chain Hoist Products

We manufacture stainless steel chain hoist products that are appropriate for clean room applications such as pharmaceutical, food processing and electronics manufacturing, where contamination from rust or flaking paint cannot be accepted. also offers manual stainless steel chain hoist products, also ideal for sanitary, clean room or non-corrosive applications requiring 304/316 stainless construction.

Electric Chain Hoist Products

Our electric chain hoist products are found throughout industry. We also specialize in custom hoist designs. Explosion proof chain hoist products are made by featuring NEMA 7 or NEMA 9 enclosures, making them ideal for hazardous environments.

Our variable speed chain hoists, also known as die setters, are specifically for low speed placement of dies and molds. Air hoist products are pneumatically-powered to provide unlimited duty cycles in tough industrial environments.

MAGCO ELECTRIC WIRE ROPE HOIST

We are Manufacture of Electric Wire Rope Hoist that is available in several models. Our Hoist is developed using optimum quality raw material such as MS Sheets, MS angles, |beam, motors, brakes etc. These are hugely demanded in machine shop, engineering industry and foundry and can be customized as per the requirement of clients.

Features:

- Corrosion resistance
- Sturdy
- High efficiency
- Durable
- Easy to operate

Available Models:

- Electric Chain Hoists
- Electric Wire Rope Hoists
- Crab Hoists
- Frame Proof Hoists
- Farness Duty Hoists
- Any specify Hoists

SALIENT FEATURES

Gear Box: Single Helical Splash Lubricated Cl/MS Fabricated Housing Triple/Quadruple Stage Reduction Bale/Roler Bearing Mounting Crane.

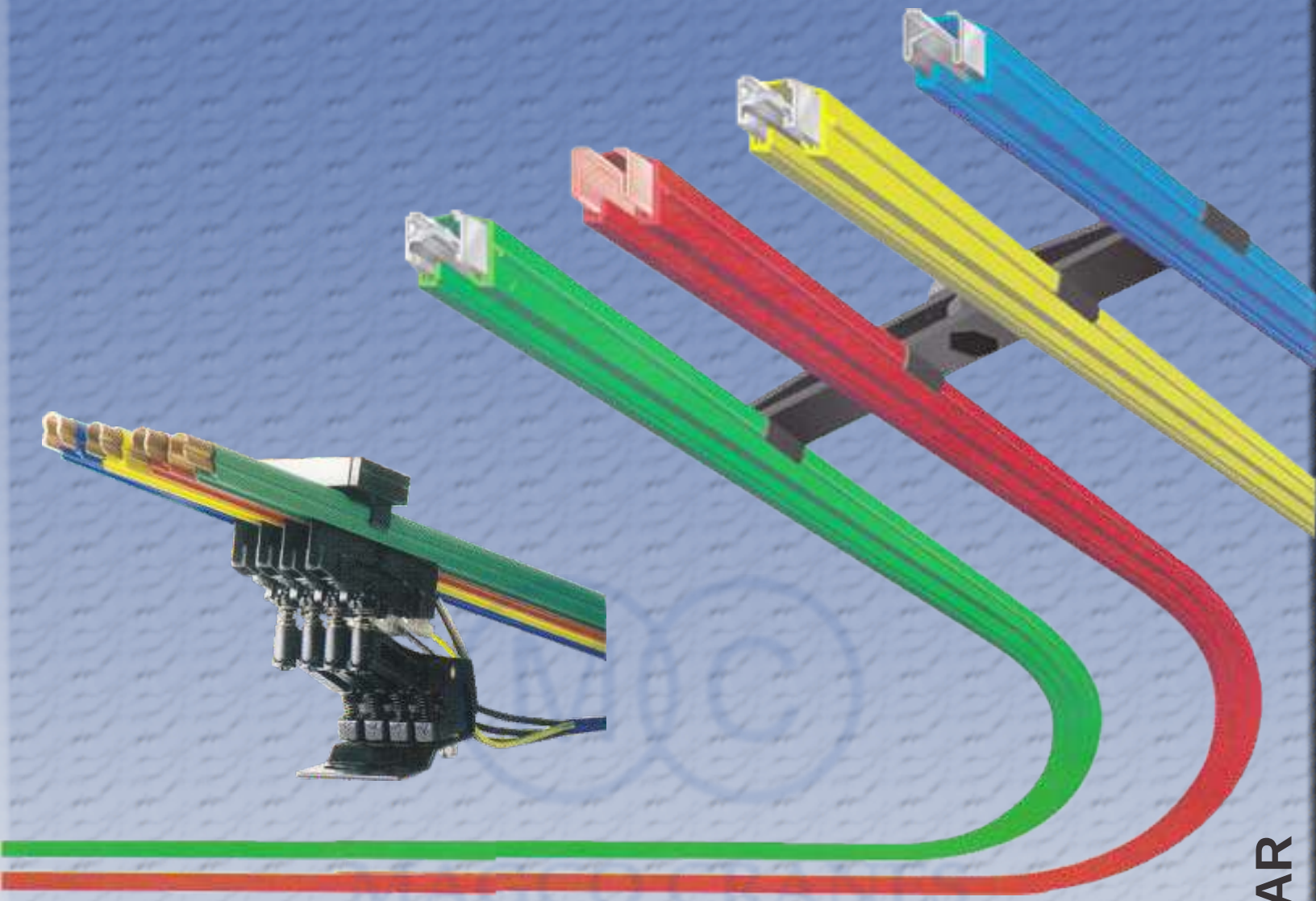
Motor: TEFC Foot cum Flang Mounted Squirrel Cage Crane Duty Induction Electric Motor S4 Duty 150 Starts Per Hour 40% CDF.

Drum: MS Seamless Pipe Fabricated with Plate Single Grooved Fine Machined with guide Nut For Proper laying of wire rope.

Control Panel: Contractors step down Transformers H.R.C. fuses, Transformers, fittings, will be provided in Control Panel. Limit Switches snap action roller type providing in Main Hoisting.

Trolley: Available in Geared Manual type, Motorised, Adjustable as per I beam size.

EVERY HOIST IS TESTED TO 25% OVERLOAD



MAGCO DSL BUS BAR

MAGCO CRANES Insulated conductors are manufactured as per international practices and are designed for Indian conditions. They are finding wide acceptance due to multiple advantages they offer. **MAGCO CRANES** are very compact, easy to install, colour coded and flexible in installation. They are designed as per international standards of 14 mm, center distance, 4M standard lengths. They are suitable for straight/curbed sections, switching/sectionalizing assemblies etc. The conductors can be cut, bent, assembled at site for all type of installations. One or more feed points at any position possible. Joints are designed for expansion and contraction. All these advantages come at unbelievable economical prices.

MFG. : E.O.T. Cranes, H.O.T. Cranes, JIP Cranes, Crane Control Gear Equipments & Power Transmission Equipments

Conductor with PVC Cover
Material G.I. / Cu
Standard length - 4 meter
Cross sectional area - 24 sq. mm.
Max. working voltage - 600 V
Working temp 80C
DC Resistance G.I. 5.4 m Ohms/M
DC Resistance Cu 0.715 m Ohms/M
Impedance G.I. 5.414 m Ohms/M
Impedance Cu 0.75 m Ohms/M

Conductor Joint
End feed 1 X 25 A with straight funnel
Double ended feed for any location 2 X 25 A = 50 A
Double ended feed for joint location 2 X 25 A = 50 A

Feed Terminal
Standard support 4 pole
Add on arrangement for multi pole combination
14 mm center distance maintained for all pole combination
4 pole installation dimensions 40 X 65 mm mounting bolt 6 X 20 mm adjustable in horizontal plane

Hanger Support Bracket
To prevent conductor section from sliding
One location per 36 meter length

Anchor Clamp
Sintered copper graphite shoe spring loaded contact
2 contact shoes per pole
swivel 15mm, lift 15mm
Spacing 14mm
Mounting distance 98mm from conductors

40 A Current Collector
For smooth collector transfer in switching applications
Straight funnel used as end cap housing end feed

Transfer Guide
For sectionalizing circuits
Feed clip can be mounted on either side

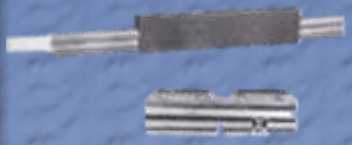
Isolating Section
For joint clip assembly
For sliding joint cover over joint clip

Assembly Tool
Required for preparing conductor ends at site
Factory made lengths available

Slot Tool
Required for bending conductor sections at site
Factory made lengths available

Bending Tool
Required for bending conductor sections at site
Factory made curved sections available

Conductor with PVC Cover



Conductor Joint

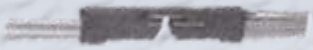
Feed Terminal

Hanger Support Bracket

Anchor Clamp

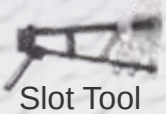
40 A Current Collector

Transfer Guide



Isolating Section

Assembly Tool



Slot Tool

Bending Tool

CONDUCTORS

G.I. Conductor	S35	rated	35A
Copper Conductor	S95	rated	95A

Factory made curved sections available. Possible to make curved sections at site Tools available. Curved sections min. radius - 400 mm

MOUNTING SUPPORTS

Conductor is designed for international practice of 14 mm entre distance. Basic hanger clamp bracket is 4 pole add-on arrangements for multi-pole requirements.

INSTALLATION

Very compact, easy to install, horizontal / vertical recess / edge etc. possible. Suitable for indoor use only.

CONDUCTOR JOINT

Mechanically and electrically strong but joint designed for expansion and contraction of conductor.

FEED TERMINALS

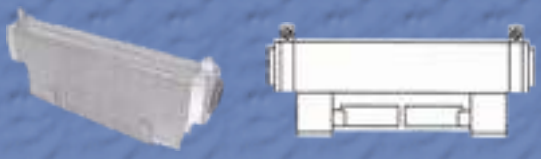
Power feed at any position possible end / mid rail / joint feed clips available multi feeds also possible.

ADVANTAGES

- Very compact
- Fully Insulated
- Finger Safe
- Accident Free
- No Sparking
- Colour Coded Multi Pole Arrangement
- No Periodic Maintenace

APPLICATIONS

- Straight / Curved / Monorail Hoist
- Switching Arrangements
- Sectionalising Zones
- Transfer Cars
- Motorized Monorails
- EOT Crane C.T. Applications Lighting
- Speed Conveyors



Center Power Feed Kit

End Cap

Heavy Duty Current Collectors

Center Power Feed Kit

The Power Feed point can be either end or any where along the run. One or more Power Feed points are possible to reduce Voltage Drop.

End Cap

The Open Ends / End Feeds of conductors are covered by End Caps.

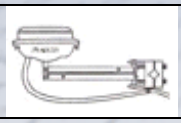
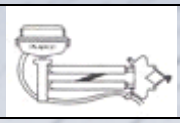
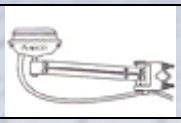
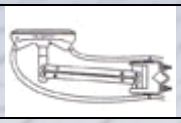
Heavy Duty Current Collectors

Heavy Duty Current Collectors are of fully Articulated Design.

This provides multi axis degree of movement thereby allowing compensation of machine motion tolerances and installation variation.

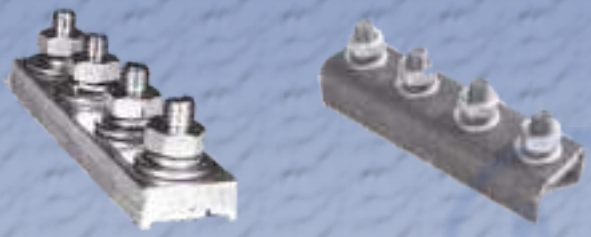
Spring loaded unit provides positive pressure contact with conductors, thus ensures uninterrupted power transfer during motion.

Variety of designs for different applications and site conditions.

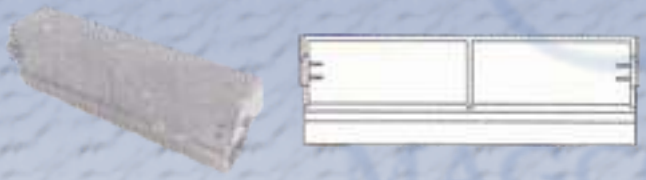
Magco Cranes Single Pole Current Collector Technical Data					
Type		**MMACC 60**	**DACC 125**	**MACC 125**	**MACC 250**
Current Rating		60 A	125 A	125 A	250 A
Collector Movement	Horizontal	± 125	± 50	± 200	± 200
	Vertical	± 50	± 60	± 60	± 60
Mounting Bracket		16 sq mm bar	25 sq mm bar	25 sq mm bar	25 sq mm bar
Mounting Distance from conductor contact surface		100 mm	127 mm	127 mm	127 mm
Sintered Copper Shoe		125 A	125 A	125 A	250 A
Shoe Holder		Nylon	Nylon	Nylon	ABS
Structure		Metallic	Moulded	Metallic	Metallic

G.I. / Cu Conductor

Al Conductor with S.S. Strip



Joint Clip



Joint Cover

Hanger Clamp

Anchor Clamp

G.I. / Cu Conductor

MAGCO CRANES Insulated Conductors are designed in accordance to International Regulations for a multitude of Power Supply Applications. The Conductors conform to Ip21. These Conductors are Compact, Insulated and easy to install. V Contact design ensures Positive Contact. The Conductors are colour coded RYBG.

Al Conductor with S.S. Strip

They can be mounted in Horizontal or Vertical configuration.

The Conductor Bars are 4.5 Meters long to be supported at every one Meter.

Design allows Uni /MuIti pole mounting arrangement.

Conductors can be mounted side by side.

Factory made Curved Conductors are available.

Joint Clip

Bolted Joints are designed to rigidly join Conductor Bars. Two bolts on either side ensure electrically and Mechanically strong Joint.

Double Bolted design provides Smooth and Perfect Alignment at Joints. This allows smooth glide of Collectors.

Joint Cover

Easy to fit, Snap on type, Insulated Joint Cover protects the Joint.

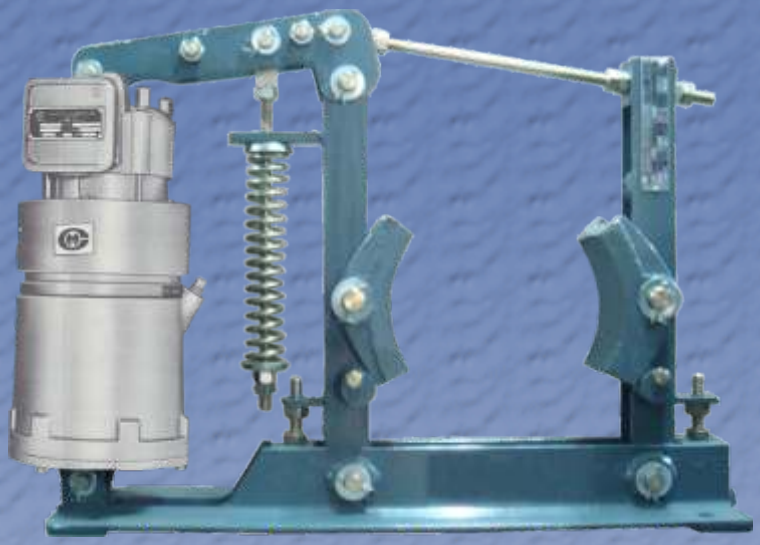
Hanger Clamp

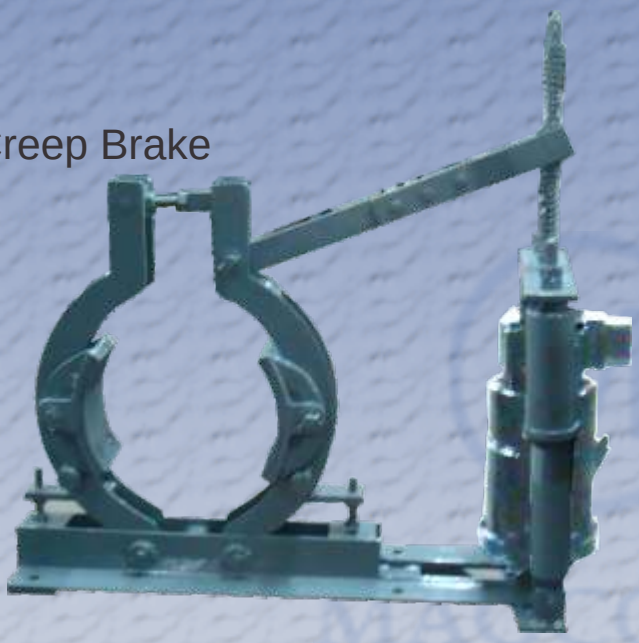
Snap on Insulated Single and Four Pole Hanger Clamps designed for Horizontal / Vertical Installations.

Anchor Clamp

Plastic molded Snap-on type with self anchoring feature. For use at Anchor Points.

MAGCO ELECTRO HYDRAULIC THRUSTER BRAKE





Creep Brake

Introduction

Magco Thruster brake is a device used to retard the speed of moving machinery and to stop it accurately to the desired position. The braking force is applied to the brake shoes by a pre-stressed comprising spring. The shoes press on the rotating brake drum retarding its speed and finally stop it. The releasing of the brake drum and compressing of the spring is done by thruster.

Assembly and Function

A thruster shoe brake has a pair of cast iron shoes which are lined up with friction pads. The shoes are hinged on main arm and side arm of the brake, each of them have a hinge pin fitted in the base. They are connected to each other on top by a tie rod, which is hinged in the main arm and locked to the swivel block in the side arm, by a lock nut.

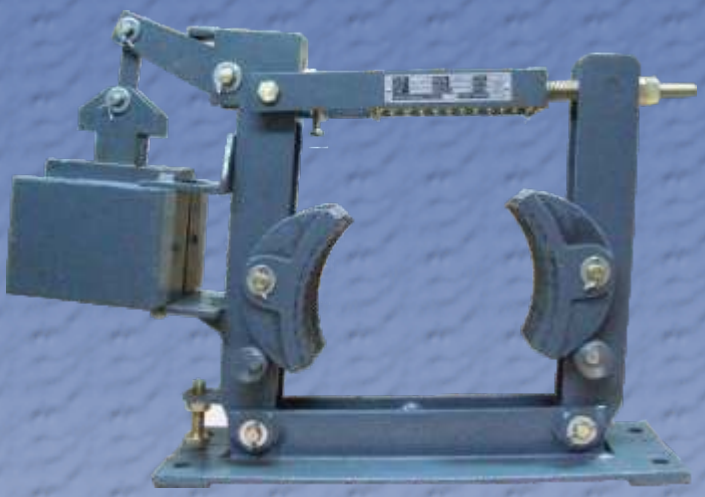
A crank lever is hinged on the main arm and the other end is fixed to the top clevis of the thruster by a hinge pin. A brake spring is fixed on the main arm and is pre-loaded by a locknut on the lever. The pre-tension in this spring decides the braking torque. The thruster is fitted on the base by a hinge pin. When the thruster is not energized, the brake shoes are pressed on the brake drum fitted on the drive motor shaft and hold it under the effect of braking force provided by the spring. In such condition, the brake is applied and the drum cannot rotate.

As the piston travels upwards the angle lever turns, pushes the brake rod and compresses the brake spring. Simultaneously, the brake lever on the other side of the wheel (Brake Drum) is retracted. When the first lever reaches the stop on the brake base member the brake lever at the thrustor begins to move, releasing the brake drum.

Technical Specification

Model No.	Drum Dia	Braking Torque (KG.M)	Thruster Details			Length (max)	Width (max)	Height (max)
			Model No.	Force (KG)	Stroke (MM)			
MC-EHTB-100/18	100	6	MC-EHT-18	18	51	425	140	430
MC-EHTB-150/18	150	9	MC-EHT-18	18	51	550	200	450
MC-EHTB-160/18	160	10	MC-EHT-18	18	51	550	200	450
MC-EHTB-200/18	200	20	MC-EHT-18	18	51	675	200	450
MC-EHTB-200/34	200	32	MC-EHT-34	34	51	763	225	575
MC-EHTB-250/18	250	35	MC-EHT-18	18	51	725	200	525
MC-EHTB-250/34	250	42	MC-EHT-34	34	51	850	225	575
MC-EHTB-300/18	300	42	MC-EHT-18	18	51	850	225	575
MC-EHTB-300/34	300	62	MC-EHT-34	34	51	850	225	625
MC-EHTB-400/46	400	90	MC-EHT-34	34	51	1000	238	675
MC-EHTB-400/68	400	110	MC-EHT-46	46	51	1000	238	675
MC-EHTB-500/46	500	190	MC-EHT-46	46	51	1525	262	700
MC-EHTB-500/68	500	290	MC-EHT-68	68	76	1525	262	700
MC-EHTB-600/68	600	350	MC-EHT-68	68	76	1625	262	775

MAGCO ELECTRO MAGNETIC BRAKE



Range of 'MAGCO' Electro Magnetic Brakes

Brake Model No.	Drum Dia (mm)	Braking Torque (KG.M)	Length (Max)	Width (Max)	Height (Max)
MC-100	100	1.84	370	155	275
MC-150	150	6.50	435	155	305
MC-200	200	15.00	575	175	370
MC-250	250	19.30	655	175	460
MC-300	300	38.50	765	190	530
MC-380	380	58.60	850	190	645

GENERAL

MAGCO Brakes are suitable for AC Supply upto 440 V single phase and are available for a wide range of Drum sizes, from 100 mm to 375 mm. dia.

These brakes are available with rated torque ranging from 105 kg cms. for the smallest brake (100 mm. drum dia.) upto 5600 kg. cms. (375 mm. drum dia.) Ratings correspond to 50% intermittent duty i.e. coil in circuit for maximum of 5 minutes out of every 10 minutes.

CONSTRUCTION

BASE - High grade cast iron, accurately machined, with accessible fixings.

BRAKE ARMS - Robust design, of high grade cast iron, jig drilled and machined to ensure interchangeability.

SHOES - Self-aligning, easily removable, high grade cast iron, fitted with best quality fabric linings. Designed with a large cooling surface and fitted with stoppers to prevent rubbing on drum when brake is “off”.

OPERATION – Compression springs provide the necessary workings pressure to apply the brake, release being affected by a single phase electro magnet. A hand release lever is fitted to lock the brake in the "off"' position, when required.

ELECTRO-MAGNET - Solenoid type with laminated magnetic circuit having ground pole faces to ensure quiet operation. Spool wound impregnated coil enclosed in ventilated ironclad cover with pushed hole for cable entry. The coil is very easily interchanged, and, if necessary the complete solenoid may be removed without affecting the adjustment of the brake.

NOTE - If required the electro-magnet may be turned through 180°, i.e. terminal cover on opposite side.

PIVOTS - All pivot pins, etc., are steel, of ample strength and with large bearing surface.

BRAKE DRUM - When specified, an accurately machined cast iron drum or drum coupling can be supplied, bored and keyway to requirements, ready to fit on the motor shaft.

SPARES - As all parts are jig drilled and accurately machined to limits, no difficulty is experienced in replacements which can be supplied ex-stock.

ADJUSTMENT - The brake springs are set, before dispatch, to give the correct braking torque and should not require further adjustment.

INSTALLATION — Four accessible fixing holes are provided in the base plate for mounting the brake in position and the self-aligning shoes automatically compensate for slight dimensional discrepancies.

Maintenance

The solenoid stroke should be reset periodically to the figure on the instruction plate, to compensate for lining wear. Spring loaded locking nuts are provided for this purpose and also adjusting the shoe clearance. ranging from 105 kg cms. for the smallest brake automatically compensate for slight dimensional

TORQUE ADJUSTER

Set at works before dispatch; should not require adjustment.

Note: There are two springs, one inside the other and each spring is designed to give half the total braking torque.

SOLENOID STROKE ADJUSTER - (To compensate for lining wear). Slacken locking not nut and turn adjuster in a clockwise direction; tighten locknut. Turn shoe clearance adjuster the same number of notches anti-clockwise. This will equalize the shoe.

RE-LINJNG SHOES - Remove shoe pivot pin, lower shoe and slide from under drum. It is recommended that spare shoes with linings are stocked for replacement. The worn linings may then be replaced at leisure.

INSTALLATION

Slacken Shoe clearance adjuster bolt.

Adjust shoe clearance adjuster bolt so that there is a clearance of about 1/32” between the bolt head and brake arm.

Tighten solenoid stroke [adjuster nuts till the magnet stroke N is ¾”.

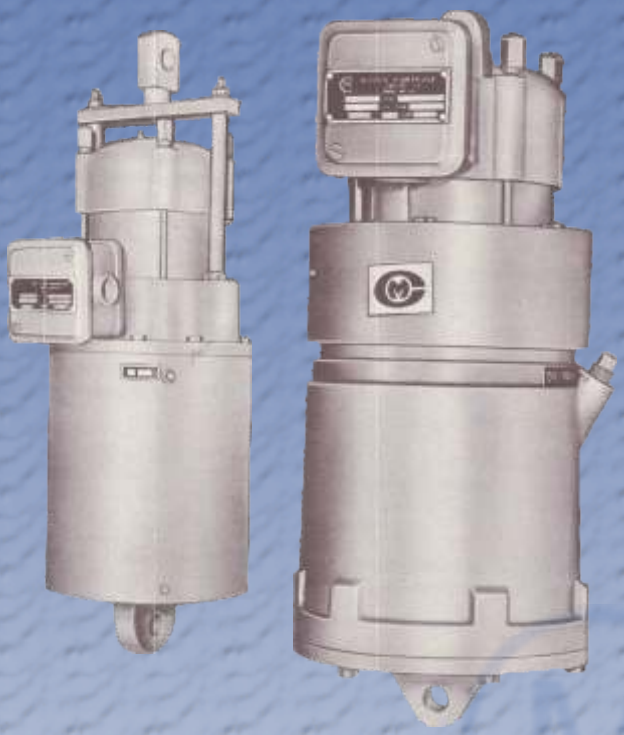
See that the hand release is in OFF position.

Press solenoid lever by hand and see that both shoes clear the brake drum.

Adjust bolt underneath shoes to see that shoes grip the drum uniformly.

Solenoid stroke should be reset periodically to the figure given on instruction plate to compensate for wear. The shoe clearance should be adjusted simultaneously.

MAGCO ELECTRO HYDRAULIC THRUSTOR



Range of 'MAGCO' Electro Hydraulic Thrustors

Size of Thrustor	Nett rated Thrust in Kgs.	Rated stroke in mm.	Input Watts (approximate)	Weight in Kgs.
MC 40	18	50	75	15
MC 75	34	50	125	28
MC 100	45	50	150	28
MC 150	68	75	200	42
MC 250	114	75	200	42

"MAGCO" Electro Hydraulic Thrustor is robust and dependable equipment possessing the stamina needed for the toughest of duty conditions imposed by unattended drives in any industry. Because of its extra-ordinary versatility it has wide applications in electrically driven Hoists, Cranes, Elevators, Ropeways, Flap valves, Guillotine machines, Conveyors, Steel Mills etc.

18 Kgs. Hydraulic Thrustor consists of a cylinder filled with oil, the centrifugal pump located at the bottom and the electric motor assembled on the top over of the cylinder. The rotor shaft of the motor is extended vertically downwards into the cylinder and carries an impeller at its lower end. When the motor drives the impeller, it pumps the oil from the upper to the lower side of the piston. The top lug, cast integral with motor top end shield, is forced up with the movement of the piston. The operating pressure is carried by the motor casing. The whole motor and end shield assembly move up during power stroke. When the power to the motor is switched off, the impeller stops, oil flows in the reverse direction through the stationery impeller, the weight of the motor and piston mechanism lowers the piston to its original position.

The thrustor exerts a thrust of 18 kgs. with a stroke of 50 mm. The thrustor motor is totally enclosed 'B' class insulated, suitable for 3 phases, 440 volts A.C. 50 cycles supply system. The top bearing of the motor is grease lubricated and the bottom bearing splash lubricated from oil in the tank.

34 Kgs. Hydraulic Thrustor consists of a cylinder, filled with oil, having its centrifugal pump located at the bottom and the electric motor assembled on the top cover of the cylinder. The rotor shaft of the motor is extended vertically downwards into the cylinder and carries an impeller at its lower end, Inside the cylinder above the impeller is a piston with two thrust rods connected by a cross bar which delivers the useful thrust When the motor drives the impeller, pressure's built up under the piston which moves upwards. When the impeller stops, the load forces the piston down, the oil then bypasses the piston.

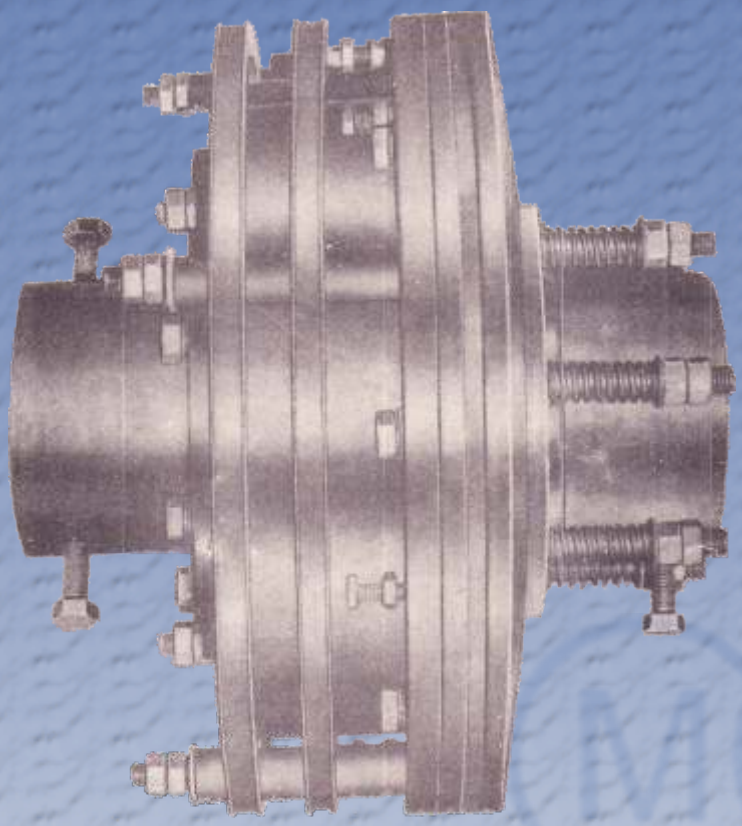
The Thrustor exerts a thrust of 34 Kgs. with a stroke of 50mm. The rated stroke can be changed by altering the sleeve length on the thrust rods inside the cylinder limiting the piston travel.

The thrustor motor is totally enclosed, 'B' class insulated, suitable for 3 phases, 440 volts A.C. 50 cycles supply system. The top bearing of the motor is grease lubricated and the bottom bearing splash lubricated from oil in the tank.

Special features of 'MAGCO' Electro Hydraulic Thrustors:

- Delivers gentle thrust without any jerks.
- Consumes negligible power.
- Can withstand many switching operations without overheating the motor.
- Can withstand mechanical overloads without over loading the motor.
- Can be fitted up to 10" from the vertical in either direction due to swivel mounting arrangement.

MAGCO ELECTRO MAGNETIC CLUTCH



Range of 'MAGCO' Magnetic Clutch

Type	A	B	C (MAX)	D	E	F (MAX)	G (APPROX)	WATTS	MAX SPEED (R.P.M.)	Ultimate Pull out Torque (KG-M)	NETT WEIGHT APPROX. (KG.)
ECS-10	100	52	20	1.5	55	55	190	20	3000	1	5
ECS-15	150	53	25	1.5	55	55	225	36	3000	3	10
ECS-20	200	88	45	1.5	65	65	240	65	2880	5	24
ECS-25	250	85	50	1.5	65	65	240	90	2300	11	27
ECS-30	300	110	60	1.5	65	65	270	130	1920	25	61
ECS-35	350	108	80	1.5	95	95	320	175	1650	50	75
ECS-40	400	137	100	1.5	100	100	365	225	1410	90	132
ECS-45	450	127	100	1.5	100	100	365	270	1250	140	150
ECS-50	500	137	100	1.5	100	100	365	320	1150	200	225
ECS-60	600	128	125	1.5	115	115	450	420	960	350	325
ECS-70	700	242	125	1.5	115	115	520	525	820	560	425
ECS-80	800	194	160	1.5			600	650	720	810	700
ECS-90	900	200	200	1.5			700	760	648	1100	850
ECS-100	1000	205	250	1.5			750	880	570	1400	1110

GENERAL:

In many industries Mago Clutches are used to ensure smooth transmission of mechanical power Conventional, mechanical clutches create many problems in progressive automation of industries. Electromagnetic clutches are designed to suit any automatic machine. Electric operation of clutch makes possible the push button control of a machine from one or several points and from near or by remote.

APPLICATION AND SCOPE:

These clutches are used for smooth starting of machine in printing paper industries, automatic machine tools, plastic moulding machines, coil winding machines, textile machines, wire drawing machines, rolling mills, cranes, elevators and industrial refrigerating plants where starting torque is very high. Application of these clutches eliminates wear and tear of starters and contact points. Motor does not need heavy current while starting as it starts with no load condition, also low starting torque and less H.R motors can be used. These clutches can be, actuated by miIIi-amps. Electromagnetic Clutch makes possible the use of steam turbine, oil engine in automatic machines. One Motor can drive different mechanisms simultaneously or individually. Brakes are actuated by electric current to stop rotating mass and the same is released when the current is cutoff, normally off type. They also work on 24 Volts D.C. and could be mounted either on front or back end of motor or at any counter shaft.

DESIGN FEATURE:

We offer two series of magnetic clutch couplings. Design of both the series is so versatile that can easily be used for direct drive (coupling), belt drive, pulley drive or chain gear drive continuous shaft, fly wheel etc. without disturbing basic design. 'SAKAR' series is very compact and light in weight. They are recommended where number of engagements and disengagements are not much. 'VlSTAR' series is rigid in construction and is recommended for any number of operations as friction faces are replaceable. All clutches and brakes work on 24 V.D.C supply. Different voltages are- available on special demand.

CONSTRUCTION AND OPERATION:

Electromagnetic Clutch consists of two parts, one is known as magnet and other as armature assembly. Magnet contains sealed coil, slip ring and threaded ring to adjust wear of friction liner and to achieve desired working clearance and air gap, whereas Armature Assembly is a combination of two plates, Armature plate and Back plate. The friction material is bonded or bolted to Armature Plate. Magnet is generally placed on driving shaft and armature assembly on driven shaft.

When current is supplied to magnet through slip rings an armature plate is attracted and locked with magnet body, thus power is transmitted. No sooner current is stopped, armature plate is returned to its original position by retaining springs. When the clutch is disengaged while motor is kept running, there is no wear and tear of friction material since there is a clear running clearance between magnet body and armature plate. Liner and carbon brushes are the only wearing parts. In case of Brake the current is supplied through terminal contacts. Armature plate, which is rotating, is attracted and locked with Magnet Body. Magnet Body being secured and stationery, Armature Plate also stops along with rotating shaft on which it is mounted.

MAGCO DISC TYPE ELECTROMAGNETIC D.C. BRAKES

Comparison of D.C. (Normally off) and Spring Loaded A.C. or D.C. (Normally on) Brakes:

D.C. BRAKES (Normally off)	A.C. or D.C. BRAKES (Normally on)
Compact and Light in Weight.	Heavy and Bulky
No Maintenance and Adjustments.	Requires adjustments & little maintenance.
Consumes negligible power.	Consumes little more power than equivalent brake. Normally off brake.
Consumes current only when brake is applied.	Consumes current at all times when machine is running
Shaft can pass through brake body.	Shaft can go through brake under certain conditions only.
Starter Switch, Relay or some other arrangement is required for actuation of brakes	Brake is connected in parallel with motor and no special device is required to actuate the brake.
Braking is not positive i.e. current fails, brake will not work.	Even if current fails, brake will hold the load and rotating mass as it is, hence called Fail-Safe brakes.
Used in machine tools, printing, bottling, wire drawing, textile machinery etc.	Used for hoist, cranes, winches, lifts etc. (accident prone equipment).

INTRODUCTION:

When magnet is fixed to the frame or any other rigid support and armature assembly is installed on braking shaft, clutch works as a brake. ln this case slip rings are not required. Two types of mountings, internal and external are available.

SELECTION OF BRAKE:

When braking torque is assumed to be equal to the starting torque, then the brake selected by this assumption will stop the mechanism at least as fast as the time it took for the motor to bring the load up to speed. When instantaneous braking is required, braking torque should be two to three times more than starting torque.

START-STOP UNITS (CLUTCH AND BRAKE COMBINATION):

A combination of clutch and brake is also available with us. These units are used in winding, wire drawing machines, etc. where starting and stopping of machine is controlled. lnching operations are also possible with the help of this unit. (Separate sheet on start—stop unit will be sent on request).
We also manufacture spring loaded Electromagnetic Disc type A.C. & D.C. Brakes.

MAGCO RESISTANCE BOX

MAGCO Resistors are suitable for all control gear applications, both A. C. and D. C. requiring grid resistors combining lightness with considerable mechanical strength. Our Resistors more than adequately meet these requirements. Due to the resilience of the grid material they are specially suitable for resistors which are subject to vibration, and represent a considerable advance on cast grid resistors.

MAGCO resistors are tailor-made for the particular equipment with which they are to be used, the grids being assembled to suit each individual type of duty cycle.

The grids are firmly supported so that adjacent grids cannot touch each other under the most severe conditions of service. This form of resistance is the lightest and most compact. They are particularly efficient on continuous duty.

CONSTRUCTION:

The resistor element consists of a continuous length of resistance strip or wire of uniform section formed into the required number of loops and bent so as to form a typical grid or element. These tire then mounted on mica-insulated steel rods, with mica washers between steel spacers acting as grid separators. The whole assembly thus forms a rigid and open tier or "stack".

Each stack is mounted between two pressed steel end frames, with flanged edges for bolting to other boxes. Up to six standard boxes, can be assembled in this way and the complete resistor enclosed by louvered covers, and a drip-proof top cover. The terminals are easily accessible and cable boxes can be fitted as required.

GRIDS:

The grid material is generally of high resistance steel strip or wire. It should be noted that surface discoloration due to the process of manufacture sometimes occurs, but this does not affect the operation of the resistor. The drawn resistor material is uniform in section and free from any flaw or unevenness likely to cause local heating. Suitable sizes of strip are employed to give a wide range of current ratings.

TERMINALS:

The terminals are made of heavily plated metal and each one is securely clamped to a rigid loop on the grid near one of the supporting tie-rods. The terminals, fitted with screws, support the cables or interconnecting copper work firmly, holding them well clear of other parts.

BOX SIZES:

The resistor box dimensions are fixed by end frame dimensions, tie-rod length and the number of boxes, thus covering a wide range of sizes.

FINISH: The standard finish is heavy duty galvanized on end frames, covers and other steel work.

OPERATION:

Although the temperature-resistance coefficient of the material has some effect on steel strip grids, this is well within limits for crane duty motor applications. It is advisable to work the resistor at as high temperature as possible consistent with safety and reliability, since under these conditions the resistor is more compact, costs less and dissipates heat more rapidly. Magco grid resistors for use with controllers are designed to meet the requirements of BS 587 or equivalent.

RATINGS OF RESISTORS FOR MOTOR CONTROL:

Resistors can be supplied for use with drum controllers and contactor panels for 5 and 10 minutes ratings and continuous duty ratings.

MAGCO MASTER CONTROLLER

Introduction

Magco Master controllers are used for operation of contractor's equipment controlling E.O.T. Cranes & Rolling mills drives. The controllers are made in dust proof enclosure in IP-54 degree of protection, up to 6 notches either side with maximum 24 contacts as per desired sequence with spring return arrangement & dead man's handle arrangement are available. Master Controllers are compact up to 4-0-4 step suitable for Grab-Hoist, CT-LT maximum contacts 16 per motion with spring return arrangement.

Assembly and Function

Magco Master controllers are of cam type where in contacts are actuated by individual cams mounted on operated shaft. Master controller is housed in enclosure and provided with an easily removable cover with ample area for maintenance. The cam shaft is mounted on bearing bushes on walls of housing. The cams are made of derlin material and fixed on square.

Deadman's control

This consists of one auxiliary contact of two circuit block (1 NO+ 1 NC) operated through a spring loaded push button provided on joystick handle in case of operator looses the grip over button during operation, motion will come to stop as main contactor will be de-energized.

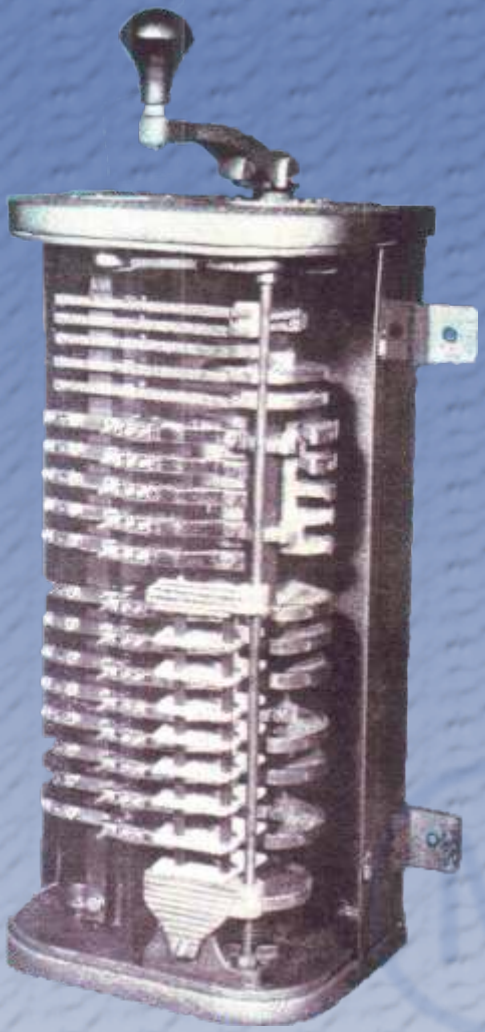
Spring Return arrangement

The master / cam controller can be provided with spring return arrangement whereby handle returns to the neutral position when it is released.

Technical Specification of Master Controller

Body Material	M.S sheet
Enclosure	IP-44/IP-54
Mounting Position	Horizontal/Vertical
Rated Voltage	500 V
Cable entry	2x 20 / 2x26 Conduit
Thermal Test Current	10 amp
Frequency of operation	1000 switching per hour
No. of contacts	24 maximum
No.of step	6-0-6 maximum
Optional arrangement	Spring return/deadman's Handle
Contact Material	Silver Cadmium

MAGCO DRUM CONTROLLERS



Range of 'MAGCO' Drum Controllers

Type	Description ('N' Steps)	Rating at 415 V-AC	Suitable upto HP	Approx. Wt. Kg.
MC 25/4	4 Step	25 Amps	5	30
MC 40/4	4 Step	40 Amps	7.5	30
MC 60/4	4 Step	60 Amps	15	48
MC 60/6	6 Step	60 Amps	30	50
MC 90/6	6 Step	90 Amps	45	52
MC 60/7	7 Step	60 Amps	30	50
MC 60/7C	7 Step (Creep Speed)	60 Amps	30	50
MC 90/7	7 Step	90 Amps	45	52
MC 150/7	7 Step	150 Amps	90	88
MC 150/8	8 Step	150 Amps	90	88

Magco Drum Controllers are designed for controlling the various motions of cranes. Slipring induction motors driving on direct haulage in mines and other classes of machinery. These are meant for reversing duty for AC motors- slipring stator and rotor control, squirrel cage, single or multi speed control.

GENERAL SPECIFICATION:
Heavy duty, continuosly rated, air break, vertically/floor mounted, totally enclosed, reversible, crank handle type drum controller with 240 switching operation per hour.

HANDLE:
The controller is provided with Crank type operating handle of the reversing type with off position in the centre. Provision can also be made for non-rreversion by addition of a screwed stop and off-position trigger catch if required.

HOUSING:
The drum controller is housed in a heavy gauge sheet steel enclosure. Top and bottom plates are of cast iron, in which bearing for the drum shaft are housed. The close fitting front cover is of thick steel sheet and is secured by quick release catches. Fixing holes are provided both for floor and wall mounting.

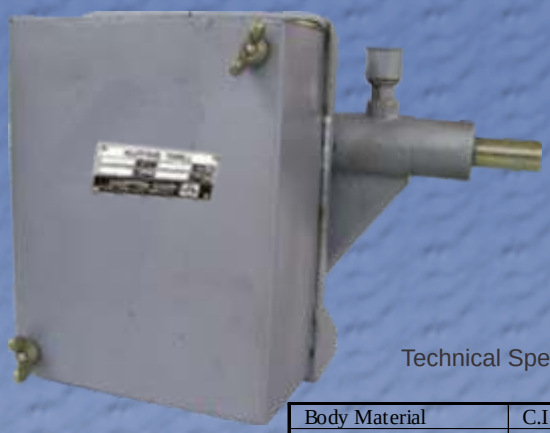
CONTROLLER DRUM:
Renewable contact segments of hard-drawn copper are secured to cast iron drum rings by counter sunk head screws. The drum is of large diameter to provide ample wearing surface and increased arcing distance between the segments and tips. A ratchet wheel engaging on adjustable spring loaded pawl-lever fitted with roller is provided to ensure the exact location of the contacts at each step. The drum castings are insulated from the square drum shaft by square bakelite tube.

CONTACT FINGERS:
The main contact fingers consist of heavy section brass bar fitted with renewable hard drawn copper half tips. The fingers are rigidly clamped to the bakelite insulated steel square bar with hinge provision. The fingers engage with the drum under spring pressure. The current from the fingers to the terminal bases is carried by the laminated copper shunts.

ARC SHIELDS:
These are made of non-combustible, non-hygroscopic material capable of withstanding severe arcing and fitted over the stator contacts of A.C. controller. The arc shields mounted on a bracket can be swung clear of the fingers and contact segments to facilitate inspection of the finger tips and segment.

- The Drum controllers are provided with 'ZERO' interlocking contacts.
- Shunt limit switch contacts, DEAD Man's handle, Dust-proof arrangement can be provided against specific requirements.
- Cable sealing boxes with cone glands to BSS 542 shall be provided to recieve cables against specific enquiry.
- The controller is provided with 'N' number of notches / points for forward and 'N' notches for reverse and suitable number of resistance cut-out points.
- Single step drum controllers having notches for forward and reverse for squirrel cage motors are also manufactured.

MAGCO ROTARY GEARED LIMIT SWITCH



Technical Specification

Body Material	C.I casting
Enclosure	IP-44/IP-54
Mounting Position	Vertical
Cable entry	¾" Conduit
Gear ratios	48:1, 60:1, 96:1
Drive	Worm drive
Rated Voltage	500 V
Thermal Test Current	10 Amp
No. of contacts	2 NO or 2 NC (Adjustable cam setting)
Contact Material	Silver Cadmium

Magco Geared rotary limit switches are used in reversing drives such as Hoists, Winches, Rolling Mill auxiliaries etc., so as to limit their rotation/movement within predetermined operating range and stop the mechanism or drive at the extreme forward/reverse hoist/Lower positions.
Type LSGR - For Shunt connection in control circuit provided with 2 NC contacts 10 Amps rated at working voltage of maximum 500V AC.
Type LSGRS — For Series connection in Power circuit provided with 4 NC contacts 40 Amps rated at maximum working voltage of 500V AC.

These limit switches are Heavy duty type having gear ratio of 48; 1 with dust proof enclosure and keyway shaft extension on right hand side (Left hand side can also be provided) for coupling to the rotating machinery through coupling or chain or gear driving system. Reduction ratio is achieved through worm and worm gear enclosed in CI housing. Contacts are mounted on a Bakelite board. Cams are provided on a cam shaft which is fixed into the worm-gear. The cams can be angularly adjusted to operate (open) the contacts at predetermined points of STOP within 42 revolutions, In Shunt limit switch one contact cuts off power supply to the control circuit of Hoist or Forward contactor and the other contact cuts off power to the LOWER or Reverse contactor.

In Series limit switch, two contacts cut off power supply to motor in Hoist or Forward direction and the other two contacts cut off power supply to the motor in Lower or Reverse direction, The Contacts are automatically reset in reverse direction

MAGCO TWO WAY LEVER TYPE SHUNT LIMIT SWITCH-TYPE LSZSH5

Technical Specification

Body Material	M.S sheet / Aluminium casting
Enclosure	IP-44/IP-54
Mounting Position	Vertical
Cable entry	¾" Conduit
Rated Voltage	500 V
Thermal Test Current	10 Amp
No. of contacts	2 / 3 / 4
Mode of operation	2 way self resetting
Contact Material	Silver Cadmium

"Magco" make 2 way Shunt limit switch prevents over travel and over traverse in EOT Cranes, wagon shunting devices etc., The limit switch is fitted with 2 numbers of silver tipped contacts normally closed and supply power to the contactor coil in control panel. These are operated with two cams provided on a cam shaft. Whole arrangement is enclosed in Heavy gauge sheet metal housing. A projecting lever with roller at one end is fitted to the cam shaft at the other end. When the lever is moved over a projecting member fixed at a pre-determined position on either side of the gantry, the power supply to the contactor coil is cut off. The contacts are automatically reset when the lever returns to zero position due to spring. The contacts are rated for I0 Amps at maximum working voltage of 500 Volts AC and these are suitable for 1000 operations per hour.

MAGCO TWO WAY LEVER TYPE SERIES LIMIT SWITCH-TYPE LSZS

Technical Specification

Body Material	M.S sheet / Aluminium casting
Enclosure	IP-44/IP-54
Mounting Position	Vertical
Cable entry	¾" Conduit
Rated Voltage	500 V
Thermal Test Current	10 Amp
No. of contacts	2 / 3 / 4
Mode of operation	1 way self resetting
Contact Material	Silver Cadmium

'Magco' make 2 way Series limit switch prevents over travel and over traverse in EOT Cranes, wagon shunting devices etc. The limit switch is fitted with 4 sets of contacts which remain normally closed through rotors on a rotor shaft, At the extension end of the rotor shaft a projecting lever of steel is fitted. The lever has a roller on the other end, The whole contacts assembly is enclosed in a sheet metal housing with removable top cover. The side covers are of cast iron.

The limit switch is of series type. The contacts are rated for 60 Amps at maximum working voltage of 50OV AC. The frequency of switching is 720 operations per hour. The two sets of contacts (Forward direction) cut off power to two phases of motor and stop the motion when it reaches a predetermined position and the lever is moved over a projecting member fixed to the gantry. Similarly in reverse direction the other two sets of contacts cut off power to the motor. The contacts are automatically reset when the lever returns to central position due to spring action.

MAGCO BREAKDRUM FLEXIBLE COUPLING

FULL GEARED COUPLING

Introduction:
MAGCO FLEXIBLE GEAR COUPLINGS are distinguished by their MECHANICAL FLEXIBILITY and compensation of misalignment of the connected shafts automatically without any loss of transmitted power during running. These coupling ensure greater flexibility because of their well designed tooth formation generated by INVOLUTE system to ensure uniform toothe PROFILE AND PITCH.

Lubrication:
The coupling must be fitted with grease or oil. It is recommended to use grease where the maximum temperature is within 800°C & for temperature above 800°C oil should be use.

MAGCO CAST IRON BRAKE DRUM FLEXIBLE COUPLING

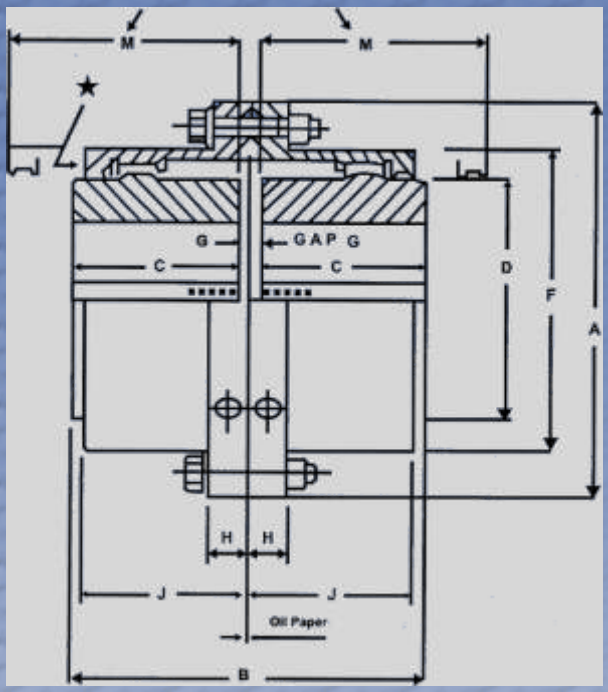
Magco Cast Iron Brake Drum Flexible coupling. Suitable for Cranes, Hoists, Gates, winches, textile mills, mixing mills, rubber mills, etc.

FLEXIBLE C.I. BREAKDRUM COUPLING

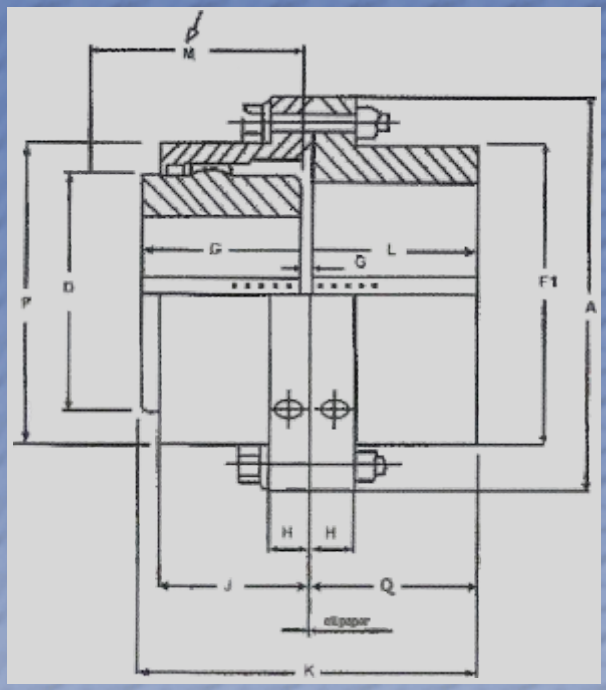
COUPLING SIZE	ΦA	B	C	D	E	F	ΦG	ΦH	FINISH BORE (Φ)		WEIGHT kg.	TORQUE	HP / RPM	CD2 KGM2
MFBC 150	150	75	3	6	42	42	92	70	20	35	8	36	0.028	0.09
MFBC 200	200	100	6	10	57	73	127	90	20	55	20	63	0.050	0.32
MFBC 250	250	127	6	10	82	90	142	100	25	60	36	90	0.125	1.0
MFBC 300	300	152	6	10	89	105	197	127	25	75	57	250	0.350	2.5
MFBC 400	400	165	3	6	147	156	250	137	25	85	114	300	0.500	9.94

MFG. : E.O.T. Cranes, H.O.T. Cranes, JIP Cranes, Crane Control Gear Equipments & Power Transmission Equipments

MAGCO FLEXIBLE GEAR COUPLING



FULL FLEXIBLE TYPE



HALF FLEXIBLE TYPE

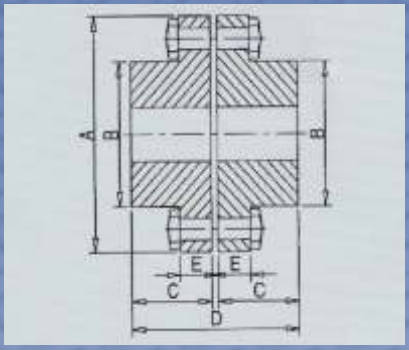
COMMON FOR BOTH COUPLINGS												FULL FLEXIBLE TYPE					HALF FLEXIBLE TYPE					
No.	H.P. Capacity at 100 R.P.M.	Max. Torque K.G.M	Max. R.P.M	BORE Min	A	C	D	F	M	G	H	BORE Max	J	B	WR² KGM²	WT in KG	K	Q	Bore Max	F1	WR² KGM²	WT in KG
100	7	50	8000	10	120	45	50	75	55	1.5	15	30	39.5	93	0.03	4	93	46.5	50	70	0.03	4
101	14	100	6300	20	170	55	65	110	65	2.5	17	40	49	115	0.14	10	115	57.5	60	85	0.15	10
102	35	250	5000	30	185	70	85	125	80	2.5	17	55	62	145	0.20	15	145	72.5	75	110	0.24	15
103	63	450	4000	40	220	85	105	150	105	2.2	20	70	78	175	0.48	25	175	87.5	90	130	0.51	25
104	119	850	3350	50	250	105	130	175	125	2.2	20	85	96	215	0.95	39	215	107.5	110	160	1.0	40
105	182	1300	2800	60	290	110	155	200	140	5	25	105	106	230	1.90	59	230	115	130	185	2.0	60
106	280	2000	2500	75	320	125	175	230	155	5	25	120	117	260	3.00	85	260	130	150	215	3.3	85
107	490	3500	2100	90	350	143	205	260	175	5	25	130	134	290	5.25	103	290	145	170	240	5.8	106
108	630	4500	1900	105	380	155	230	290	190	5	25	150	147	320	8.50	138	320	160	200	285	9.5	149
109	784	5600	1700	125	430	165	250	330	205	5	25	170	156	340	15.00	210	340	170	220	315	16.8	200
110	1148	8200	1400	140	490	180	310	390	220	5	25	210	171	370	30.50	277	370	185	260	370	35.0	274
111	1536	11000	1250	160	545	200	350	445	240	5	30	260	192	410	58	550						
112	2063	14700	1120	180	590	240	400	490	280	5	30	300	231	490	88	710						
113	2793	20000	1000	200	680	260	440	555	310	7.5	35	330	242	535	138	980						
114	3994	28600	900	220	730	280	500	610	330	7.5	35	370	266	575	291	1320						
115	4852	34750	800	250	780	320	540	680	370	7.5	35	410	305	665	353	1700						
116	8378	60000	710	300	900	350	625	755	425	10.0	45	455	335	720	680	2550						
117	11917	83550	630	375	1000	400	720	855	460	10.0	45	520	386	820	1235	3620						
118	15778	113000	580	450	1100	450	810	950	510	10.0	55	610	430	920	1965	4860						
119	20806	149000	500	520	1250	485	910	1050	560	15.0	55	710	446	1000	3012	6380						

Note:
Made to order / special gear coupling also can be manufactured
Dynamic balancing and heat treatment will be done on request (Extra)

MFG. : E.O.T. Cranes, H.O.T. Cranes, JIP Cranes, Crane Control Gear Equipments & Power Transmission Equipments

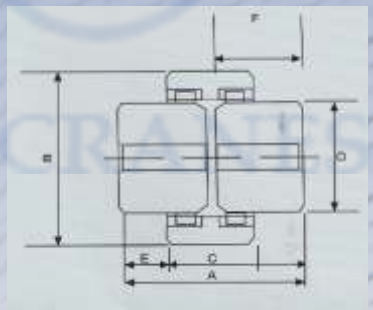
MAGCO FLEXIBLE GEAR COUPLING

RIGID COUPLING



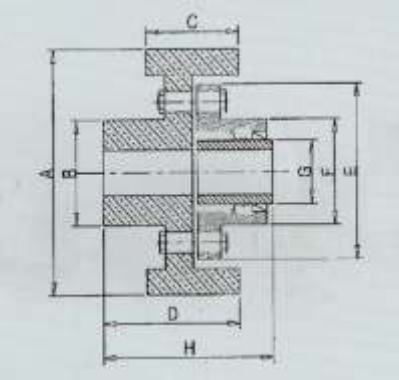
COUPLING SIZE	FINISH BORE		ΦA	ΦB	C	ΦD	E	WEIGHT kg.	MAX R.P.M.
	Min.	Max.							
MRC 100	10	50	120	70	46.5	80	15	4	8000
MRC 101	20	60	170	85	57.5	115	17	11	6300
MRC 102	30	75	185	110	72.5	145	17	15	5000
MRC 103	40	90	220	130	87.5	175	20	20	4000
MRC 104	50	110	250	160	107.5	215	20	40	3350
MRC 105	60	130	290	185	115	230	25	62	2800
MRC 106	75	150	320	215	135	260	25	88	2800
MRC 107	90	170	350	240	145	290	25	110	2100
MRC 108	105	200	380	285	160	320	25	140	1900
MRC 109	125	220	430	315	170	340	25	200	1700
MRC 110	140	260	490	370	185	370	25	270	1400

NYLONE GEAR COUPLING



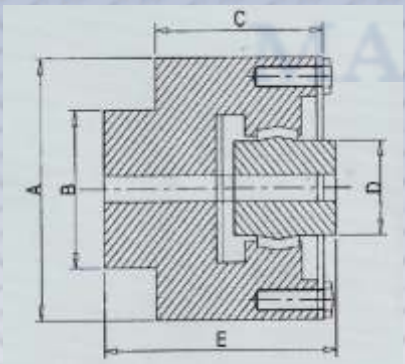
ORDERING GDE		M 19		M 28		M 38		M 48		M 65	
A		54		81		84		110		144	
B		48		66		85		100		140	
C		37		46		48		53		72	
D		30		44		58		65		96	
E		8.5		17		18		29		39	
F		25		40		40		54		70	
G Pilot bore dia		10		13		15		17		20	
Coupling size	Elec. Motor Frame Size	3000 RPM		1500 RPM		1000 RPM		750 RPM		Max. Torque at 150 RPM		Max. RPM	Weight kg.
		KW		HP		KW		HP		KW	HP		
19	80 90S 90L	2.2	2	1.5	1	1.1	1	0.75	1	0.5	3.6	3000	0.35
28	100 L 112 M	7.5	10	5.5	5	4.25	5	2.2	3	2.3	16.6	3000	1.05
38	132 S 132 m	10	13	7.5	10	5.5	7.5	3	4.5	7	4.9	3000	1.80
48	160 ML 180 ML	22	30	18.5	25	15	20	11	15	14.4	04	3000	3.20
65	200 L 250 M	55	75	55	75	37	50	30	40	35.5	256	3000	8.90

MFG. : E.O.T. Cranes, H.O.T. Cranes, JIP Cranes, Crane Control Gear Equipments & Power Transmission Equipments



MAGCO BREAK DRUM WITH FLEXIBLE GEARED COUPLING

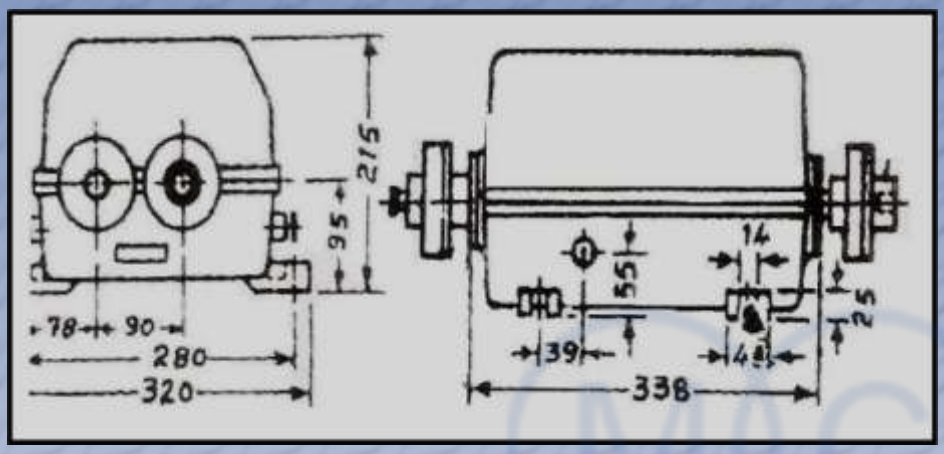
COUPLING SIZE	FINISH BORE		ΦA	ΦB	C	ΦD	E	F	G	H	WEIGHT kg.	TORQUE	MAX R.P.M.
	Min.	Max.											
MBDFG 150	15	30	150	60	75	113	120	75	50	128	7.5	50	8000
MBDFG 160	15	30	160	60	85	110	120	75	50	110	8	50	8000
MBDFG 200	20	45	200	80	96	110	170	110	65	124	15.2	100	6300
MBDFG 250	20	45	250	80	110	165	170	110	65	154	24	100	6300
MBDFG 250	20	55	250	80	120	165	185	125	85	169	25.5	250	5000
MBDFG 300	30	70	300	96	150	165	220	150	105	175	44.4	450	4000
MBDFG 300	40	85	300	96	150	165	250	175	130	195	51.4	850	3350
MBDFG 400	40	85	400	150	180	206	250	175	130	230	80	850	3350
MBDFG 400	40	105	400	150	180	210	290	200	155	235	90	1300	2800
MBDFG 500	50	120	500	200	225	256	320	230	175	265	160	2000	2500



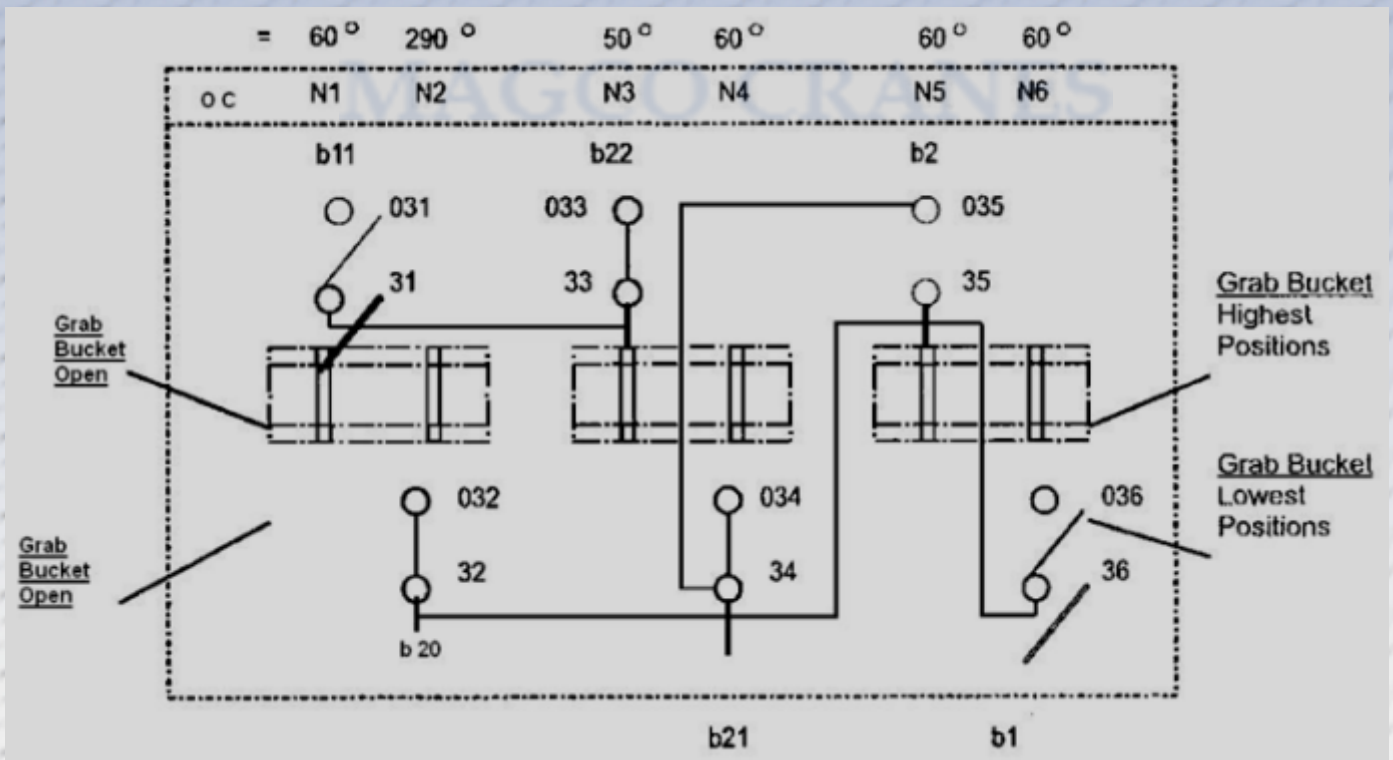
MAGCO BREAK DRUM GEARED COUPLING

COUPLING SIZE	FINISH BORE		A	B	C	D	E	WEIGHT kg.	TORQUE	MAX R.P.M.
	Min.	Max.								
MBDGC 4”	15	40	100	80	70	65	103	5	100	8000
MBDGC 5” ½	15	45	140	80	90	70	130	12.5	100	6300
MBDGC 6”	15	45	150	80	90	70	130	14	250	6300
MBDGC 7”	20	55	175	90	95	85	140	20	450	5000
MBDGC 8”	20	70	200	120	95	120	143	27	850	4000
MBDGC 10”	25	80	250	130	120	125	130	50	2000	3350

MAGCO GRAB DIFFERENTIAL LIMIT SWITCH (MODEL NO. MC-1121):



A Grab Differential limit Switch is Driven by holding and closing winches used in auxiliary circuit for single lever grabs control. It is used to stop or start the function of the motor at required preset position, irrespective of the height of the grab. It works at the highest & lowest grab position. A key is provided with the switch to release the locking nut to adjust the cam disc.



MFG. : E.O.T. Cranes, H.O.T. Cranes, JIP Cranes, Crane Control Gear Equipments & Power Transmission Equipments

MODELS OF MAGCO RADIO REMOTE CONTROLS

MC 301 S

Application : Pendant or cabin operated cranes.

Functions :
Magnetic Key - Yes
Main Power - ON
Hoist - Up/Down 1 step
Cross Travel - Right/Left 1 step
Long Travel - Forward/Reverse 1 step
Hooter - Yes
Battery Check LED - Yes
Emergency Stop - Yes

'START' push button is used to put the mainline ON. Once the mainline is ON this button is used for hooter function.

MC 301

Application : Pendant or cabin operated cranes.

Functions :
Magnetic Key - Yes
Main Power - ON
Hoist - Up/Down 1 step
Cross Travel - Right/Left 1 step
Long Travel - Forward/Reverse 1 step
Hooter - Yes
Battery Check LED - Yes
Emergency Stop - Yes

'START' push button is used to put the mainline ON. Once the mainline is ON this button is used for hooter function.

MC 302

Application : Cabin operated cranes

Functions :
Magnetic Key - Yes
Main Power - ON
Main Hoist - Up/Down 2 steps
Cross Travel - Right/Left 2 steps
Long Travel - Forward/Reverse 2 steps
Hooter - Yes
Battery Check LED - Yes
Emergency Stop - Yes
For master controlled cabin operated cranes Model MC-302 with 2- step pushbutton can be used to achieve slow speed on the first step of the pushbutton representing the first or second notch of the master controller and 2nd step of the push button can be used to achieve full speed representing the final notch of the master controller. In other words speed control to the extent of two speeds can be achieved through hand held push button type transmitter.

'START' push button is used to put the mainline ON. Once the mainline is ON this button is used for hooter function.

MC 305

Application : Cabin operated cranes

Functions :
Magnetic Key - Yes
Main Power - ON
Hoist - Up/Down 5 steps
Cross Travel - Right/Left 5 steps
Long Travel - Forward/Reverse 5 steps
Hooter - Yes
Battery Check LED - Yes
Emergency Stop - Yes
1st speed step is achieved by pressing motion/direction button and 2nd or 3rd or 4th or 5th speed steps by pressing 2 or 3 or 4 or 5 while keeping pressed 1.

Additional Functions :
Apart from the above functions it is possible to achieve other functions by programming the system such as micro speed in all 3 motions, underbridge lights etc. as explained below:

By default the function buttons for Hoist, Cross Travel & Long Travel namely UP, DOWN, EAST, WEST, NORTH & SOUTH shall function as creep speed. Now on pressing buttons denoted as UP & DOWN simultaneously the respective function button will operate as main speed. When this operation is repeated i.e. pressing of UP & DOWN buttons simultaneously again the respective function buttons will revert to creep speed.

Underbridge lights can be switched ON by pressing buttons denoted as EAST & WEST simultaneously. When this operation is repeated the lights will be switched OFF.

START' push button is used to put the mainline ON. Once the mainline is ON this button is used for hooter function.

MODELS OF MAGCO RADIO REMOTE CONTROLS

MC 402

Application : Cabin operated cranes

Functions :
Magnetic Key - Yes
Main Power - On
Main Hoist - Up/Down 2 steps
Aux. Hoist - Up/Down 2 steps
Cross Travel - Right/Left 2 steps
Long Travel - Forward/Reverse 2 steps
Micro Speed in - 1 step

MC 401

Application : Pendant or cabin operated cranes

Functions :

Magnetic Key	-	Yes	
Main Power	-	On	
Main Hoist	-	Up/Down	1 step
Aux. Hoist	-	Up/Down	1 step
Cross Travel	-	Right/Left	1 step
Long Travel	-	Forward/Reverse	1 step
Micro Speed	-		1 step in any one motion
Hooter	-	Yes	
Underbridge Light	-	Yes	
Battery Check LED	-	Yes	
Emergency Stop	-	Yes	

Additional Functions :

Apart from the above functions it is possible to achieve other functions by programming the system such as micro speed in all 4 motions, underbridge lights etc. as explained below:

By default the function buttons for Hoist, Aux. Hoist, Cross Travel & Long Travel namely UP, DOWN, AUX. UP, AUX. DOWN, EAST, WEST, NORTH & SOUTH shall function as creep speed. Now on pressing buttons denoted as UP & DOWN simultaneously the respective function buttons will operate as main speed. When this operation is repeated i.e. pressing of UP & DOWN buttons simultaneously again the respective function buttons will revert to creep speed.

Underbridge lights can be switched ON by pressing buttons denoted as EAST & WEST simultaneously. When this operation is repeated the lights will be switched OFF.

'START' push button is used to put the mainline ON. Once the mainline is ON this button is used for hooter function.

MC 403

Application : Cabin operated cranes

Functions :

Magnetic Key	-	Yes	
Main Power	-	On	
Main Hoist	-	Up/Down	3 steps
Aux. Hoist	-	Up/Down	3 steps
Cross Travel	-	Right/Left	3 steps
Long Travel	-	Forward/Reverse	3 steps
Hooter	-	Yes	
Emergency Stop	-	Yes	

1st speed step is achieved by pressing motion/direction button and 2nd or 3rd speed steps by pressing 2 or 3 while keeping pressed 1.
Apart from the above functions it is possible to achieve other functions by programming the system such as micro speed in all 4 motions, underbridge lights etc. as explained below:

By default the function buttons for Hoist, Aux. Hoist, Cross Travel & Long Travel namely UP, DOWN, AUX. UP, AUX. DOWN, EAST, WEST, NORTH & SOUTH shall function as creep speed. Now on pressing buttons denoted as UP & DOWN simultaneously the respective function buttons will operate as main speed. When this operation is repeated i.e. pressing of UP & DOWN buttons simultaneously again the respective function buttons will revert to creep speed.

Underbridge lights can be switched ON by pressing buttons denoted as EAST & WEST simultaneously. When this operation is repeated the lights will be switched OFF.

'START' push button is used to put the mainline ON. Once the mainline is ON this button is used for hooter function.

MODELS OF MAGCO RADIO REMOTE CONTROLS

MC 305 J

Application : Cabin operated cranes

Functions :
Key switch - Yes
Main Power - On
Main Hoist - Up/Down 5 steps
Cross Travel - Right/Left 5 steps
Long Travel - Forward/Reverse 5 steps
Hooter - Yes
Underbridge Lights - Yes
Battery Check LED - Yes
Emergency Stop - Yes

MC-305J can accommodate other functions also such as micro speeds tong/magnet etc.

MC 405 J

Application : Cabin operated cranes

Functions :
Key switch - Yes
Main Power - On
Main Hoist - Up/Down 5 steps
Aux. Hoist - Up/Down 5 steps
Cross Travel - Right/Left 5 steps
Long Travel - Forward/Reverse 5 steps
Hooter - Yes
Underbridge Lights - Yes
Battery Check LED - Yes
Emergency Stop - Yes

MC-405J can accommodate other functions also such as micro speeds, tong/magnet etc.

MC 403 J / 404 J

Application : Cabin operated cranes

Functions :

	CC-403	CC-404J
Key switch -	Yes	Yes
Main Power -	On	On
Main Hoist - Up/Down	3 steps	4 steps
Aux. Hoist -Up/Down	3 steps	4 steps
Cross Travel - Right/Left	3 steps	4 steps
Long Travel - Forward/ Reverse	3 steps	4 steps
Hooter -	Yes	Yes
Underbridge Lights -	Yes	No
Battery Check LED -	Yes	Yes
Emergency Stop -	Yes	Yes

MC 304 J

Application : Cabin operated cranes

Functions :
Keyswitch - Yes
Main Power - On
Main Hoist - Up/Down 4 steps
Cross Travel - Right/Left 4 steps
Long Travel - Forward/Reverse 4 steps
Hooter - Yes
Underbridge Lights - Yes
Battery Check LED - Yes
Emergency Stop - Yes

MC 405 DJ 1

Application : Cabin operated cranes

Functions :

Key switch - Yes
Main Power - On
Main Hoist - Up/Down 5 steps through dual joystick
Aux. Hoist - Up/Down 5 steps
Cross Travel - Right/Left 5 steps through dual joystick
Long Travel - Forward/Reverse 5 steps
Hooter - Yes
Underbridge Lights - Yes
Emergency Stop - Yes

Main Hoist & Aux. Hoist can be operated through a dual joystick whereas Cross Travel & Long Travel operations can be clubbed through another dual joystick.

MC-405DJ1 can accommodate other functions also such as microspeeds, tong/magnet etc.

MODELS OF MAGCO RADIO REMOTE CONTROLS

MC 405 DJ 2

Commander 1

Application : Cabin operated cranes

Functions :

Magnetic Key - Yes
Main Power
Turn clockwise and release - On
Turn anticlockwise - Off
Main Hoist - Up/Down 3 steps
Aux. Hoist - Up/Down 3 steps
Cross Travel - Right/Left 3 steps
Long Travel - Forward/Reverse 3 steps
Hooter - Yes
Emergency Stop - Yes

Commander 2

Functions :

Magnetic Key	-	Yes
Main Power	-	On
Turn clockwise and release	-	On
Turn anticlockwise	-	Off
Main Hoist	-	Up/Down
Cross Travel	-	East/West
Long Travel	-	North/South
Hooter	-	Yes
Battery Check LED	-	Yes
Emergency Stop	-	Yes

Commander 3

Functions :

Magnetic Key	-	Yes
Main Power	-	On
Turn clockwise and release	-	On
Turn anticlockwise	-	Off
Main Hoist	-	Up/Down
Cross Travel	-	East/West
Battery Check LED	-	Yes
Emergency Stop	-	Yes

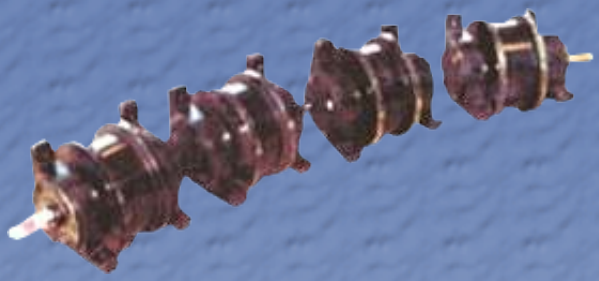
Commander 4

Functions :

Magnetic Key	-	Yes
Main Power	-	On
Turn clockwise and release	-	On
Turn anticlockwise	-	Off
Main Hoist	-	Up/Down
Battery Check LED	-	Yes
Emergency Stop	-	Yes

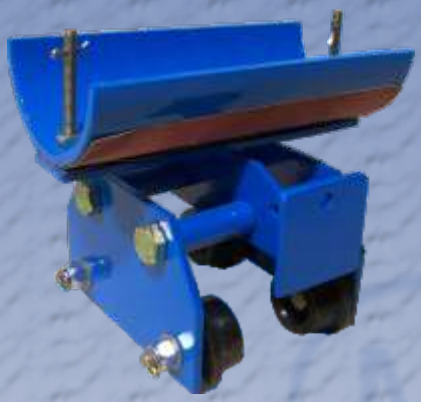
MFG. : E.O.T. Cranes, H.O.T. Cranes, JIP Cranes, Crane Control Gear Equipments & Power Transmission Equipments

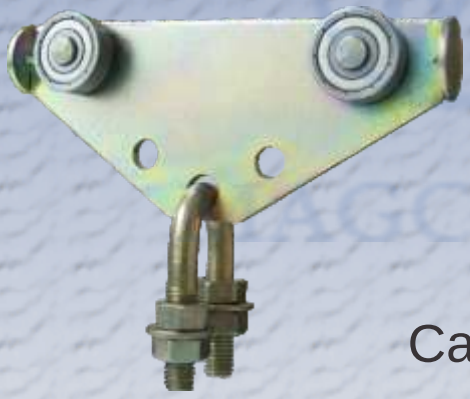
Spring Buffer



Trolley Wheels

Gravity Type
Current Collector





Cable Trolley

Grab

Heavy Duty Cable Trolley

MFG. : E.O.T. Cranes, H.O.T. Cranes, JIP Cranes, Crane Control Gear Equipments & Power Transmission Equipments

MAGCO CRANES

MFG. : EOT Cranes, H.O.T. Cranes, JIB Cranes,
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