



JSL INDUSTRIES LTD

# “Jyoti” New Generation Slipring Motor Starter type Magnastart

## Introduction

## Features & Advantages

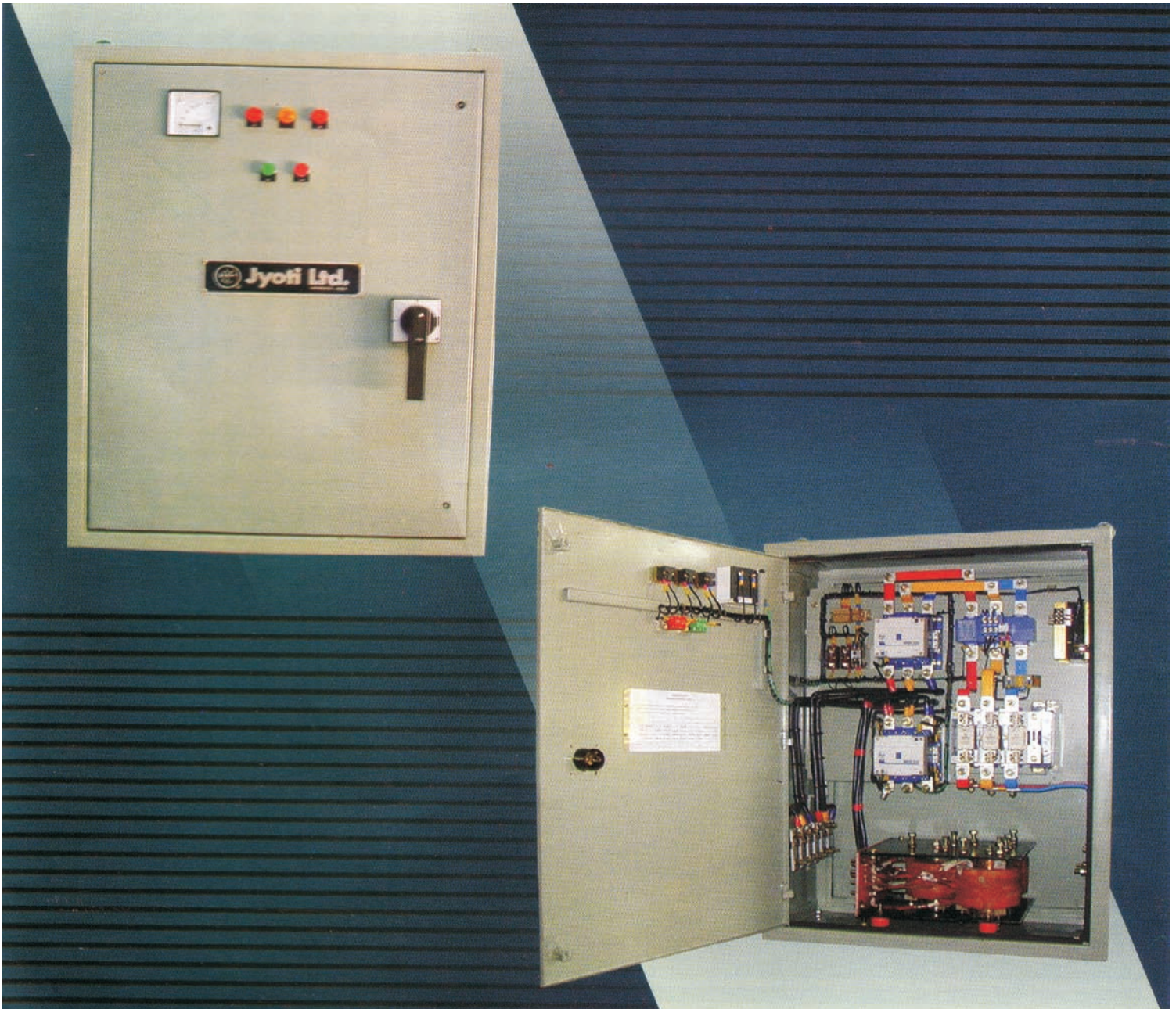
## Technical Information



## Five Good Reasons to switch over the best

- A Less complex system with no maintenance
- In Built Automatic Stepless Operation
- Load Sensitive Starting
- Protects Motor from the possibility of wrong selection of Resistance
- Constant Torque and Constant Current Acceleration

## 'JYOTI' New Generation Slipring motor Starter type Magnastart



# Automatic Starter for Slipping Motors

( Upto 200 kW Higher Rating against specific enquiry )

'Jyoti'

Magnastart slipping motor starters are IDEAL for :

CRUSHERS

PUMPS

COMPRESSORS

BLOWER FANS

CONVEYORS

CRANES

RUBBER MILLS

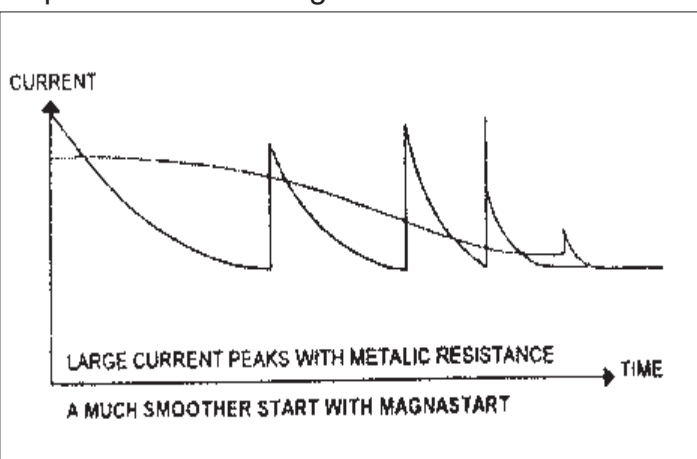
PRESSES

## HOW MAGNASTART WORKS

The Magnastart inducer consists of 3 coils wound on specially shaped steel cores. Eddy currents in these cores are reflected in the windings as an impedance which is dependent on rotor frequency.

When power is applied to the motor the frequency in the rotor is the same as that in the stator. As the machine accelerates, the rotor frequency and inducer impedance decrease. This results in a smooth acceleration to full speed at which point the sliprings are short circuited. The heavy mass of core material allows the inducer to absorb a considerable amount of heat. The advanced thermal insulation protects the coils which remains relatively cool and several consecutive starts may be obtained on drives with high inertia loads.

Each of the coils have four connections brought out to studs on the front panel. By using star and delta combinations - up to 17 different starting impedances are available. The inducer can be set up to provide the exact starting characteristics required on a wide range of motors.



## ADVANTAGES OF MAGNASTART

### Size

Though physically smaller than conventional systems, the large thermal capacity of Magnastart permits the starting of difficult and high inertia loads without any problems.

### Simplicity

Magnastart requires only one shorting contactor, reducing the overall system complexity, size and cost.

### Performance

Magnastart has no moving parts and does not use liquids or chemicals. Magnastart will give many years of service without any maintenance or adjustment.

### Reliability

The robust construction permits heavy usage under the most difficult conditions. Comprehensive thermal protection prevents any possibility of damage.

### Flexibility

Each inducer model is designed to start a wide range of motors. The front panel allows the user to select the exact starting torque and current as per requirement.

### Smooth Starting

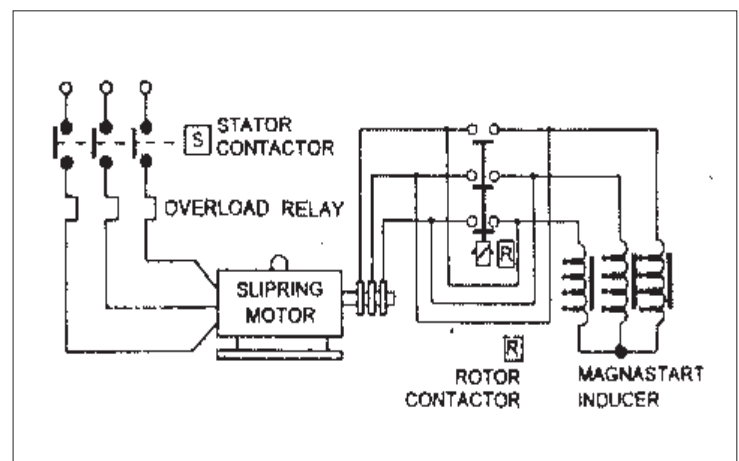
Smooth acceleration to full speed reduces electrical stress in the motors and mechanical wear through out the drive.

### Protection

Inducer provided with Thermal Cut Out.

### Cable Termination

Liberal bottom entry cable terminations provided.



# 'Jyoti' Magnastart System

## A- RANGE - STATOR ROTOR STARTERS

CONSISTING OF

SWITCH DISCONNECTOR FUSE UNIT, STATOR CONTACTOR, THERMAL OVERLOAD, STOP & START PUSH BUTTONS, INDICATOR LAMPS, AMMETER, MAGNATART INDUCER, TIMER AND ROTOR CONTACTOR, ENCLOSURE TO IP 54.

Options available

REVERSING CONTACTOR, PLUG BRAKING, FORWARD & REVERSE INCHING.

Built to order and can include customers specifications.

### STATOR ROTOR STARTERS - TECHNICAL INFORMATION :

MODEL NO.		A22-30	A37-30	A55-45	A75-90	A95-90	A110-90	A150-125	A200-175
MOTOR SIZE KW <sup>1</sup>		22	37	55	75	95	110	150	200
INDUCER SIZE		M30	M30	M45	M90	M90	M90	M125	M175
MAXIMUM RATING	START/HR <sup>2</sup>	15	9	7	10	8	6	7	5
	STATOR VOLTAGE V	550	550	660	660	660	660	660	660
	STATOR <sup>3</sup> CURRENT A	43	72	110	135	170	250	250	480
	ROTOR <sup>4</sup> VOLTAGE V	600	600	600	800	800	800	800	1000
	ROTOR <sup>5</sup> VOLTAGE HEAVY DUTY V	500	500	500	550	550	550	600	800
	ROTOR FULL LOAD CURRENT A	75	75	125	190	190	240	240	300
	ROTOR STARTING CURRENT A	140	140	275	425	425	425	525	625
TIMER RANGE		0.3 - 30 SECS							

CONTROL VOLTAGE		230V, 380V, 415V							
DIMENSION (mm) <sup>7</sup>	WIDTH	650	650	800	800	800	800	800	800
	DEPTH <sup>6</sup>	400	400	400	400	400	500	500	500
	HEIGHT	875	875	1150	1150	1250	1250	1500	1500
WEIGHT (KG) (APROX)		88	90	135	156	184	210	244	286

#### NOTES : ( For A and H Range Starters )

1. At 415 V/50 HZ phase ,for other supply voltages please contact the manufactures.
2. This is based on the maximum motor size starting against 1.5 X FLT for 15 seconds.
3. AC3 rating at 415 V for heavy duties consult manufactures.
4. Normal duties, occasional inching in both directions.
5. Heavy inching and plug braking.
6. Overall depth of panel only - front controls project 25mm and isolator handle projects 60mm.
7. Weight and dimensions are a guide only and will depend on specification of each individual starter.

# H-RANGE - ROTOR STARTERS

Consisting of : Magnastart Inducer, Timer, Shorting Contactor, Enclosure to IP-54.

Ideal for replacing old 'Resistance', liquid or chemical starters where the stator control gear is separate. Built to order and can include customers specifications.

## ROTOR STARTERS - TECHNICAL INFORMATION

MODEL NO.		H30	H45	H90	H125	H175
MOTOR SIZE KW <sup>1</sup>		37	55	110	150	200
MAXIMUM RATINGS	START/HR <sup>2</sup>	9	7	6	7	5
	ROTOR VOLTAGE <sup>4</sup> V	600	600	800	800	1000
	ROTOR VOLTAGE HEAVY DUTY <sup>5</sup> V	500	500	550	600	800
	ROTOR FULL CURRENT A	75	125	240	240	300
	ROTOR STARTING CURRENT A	140	275	425	525	625
TIME RANGE		0.3-30 SECS				

CONTROL VOLTAGE		230V, 380V, 415V				
DIMENSION (mm)	WIDTH	450	450	450	500	500
	DEPTH <sup>6</sup>	400	450	450	500	500
	HEIGHT	650	650	650	800	800
WEIGHT (KG) (APPROX.)		69	83	107	144	155

## TECHNICAL DETAILS REQUIRED WITH ENQUIRY

- Motor Rating - KW / HP
- Stator Voltage & Current
- Rotor Voltage & Current
- Control Supply Voltage
- Starting Duty - No. Of Starts per hour & Starting duration with load.
- Application
- Special Requirements if any.