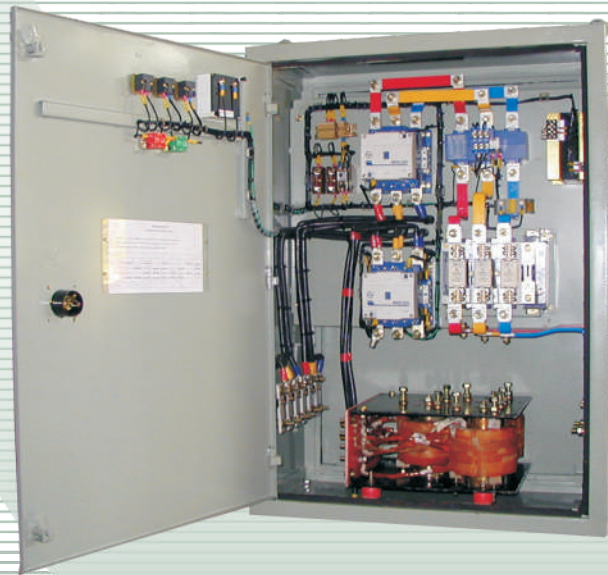




JSL INDUSTRIES LTD.

**Magnastart System
New Generation
Slipring Induction Motor Starter**



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



ISO 9001 : 2015



MAGNASTART SYSTEM NEW GENERATION SLIPRING INDUCTION MOTOR STARTER

'JSL' Magnastart system slipring induction motor starters are IDEAL for :

- CRUSHERS
- PUMPS
- COMPRESSORS
- BLOWER FANS
- CONVEYORS
- CRANES
- RUBBER MILLS
- PRESSES

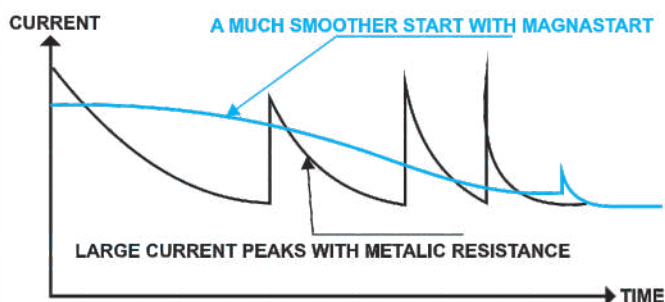
How Magnastart Works : Principle of Operation

The Magnastart system consist of inducer with 3 coils wound on specially shaped steel cores. Eddy currents in these cores are reflected in the windings as an impedance which is dependant 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.

Time current characteristics of starting



Upto 200 KW
Higher Rating are available

ADVANTAGES OF MAGNASTART SYSTEM

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

Performance

Magnastart system has no moving parts and does not use liquids or chemicals. Magnastart system 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. It is possible to have upto 15 different starting impedances. This 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.

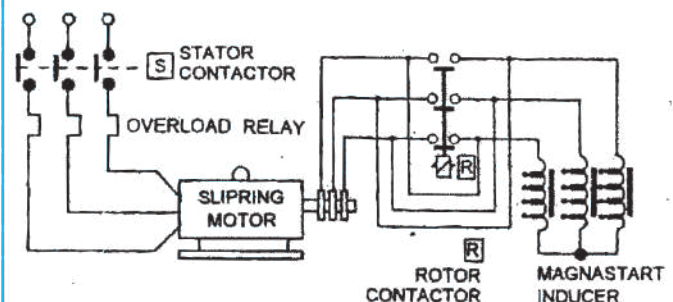
Protection

Inducer provided with Thermal Cut Out.

Cable Termination

Liberal bottom entry cable terminations provided.

Schematic Diagram of Magnastart System



STATOR ROTOR STARTERS - MODEL : A

It consist of

Switch Disconnecter Fuse Unit, Stator Contactor, Thermal Overload, Stop & Start Push Buttons, Indicator Lamps, Ammeter, Magnastart Inducer, Timer and Rotor Contactor, Enclosure.

Options available

Reversing Contactor, Plug Braking, Forward & Reverse Inching.

All Magnastart Systems are built against order therefore customers specifications can be included.

STATOR ROTOR STARTERS - TECHNICAL DETAILS

MODEL NO.	A22-30	A37-30	A55-45	A75-90	A95-90	A110-90	A150-125	A200-175
MOTOR SIZE KW ¹	22	37	55	75	95	110	150	200
INDUCER SIZE	M30	M30	M45	M90	M90	M90	M125	M175
MAXIMUM RATING	START/HR ²	15	9	7	10	8	6	5
	STATOR VOLTAGE V	550	550	660	660	660	660	660
	STATOR CURRENT ³ A	43	72	110	135	170	250	480
	ROTOR VOLTAGE ⁴ V	600	600	600	800	800	800	1000
	ROTOR VOLTAGE ⁵ HEAVY DUTY V	500	500	500	550	550	550	600
	ROTOR FULL LOAD CURRENT A	75	75	125	190	190	240	240
	ROTOR STARTING CURRENT A	140	140	275	425	425	425	525
TIMER RANGE	0.3 - 30 SECS							
CONTROL VOLTAGE	230V, 380V, 415V							

ROTOR STARTERS - MODEL : H

It consist of :

magnastart Inducer, Timer, shorting Contactor, Enclosure.

Ideal for replacing old 'Resistance' and Rotor Control Circuit, liquid or chemical starters where the stator control gear is separate.

All Magnastart Systems are built against order therefore customers specifications can be included.

ROTOR STARTERS - TECHNICAL DETAILS

MODEL NO.	H30	H45	H90	H125	H175
MOTOR SIZE KW ¹	37	55	110	150	200
INDUCER SIZE	M30	M45	M90	M125	M175
MAXIMUM RATINGS	START/HR ²	9	7	6	7
	ROTOR VOLTAGE ⁴ V	600	600	800	800
	ROTOR VOLTAGE HEAVY DUTY ⁵ V	500	500	550	600
	ROTOR FULL CURRENT A	75	125	240	240
	ROTOR STARTING CURRENT A	140	275	425	525
TIMER RANGE	0.3-30 SECS				
CONTROL VOLTAGE	230V, 380V, 415V				

INDUCER - MODEL : M

It consist of :
magnastart Inducer, Shock Mount &
Mounting Channels only

Ideal for replacing old 'Resistance' in existing
equipment.

INDUCER - TECHNICAL DETAILS

MODEL NO.		M30	M45	M90	M125	M175
MOTOR SIZE KW ¹		37	55	110	150	200
MAXIMUM RATINGS	START/HR ²	9	7	6	7	5
	ROTOR VOLTAGE ⁴ V	600	600	800	800	1000
	ROTOR VOLTAGE HEAVY DUTY ⁵ V	500	500	550	600	800
	ROTOR FULL CURRENT A	75	125	240	240	300
	ROTOR STARTING CURRENT A	140	275	425	525	625

NOTES :

1. At 415 V, 50 Hz phase, for other supply voltages consult at time of enquiry.
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 at the time of enquiry.
4. Normal duties, occasional inching in both directions.
5. Heavy inching and plug braking.

TECHNICAL DETAILS REQUIRED WITH ENQUIRY

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



FOR FURTHER ENQUIRIES
PLEASE CONTACT

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In Keeping with the technological strides the world is making in the engineering field, we introduce changes in the design of our products. Hence, the products as actually supplied might have features varying herefrom.