

## GENERAL PURPOSE RECTANGULAR LIFTING MAGNETS

### SERIES KRM

"KAKKU" General purpose rectangular lifting electro-magnets series KRM can be used for various applications for lifting cold objects (upto 80°C). A brief description of such applications is given below:

#### STEEL/ IRON PIPES

For standard pipes, two magnets on a spreader bar are required. The table below gives the depth of pipe upto 8 Meters long that can be lifted with the above magnets. Approximately 80% of the magnet is effective for lifting.

Nominal Size (inches)	Depth of lift (inches)
Loose Pipes 1/8 In. to 1.5 In.	1.5 In.
Pipe in bundles	One layer in bundles
2 to 20 Inches	1 layer

#### ROUND BAR STOCK

For round bar stock under 50mm. diameter, use the capacity as stated for pipes. On round stock of 50mm. diameter or greater, any of the magnets will lift approximately 45Kgs per cm of diameter per bar upto greatest number of bars in contact with the magnet.

For example, size-1 has an inner pole shoe of 300mm length, so the greatest number of 100mm dia bars across which the magnet makes contact is three. It will lift three bars of 100mm. dia., each weighing  $45 \times 10 = 450$  Kgs or approx. 7.3 M length (at 61.65 Kgs per Mtr.). It is recommended to use two magnets on a spreader bar for stock length exceeding 6 Mtrs for convenient working.

#### SQUARE BAR STOCK

For Square bar stock smaller than 50mm. in thickness, the length and depth of lift is given in the following table. Approx. 80% of the length of the magnet is effective for lifting.

Thickness (mm)	3	6	10	12	19	25
Max. Length (Meters)	4.2	6.2	8.1	9.5	12	13.5
Max. No. of layers per lift	10	5	4	3	2	2

#### BILLETS AND SLAB

Assuming the thickness of material as 50mm or greater and its rigidity, the lifting capacity of the magnet is governed only by weight of the load. Any of the rectangular magnet will lift 80 Kgs. per linear cm of the magnet in contact with the load (i.e. per cm length of the inner pole shoe).

Magnet Size	1	2	3	4
Length of inner poles shoe (cm)	30	68.5	104	160
Slab lifting capacity (Kgs.)	2400	5480	8320	12800

#### EXAMPLES :

- For stock of 200mm. thickness, 1Mtr. width, 5 Mtrs. length, (approx. 7850 Kgs.) use one magnet size – 3.
- For stock of 100mm thickness, 1Mtr. width, 3 Mtrs. in length (approx. 2355 Kgs.), use one magnet size – 1.
- For stock of 300mm thickness, 1Mtr. width, 5 Mtrs. length (approx. 11775 Kgs.) use one magnet size – 4 or two magnets size – 3 on a spreader bar.

#### NOTE :

Minimum two magnets, on a spreader bar should be used if the length of the Load exceeds 5 Mtrs. to ensure better convenience of working.

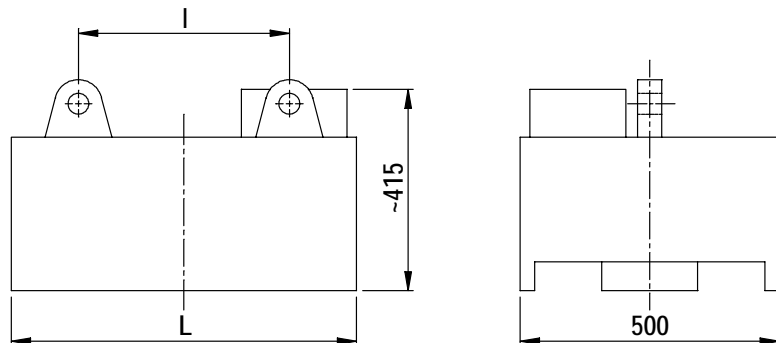
#### ELECTRICAL DATA

These Lifting Electro-magnets are copper wound, class 'H' insulated, suitable for supply voltage of 220V DC. The maximum current consumption of the magnets in cold condition is given below :-

Magnet Size	1	2	3	4
Max. Current (A) at 220V DC	3.3	6.5	11.1	13.0

#### SERIES KRM Dimensions (mm)

MAGNET SIZE	DIMENSION (IN MM.)		WEIGHT (IN KGS.) (APPROX.)
	L	I	
1	600	270	600
2	1000	450	1000
3	1375	600	1300
4	1900	850	1800



*Product improvement is a continuous process at KAKKU. Hence data given in this catalogue is subject to revision without notice.*

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