



### **RESISTANCE BOX - FECHRAL**



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EDGE WOUND RESISTOR FECHRAL



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PUNCHED GRID RESISTANCE BOX FS 375°C



PUNCHED GRID RESISTANCE BOX 2FS 375°C



H. O. Unit -I: C-15/16, Nand Jyot Industrial Estate, Andheri-Kurla Road, Mumbai - 400072, Tel: (022) 42469700/730 E-mail: sales@socgroup.in Unit - II: Plot No. 4912, G. I. D. C., Phase IV, Vatva, Ahmedabad - 382445 Tel.: (079) 68169700/702/712 E-mail: enquiry2@socgroup.in



## **Edge Wound Resistor Fechral**



#### **Introduction Resistor - ZS-15**

Fechral Edge Wound Resistor are used for starting, braking or discharging in distribution system of 50Hz AC rated voltage up to 660V and DC rated voltage up to 900 V. The resistors are made up o spiral tubular type resistor element which are shock proof & unbreakable. Resistance used for steel mill duty application for cranes also used as dynamic breaking resistor.

## Technical Data Dynamic Breaking Resistor

Type Of Resistor	Fechral edge Wound
Cooling	Natural Air cooled
Resistors Material	Fechral
Enclosure	Sheet Steel Painted / Galvanised
Mounting	Floor Mounting Horizontal
Cable Entry	Bottom
Protection Degree	IP-20 / IP-21 / IP-23 / IP-33.
Over Ambient Temperature	+40°C to -25°C
Current Rating	22 Amps - 500 Amps
Connections	Series / Parallel
Voltage	660 V / 900 V AC
Terminals	3/8" & 1/2"
Other Voltage	1100/3300 V on request
Average Temperature	< +35°C during 24 Hours.
Relative Humidity	Below 85% between +20°C,

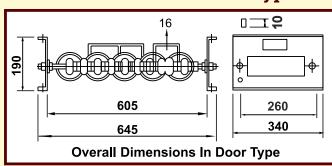
## **Current Rating Chart For 375° Temperature Rise**

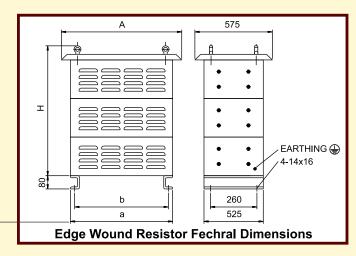
Grid Type	Rated value (Ohms)	Current ra factors (A	ous duty	
	(OIIIIS)	40 % ED	60 %ED	100 %ED
2ZY 8	0.04	326	284	234
2ZY 11	0.056	292	254	210
2ZY 16	0.08	232	202	166
ZY 8	0.08	163	142	117
ZY 11	0.112	146	127	105
ZY 16	0.16	116	101	83
ZY 24	0.24	98	85	70
ZY 32	0.32	82	71	59
ZY 42	0.42	70	61	50
ZY 60	0.6	59	51	43
ZY 84	0.84	50	44	36
ZY 112	1.12	44	38	32
ZY 160	1.6	36	32	26
ZY 220	2.2	30	26	22

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#### **Overall Dimensions In Door Type**





#### **Dimensional Details**

ı	Unit	Α	a	b	Unit	Α	а	b	Н
ı	Size				Size				
ı	Y1	710	645	605	Z1	900	850	810	280
ı	Y2	710	645	605	Z2	900	850	810	520
ı	Y3	710	645	605	Z3	900	850	810	780
ı	Y4	710	645	605	Z4	900	850	810	1040
ı	Y5	710	645	605	Z5	900	850	810	1300
ı	Y6	710	645	605	Z6	900	850	810	1560

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## **Punched Grid Resistance Box - FS 375° C**



#### Introduction

Resistance boxes are used to add resistance to an electric motor circuit for modifying the performance characteristic of slip ring induction motors of EOT cranes, rubber mills, steel rolling mills, cement mills, power plants, conveyors, coke oven, blowers, etc. For speed control and developing starting torque with low starting currents. They are also used as Dynamic Braking Resistor for VVVF AC drives, electric loading of ac alternators, degeneration, and dynamometers. Resistors are designed to meet the requirements of both A.C. & D.C. applications.

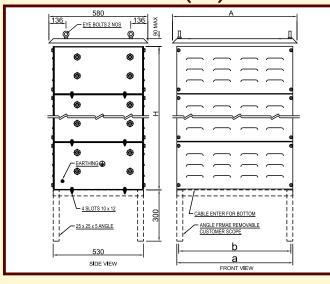
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#### **Technical Data**

Type Of Grid	Punched Grid
Cooling	Natural Air cooled
Resistors Material	Fechral
Enclosure	Sheet Steel (Galvanized)
Mounting	Floor Mounting Horizontal
Cable Entry	Bottom
Protection Degree	IP-20 / IP-21 / IP-23 / IP-33
Over Ambient Temperature	375° C
Current Rating	8 Amps3000 Amps
Connections	Series / Parallel
Voltage	600 V
Terminals	3/8"
Other Voltage	1100/3300 V on request

#### **Resistance Boxes (FS)**



#### **Resistance Boxes**

Current Rating Chart for Punched Grid Resistors for 375°C temperature rise

Grid	Rated	Current ra	ting for various	s duty facto	ors (Amps)	
Type	Value	25%ED 40%ED		60%ED	100%ED	
FS-10	0.015	333	244	210	176	
FS-15	0.022	275	202	175	145	
FS-22	0.033	225	165	143	119	
FS-32	0.048	187	138	115	99	
FS-46	0.070	157	114	98	83	
FS-68	0.1	128	95	83	68	
FS-100	0.15	106	78	66	56	
FS-150	0.22	93	68	55	46	
FS-220	0.33	72	54	45	38	
FS-300	0.45	68	48	38	33	
FS-460	0.7	49	36	31	26	
FS-720	0.05	38	30	25	20	
FS-1000	1.5	35	25	21	19	
FS-1500	2.4	28	20	18	15	

#### **Resistance Boxes (FS)**

**Dimension Details of Punched Fechral** 

**Resistance Boxes** 

١	Unit		_	L.	Unit		_	L.	77
	Size	A	а	b	Size	Α	a	b	Н
	A1	430	380	360	B1	580	530	510	280
	A2	430	380	360	B2	580	530	510	560
	C1	730	680	650	D1	880	830	805	280
	C2	730	680	650	D2	880	830	805	560
	С3	730	680	650	D3	880	830	805	840
	C4	730	680	650	D4	880	830	805	1120
	C5	730	680	650	D5	880	830	805	1400
	C6	730	680	650	D6	880	830	805	1680

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Unit - II: Plot No. 4912, G. I. D. C.,

## **Punched Grid Resistance Box - 2FS 375° C**



#### Introduction

Resistance boxes are used to add resistance to an electric motor circuit for modifying the performance characteristic of slip ring induction motors of EOT cranes, rubber mills, steel rolling mills, cement mills, power plants, conveyors, coke oven, blowers, etc. For speed control and developing starting torque with low starting currents. They are also used as Dynamic Braking Resistor for VVVF AC drives, electric loading of ac alternators, degeneration, and dynamometers. Resistors are designed to meet the requirements of both A.C. & D.C. applications.

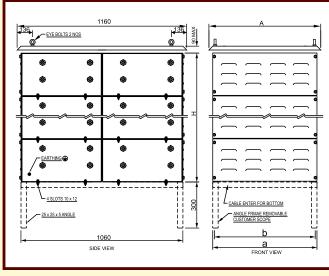
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Current Rating	8 Amps3000 Amps
Connections	Series / Parallel
Voltage	600 V
Terminals	3/8"
Other Voltage	1100/3300 V on request

## Resistance Boxes (2FS)



#### **Resistance Boxes**

Current Rating Chart for Punched Grid Resistors for 375°C temperature rise

Grid	Rated Value	Current rating for various duty factors (Amps)						
Туре	(Ohms)	20%ED	40%ED	60%ED	100%ED			
2FS-10	0.005	666	488	420	352			
2FS-15	0.0075	550	404	350	290			
2FS-22	0.011	450	330	286	238			
2FS-32	0.016	374	276	230	198			
2FS-46	0.023	314	228	196	166			
2FS-68	0.034	256	190	166	136			

# Resistance Boxes (FS) Dimension Details of Punched Fechral Resistance Boxes

Unit Size	A	a	b	Unit Size	A	a	b	Н
A1	430	380	360	B1	580	530	510	280
A2	430	380	360	B2	580	530	510	560
C1	730	680	650	D1	880	830	805	280
C2	730	680	650	D2	880	830	805	560
C3	730	680	650	D3	880	830	805	840
C4	730	680	650	D4	880	830	805	1120
C5	730	680	650	D5	880	830	805	1400
C6	730	680	650	D6	880	830	805	1680

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