

## **INLINE CENTRIFUGAL DIRECT DRIVEN SINGLE FANS**



### **SINGLE CABINET FAN**

Standard single duct inline centrifugal cabinet direct driven fan available in various models covering an extensive range of air volumes from 400 m<sup>3</sup>/hr to 7788 m<sup>3</sup>/hr (235 cfm to 4581 cfm) and pressure development of up to 300 Pa.

### **CONSTRUCTION**

MCS models standard unit casing is manufactured from heavy gauge galvanised steel suitable for internal mounting. The fans can be offered with corrosion proof epoxy coated treatment for external mounting. The casing can also be supplied in mill finish aluminium. All casings have full size removable top access panel with quick release clamps for ease of servicing. Rectangular inlet and outlet spigots are standard. Roof mounted fans can be supplied with bottom inlet for roof curb mounting. The impeller-motor assembly is mounted with anti-vibrations pads on the casing to avoid vibrations.

### **IMPELLERS**

The impellers are centrifugal double width non-overloading forward curved. The motor and impeller is factory matched statically and dynamically balanced on precision machines to give quiet, vibration free running. The blower motor assembly has low noise characteristics making it silent during operation. The blades and fan scroll are manufactured from heavy gauge galvanised steel. The motors are mounted on the fan scroll by using rubber anti-vibrations mountings to avoid vibrations.

### **MOTORS**

The fans incorporate maintenance free totally enclosed induction motors suitable for operating temperatures from -20 °C to +60 °C. The motors for MCS 097-12, MCS 133-12 and MCS 180-14 models are external rotor type suitable for operating temperatures from -20 °C to +50 °C. All motors have sealed for life ball bearings.

### **ELECTRICAL**

Single phase 220-240 Volts-50 Hz capacitor start and run. Three phase 380-415 Volts-50 Hz. All motors are fitted with Standard Thermal Overload Protection (STOP) to prevent motor damage by overloading / overheating. All models are speed controllable by variable type speed controller for single phase motors and by VFD for three phase motors.

### **TERMINAL BOX**

The fans are supplied completely factory prewired to an IP55 terminal box supplied with all models, ensuring suitability for external use.

### **QUALITY ASSURANCE**

The fans are AMCA tested as per AMCA Standard 210-85 for Air Performance Test (AMCA LABORATORY TEST NO. 17703-A1) and AMCA Standard 300 for Sound Test (AMCA LABORATORY TEST NO. 17703-S1). The METRICO INDUSTRIAL FANS LTD. holds BS EN ISO 9002 : 1994 certification.

### **OPTIONAL FEATURES**

Aluminum Casing / Epoxy Finish  
Acoustic Insulation / Bird Guard (Wire Mesh)  
Back Draft Damper / Disconnect Switch

**PERFORMANCE CHART (cfm @ inches of w.g.)**

Model	DUTY : cfm @ inches of w.g.									
	0	0.1	0.2	0.3	0.4	0.5	0.6	0.8	1.0	1.2
MCS 097-12/A	235	225	215	195	180	155	122	27		
MCS 133-12/A	400	388	376	360	340	310	275	200	145	36
MCS 133-12/B	476	460	450	435	420	405	385	340	285	80
MCS 7-7-0.15	892	876	846	813	775	730	672	398		
MCS 9-9-0.37	1780	1750	1687	1640	1579	1548	1486	1370	1192	975
MCS 9-9-0.55	1964	1886	1834	1780	1756	1678	1610	1500	1298	1107
MCS 12-9-0.75	3075	3010	2942	2862	2782	2620	2514	2246	1818	690
MCS 12-9-0.95	3352	3230	3088	3000	2824	2706	2647	2353	2059	824
MCS 12-9-1.1	4048	3952	3852	3748	3638	3520	3393	3096	2683	1923
MCS 12-12-1.1	-	-	4581	4438	4292	4141	3980	3608	3032	2459

**PERFORMANCE CHART (m³/s @ Pa)**

Model	DUTY : m³/s @ Pa									
	0	25	50	75	100	125	150	200	250	300
MCS 097-12/A	0.111	0.106	0.101	0.092	0.085	0.073	0.058	0.013		
MCS 133-12/A	0.189	0.183	0.177	0.170	0.161	0.146	0.130	0.094	0.068	0.017
MCS 133-12/B	0.225	0.217	0.212	0.205	0.198	0.191	0.182	0.161	0.135	0.038
MCS 7-7-0.15	0.421	0.413	0.399	0.384	0.366	0.345	0.317	0.188		
MCS 9-9-0.37	0.840	0.826	0.796	0.774	0.745	0.731	0.701	0.647	0.563	0.460
MCS 9-9-0.55	0.927	0.890	0.866	0.840	0.829	0.792	0.760	0.708	0.613	0.522
MCS 12-9-0.75	1.451	1.421	1.388	1.351	1.313	1.236	1.186	1.060	0.858	0.326
MCS 12-9-0.95	1.581	1.524	1.457	1.415	1.332	1.277	1.249	1.110	0.971	0.389
MCS 12-9-1.1	1.910	1.865	1.818	1.769	1.717	1.661	1.601	1.461	1.266	0.908
MCS 12-12-1.1	-	-	2.162	2.094	2.026	1.954	1.878	1.703	1.431	1.160

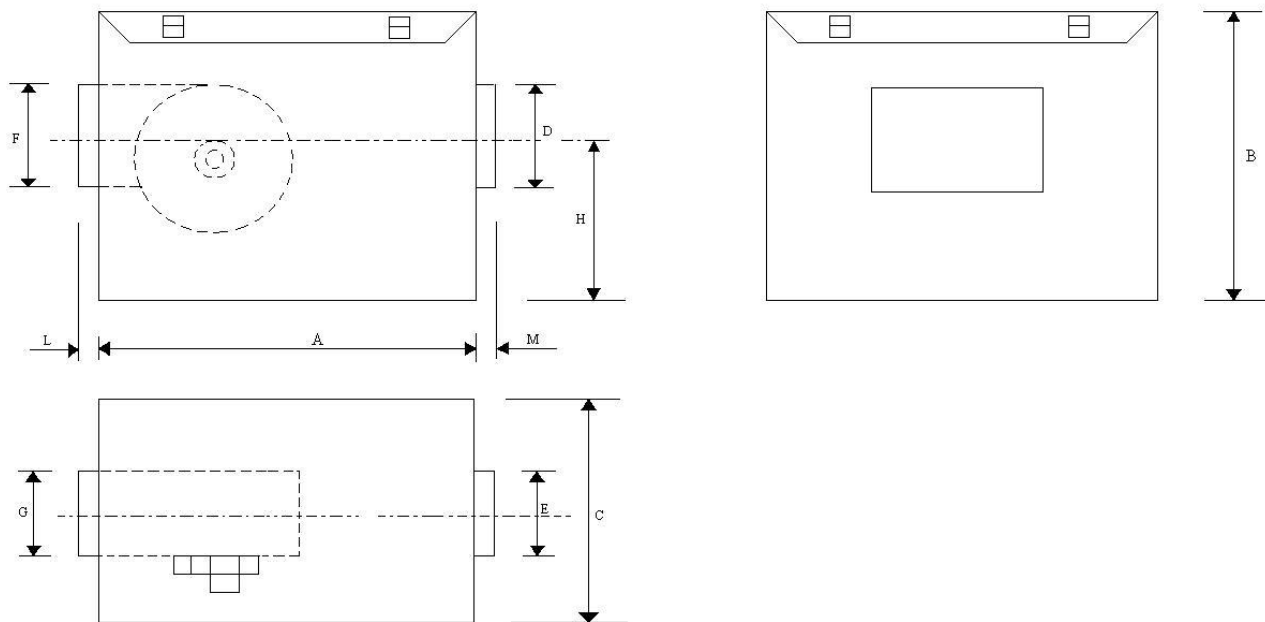
**ELECTRICAL DETAILS**

Model	RPM	Motor Power (kW)	FLC (Amps.)	Electrical Supply	Speed Controlled	Motor Insulation Class	Motor IP Rating
MCS 097-12/A	2500	0.087	0.39	220-240V / 1 Ph / 50 Hz	YES	B	20
MCS 133-12/A	2400	0.190	0.84	220-240V / 1 Ph / 50 Hz	YES	B	44
MCS 133-12/B	2400	0.175	0.78	220-240V / 1 Ph / 50 Hz	YES	B	44
MCS 7-7-0.15	1230	0.15	1.40	220-240V / 1 Ph / 50 Hz	YES	F	54
MCS 9-9-0.37	1320	0.37	3.30	220-240V / 1 Ph / 50 Hz	YES	F	54
MCS 9-9-0.55	1310	0.55	4.50	220-240V / 1 Ph / 50 Hz	YES	F	54
MCS 12-9-0.75	850	0.75	6.0	220-240V / 1 Ph / 50 Hz	YES	F	54
MCS 12-9-0.95	850	0.95	6.9	220-240V / 1 Ph / 50 Hz	YES	F	54
MCS 12-9-1.1	850	1.1	3.8	380-415V / 3 Ph / 50 Hz	VFD	F	54
MCS 12-12-1.1	850	1.1	3.8	380-415V / 3 Ph / 50 Hz	VFD	F	54

**NOISE LEVEL**

Model	SOUND POWER LEVEL SPECTRUM (LwA): dB(A)								
	63	125	250	500	1000	2000	4000	8000	Total
MCS 097-12/A	52	56	48	42	44	38	36	34	58
MCS 133-12/A	56	58	50	43	45	38	36	34	61
MCS 133-12/B	58	60	52	44	46	38	36	34	63
MCS 7-7-0.15	29	44	55	61	62	62	63	55	68
MCS 9-9-0.37	36	51	62	67	70	69	70	61	76
MCS 9-9-0.55	40	55	66	72	73	72	74	65	79
MCS 12-9-0.75	39	54	65	70	71	71	72	64	77
MCS 12-9-0.95	44	58	61	66	68	70	67	60	75
MCS 12-9-1.1	45	60	70	75	78	77	78	70	84
MCS 12-12-1.1	45	60	70	75	78	77	78	70	84

**DIMENSIONAL DETAILS**



Model	Dimensions (mm)										Weight (Kgs.)
	A	B	C	D	E	F	G	H	L	M	
MCS 097-12/A	300	250	350	120	250	65	145	165	30	30	7
MCS 133-12/A	325	300	400	150	320	68	215	180	30	30	9
MCS 133-12/B	325	300	400	150	320	100	232	180	30	30	9
MCS 7-7-0.15	480	460	500	300	400	210	232	235	50	50	15
MCS 9-9-0.37	550	550	600	350	500	260	300	255	50	50	20
MCS 9-9-0.55	550	550	600	350	500	260	300	255	50	50	22
MCS 12-9-0.75	650	700	800	450	700	345	310	360	50	50	35
MCS 12-9-0.95	650	700	800	450	700	345	310	360	50	50	39
MCS 12-9-1.1	650	700	800	450	700	345	388	360	50	50	38
MCS 12-12-1	650	700	850	500	750	345	388	360	50	50	42

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