# **Cooling Systems**for Power Transformers



marangoni • MEISER



transformer manufacturers across the

**United States.** 



## Since 1944 More than 80 years of history

1940s Mr. José Marangoni, was founded the company, carrying out minor repairs. In 1944, the company began manufacturing power transformers. 1950s The Marangoni industry is consolidated, with the expansion of its product portfolio for the Brazilian market. 1960s Marangoni establishes itself as a trusted supplier and manufacturing benchmark in Brazil and across South America. 1970s Marangoni expands its operations by producing cooling systems for power transformers—radiators, cooling fans, and butterfly valves. During this period, Brown Boveri acquires a 30% stake in 1980s the company. The new metalworking division is inaugurated, laying the foundation for the company's current production plants. Around the same time Marangoni becomes part of the ABB 1990s Invited by Siemens, Marangoni opened it's first international branch Marangoni Andina, in Bogota, Colombia. It later repurchased its shares from ABB, returning to full 2000s Brazilian ownership. Marangoni implemented ISO 9001 and a corporate governance program. Following another invitation from Siemens, a new unit, Marangoni DOO., was established in Croatia. 2010s The galvanizing plant was launched in Marangoni entered a joint venture with Meiser, a German company, 2006, and the **road safety plant** in 2007. establishing Marangoni-Meiser to specialize in metal grating. 2020s In partnership with Road Steel, part of Gonvarri Industries (Spain company), The "Skunk Works" department was the company expanded its production created as a core innovation hub and supply of road safety systems. dedicated to the development and promotion of new Technologies. ISO 14001 was implemented as part of its commitment to environmental Marangoni formed a partnership with a management. Ukrainian startup to manufacture and sell the Mosqitter Brazil—an **TODAY** eco-friendly pest control solution. In 2025, the company expanded internationally with the establishment of Marangoni-Meiser USA, headquartered in Indianapolis, IN, with the goal of serving power



#### **COOLING FANS**

#### General Characteristics and Requirements

According to IEC 60076-1 and IEEE C57.12.00 or unusual service conditions agreed between the purchaser and supplier.
IEC 60076-22-6 and IEEE C57.12.36 or unusual service conditions agreed between the purchaser and supplier.
Continuous operation S1
Horizontal and Vertical.
C4 acc. to ISO 12944-2 or another special requests.
See detail in datasheets and drawings.
See the datasheets.

Model	RPM	CFM(1)	dB(A)
	850	2758	51.5
CF19	1140	2936	56
	1750	4806	63.5
CF19+	1140	6230	64
	850	4225	52
CF23	1140	6094	58.5
	1750	8156	66.5
	850	4010	47.5
CF26	1140	6164	56.5
	1750	8355	68
	850	5419	50.9
CF27	1140	7294	60
	1750	10510	71.5

<sup>+ (</sup>plus): optimized air flow - better performance.

#### **MOTOR CONSTRUCTION**

Motor:	According to NEMA MG 1
IVIOTOI:	ACCORDING TO NEIMA ING I

(UL Certification);

1-phase or 3-phase motor with internal automatic reset overload protections sensing both temperature and current.

Frame: NEMA 48 with stainless steel shaft

Total enclosed motor

Winding Insulation: Class F

Winding Class B for longer motor life

**Temperature Rise:** acc. to IEC 60085

**Max Ambient**  $+131^{\circ}F (+55^{\circ}C)$  or another special

**Temperature:** requests.

Motor degree Protection: IP54 enclousure according to IEC 60529 or another special requests

Final Coat ANSI 70 GRAY

Standard:

**Bearings:** Double sealed ball bearings

**Connection Hole:** 1/2" NPT

**Drain Plugs:** The motor includes strategically positioned drain holes for both

horizontal and vertical operation, according to instructions supplied

with each fan.

#### **FAN BLADE**

**Blade:** Each blade assembly is manufactured

as a single piece of aluminum

#### **GUARDS AND HOUSING**

**Protection:** Acc. to IEC 60529 IP20 and

OSHA requirements.

**Finishing:** Hot-Dip Galvanizing ASTM A123

and/or EN 1461 or Stainless Steel in

special requests

 $\label{eq:cfm} CFM(I): Actual \ AirFlow \ in \ CFM \ as \ measured \ with \ Horizontal \ Airflow \ on \ discharge \ side \ of \ one \ tranformer \ radiator.$ 

SOUND PRESSURE: Values represent the average of 5 readings obtained at 2 meters with free discharge and do not include any corrections.

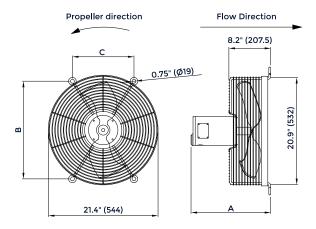
NOTICE: The performance data provided represents typical values and is not guaranteed. Variations may occur due to standard manufacturing tolerances.

## **COOLING FANS CF19 and CF19+**

General Characteristics and Requirements

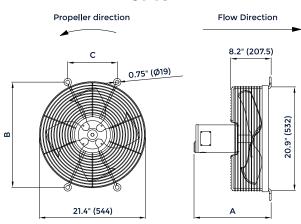
Part Number	Freq. (Hz)	Phase	Voltage (V)	Air Flow CFM (1)	Sound Pressure db(A)	Poles	Speed	Power HP (kW)	Dimension "A"
CF19 4115P01	60	1	115-120 /208-240	2758	51.5	8	850	1/8 (.09kW)	14.9" (379)
CF19 4115P03	60	1	115-120 /208-240	2936	56	6	1140	1/6 (.12kW)	14.9" (379)
CF19 4115P06	60	1	115-120 /208-240	4806	63.5	4	1750	1/4 (.19kW)	14.1" (359)
CF19+ 4116P01	60	1	115-120 /208-240	6230	64	6	1140	1/3 (.25kW)	15.5" (394)
CF19 4115P02	60	3	208-240 /460-480	2758	51.5	8	850	1/8 (.09kW)	14.9" (379)
CF19 4115P04	60	3	208-240 /460-480	2936	56	6	1140	1/6 (.12kW)	13.7" (349)
CF19 4115P05	60	3	575-600	2936	56	6	1140	1/6 (.12kW)	13.7" (349)
CF19 4115P07	60	3	208-240 /460-480	4806	63.5	4	1750	1/2 (.37kW)	14.9" (379)
CF19 4115P08	60	3	575-600	4806	63.5	4	1750	1/2 (.37kW)	14.9" (379)
CF19+ 4116P02	60	3	208-240 /460-480	6230	64	6	1140	1/3 (.25kW)	14.9" (379)
CF19+ 4116P03	60	3	575-600	6230	64	6	1140	1/3 (.25kW)	14.9" (379)

#### **CF19**



Dimensions	Inch (mm)
Dimension "B"	19" (483)
Dimension "C"	12" (305)
Ø External	21.4" (544)
Ø Holes	0.75" (19)

#### CF19+



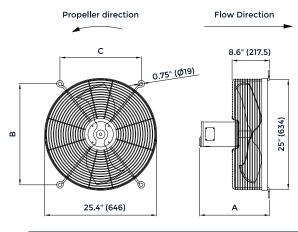
Dimensions	Inch (mm)
Dimension "B"	21.25" (540)
Dimension "C"	10" (254)
Ø External	21.4" (544)
Ø Holes	0.75" (19)

## **COOLING FANS CF23**

#### General Characteristics and Requirements

Part Number	Freq. (Hz)	Phase	Voltage (V)	Air Flow CFM (1)	Sound Pressure db(A)	Poles	Speed	Power HP (kW)	Dimension "A"
CF23 4117P01	60	1	115-120 /208-240	4225	52	8	850	1/8 (.09kW)	15.3" (389)
CF23 4117P03	60	1	115-120 /208-240	6094	58.5	6	1140	1/6 (.12kW)	15.3" (389)
CF23 4117P06	60	1	115-120 /208-240	8156	66,5	4	1750	1/2 (.37kW)	15.3" (389)
CF23 4117P02	60	3	208-240 /460-480	4225	52	8	850	1/8 (.09kW)	15.3" (389)
CF23 4117P04	60	3	208-240 /460-480	6094	58.5	6	1140	1/6 (.12kW)	14.1" (359)
CF23 4117P05	60	3	575-600	6094	58.5	6	1140	1/6 (.12kW)	14.1" (359)
CF23 4117P07	60	3	208-240 /460-480	8156	66.5	4	1750	1/2 (.37kW)	15.3" (389)
CF23 4117P08	60	3	575-600	8156	66.5	4	1750	1/2 (.37kW)	15.3" (389)





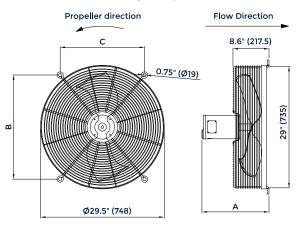
Dimensions	Inch (mm)
Dimension "B"	23" (584)
Dimension "C"	18.5" (470)
Ø External	25.4" (646)
Ø Holes	0.75" (19)

## **COOLING FANS CF26**

#### General Characteristics and Requirements

Part Number	Freq. (Hz)	Phase	Voltage (V)	Air Flow CFM (1)	Sound Pressure db(A)	Poles	Speed	Power HP (kW)	Dimension "A"
CF26 4119P01	60	1	115-120 /208-240	4010	47.5	8	850	1/8 (.09kW)	15.3" (389)
CF26 4119P03	60	1	115-120 /208-240	6164	56.5	6	1140	1/6 (.12kW)	15.3" (389)
CF26 4119P06	60	1	115-120 /208-240	8355	68	4	1750	1/2 (.37kW)	15.3" (389)
CF26 4119P02	60	3	208-240 /460-480	4010	47.5	8	850	1/8 (.09kW)	15.3" (389)
CF26 4119P04	60	3	208-240 /460-480	6164	56.5	6	1140	1/6 (.12kW)	14.1" (359)
CF26 4119P05	60	3	575-600	6164	56.5	6	1140	1/6 (.12kW)	14.1" (359)
CF26 4119P07	60	3	208-240 /460-480	8355	68	4	1750	1/2 (.37kW)	15.3" (389)
CF26 4119P08	60	3	575-600	8355	68	4	1750	1/2 (.37kW)	15.3" (389)





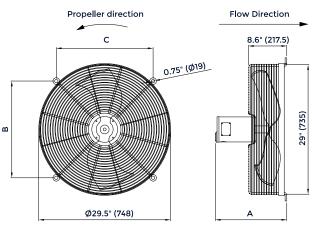
Dimensions	Inch (mm)
Dimension "B"	24.75" (629)
Dimension "C"	20.06" (510)
Ø External	29.5" (748)
Ø Holes	0.75" (19)

## **COOLING FANS CF27**

#### General Characteristics and Requirements

Part Number	Freq. (Hz)	Phase	Voltage (V)	Air Flow CFM (1)	Sound Pressure db(A)	Poles	Speed	Power HP (kW)	Dimension "A"
CF27 4120P01	60	1	115-120 /208-240	5419	50.9	8	850	1/8 (.09kW)	15.3" (389)
CF27 4120P03	60	1	115-120 /208-240	7294	60	6	1140	1/3 (.25kW)	15.9" (404)
CF27 4120P06	60	1	115-120 /208-240	10510	71.5	4	1750	1 (.75kW)	15.9" (404)
CF27 4120P02	60	3	208-240 /460-480	5419	50.9	8	850	1/8 (.09kW)	15.3" (389)
CF27 4120P04	60	3	208-240 /460-480	7294	60	6	1140	1/3 (.25kW)	15.3" (389)
CF27 4120P05	60	3	575-600	7294	60	6	1140	1/3 (.25kW)	15.3" (389)
CF27 4120P07	60	3	208-240/ 460-480	10510	71.5	4	1750	1 (.75kW)	15.9" (404)
CF27 4120P08	60	3	575-600	10510	71.5	4	1750	1 (.75kW)	15.9" (404)





Dimensions	Inch (mm)
Dimension "B"	21.6" (549)
Dimension "C"	21.6" (549)
Ø External	29.5" (748)
Ø Holes	0.75" (19)

## **OUR MANUFACTURING FACILITIES**





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