

Cooling Systems for Power Transformers



maran[∞]ni • MEISER

TIME LINE

marangoni

MEISER

Mr. José Marangoni founded the company, carrying out minor repairs. In 1944, the company began manufacturing **power transformers**.



..... 1940's

The Marangoni industry is **consolidated**, with the **expansion** of its product portfolio for the Brazilian market.



..... 1950's

Marangoni establishes itself as a trusted supplier and **manufacturing benchmark in Brazil** and across South America.



..... 1960's

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 the company.



..... 1970's

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 Group**.



..... 1980's

Invited by Siemens, Marangoni opened its first international branch **Marangoni Andina**, in Bogota, **Colombia**.

It later repurchased its shares from ABB, returning to full **Brazilian ownership**.



..... 1990's

Marangoni implemented **ISO 9001** and a corporate governance program. Following another invitation from Siemens, a new unit, **Marangoni DOO.**, was established in **Croatia**. The **galvanizing plant** was launched in 2006, and the **road safety plant** in 2007.



..... 2000's

Marangoni entered a **joint venture with Meiser**, a German company, establishing **Marangoni-Meiser** to specialize in metal grating.

In partnership with **Road Steel**, part of **Gonvarri Industries** (Spanish company), the company expanded its production and supply of road safety systems. **ISO 14001** was implemented as part of its commitment to environmental management.



..... 2010's

The "Skunk Works" department was created as a core innovation hub dedicated to the development and promotion of new Technologies. Marangoni formed a partnership with a Ukrainian startup to manufacture and sell the **Mosqitter Brazil** — an eco-friendly pest control solution.



..... 2020's

In 1956, **Edmund Meiser founded the company in Limbach**, Saarland, focusing on reinforcing **steel for concrete**. He learned early lessons in risk management after a severe currency fluctuation, setting the tone for disciplined growth.



By 1960, Meiser entered the **grating market**. With just ten employees, he built his **first hot-dip galvanizing plant in 1969**, designed by his nephew Wilfried Geib, whose innovation solved a critical zinc-melting issue and **shaped the company's engineering culture**.



The company built the BEA Hall, in 1972, for steel processing and, in 1976, added a **new galvanizing line for serial products**. These steps created the foundation for Meiser's future large-scale production.



In 1980, Meiser launched Limbacher Verzinkerei GmbH and deepened vertical integration. Erich Petry became Sales Manager in 1983, and by 1990, **the company had expanded into wire drawing, slitting, cold rolling, and stair manufacturing** — securing strong self-sufficiency.



The 1990s marked rapid expansion: Fameco in Belgium, in 1991, Ferrotec Kft. in Hungary, in 1992 through István Horváth, and Altenberg in Essen, in 1995. Wolfgang Meiser took over Sales & Marketing in 1996, while Frank Degenkolb and Dietmar Prätorius led Oelsnitz. **Meiser became a European Grating Leader**.



Globalization accelerated. MULTI MEISER Egypt, in 2000, Ulrich Meiser joining Finance, in 2001, and Robert Vièl's creation of **LIONWELD MEISER - Dubai**, in 2006, **established the brand worldwide**. Growth continued in Turkey, Sweden, Ostrava, and with a tubes division in Limbach.



Created a cutting-edge galvanizing and logistics hub in Limbach in 2011.

MEISER do Brasil was founded in 2013, **Marangoni-Meiser (Brazil)** began operations with a **fully automated**, production line, providing a complete local supply chain. Oelsnitz was expanded with a modern galvanizing plant, and MEISER gratings Inc. was founded in the USA in 2019.



A decade of leadership and acquisitions: VR (Easy-Rail/BBV), SORST Streckmetall, SEMITECH, Cugnart/Le Piquet EMCO (UK), and Meiser Produits de Sécurité (Nogent-sur-Oise). **Acquiring IKG** made Meiser the global market leader in gratings with factories in Houston (TX), Garrett (IN), and Querétaro (Mexico), in 2024. Saarlouis galvanizing plant began operations, featuring powder-coating technology and operated by Coatinc Siegen GmbH, in 2025.



marangoni • MEISER

TODAY



In 2025, the company expanded internationally with the establishment of **Marangoni • Meiser USA**, headquartered in **Indianapolis, IN**, with the goal of serving power transformer manufacturers across the United States.

COOLING FANS

General Characteristics and Requirements

Service conditions:	According to IEC 60076-1 and IEEE C57.12.00 or unusual service conditions agreed between the purchaser and supplier
Standard:	IEC 60076-22-6 and IEEE C57.12.36 or unusual service conditions agreed between the purchaser and supplier
Duty Type:	Continuous operation 24 hours outdoor
Mounting Position:	Horizontal and Vertical - up
Corrosion Class:	C4m acc. to ISO 12944-2 or another special requests
Overall Dimension:	See detail in datasheets and drawings
Technical Parameters:	See the datasheets
Models:	CF - Basket-type Housing, hot-dip galvanized steel CFS - Basket-type Housing, ANSI 304 Stainless steel BMF - Bell Mouth Housing, hot-dip galvanized steel

MOTOR CONSTRUCTION

Motor:	According to NEMA MG 1 (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 Temperature Rise:	Class B for longer motor life acc. to IEC 60085
Max Ambient Temperature:	+131°F (+55°C) or another special requests
Motor degree protection:	IP54 or IP55 enclosure according to IEC 60529 or another special requests
Final Coat Standard:	ANSI 70 GRAY
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

Model	RPM	CFM(l)	dB(A)
CF19 & CFS19	850	2.758	51.5
	1140	2.936	56
	1750	4.806	63.5
CF19+ & CFS19+	1140	6.230	64
CF23 & CFS23	850	4.225	52
	1140	6.094	58.5
	1750	8.156	66.5
CF26 & CFS26	850	4.010	47.5
	1140	6.164	56.5
	1750	8.536	68
CF27 & CFS27	850	5.419	50.9
	1140	7.506	60
	1750	10.510	71.5
BMF23	1750	12.385	72.5

+ (plus): optimized air flow - better performance.

FAN BLADE

Blade:	Each blade assembly is manufactured as a single piece of aluminum with two wings
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GUARDS AND HOUSING

Type:	Basket-type Housing (CF & CFS) or Bell Mouth type Housing (BMF)
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

CFM(l): Actual AirFlow in CFM as measured with Horizontal Airflow on discharge side of one transformer radiator.

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

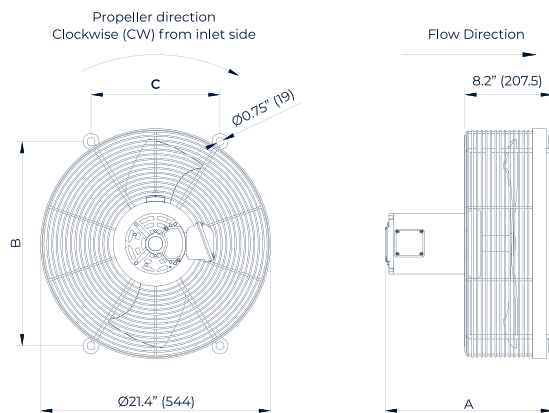
NOTICE: The performance data provided represents typical values and is not guaranteed. Variations may occur due to standard manufacturing tolerances.

COOLING FANS CF19 and CF19+

General Characteristics and Requirements

Part Number	Freq. (Hz)	Phase	Voltage (V)	Air Flow CFM (l)	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)

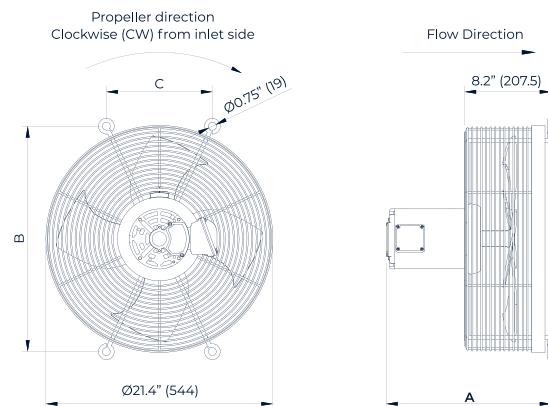
CF19



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

Note:
The single-phase
model includes a
motor-mounted
capacitor box.

CF19+



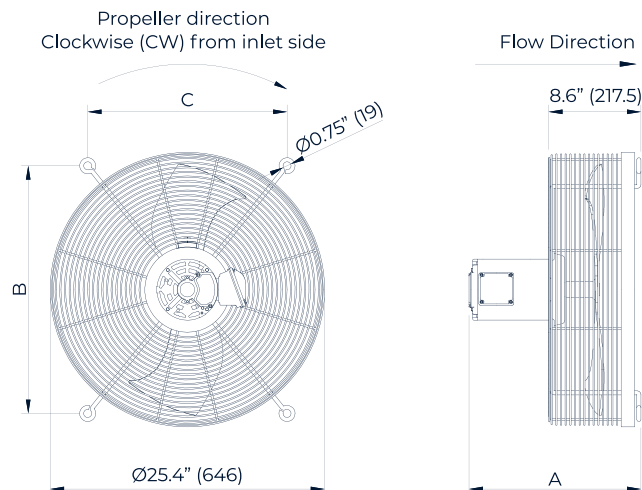
Dimensions	Inch (mm)
Dimension "B"	21.25" (540)
Dimension "C"	10" (254)
Ø External	21.4" (544)
Ø Holes	0.75" (19)

COOLING FANS CF23

General Characteristics and Requirements

Part Number	Freq. (Hz)	Phase	Voltage (V)	Air Flow CFM (l)	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)

CF23



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

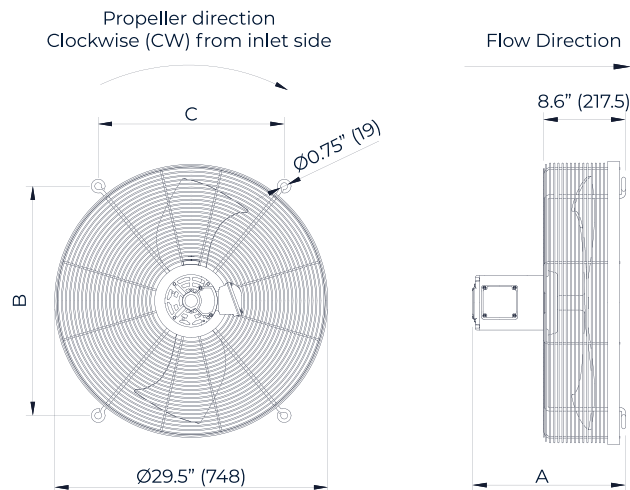
Note: The single-phase model includes a motor-mounted capacitor box.

COOLING FANS CF26

General Characteristics and Requirements

Part Number	Freq. (Hz)	Phase	Voltage (V)	Air Flow CFM (l)	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 4119P09	60	1	115-120 /208-240	8536	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)
CF26 4119P10	60	3	208-240 /460-480	8536	68	4	1750	1/2 (.37kW)	15.3" (389)
CF26 4119P11	60	3	575-600	8536	68	4	1750	1/2 (.37kW)	15.3" (389)

CF26



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

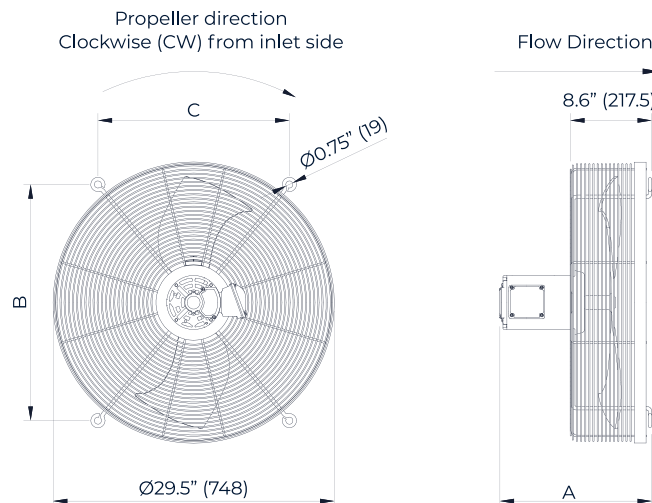
Note: The single-phase model includes a motor-mounted capacitor box.

COOLING FANS CF27

General Characteristics and Requirements

Part Number	Freq. (Hz)	Phase	Voltage (V)	Air Flow CFM (l)	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 4120P09	60	1	115-120 /208-240	7506	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 4120P10	60	3	208-240 /460-480	7506	60	6	1140	1/3 (.25kW)	15.3" (389)
CF27 4120P11	60	3	575-600	7506	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)

CF27



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

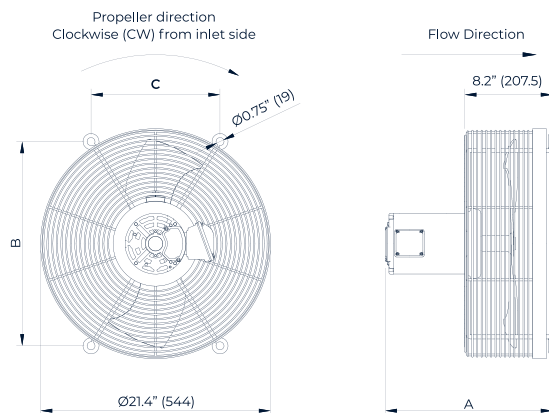
Note: The single-phase model includes a motor-mounted capacitor box.

COOLING FANS CFS19 and CFS19+

STAINLESS STEEL - General Characteristics and Requirements

Part Number	Freq. (Hz)	Phase	Voltage (V)	Air Flow CFM (l)	Sound Pressure dB(A)	Poles	Speed	Power HP (kW)	Dimension "A"
CFS19 4137P01	60	1	115-120 /208-240	2758	51.5	8	850	1/8 (.09kW)	14.9" (379)
CFS19 4137P03	60	1	115-120 /208-240	2936	56	6	1140	1/6 (.12kW)	14.9" (379)
CFS19 4137P06	60	1	115-120 /208-240	4806	63.5	4	1750	1/4 (.19kW)	14.1" (359)
CFS19+ 4138P01	60	1	115-120 /208-240	6230	64	6	1140	1/3 (.25kW)	15.5" (394)
CFS19 4137P02	60	3	208-240 /460-480	2758	51.5	8	850	1/8 (.09kW)	14.9" (379)
CFS19 4137P04	60	3	208-240 /460-480	2936	56	6	1140	1/6 (.12kW)	13.7" (349)
CFS19 4137P05	60	3	575-600	2936	56	6	1140	1/6 (.12kW)	13.7" (349)
CFS19 4137P07	60	3	208-240 /460-480	4806	63.5	4	1750	1/2 (.37kW)	14.9" (379)
CFS19 4137P08	60	3	575-600	4806	63.5	4	1750	1/2 (.37kW)	14.9" (379)
CFS19+ 4138P02	60	3	208-240 /460-480	6230	64	6	1140	1/3 (.25kW)	14.9" (379)
CFS19+ 4138P03	60	3	575-600	6230	64	6	1140	1/3 (.25kW)	14.9" (379)

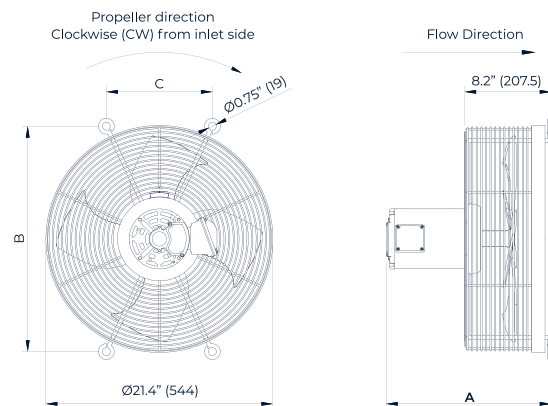
CFS19



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

Note:
The single-phase
model includes a
motor-mounted
capacitor box.

CFS19+



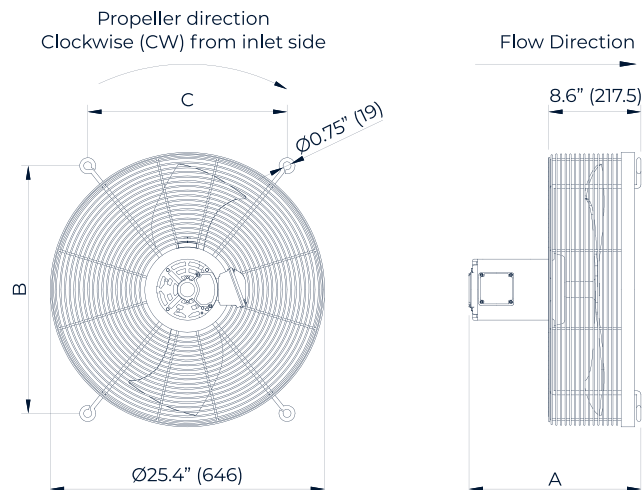
Dimensions	Inch (mm)
Dimension "B"	21.25" (540)
Dimension "C"	10" (254)
Ø External	21.4" (544)
Ø Holes	0.75" (19)

COOLING FANS CFS23

STAINLESS STEEL - General Characteristics and Requirements

Part Number	Freq. (Hz)	Phase	Voltage (V)	Air Flow CFM (l)	Sound Pressure dB(A)	Poles	Speed	Power HP (kW)	Dimension "A"
CFS23 4139P01	60	1	115-120 /208-240	4225	52	8	850	1/8 (.09kW)	15.3" (389)
CFS23 4139P03	60	1	115-120 /208-240	6094	58.5	6	1140	1/6 (.12kW)	15.3" (389)
CFS23 4139P06	60	1	115-120 /208-240	8156	66,5	4	1750	1/2 (.37kW)	15.3" (389)
CFS23 4139P02	60	3	208-240 /460-480	4225	52	8	850	1/8 (.09kW)	15.3" (389)
CFS23 4139P04	60	3	208-240 /460-480	6094	58.5	6	1140	1/6 (.12kW)	14.1" (359)
CFS23 4139P05	60	3	575-600	6094	58.5	6	1140	1/6 (.12kW)	14.1" (359)
CFS23 4139P07	60	3	208-240 /460-480	8156	66.5	4	1750	1/2 (.37kW)	15.3" (389)
CFS23 4139P08	60	3	575-600	8156	66.5	4	1750	1/2 (.37kW)	15.3" (389)

CFS23



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

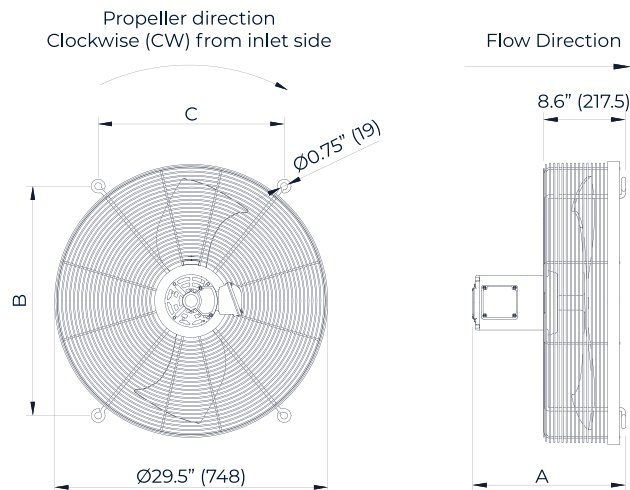
Note: The single-phase model includes a motor-mounted capacitor box.

COOLING FANS CFS26

STAINLESS STEEL - General Characteristics and Requirements

Part Number	Freq. (Hz)	Phase	Voltage (V)	Air Flow CFM (l)	Sound Pressure dB(A)	Poles	Speed	Power HP (kW)	Dimension "A"
CFS26 4141P01	60	1	115-120 /208-240	4010	47.5	8	850	1/8 (.09kW)	15.3" (389)
CFS26 4141P03	60	1	115-120 /208-240	6164	56.5	6	1140	1/6 (.12kW)	15.3" (389)
CFS26 4141P06	60	1	115-120 /208-240	8355	68	4	1750	1/2 (.37kW)	15.3" (389)
CFS26 4141P09	60	1	115-120 /208-240	8536	68	4	1750	1/2 (.37kW)	15.3" (389)
CFS26 4141P02	60	3	208-240 /460-480	4010	47.5	8	850	1/8 (.09kW)	15.3" (389)
CFS26 4141P04	60	3	208-240 /460-480	6164	56.5	6	1140	1/6 (.12kW)	14.1" (359)
CFS26 4141P05	60	3	575-600	6164	56.5	6	1140	1/6 (.12kW)	14.1" (359)
CFS26 4141P07	60	3	208-240 /460-480	8355	68	4	1750	1/2 (.37kW)	15.3" (389)
CFS26 4141P08	60	3	575-600	8355	68	4	1750	1/2 (.37kW)	15.3" (389)
CFS26 4141P10	60	3	208-240 /460-480	8536	68	4	1750	1/2 (.37kW)	15.3" (389)
CFS26 4141P11	60	3	575-600	8536	68	4	1750	1/2 (.37kW)	15.3" (389)

CFS26



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

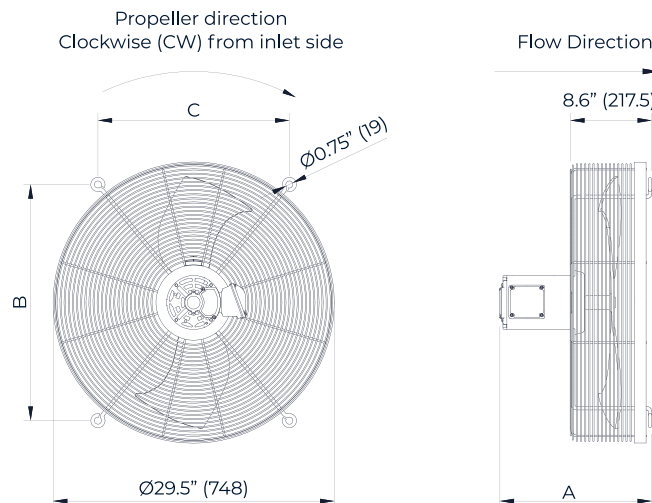
Note: The single-phase model includes a motor-mounted capacitor box.

COOLING FANS CFS27

STAINLESS STEEL - General Characteristics and Requirements

Part Number	Freq. (Hz)	Phase	Voltage (V)	Air Flow CFM (l)	Sound Pressure dB(A)	Poles	Speed	Power HP (kW)	Dimension "A"
CFS27 4142P01	60	1	115-120 /208-240	5419	50.9	8	850	1/8 (.09kW)	15.3" (389)
CFS27 4142P03	60	1	115-120 /208-240	7294	60	6	1140	1/3 (.25kW)	15.9" (404)
CFS27 4142P09	60	1	115-120 /208-240	7506	60	6	1140	1/3 (.25kW)	15.9" (404)
CFS27 4142P06	60	1	115-120 /208-240	10510	71.5	4	1750	1 (.75kW)	15.9" (404)
CFS27 4142P02	60	3	208-240 /460-480	5419	50.9	8	850	1/8 (.09kW)	15.3" (389)
CFS27 4142P04	60	3	208-240 /460-480	7294	60	6	1140	1/3 (.25kW)	15.3" (389)
CFS27 4142P05	60	3	575-600	7294	60	6	1140	1/3 (.25kW)	15.3" (389)
CFS27 4142P10	60	3	208-240 /460-480	7506	60	6	1140	1/3 (.25kW)	15.3" (389)
CFS27 4142P11	60	3	575-600	7506	60	6	1140	1/3 (.25kW)	15.3" (389)
CFS27 4142P07	60	3	208-240 /460-480	10510	71.5	4	1750	1 (.75kW)	15.9" (404)
CFS27 4142P08	60	3	575-600	10510	71.5	4	1750	1 (.75kW)	15.9" (404)

CFS27



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

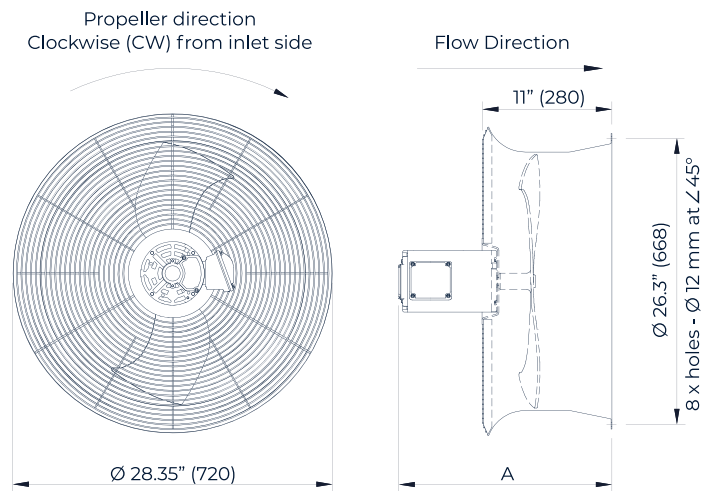
Note: The single-phase model includes a motor-mounted capacitor box.

COOLING FANS BMF23

BELL MOUTH - General Characteristics and Requirements

Part Number	Freq. (Hz)	Phase	Voltage (V)	Air Flow CFM (l)	Sound Pressure dB(A)	Poles	Speed	Power HP (kW)	Dimension "A"
BMF23 4143P06	60	1	115-120 /208-240	10.308	70	4	1750	1/2 (.37kW)	17.8" (452)
BMF23 4143P09	60	1	115-120 /208-240	12.385	72.5	4	1750	1 (.75kW)	18.4" (467)
BMF23 4143P07	60	3	208-240 /460-480	10.308	70	4	1750	1/2 (.37kW)	17.8" (452)
BMF23 4143P08	60	3	575-600	10.308	70	4	1750	1/2 (.37kW)	17.8" (452)
BMF23 4143P10	60	3	208-240 /460-480	12.385	72.5	4	1750	1 (.75kW)	18.4" (467)
BMF23 4143P11	60	3	575-600	12.385	72.5	4	1750	1 (.75kW)	18.4" (467)

BMF23



Dimensions	Inch (mm)
Ø External	28.35" (720)
Ø Holes	0.47" (12)

Note: The single-phase model includes a motor-mounted capacitor box.

ELECTRICAL CONNECTIONS KITS

For Power Transformer Cooling Fan Applications

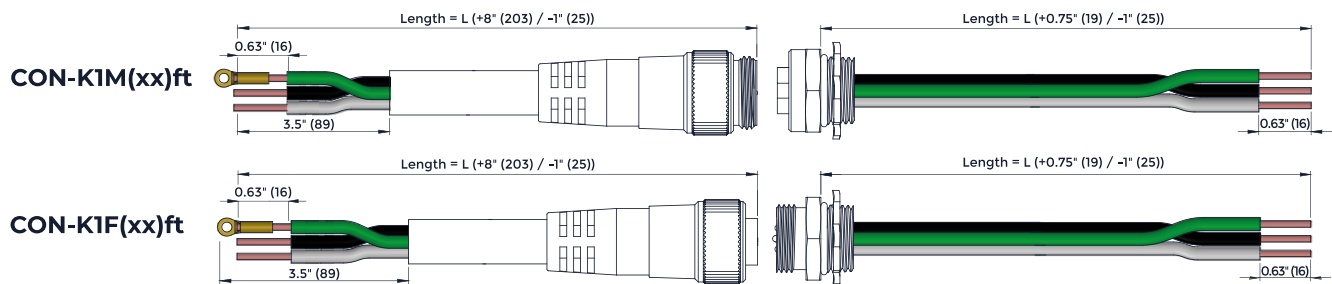
Our **Electrical Connection Kits** are designed to provide a complete, ruggedized **connection solution for cooling fans** used in power transformer applications. Each kit includes a plug-and-cord assembly and its matching receptacle, supplied as a compatible pair as specified in the selection table provided in this catalog.

Designed for demanding industrial and outdoor environments, these kits feature heavy-duty connector construction, **14 AWG** conductors rated for up to **600 V** and **15 A**, outdoor-rated STOOW or SOOW cordage, gold-plated copper-alloy contacts, cast-metal receptacle housings, secure **1/2 in NPT** mounting, and **IP67** ingress protection when properly mated with the corresponding connector.

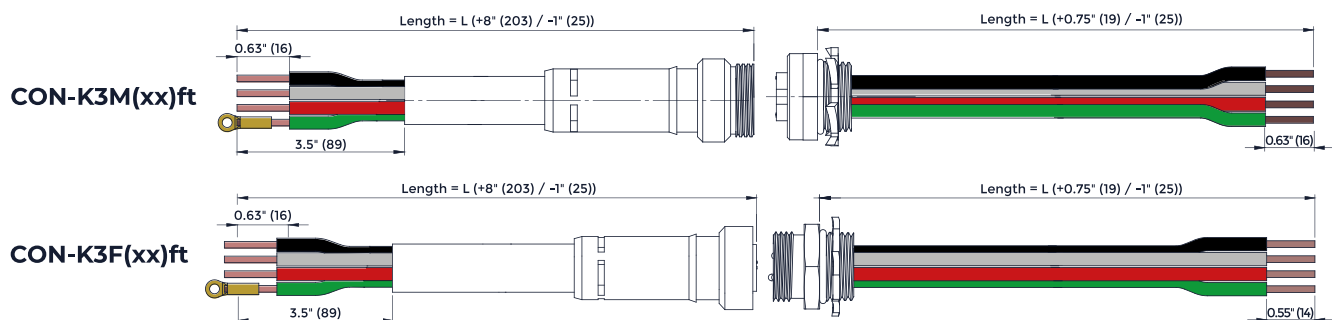
Each kit includes a receptacle with a standard 24 in. lead. The plug-and-cord assembly is available in a range of standard cable lengths, with custom cable lengths available upon request to meet specific application requirements.

Part Number	Phase Usage	PINS	Plug & Cord Description	Receptacle Description	KIT
CON-K1M(xx)ft	1	3	Plug & cord, 3 pins, male, 14 AWG, 600 V, 15 A, length (xx)ft	Receptacle, 3 pins, female, 14 AWG, 600 V, 15 A, metal body, 1/2" NPT, length 24 in	CON-P1M(xx)ft + CON-R1F24in
CON-K1F(xx)ft	1	3	Plug & cord, 3 pins, female, 14 AWG, 600 V, 15 A, length (xx)ft	Receptacle, 3 pins, male, 14 AWG, 600 V, 15 A, metal body, 1/2" NPT, length 24 in	CON-P1F(xx)ft + CON-R1M24in
CON-K3M(xx)ft	3	4	Plug & cord, 4 pins, male, 14 AWG, 600 V, 15 A, length (xx)ft	Receptacle, 4 pins, female, 14 AWG, 600 V, 15 A, metal body, 1/2" NPT, length 24 in	CON-P3M(xx)ft + CON-R3F24in
CON-K3F(xx)ft	3	4	Plug & cord, 4 pins, female, 14 AWG, 600 V, 15 A, length (xx)ft	Receptacle, 4 pins, male, 14 AWG, 600 V, 15 A, metal body, 1/2" NPT, length 24 in	CON-P3F(xx)ft + CON-R3M24in

For single-phase applications



For three-phase applications



PLUG AND CORD

General Characteristics of Electrical Connections

Ruggedized Construction: Heavy-duty mating connector assemblies engineered for dependable performance in demanding industrial and outdoor environments

Contact Reliability: Gold-plated copper-alloy contacts support low contact resistance, stable conductivity, and improved corrosion resistance over time

Electrical Performance: 14 AWG conductors rated up to 600 V and 15 A, depending on application conditions and applicable derating factors

Ingress Protection: IP67 rated when fully mated to a compatible receptacle and properly sealed

Environmental Durability: STOOW or SOOW outdoor-rated cordage provides resistance to moisture, abrasion, oil, and harsh environmental exposure

Cable Length Options: Standard lengths include 6 ft up to 28 ft. Custom lengths are available upon request

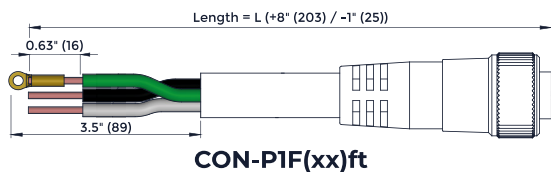
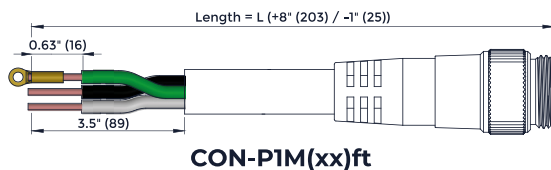
Part Number	Phase Usage	PINS	Component	Description	Dimensions "L"
CON-P1F06ft	1	3	Female	Plug & cord, 3 pins, female, 14 AWG, 600 V, 15 A, length 6 ft	72" (1828)
CON-P1F02m	1	3	Female	Plug & cord, 3 pins, female, 14 AWG, 600 V, 15 A, length 2 m	78.7" (2000)
CON-P1F10ft	1	3	Female	Plug & cord, 3 pins, female, 14 AWG, 600 V, 15 A, length 10 ft	120" (3048)
CON-P1F12ft	1	3	Female	Plug & cord, 3 pins, female, 14 AWG, 600 V, 15 A, length 12 ft	144" (3658)
CON-P1F05m	1	3	Female	Plug & cord, 3 pins, female, 14 AWG, 600 V, 15 A, length 5 m	196.8" (5000)
CON-P1F18ft	1	3	Female	Plug & cord, 3 pins, female, 14 AWG, 600 V, 15 A, length 18 ft	216" (5486)
CON-P1M06ft	1	3	Male	Plug & cord, 3 pins, male, 14 AWG, 600 V, 15 A, length 6 ft	72" (1828)
CON-P1M02m	1	3	Male	Plug & cord, 3 pins, male, 14 AWG, 600 V, 15 A, length 2 m	78.7" (2000)
CON-P1M10ft	1	3	Male	Plug & cord, 3 pins, male, 14 AWG, 600 V, 15 A, length 10 ft	120" (3048)
CON-P1M05m	1	3	Male	Plug & cord, 3 pins, male, 14 AWG, 600 V, 15 A, length 5 m	196.8" (5000)
CON-P1M18ft	1	3	Male	Plug & cord, 3 pins, male, 14 AWG, 600 V, 15 A, length 18 ft	216" (5486)
CON-P1M21ft	1	3	Male	Plug & cord, 3 pins, male, 14 AWG, 600 V, 15 A, length 21 ft	252" (6400)
CON-P3F06ft	3	4	Female	Plug & cord, 4 pins, female, 14 AWG, 600 V, 15 A, length 6 ft	72" (1828)
CON-P3F02m	3	4	Female	Plug & cord, 4 pins, female, 14 AWG, 600 V, 15 A, length 2 m	78.7" (2000)
CON-P3F10ft	3	4	Female	Plug & cord, 4 pins, female, 14 AWG, 600 V, 15 A, length 10 ft	120" (3048)
CON-P3F12ft	3	4	Female	Plug & cord, 4 pins, female, 14 AWG, 600 V, 15 A, length 12 ft	144" (3658)
CON-P3F05m	3	4	Female	Plug & cord, 4 pins, female, 14 AWG, 600 V, 15 A, length 5 m	196.8" (5000)
CON-P3F18ft	3	4	Female	Plug & cord, 4 pins, female, 14 AWG, 600 V, 15 A, length 18 ft	216" (5486)

PLUG AND CORD

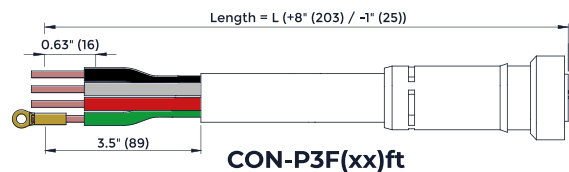
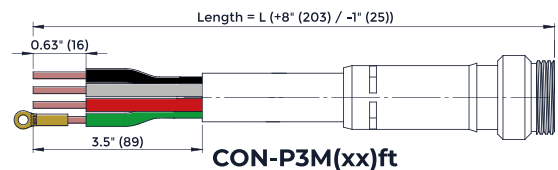
General Characteristics of Electrical Connections

Part Number	Phase Usage	PINS	Component	Description	Dimensions "L"
CON-P3M06ft	3	4	Male	Plug & cord, 4 pins, male, 14 AWG, 600 V, 15 A, length 6 ft	72" (1828)
CON-P3M02m	3	4	Male	Plug & cord, 4 pins, male, 14 AWG, 600 V, 15 A, length 2 m	78.7" (2000)
CON-P3M10ft	3	4	Male	Plug & cord, 4 pins, male, 14 AWG, 600 V, 15 A, length 10 ft	120" (3048)
CON-P3M05m	3	4	Male	Plug & cord, 4 pins, male, 14 AWG, 600 V, 15 A, length 5 m	196.8" (5000)
CON-P3M18ft	3	4	Male	Plug & cord, 4 pins, male, 14 AWG, 600 V, 15 A, length 18 ft	216" (5486)
CON-P3M21ft	3	4	Male	Plug & cord, 4 pins, male, 14 AWG, 600 V, 15 A, length 21 ft	252" (6400)
CON-P3M23ft	3	4	Male	Plug & cord, 4 pins, male, 14 AWG, 600 V, 15 A, length 23 ft	276" (7010)
CON-P3M28ft	3	4	Male	Plug & cord, 4 pins, male, 14 AWG, 600 V, 15 A, length 28 ft	336" (8534)

For single-phase applications



For three-phase applications



RECEPTACLE

General Characteristics of Electrical Connections

Ruggedized Construction: Heavy-duty mating connector assemblies engineered for dependable performance in demanding industrial and outdoor environments

Electrical Performance: 14 AWG conductors rated up to 600V and 15A, depending on application conditions and applicable derating factors

Contact Reliability: Gold-plated copper-alloy contacts support low contact resistance, stable conductivity, and improved corrosion resistance over time

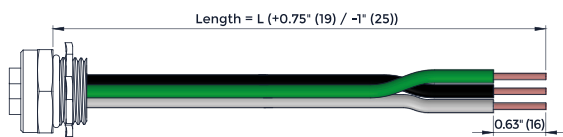
Secure Mounting: Cast-metal housing with a 1/2 in NPT threaded mounting hub for secure, vibration-resistant attachment to a junction box or enclosure

Ingress Protection: IP67 rated when fully mated to a compatible receptacle and properly sealed

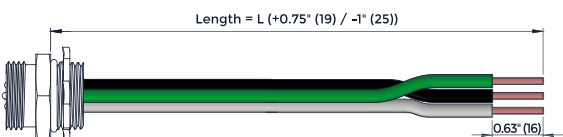
Lead Length Options: Supplied with a standard 24 in lead. Custom lead lengths are available upon request

Part Number	Phase Usage	PINS	Component	Description	Dimensions "L"
CON-R1F06in	1	3	Female	Receptacle, 3 pins, female, 14 AWG, 600 V, 15 A, metal body, 1/2" NPT, length 6 in	6" (152)
CON-R1F12in	1	3	Female	Receptacle, 3 pins, female, 14 AWG, 600 V, 15 A, metal body, 1/2" NPT, with length 12 in	12" (305)
CON-R1F18in	1	3	Female	Receptacle, 3 pins, female, 14 AWG, 600 V, 15 A, metal body, 1/2" NPT, length 18 in	18" (457)
CON-R1F24in	1	3	Female	Receptacle, 3 pins, female, 14 AWG, 600 V, 15 A, metal body, 1/2" NPT, length 24 in	24" (610)
CON-R1F30ft	1	3	Female	Receptacle, 3 pins, female, 14 AWG, 600 V, 15 A, metal body, 1/2" NPT, length 30 ft	360" (9144)
CON-R1M04in	1	3	Male	Receptacle, 3 pins, male, 14 AWG, 600 V, 15 A, metal body, 1/2" NPT, length 4 in	4" (101.6)
CON-R1M24in	1	3	Male	Receptacle, 3 pins, male, 14 AWG, 600 V, 15 A, metal body, 1/2" NPT, length 24 in	24" (610)
CON-R3F06in	3	4	Female	Receptacle, 4 pins, female, 14 AWG, 600 V, 15 A, metal body, 1/2" NPT, length 6 in	6" (152)
CON-R3F12in	3	4	Female	Receptacle, 4 pins, female, 14 AWG, 600 V, 15 A, metal body, 1/2" NPT, length 12 in	12" (305)
CON-R3F24in	3	4	Female	Receptacle, 4 pins, female, 14 AWG, 600 V, 15 A, metal body, 1/2" NPT, length 24 in	24" (610)
CON-R3M04in	3	4	Male	Receptacle, 4 pins, male, 14 AWG, 600 V, 15 A, metal body, 1/2" NPT, length 4 in	4" (101.6)
CON-R3M24in	3	4	Male	Receptacle, 4 pins, male, 14 AWG, 600 V, 15 A, metal body, 1/2" NPT, length 24 in	24" (610)

For single-phase applications

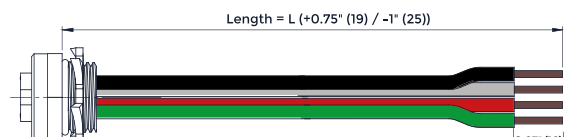


CON-R1F(xx)

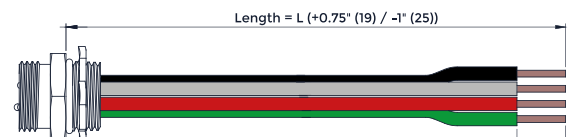


CON-R1M(xx)ft

For three-phase applications

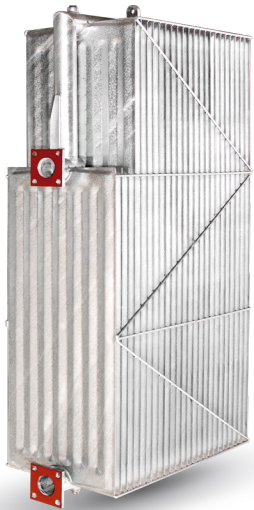


CON-R3F(xx)

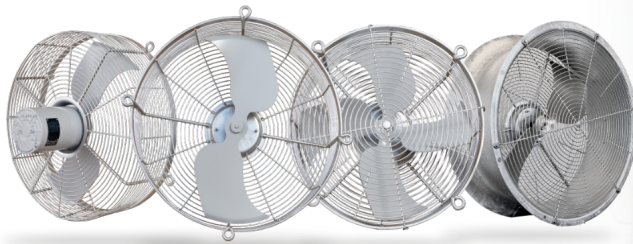


CON-R3M(xx)

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Radiators



Cooling Fans



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