

CONCA REPRESENTACOES PARA AUTOMACAO INDUSTRIAL LTDA

CNPJ: 16.553.670/0001-75

Rodovia Luiz Rosso, 435,

Sala 11b, Sao Luiz Criciúma, SC, CEP 88803471

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ILUSTRÍSSIMA SENHORA, AGENTE DE CONTRATAÇÕES DO SAMAE
CAXIAS DO SUL/RS

**REF: RECURSO ADMINISTRATIVO - EDITAL DE PREGÃO ELETRÔNICO N°
90071/2024**

CONCA REPRESENTAÇÕES PARA AUTOMAÇÃO INDUSTRIAL LTDA, pessoa jurídica de direito privado, inscrita no CNPJ sob o nº 16.553.670/0001-75, sediada à Rodovia Luiz Rosso, 435, Sala 11b, Sao Luiz Criciúma, SC, CEP 88803471, Telefone: (48) 3413-8078, neste ato representada por seu sócio administrador, Sr. ADRIANO DA SILVA GOULART, inscrito no CPF: 059.482.849-05, RG 4060254, vêm, com o presente apresentar, tempestivamente, **RECURSO ADMINISTRATIVO**, contra a sua inabilitação (empresa CONCA REPRES. PARA AUT. IND. LTDA), o que faz com fulcro no Art. 165 Lei 14.133/2021 e suas alterações posteriores, isso pelas razões de fato e de Direito que seguem alinhadas.

I – DO OBJETO DO RECURSO

O presente recurso é baseado na ausência da realização de diligência afim de complementar as informações pertinentes ao item 90 - Conjunto Câmara Fria, causando a desclassificação da participante, ora recorrente.

II – DOS FATOS E DO DIREITO

Participaram da Pregão Eletrônico nº 90071, especialmente no item 90, no modo eletrônico, por meio do sistema Compras GOV, as empresas a seguir classificadas:

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16.553.670/0001-75 ME/EPP Desclassificada	CONCA REPRESENTACOES PARA AUTO...	Valor ofertado (unitário) Valor negociado (unitário)	R\$ 42.500,0000 R\$ 37.000,0000
22.820.216/0001-36 ME/EPP Inabilitada	D. DA SILVA GAUTERIO LTDA	Valor ofertado (unitário) Valor negociado (unitário)	R\$ 43.053,4449 R\$ 43.000,0000
49.075.392/0001-47 ME/EPP Desclassificada	ANTONIO CARLOS POLY LTDA	Valor ofertado (unitário) Valor negociado (unitário)	R\$ 45.000,0000 -
17.451.234/0001-58 ME/EPP Desclassificada	GR COMERCIO LTDA	Valor ofertado (unitário) Valor negociado (unitário)	R\$ 50.000,0000 -
88.644.901/0001-67 Aceita e habilitada	MAGNANI & CIA LTDA	Valor ofertado (unitário) Valor negociado (unitário)	R\$ 60.000,0000 R\$ 43.053,0000
93.941.847/0001-51 ME/EPP	LCM INSTALADORA COMERCIAL LTDA	Valor ofertado (unitário) Valor negociado (unitário)	R\$ 85.000,0000 -

Desta forma, a 1ª colocada, WEST ENGENHARIA LTDA, fora considerada vencedora do certame. No entanto, conforme se desprende no chat do processo e na ata da sessão, fora desclassificada, conforme se demonstra:

16.553.670/0001-75 ME/EPP Desclassificada	CONCA REPRESENTACOES PARA AUTO...
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Proposta desclassificada conforme análise técnica disponível em <https://www.samaecaxias.com.br/Edital/Consultar/72137>

Em consulta ao sítio eletrônico, disponível através do endereço: <<https://www.samaecaxias.com.br/Edital/Consultar/72137>>, é possível identificar o relatório de Análise Técnica, no qual define a desclassificação da seguinte maneira:

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ITEM 90: a proposta apresentada pela licitante CONCA REPRESENTACOES PARA AUTOMACAO INDUSTRIAL LTDA. **NÃO** atende ao exigido no Termo de Referência não foi encontrado no

3

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www.samaecaxias.com.br compras@samaecaxias.com.br



catálogo enviado o modelo apresentado na proposta.

Em ato contínuo, a Agente de Contratações passou a convocar os demais classificados para que apresentassem os documentos pertinentes. No dia 08/08/2024, às 16:33:33, durante a fase de manifestação de recursos, a empresa CONCA manifestou seu interesse em recorrer do lote, com vistas a demonstrar que sua proposta atende ao especificado em edital, além de ser a proposta mais vantajosa ao ente licitante.

III – DAS RAZÕES

Nesse sentido, o Tribunal de Contas da União já decidiu:

*“No curso de procedimentos licitatórios, a Administração Pública deve pautar-se pelo **princípio do formalismo moderado**, que prescreve a adoção de formas simples e suficientes para propiciar adequado grau de certeza, segurança e respeito aos direitos dos administrados, promovendo, assim, a prevalência do conteúdo sobre o formalismo extremo, respeitadas, ainda, as praxes essenciais à proteção das prerrogativas dos administrados.” (TCU no acórdão 357/2015Plenário)*

A decisão do agente de contratações, contraria o Acórdão nº 2.049/2023-Plenário, conforme consta o voto:

“11. A conduta do pregoeiro em inabilitar a representante também violou os seguintes precedentes jurisprudenciais desta Corte de Contas:

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"A vedação à inclusão de novo documento, prevista no art. 43, § 3º, da Lei 8.666/1993 e no art. 64 da Lei 14.133/2021 (nova Lei de Licitações) não alcança documento ausente, comprobatório de condição atendida pelo licitante quando apresentou sua proposta, que não foi juntado com os demais comprovantes de habilitação e da proposta, por equívoco ou falha, o qual deverá ser solicitado e avaliado pelo pregoeiro" (grifou-se) - Acórdão 1211/2021-TCU-Plenário.

[...]

13. Como apontou a unidade técnica: 'admitir a juntada de documentos que apenas venham a atestar condição pré-existente à abertura da sessão pública do certame não fere os princípios da isonomia e igualdade entre as licitantes, e o oposto, ou seja, **a desclassificação do licitante, sem que lhe seja conferida oportunidade para sanear os seus documentos de habilitação e/ou proposta, resulta em objetivo dissociado do interesse público, com a prevalência do processo (meio) sobre o resultado almejado (fim).**'."

A lei 14.133/21 traz na sua redação:

*"Art. 64. Após a entrega dos documentos para habilitação, não será permitida a substituição ou a apresentação de novos documentos, salvo em sede de **diligência**, para:*

I - complementação de informações acerca dos documentos já apresentados pelos licitantes e desde que necessária para apurar fatos existentes à época da abertura do certame;"

Ou seja, é papel do Agente de Contratações instituir a diligência nos processos de licitação para promover mais transparência e obter a proposta mais vantajosa a administração.

Nas palavras de Ivo Ferreira de Oliveira, que elucida com a clareza que lhe é peculiar, a diligência visa:

"(...) oferecer meios para que a Comissão de Licitação ou a Autoridade Superior possa promover inquirições, vistorias, exames pertinentes a questões que eventualmente surjam e até autorizar a juntada de documentos, permitindo à Comissão ou à Autoridade julgar corretamente o certame, graças aos esclarecimentos que a diligência lhe propiciou, mas sem perder de vista os princípios constitucionais e legais que norteiam o processo licitatório." (Ivo Ferreira de Oliveira, Diligências nas Licitações Públicas, Curitiba, JM Editora, 2001, p. 24.)

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Outro ponto polêmico na redação do dispositivo em xeque diz respeito a “faculdade” da Administração realizar diligência. Não há discricionariedade da Administração optar ou não na realização de diligência, **sempre que houver dúvidas sobre alguma informação a diligência torna-se obrigatória**. Com brilhantismo e clareza Marçal Justen Filho leciona:

“A realização da diligência não é uma simples “faculdade” da Administração, a ser exercitada segundo juízo de conveniência e oportunidade. A relevância dos interesses envolvidos conduz à configuração da diligência como um poder-dever da autoridade julgadora. Se houver dúvida ou controvérsia sobre fatos relevantes para a decisão, reputando-se insuficiente a documentação apresentada, é dever da autoridade julgadora adotar as providências apropriadas para esclarecer os fatos. Se a dúvida for sanável por meio de diligência será obrigatória a sua realização.”(Marçal Justen Filho, Comentários à Lei de Licitação e Contratos Administrativos, 16ª ed, Revista dos Tribunais, São Paulo, 2014, pág. 804.)

Sobre o caso em epígrafe, o Agente de Contratações não procedeu com a Diligência do caso, somente desclassificou a empresa CONCA REPRESENTAÇÕES PARA AUTOMAÇÃO INDUSTRIAL LTDA.

Diante da fundamentação apresentada, resta claro e evidente que a promoção da diligência no caso de dúvidas em relação ao teor do catálogo, deveria ser obrigatória.

Abaixo demonstraremos que o modelo ofertado atende as especificações do edital:

Modelo orçado CVE40U1262800, atende as características propostas no edital, onde recomendava o modelo 35356 da Legrand.

O modelo ofertado (CVE40U1262800) possui mesmo peso, dimensões praticamente iguais, mesma tensão de alimentação, e capacidade de refrigeração um pouco maior, 4050W, com um consumo ligeiramente menor de corrente.

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Figura 1 MODELO REFERENCIA

Climatizadores verticais				
Referências	353 47	353 49	353 50	353 56
Potência de refrigeração (W) L35L35/EN 814	640	1250	1600	3850
L35L50/EN 814	470	910	1230	2870
Tensão (V/fase)	230/1	230/1	230/1	400/3
Frequência (Hz)	50/60	50/60	50/60	50/60
Potência (W)	470	760	940	2050
Corrente (A) funcionamento	2,1	3,8	5,3	3,6
Corrente (A) arranque	8,1	11	18	18
Vazão circuito de ar interno (m ³ /h)	330	570	570	1450
Vazão circuito de ar externo (m ³ /h)	570	860	1050	1450
Carga gás refrigeração R134a (kg)	0,2	0,38	0,45	1,05
IP circuito interno	54	54	54	54
IP circuito externo	24	24	24	24
Nível sonoro (dB)	65	65	65	70
Dim.: A x L x P (mm)	605 x 315 x 209	999 x 406 x 237	999 x 406 x 237	1270 x 500 x 325
Massa (kg)	21	38	40	85

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Figura 2 MODELO ORÇADO

CODE		M.U.	CVE40U12628000	
UL Listed			✓	
Rated Voltage		V, ~	400,3	460,3
Nominal Frequency		Hz	50	60
Cooling Capacity	L35L35	W	--	4050
Cooling Capacity	L35L50	W	--	3260
Power Consumption	L35L50	W	--	1840
Current Consumption	CE, L35L35	A	2,8	3,1
	UL, L45L55	A	--	5,26
Start-up Current	CE	A	19	
Internal operating temperatures	min/max	°C	+25 / +45	
External operating temperatures	min/max	°C	+20 / +55	
Internal Circuit Protection Degree	CE	IP	54	
	UL	Type	--	12
External Sound Pressure		dB(A)	67	
Height (A)		mm	1219	
Width (B)		mm	514	
Depth (C)		mm	347	
Weight		kg	85	

No anexo I segue catálogo completo do modelo ofertado, contendo todas as informações pertinentes a avaliação técnica.

III.I – A posição da jurisprudência e da doutrina

A Lei 14.133/2021, no seu art. 5º, estabelece:

“Art. 5º Na aplicação desta Lei, serão observados os princípios da legalidade, da impessoalidade, da moralidade, da publicidade, da eficiência, do interesse público, da probidade administrativa, da igualdade, do planejamento, da transparência, da eficácia, da

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segregação de funções, da motivação, da vinculação ao edital, do julgamento objetivo, da segurança jurídica, da razoabilidade, da competitividade, da proporcionalidade, da celeridade, da economicidade e do desenvolvimento nacional sustentável, assim como as disposições do Decreto-Lei nº 4.657, de 4 de setembro de 1942 (Lei de Introdução às Normas do Direito Brasileiro).”

Segundo a doutrina e o princípio da Vinculação ao Edital, a CONCA não deixou de apresentar os documentos exigidos no certame.

O que não afasta o que foi estabelecido, pelo contrário, demonstra que atentou-se ao edital e apresentou os documentos necessários a sua plena participação.

O que ocorre é uma ausência de informação no catálogo técnico do produto ofertado, no qual a equipe técnica comenta “não foi encontrado no catalogo o produto ofertado.”

O que ocorre neste recurso e que poderia ser objeto da própria administração, é uma complementação das informações, que embora faltantes, são pré-existentes ao procedimento licitatório, em sede de diligência.

O Acórdão 1211/2021-TCU-Plenário, trás o entendimento:

“O pregoeiro, durante as fases de julgamento das propostas e/ou habilitação, deve sanear eventuais erros ou falhas que não alterem a substância das propostas, dos documentos e sua validade jurídica, mediante decisão fundamentada, registrada em ata e acessível aos licitantes (...).”

Portanto, resta claro e evidente que a apresentação da diligência, que complementa as informações pré existentes do procedimento licitatório, é fundamentada e está de acordo com as mais recentes práticas da administração pública e da corte de contas.

Quanto ao princípio da economicidade vale salientar a diferença de valor entre a oferta da empresa CONCA e da atual classificada, MAGNANI & CIA LTDA:

Item	Razão Social	Situação	Quantidade	Valor Unitário	Valor Total	Diferença
90	CONCA REPRESENTAÇÕES PARA AUTOMAÇÃO INDUSTRIAL LTDA	Desclassificada	2	R\$ 37.000,00	R\$ 74.000,00	0,00%
90	MAGNANI & CIA LTDA	Aceita e Habilitada	2	R\$ 43.053,00	R\$ 86.106,00	14,06%

Conforme demonstrado, há uma economicidade de R\$ 12.106,00 para o item, caso seja reformada a decisão de desclassificação da empresa CONCA,

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representando uma economia aos cofres públicos, bem como também o pleno atendimento a necessidade do órgão licitante.

III – DO PEDIDO:

Face ao acima exposto, tendo em vista o esclarecimento dos fatos e do direito, resta comprovado que a empresa CONCA REPRESENTAÇÃO PARA AUTOMAÇÃO INDUSTRIAL LTDA, encontra-se com a documentação de habilitação em acordo com o edital, devendo reformar a decisão de inabilitação.

Isto posto, requer que o Recurso apresentado pela empresa seja julgado **PROCEDENTE**, reformando assim a decisão tomada na sessão de abertura, declarando como vencedor do item 90 do certame a empresa **CONCA REP. P. AUTOMAÇÃO IND. LTDA.**

Criciúma, 13 de Agosto de 2024

ADRIANO DA SILVA GOULART

CPF: 059.482.849-05 RG 4060254

(Representante legal da empresa CONCA REP. P. AUTOMAÇÃO IND. LTDA)



cosmotec

your cooling solutions

Enclosure Thermal Management



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your cooling solutions

The history of **cosmotec** began in 1989, in Peschiera del Garda, from the dream of people who strongly believed in their experience in industrial air conditioning and in sharing it with their customers.

Shortly after the production of the first units and the beginning of export worldwide, the need to expand the product range to meet all the Thermal Management needs opened up; this led to the birth of the industrial refrigeration line, a major challenge that saw **cosmotec** competing on an equal footing with important players in the industry, asserting what is its most distinctive trait: working closely with customers, providing products and solutions that can solve their needs.

The approach chosen to meet market demands is lean and effective, a typical example of Italian flexibility, coupled with the solidity represented by the German STULZ group, which **cosmotec** joined in 2001. With STULZ, the product lines expanded to include telecommunications and new ranges of chillers with increasingly higher capacities.

The speed of product renewal grew dramatically, and to keep up with the needs of the markets, **cosmotec** decided to invest in employee training, production quality and efficiency, product engineering, and, in addition, expanded its production area, with new lines and a state-of-the-art Climatic Chamber.

The company's efforts are currently aimed at maintaining the efficiency and flexibility of its product ranges at the highest levels: the "Innovation Center" was created with this goal, in order to allow the development and testing of new technologies that meet the needs of sustainability and efficiency required by today's market.

*All the achievements **cosmotec** has made so far and those to come have been possible thanks to the commitment, ideas and work of the people who make it up and who help make it grow every day*



Foundation Year

1989



Employees

300



Worldwide partners

130



Units per year

10.000

Our Values

The key to **cosmotec's** success lies in its continuous **innovation**, ability and **flexibility** in handling each project, from its conception developed in cooperation with the customer, through to installation, maintenance and service, each time studying specific solutions to the needs of each individual plant and application.

Enthusiasm, the drive to strive for excellence and for new solutions in step with customer demands, attention to **workers' health and safety** and to the **environment**, transparency and acting responsibly: these are the values by which **cosmotec** is inspired by and by which it is guided every day.

Through offering highly specialized services and products in high-tech fields, we contribute to the growth of the company team and our clients.



Sustainability and Environmental Responsibility

We strive to reduce the company's environmental footprint and handle product design, development and production in a way that minimises environmental impact throughout its life cycle.



People and Work Ethics

We are committed to empowering people, identifying and developing talents and creating an environment based on trust, respect and personal well-being. We base all our internal and external relationships on transparency and fairness. We work daily to ensure that all employees work under the safest conditions.



Reliability

We conceive, design, develop and propose our solutions and services in such a way as to ensure continuity of service over time.



Innovation

We are committed to introducing new ways of designing, producing and selling goods or services, pursuing the continuous improvement of our offer.



Focus on Customer and Quality

We offer scalable solutions and share our expertise by gathering, intercepting and anticipating customers' implicit or expressed needs and market trends.

The Value of People

The company's most valuable resource is undoubtedly its people. They are the strength for the continuous development of activities and the achievement of success.

A highly specialised team, capable of proposing and implementing solutions with the highest technological level for the industrial sector, and able to fulfil the specific requirements of each individual customer, following them through every stage of the project and beyond.



Making cooling greener, one step at a time

cosmotec strongly believes in the duty to contribute to decreasing and improve the environmental impacts associated with its activities and products.

In the Company

One of **cosmotec's** main goals is the continuous improvement of environmental performance, to be achieved both through a reduction in wastage of resources (such as raw materials and energy) and through greater control of environmental costs, related to the treatment (disposal/recovery) of waste. With that in mind, the company has achieved the following certifications:



ISO 14001 (Environmental Management System): ensuring a business model based on sustainability and reducing the environmental impact of products and the entire production process in order to provide customers with a service that meets current environmental standards. All activities that may affect the environment are assessed and controlled in accordance with current regulations.



ISO 50001 (Energy Management System): It aims to improve the company's energy performance, such as reducing energy consumption and related costs; reducing CO2 emissions.

Furthermore, the focus on environmental issues led to the decision to adopt a policy of reducing the use of paper documentation.

Paperless Documentation

our units are accompanied by the instructions for safe use and CE declaration, while the rest of the documentation will be available on Adam, our free App, downloadable on our website.



In the Products

To fight climate change and reduce greenhouse gas emissions, specific regulations have been introduced, including Regulation No. 517/2014, which imposes the phase-down of HFCs.

cosmotec has decided to use low GWP (Global Warming Potential) gases, which significantly reduce the carbon footprint and environmental impact of our products.

Improved performance and reduced power consumption for high energy efficiency.

EER (Energy Efficiency Ratio): our air conditioners boast the best values in the business

SEPR (Seasonal Energy Performance Ratio): chillers in the **cosmotec** line comply with the Ecodesign regulation and achieve high SEPR values

Service

The knowledge we have acquired developing industrial air conditioning and refrigeration systems, allows us to offer our customers a complete service, from the design of the systems to the supply of the machines, from the Start Up phase to the ordinary and extraordinary maintenance.

The level of complexity and precision required in today's production processes require a high level of control and reliability. The management of temperatures and heat disposal is one of the critical issues to be addressed, considering the uniqueness of each process and application.

Our technical assistance is also able to guarantee a remote assistance service: **cosmotec**, always attentive to the needs of its customers, has developed and launched on the market a range of technologically advanced controllers that guarantee connectivity wherever you are. And thanks to connectivity, our support team can be at your side in real time, wherever you are, and give you advice and suggestions on how to improve performance, solve any problems and check the operation of your units.

Please visit our dedicated website, www.cosmotecservice.com, to discover our offer and find the contacts of our international service network!



Advice and Planning

Support from the planning phase through to installation and start-up of the system



Positioning and Installation

We guarantee the correct operation of equipment and related systems



Startup

We guarantee perfect commissioning and start-up of the entire system, with customised solutions



Maintenance contracts

A preventive and routine maintenance plan, ensuring constant plant efficiency



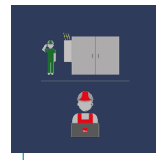
Availability

With guaranteed response times



Training

Programme of high-quality training courses with technical content



Remote Assistance

At your side in real time, with the help of augmented reality devices



Spare Parts

Supply of spare parts and repair service both in-house and on site



Selection & Monitoring Softwares

The correct cooling of industrial plants is vital for the operation of companies, as is the ability to monitor, even remotely, that all processes are running smoothly.

In order to be at your side at all times, from planning (Web Select) to monitoring (Adam), we have developed two software packages, which we make available to you free of charge.



Who's Adam?

This is the new app that records your **cosmotec** units and imports them onto your mobile devices. Thanks to Adam you will have access to our entire sales and technical documentation.

It's also possible to organise, monitor and report faults for for all **cosmotec** units equipped with a SEC.blue electronic controller or integrated Ethernet port.

Why using Adam?

So you always have all the information at your fingertips, reducing the time needed for commissioning, maintenance, analysis and troubleshooting.

Downloading Adam

- via smartphone or tablet iOS e Android (Google Play Services requires for geolocalization & OCR): download at <https://app.stulz.it>
- With a PC running Windows (in the versions currently supported by Microsoft on x86-64 architecture) download at <https://app.stulz.it/Adam.msi>

WEB SELECT



Helping you choose

Designing your own air conditioning system for industrial applications can be particularly complex, due to the many variables that need to be considered in the choice. To enable you to start planning independently, we have developed Web Select, a web-based software that will guide you in making the best choice for your application's air conditioning.

Web Select includes the following **cosmotec** ranges:

- Air Conditioners
- Heat Exchangers
- Wall and roof fileter fans

How to use Web Select

To use our software, you do not need to install any software, just go to

www.cosmotec.it/software/cosmotec-web-select/ and follow the instructions. Available for Explorer 10, Chrome, Firefox

Credentials are required for access, which you can obtain free of charge by writing to setup.cva@stulz.it

Products Certifications

In a globalised and competitive market it is essential to provide the correct certification required in each country to which the product is exported.

Having the CE mark is not sufficient for export in USA, Canada and the Eurasian countries. To this end, **cosmotec** products have **specific certifications** which guarantee **high safety and quality standards**, adding brand value and **reducing type-approval and installation costs** along with the time required to enter the market.



CE Certification
certifies that the product meets EU safety requirements



Certification UKCA
a conformity mark that indicates conformity with the applicable requirements for products sold **within Great Britain**



UL Listed Certification
certifies that the product complies with UL requirements and is related to the finished product and complete components, saving time and money on subsequent approvals of the electrical panel



UL Recognized Certification
certifies that the product complies with the requirements of UL, but is related to components that form the basic elements of larger products or systems



UL Listed FTTA Certification
Certification allows products to be installed without any further assessment regarding the Type protection approval process



CSA Certification
The Canadian Standard Association is the Canadian counterpart of the US body UL. It acts as a certification body for the compliance of safety components with Canadian standards



EAC Certification
Attestation certifying the conformity of a product to the requirements established by one or more Technical Regulations of the Customs Union, consisting of Russia, Belarus and Kazakhstan



	Declaration of Conformity EU + UKCA	Certificate of Compliance UL	Certificate of Compliance UL	Certificate of Compliance UL FTTA	Certificate of Compliance CSA	Certificate EAC
Protherm III CVE/ CVO	✓	✓				✓
Compact Protherm CNE/CNO	✓	✓				✓
SlimIn III CDE	✓	✓				✓
FlexIn CDI	✓	✓				✓
Top II ETE	✓		✓			✓
Module EVE	✓					✓
Kryos3 GS	✓		✓	✓	✓	✓
KryosROOF TS	✓		✓	✓		✓



Industrial air conditioners for electrical panels

Why cool an electrical panel?

The cooling of electrical panels or cabinets is essential in any application to ensure the proper functioning of internal components and production processes, **preventing and avoiding production and/or distribution downtime.**

cosmotec products offer protection against:

- the formation of high temperature and high humidity and consequently overheating and condensation
- the infiltration of dust and/or sand, corrosive agents, etc.

to prevent component wear, derating and failure, thus ensuring reliability, safety and efficiency.

When cool an electrical panel?

Air conditioners for electrical cabinets exploit the principle of a refrigerated circuit using R134a (HFC) refrigerant gas, guarantee precise temperature control and offer simple installation on the electrical panel. Air conditioners are mainly recommended if:

- the outside air has a higher temperature value than the inside air
- the ambient air is extremely oily or dusty
- outside air and humidity must not enter the electrical cabinet
- no hydraulic circuit is to be provided

Main factors influencing the choice of air conditioning type

The choice of air conditioning solution is mainly determined by the following factors:

- **application:** Indoor, cabinet positioned inside a building, or Outdoor, cabinet positioned in an outdoor environment
- **air quality:** presence of humidity, dust, oils
- **reference temperatures:** internal (T_i) and external (T_e) and the ratio between them ($T_i > T_e$, $T_i < T_e$)
- **presence of chilled water**





Protherm

Wall mounted air conditioner
 Application: Indoor (CVE) Outdoor (CVO)
 External /semi-flush (CVE07-15-500S)
 mounting

pag. 16



Compact Protherm

Wall mounted air conditioner
 Application: Indoor (CNE) Outdoor (CNO)
 External mounting on cabinets with
 reduced depthw

pag. 28



SlimIn

Wall mounted air conditioner
 Application: Indoor
 Flush, semi-flush, external mounting
 For the conditioning of electrical panels
 where space is at a premium

pag. 33



FlexIn

Inverter air conditioner
 Application: Indoor
 Flush, semi-flush, external mounting
 Higher efficiency and high savings

pag. 38

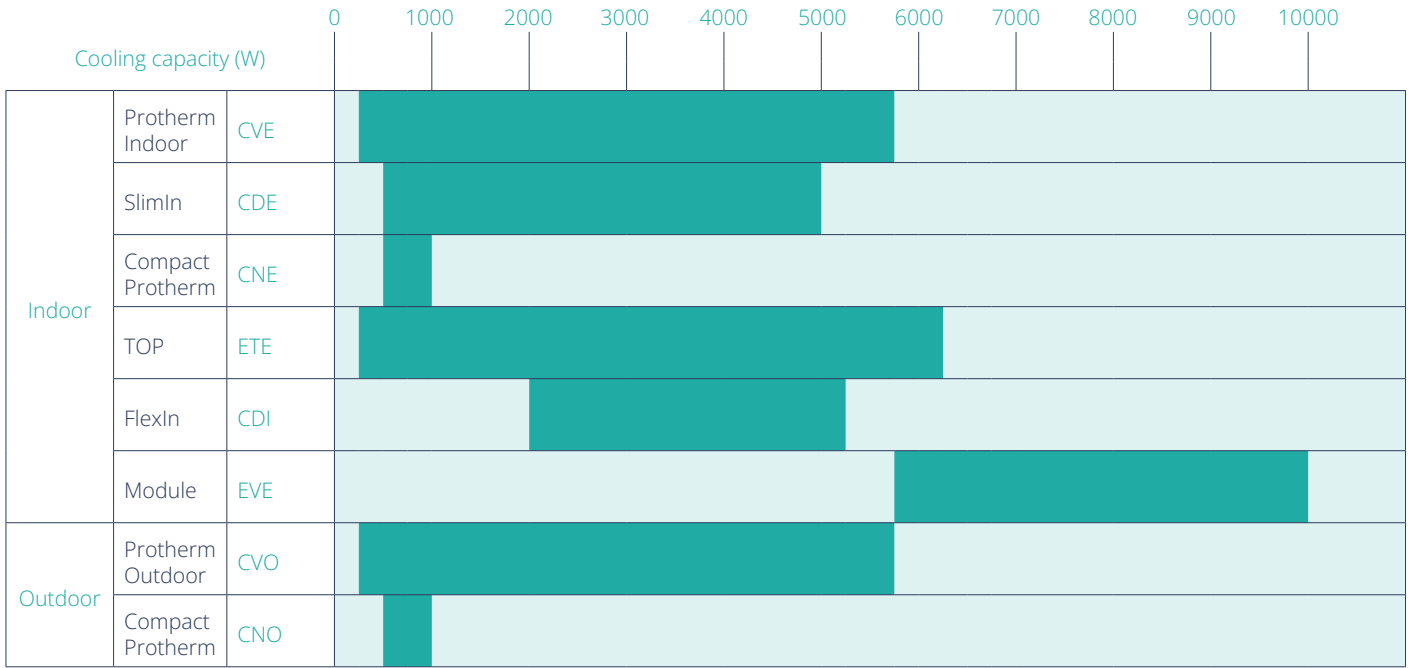


Module

Wall mounted air conditioner
 Application: Indoor
 External mounting
 For the cooling of modular enclosures
 with high thermal loads

pag. 41









Overview Air Conditioners Cooling Capacity



Condensate Evaporator

Device without any power consumption for the elimination or reduction of condensation produced by the air conditioner. Operating principle: Condensate falls inside a container into which the compressor's hot tube is passed, evaporating the liquid. The vapour formed is transferred to the outside environment through the air flow of the condenser fan.



	CVE03	CVE05	CVE07	CVE08	CVE11	CVE15	CVE20	CVE25	CVE30	CVE40	CVE60
	CVO05	CVO08	CVO11	CVO15	CVO20	CVO40	CVO60				
	CDE05	CDE10	CDE14	CDE20	CDE30	CDE40					
	ETE03	ETE06	ETE09	ETE14	ETE20	ETE28	ETE41	ETE60			
	CNE04	CNE07	CNE10		CNO04	CNO07	CNO10		CDI20	CDI26	CDI40
	EVE60	EVE80	EVEA0								

Legend: Present  Not available 

Overview Air Conditioners Controllers

	CVE03	CVE05	CVE07	CVE08	CVE11	CVE15	CVE20	CVE25	CVE30	CVE40	CVE60
	TM	XCB + Display									
	CVO05	CVO08	CVO11	CVO15	CVO20	CVO40	CVO60				
	XCB + Display										
	CDE05	CDE10	CDE14	CDE20	CDE30	CDE40					
	XCB + Display										
	ETE03	ETE06	ETE09	ETE14	ETE20	ETE28	ETE41	ETE60			
	TM	TE									
	CNE04	CNE07	CNE10		CNO04	CNO07	CNO10		CDI20	CDI26	CDI40
	XCB + Display				XCB + Display				Scheda inverter + Display		
	EVE60	EVE80	EVEA0								
	TE										

Legenda:

- Mechanical Thermostat
- Electronic Thermostat
- Electronic Board XCB + Display
- Electronic Board C100/C110 + Display
- Inverter Electronic Board + Display

Mechanical Thermostat

gas-charged. It has a bulb positioned at the entry point of the air intake from the cabinet and detects and controls the temperature, giving consent to the devices connected to it.

Electric Thermostat

microprocessor electronic controller for the management of the cooling function. Displays the operating statuses and any alarms and gives the possibility of modifying the user parameters. Presence of an alarm contact and remote control/open door

Electronic board XCB

installed in the internal compartment, offers adequate protection against external agents (dust, oils) in the environment. Mode of operation: direct expansion cooling and heating, for units equipped with electrical resistance

- Display of operating statuses and alarms and possibility of changing user parameters
- Presence of a changeover alarm contact (NO and NC) and a remote control/open door
- Test mode function for quick and easy component start-up and verification
- SEM and SEM2 functions for reducing power consumption by managing the evaporator fan
- Management of the condenser fan if the application requires low noise values
- Possibility of system redundancy via sequencing function and communication between two conditioners
- Elimination of hot spots with the possibility of installing a remote probe
- Remote communication via built-in RS485 serial port and Modbus RTU protocol

Electronic board C100/C110

installed in the internal compartment, offers adequate protection against external agents (dust, oil) in the environment

- Modes of operation: direct expansion cooling, Free Cooling, via modulation of the damper integrated in the air conditioner, emergency ventilation when the main power supply is not operating (if present), heating, for units equipped with an electric heater.
- Display of operating statuses and alarms and possibility of changing user parameters
- Signals: two alarm contacts, classified as warning and general, and two digital inputs to send remote or smoke-fire signals via external devices.
- Regulation: variable compressor speed 48Vdc (PRT20), condenser fan speed in relation to outside temperature in relation to the external operating temperature

Inverter Electronic Board

installed in the interior compartment, it offers adequate protection against external agents (dust, oils) in the environment

- Mode of operation: direct expansion cooling with continuous variation of the cooling capacity according to the actual heat load and optimising operation under all operating conditions.
- Display of operating statuses and alarms and possibility of changing user parameters
- Presence of a switch alarm contact (NO and NC) and a remote control/open door
- Test mode function for quick and easy component start-up and verification
- Intake or outlet internal temperature reading
- Elimination of hot spots with the possibility of installing a remote probe
- Temperature control with 0.2°C accuracy under stable load conditions
- Possibility of system redundancy via sequencing function and communication between three conditioners
- Remote communication via built-in Ethernet port and HTTP, SNMP, and TCP-IP protocols

Protherm

Indoor & Outdoor

Target: Savings and Efficiency

The increasing need to reduce consumption has forced the development of industrial air conditioning systems strongly oriented to **maximum efficiency**, while maintaining **robustness**, **reliability** and **compactness**, all characteristics that can be found in Protherm air conditioners.

Protherm offer a wide range of air conditioners to meet different customer requirements, both for cooling of electrical panels for **industrial applications** (CVE) and for the air conditioning of shelters/cabinets for **telecommunications, power distribution, etc** (CVO).

The CVE air conditioners, **for indoor applications**, are characterised by a display installed on the panel for the visualisation of information (except CVE03) and by the condensate dissipator (from CVE11 and CVE07).

The CVO air conditioners, suitable for outdoor applications, are able to operate at **low external temperatures**, even below -20°C ; moreover the display is supplied as an accessory, in order to avoid vandalism or modifications, and can be integrated with an electric resistance for the heating function, when necessary (from CVO11).

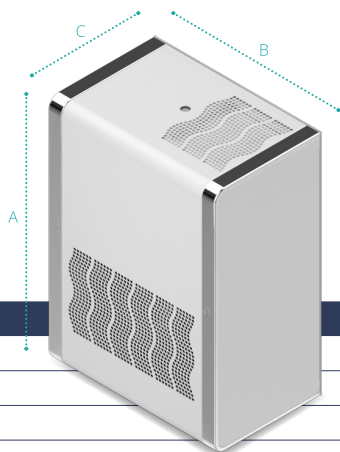
Energy efficiency at the core

SEM (Smart Energy Management) and SEM2 logics provide **energy savings of up to 23%**, combined with an increase in the cooling power of the air conditioner. Thanks to the micro-channel coil of the Protherm air conditioners, which is thinner than traditional coils, there is a **significant reduction in pressure drops** and a greater air flow rate on the condenser, with a consequent reduction in power consumption. Furthermore, thanks to the management of the evaporator fan by the XCB electronic control, it is possible to achieve a **significant reduction in power consumption**.

Main Features

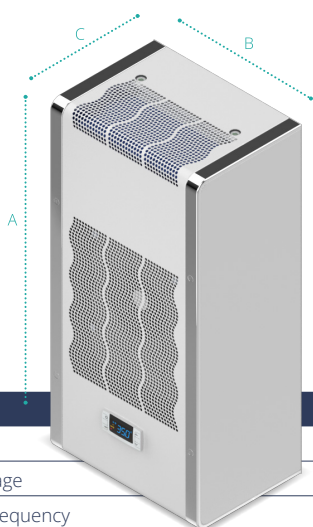
- Cooling Capacity : 360-5600 W CVE / 500-4000W CVO
- CVE (07/15/25)00S semi-flush mounting option
- Electronic Board XCB + display (except CVE03 - display as accessory on CVO)
- Certifications: CE, UL Listed, EAC
- Sequencing and Modbus (with specific Accessories)
- Condensate dissipator available starting from CVE11 and on CVE0700S
- Quick connections (CE version, except CVE03)
- μ channel condenser (from CVE/CVO11 + CVE0700S)
- General alarm and remote control contacts (except CVE03)
- NEMA 4/4x protection degree for CVO UL units
- Operation down to -40°C ambient temperature for CVO UL Listed units
- Protective treatment on the condenser, standard for CVO UL Listed units





CVE03

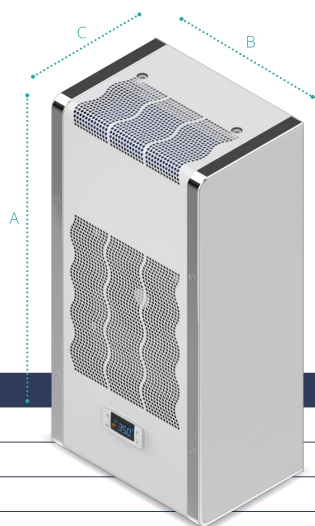
CODE		M.U.	CVE03U12200000		CVE03U12030000
UL Listed			✓		✓
Rated Voltage		V, ~	230, 1		115, 1
Nominal Frequency		Hz	50	60	60
Cooling Capacity	L35L35	W	--	380	380
Cooling Capacity	L35L50	W	--	240	240
Power Consumption	L35L50	W	--	220	220
Current Compsuntion	CE, L35L35	A	1,3	1,4	--
	UL,45L55	A	--	1,7	2,9
Start.-up Current	CE	A	9,8		--
Internal operating temperatures	min/max	°C	+25 / +45		+25 / +45
External operating temperatures	min/max	°C	+20 / +55		+20 / +55
Internal Circuit Protection Degree	CE	IP	54		--
	UL	Type	--	12	12
External Sound Pressure		dB(A)	52		52
Height (A)		mm	443		443
Width (B)		mm	324,5		324,5
Depth (C)		mm	206		206
Weight		kg	17		17



CVE05

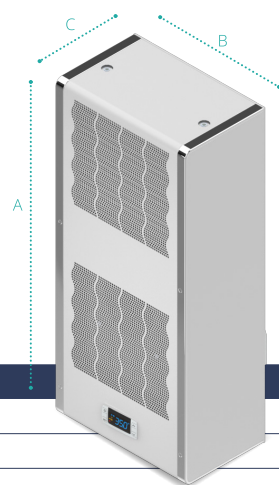
CODE		M.U.	CVE05U12208000		CVE05U12038000
UL Listed			✓		✓
Rated Voltage		V, ~	230, 1		115, 1
Nominal Frequency		Hz	50	60	60
Cooling Capacity	L35L35	W	--	580	580
Cooling Capacity	L35L50	W	--	430	430
Power Consumption	L35L50	W	--	390	390
Current Compsuntion	CE, L35L35	A	1,4	1,5	--
	UL, L45L55	A	--	21	4,7
Start.-up Current	CE	A	7,5		--
Internal operating temperatures	min/max	°C	+25 / +45		+25 / +45
External operating temperatures	min/max	°C	+20 / +55		+20 / +55
Internal Circuit Protection Degree	CE	IP	54		--
	UL	Type	--	12	12
External Sound Pressure		dB(A)	60		60
Height (A)		mm	642		642
Width (B)		mm	314,5		314,5
Depth (C)		mm	221		221
Weight		kg	23		23

CVE08

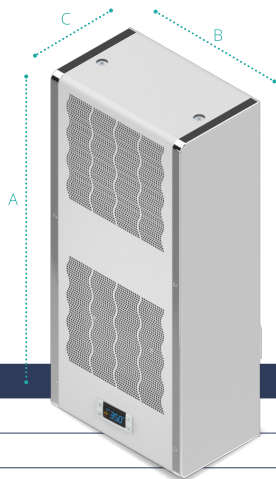


CODE		M.U.	CVE08U12208000		CVE08U12038000
UL Listed			✓		✓
Rated Voltage		V, ~	230, 1		115, 1
Nominal Frequency		Hz	50	60	60
Cooling Capacity	L35L35	W	--	900	900
Cooling Capacity	L35L50	W	--	700	700
Power Consumption	L35L50	W	--	600	600
Current Compsuntion	CE, L35L35	A	2,6	2,7	--
	UL,L45L55	A	--	3,9	7,2
Start-up Current	CE	A	20		--
Internal operating temperatures	min/max	°C	+25 / +45		+25 / +45
External operating temperatures	min/max	°C	+20 / +55		+20 / +55
Internal Circuit Protection Degree	CE	IP	54		--
	UL	Type	--	12	12
External Sound Pressure		dB(A)	64		64
Height (A)		mm	642		642
Width (B)		mm	314,5		314,5
Depth (C)		mm	221		221
Weight		kg	27		27

CVE11

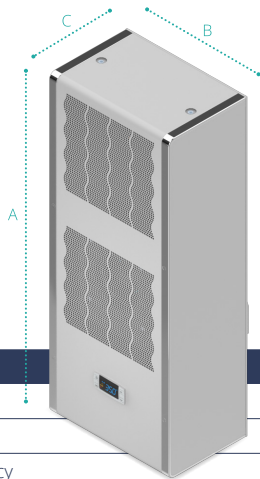


CODE		M.U.	CVE11U12208000		CVE11U12038000
UL Listed			✓		✓
Rated Voltage		V, ~	230, 1		115, 1
Nominal Frequency		Hz	50	60	60
Cooling Capacity	L35L35	W	--	1150	1150
Cooling Capacity	L35L50	W	--	890	890
Power Consumption	L35L50	W	--	750	650
Current Compsuntion	CE, L35L35	A	2,8	3,3	--
	UL,L45L55	A	--	3,6	7,5
Start-up Current	CE	A	20		--
Internal operating temperatures	min/max	°C	+25 / +45		+25 / +45
External operating temperatures	min/max	°C	+20 / +55		+20 / +55
Internal Circuit Protection Degree	CE	IP	54		--
	UL	Type	--	12	12
External Sound Pressure		dB(A)	65		65
Height (A)		mm	913		913
Width (B)		mm	413		413
Depth (C)		mm	248		248
Weight		kg	44		44



CVE15

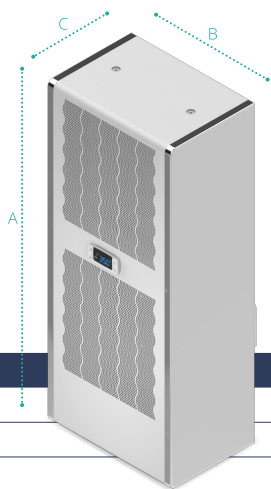
CODE		M.U.	CVE15U12208000		CVE15U12038000	CVE15U12628000	
UL Listed			✓		✓	✓	
Rated Voltage		V, ~	230, 1		115, 1	400, 3	460, 3
Nominal Frequency		Hz	50	60	60	50	60
Cooling Capacity	L35L35	W	--	1600	1600	--	1500
Cooling Capacity	L35L50	W	--	1280	1280	--	1200
Power Consumption	L35L50	W	--	825	825	--	830
Current Consumption	CE, L35L35	A	3,9	4,3	--	--	1,4
	UL, L45L55	A	--	4,5	9,4 L40L50	--	1,97
Start-up Current	CE	A	28		--	31	
Internal operating temperatures	min/max	°C	+25 / +45		+25 / +40	+25 / +45	
External operating temperatures	min/max	°C	+20 / +55		+20 / +50	+20 / +55	
Internal Circuit Protection Degree	CE	IP	54		--	54	
	UL	Type	--	12	12	--	12
External Sound Pressure		dB(A)	65		65	65	
Height (A)		mm	913		913	1005	
Width (B)		mm	413		413	413	
Depth (C)		mm	248		248	263	
Weight		kg	46		46	48	



CVE20

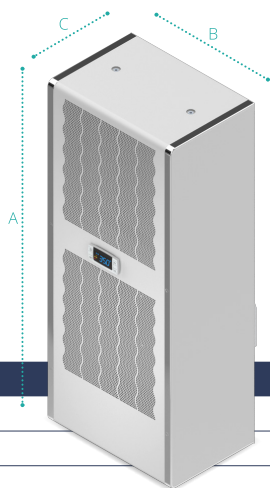
CODE		M.U.	CVE20U12208000		CVE20U12038000	CVE20U12628000	
UL Listed			✓		✓	✓	
Rated Voltage		V, ~	230, 1		115, 1	400, 3	460, 3
Nominal Frequency		Hz	50	60	60	50	60
Cooling Capacity	L35L35	W	--	2200	2200	--	2100
Cooling Capacity	L35L50	W	--	1850	1850	--	1800
Power Consumption	L35L50	W	--	1240	1240	--	1100
Current Consumption	CE, L35L35	A	4,8	5,5	--	1,7	1,8
	UL, L45L55	A	--	6,3	13,64	--	2,88
Start-up Current	CE	A	34		--	40	
Internal operating temperatures	min/max	°C	+25 / +45		+25 / +45	+25 / +45	
External operating temperatures	min/max	°C	+20 / +55		+20 / +55	+20 / +55	
Internal Circuit Protection Degree	CE	IP	54		--	54	
	UL	Type	--	12	12	--	12
External Sound Pressure		dB(A)	67		66	67	
Height (A)		mm	1005		1005	1005	
Width (B)		mm	413		413	413	
Depth (C)		mm	263		263	263	
Weight		kg	48		48	48	

CVE30

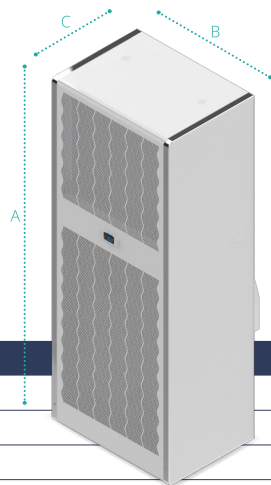


CODE		M.U.	CVE30U12208000		CVE30U12628000	
UL Listed			✓		✓	
Rated Voltage		V, ~	230, 1		400, 3	460, 3
Nominal Frequency		Hz	50	60	50	60
Cooling Capacity	L35L35	W	--	3150	--	3000
Cooling Capacity	L35L50	W	--	2600	--	2500
Power Consumption	L35L50	W	--	1370	--	1590
Current Compsumtion	CE, L35L35	A	5	6,2	2,7	2,6
	UL, L45L55	A	--	8	--	4,55
Start-up Current	CE	A	36		62	
Internal operating temperatures	min/max	°C	+25 / +45		+25 / +45	
External operating temperatures	min/max	°C	+20 / +55		+20 / +55	
Internal Circuit Protection Degree	CE	IP	54		54	
	UL	Type	--	12	--	12
External Sound Pressure		dB(A)	67		67	
Height (A)		mm	1219		1219	
Width (B)		mm	514		514	
Depth (C)		mm	347		347	
Weight		kg	75		80	

CVE40



CODE		M.U.	CVE40U12208000		CVE40U12628000	
UL Listed			✓		✓	
Rated Voltage		V, ~	230, 1		400, 3	460, 3
Nominal Frequency		Hz	50	60	50	60
Cooling Capacity	L35L35	W	--	4100	--	4050
Cooling Capacity	L35L50	W	--	3300	--	3260
Power Consumption	L35L50	W	--	1850	--	1840
Current Compsumtion	CE, L35L35	A	7,3	7,3	2,8	3,1
	UL, L45L55	A	--	8,3	--	5,26
Start-up Current	CE	A	36		19	
Internal operating temperatures	min/max	°C	+25 / +45		+25 / +45	
External operating temperatures	min/max	°C	+20 / +55		+20 / +55	
Internal Circuit Protection Degree	CE	IP	54		54	
	UL	Type	--	12	--	12
External Sound Pressure		dB(A)	67		67	
Height (A)		mm	1219		1219	
Width (B)		mm	514		514	
Depth (C)		mm	347		347	
Weight		kg	80		85	



CVE60

CODE		M.U.	CVE60U12628000	
UL Listed			✓	
Rated Voltage		V, ~	400, 3	460, 3
Nominal Frequency		Hz	50	60
Cooling Capacity	L35L35	W	--	5950
Cooling Capacity	L35L50	W	--	4850
Power Consumption	L35L50	W	--	3600
Current Consumption	CE, L35L35	A	4,2	5,7
	UL, L45L55	A	--	9,64
Start-up Current	CE	A	53	
Internal operating temperatures	min/max	°C	+25 / +45	
External operating temperatures	min/max	°C	+20 / +55	
Internal Circuit Protection Degree	CE	IP	54	
	UL	Type	--	12
External Sound Pressure		dB(A)	71	
Height (A)		mm	1406	
Width (B)		mm	556	
Depth (C)		mm	403	
Weight		kg	100	

Optional Protherm Indoor CVE

CODE	Special Colour	Stainless Steel AISI304 Housing	Stainless Steel AISI316 Housing	LN Version (only for 230 V units)	Control Phase Module (only for ~3 units)	Condenser Protective Treatment
CVE03	OCASC03	OCAINI0403	OCAINI1603	--	--	OCATC03
CVE05	OCASC05	OCAINI0405	OCAINI1605	OCALN05	--	OCATC05
CVE08	OCASC05	OCAINI0405	OCAINI1605	OCALN08	--	OCATC05
CVE11	OCASC05	OCAINI0411	OCAINI1611	OCALN08	--	OCATC11
CVE15	OCASC05	OCAINI0411	OCAINI1611	OCALN08	OCACFM	OCATC11
CVE20	OCASC05	OCAINI0411	OCAINI1611	OCALN20	OCACFM	OCATC11
CVE30	OCASC30	OCAINI0430	OCAINI1630	OCALN20	OCACFM	--
CVE40	OCASC30	OCAINI0430	OCAINI1630	OCALN40	OCACFM	OCATC40
CVE60	OCASC60	OCAINI0460	OCAINI1660	OCALN60	OCACFM	OCATC40

Accessories Protherm Indoor CVE

CODE	Air filter (only for painted version)	Baffle	Semi-flush Mounting Frame	Flush Mounting Frame	IP55 Gasket (only for CE units)	Sequencing Cable	Modbus Serial Port	SE ² Remote Probe
CVE03	--	ACABAF03	--	--	ACAG03	--	--	--
CVE05	ACAFLTI05	ACABAF05	ACASEF05	ACATEF05	ACAG03	ACASEQ	ACASPM	ACARES
CVE08	ACAFLTI05	ACABAF05	ACASEF05	ACATEF05	ACAG03	ACASEQ	ACASPM	ACARES
CVE11	ACAFLTI11	ACABAF11	ACASEF11	ACATEF11	ACAG11	ACASEQ	ACASPM	ACARES
CVE15	ACAFLTI11	ACABAF11	ACASEF11/20 (1)	ACATEF11/20 (1)	ACAG11	ACASEQ	ACASPM	ACARES
CVE20	ACAFLTI11	ACABAF11	ACASEF20	ACATEF20	ACAG11	ACASEQ	ACASPM	ACARES
CVE30	ACAFLTI30	ACABAF30	ACASEF30	ACATEF30	ACAG11	ACASEQ	ACASPM	ACARES
CVE40	ACAFLTI30	ACABAF30	ACASEF30	ACATEF30	ACAG11	ACASEQ	ACASPM	ACARES
CVE60	ACAFLTI60	ACABAF60	--	--	ACAG11	ACASEQ	ACASPM	ACARES

(1) Check the model

(2) Only for external mounting

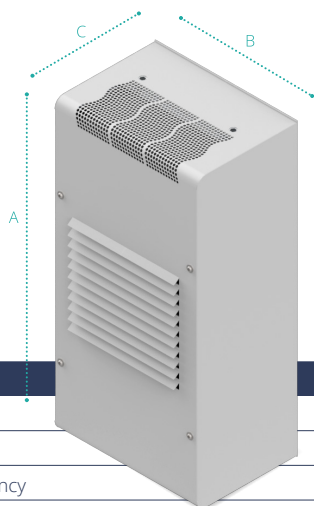
Accessories Optionals Protherm Indoor CVE

Air Filter CODE	Special Colour
ACAFLTI05	OCASCFLTI05
ACAFLTI11	OCASCFLTI05
ACAFLTI30	OCASCFLTI30
ACAFLTI60	OCASCFLTI60

Semi-flush Mounting Frame CODE	Special Colour
ACASEF05	OCASCSEF05
ACASEF11	OCASCSEF05
ACASEF20	OCASCSEF05
ACASEF30	OCASCSEF30

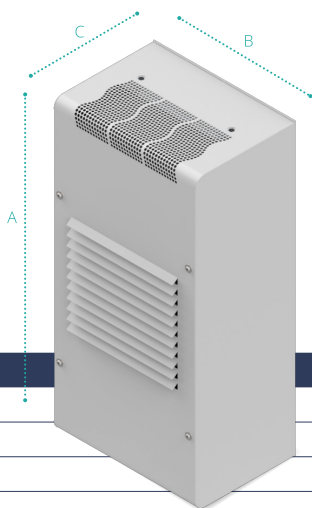
Flush Mounting Frame CODE	Special Colour
ACATEF05	OCASCTEF05
ACATEF11	OCASCTEF05
ACATEF20	OCASCTEF05
ACATEF30	OCASCTEF30

CVO05



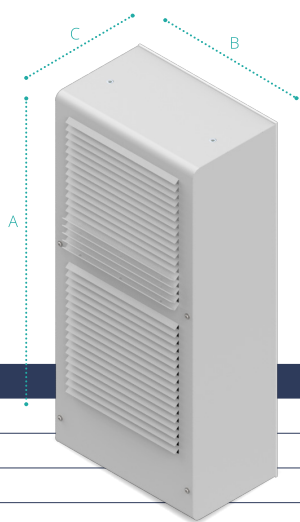
CODE		M.U.	CVO05U12208000		CVO05U12038000
UL Listed			✓		✓
Rated Voltage		V, ~	230,1		115,1
Nominal Frequency		Hz	50	60	60
Cooling Capacity	L35L35	W	-	580	580
Cooling Capacity	L35L50	W	-	430	430
Power Consumption	L35L50	W	-	390	390
Current Consumption	CE, L35L35	A	1,4	1,5	-
	UL, L45L55	A	-	2,1	4,7
Start-up Current	CE	A	7,5		-
Internal operating temperatures	min/max	°C	+25 / +45		+25 / +45
External operating temperatures	min/max	°C	-40 / +55		-40 / +55
Internal Circuit Protection Degree	CE	IP	55		-
	UL	Type	--	4	4
External Sound Pressure		dB(A)	60		60
Height (A)		mm	636		636
Width (B)		mm	314,5		314,5
Depth (C)		mm	233		233
Weight		kg	23		23

CVO08



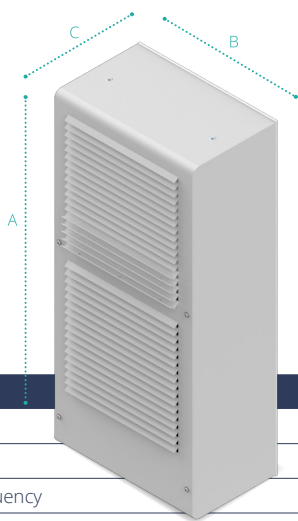
CODE		M.U.	CVO08U12208000		CVO08U12038000
UL Listed			✓		✓
Rated Voltage		V, ~	230,1		115,1
Nominal Frequency		Hz	50	60	60
Cooling Capacity	L35L35	W	-	900	900
Cooling Capacity	L35L50	W	-	700	700
Power Consumption	L35L50	W	-	600	600
Current Consumption	CE L35L35	A	2,6	2,7	-
	UL L45L55	A	-	3,9	7,2
Start-up Current	CE	A	20		-
Internal operating temperatures	min/max	°C	+25 / +45		+25 / +45
External operating temperatures	min/max	°C	-40 / +55		-40 / +55
Internal Circuit Protection Degree	CE	IP	55		-
	UL	Type	-	4	4
External Sound Pressure		dB(A)	64		64
Height (A)		mm	636		636
Width (B)		mm	314,5		314,5
Depth (C)		mm	233		233
Weight		kg	27		27

CVO11

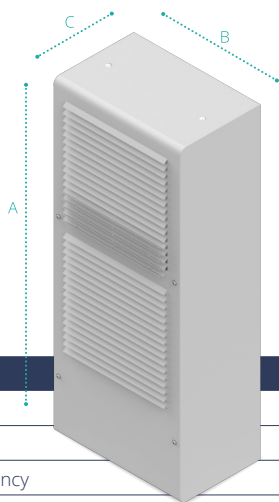


CODE		M.U.	CVO11U12208000		CVO11U12038000	
UL Listed			✓		✓	
Rated Voltage		V, ~	230,1		115,1	
Nominal Frequency		Hz	50	60	60	
Cooling Capacity	L35L35	W	-	1150	1150	
Cooling Capacity	L35L50	W	-	890	890	
Power Consumption	L35L50	W	-	750	650	
Current Compsumtion	CE, L35L35	A	2,8	3,3	-	
	UL, L45L55	A	-	3,6	7,5	
Start-up Current	CE	A	20		-	
Internal operating temperatures	min/max	°C	+25 / +45		+25 / +45	
External operating temperatures	min/max	°C	-40 / +55		-40 / +55	
Internal Circuit Protection Degree	CE	IP	55		-	
	UL	Type	-	4	4	
External Sound Pressure		dB(A)	65		65	
Height (A)		mm	906		906	
Width (B)		mm	412,5		412,5	
Depth (C)		mm	271,5		271,5	
Weight		kg	44		44	

CVO15

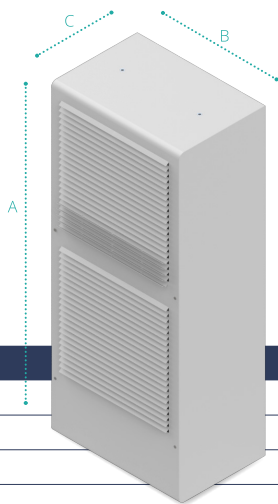


CODE		M.U.	CVO15U12208000		CVO15U12038000		CVO15U12628000	
UL Listed			✓		✓		✓	
Rated Voltage		V, ~	230,1		115,1		400,3 460,3	
Nominal Frequency		Hz	50	60	60		50 60	
Cooling Capacity	L35L35	W	-	1600	1600		- 1500	
Cooling Capacity	L35L50	W	-	1280	1280		- 1200	
Power Consumption	L35L50	W	-	825	825		- 830	
Current Compsumtion	CE, L35L35	A	3,9	4,3	--		-- 1,4	
	UL, L45L55	A	-	4,5	9,4 L40L50		- 1,97	
Start-up Current	CE	A	28		--		31	
Internal operating temperatures	min/max	°C	+25 / +45		+25 / +40		+25 / +45	
External operating temperatures	min/max	°C	-40 / +55		-40 / +50		-40 / +55	
Internal Circuit Protection Degree	CE	IP	55				55	
	UL	Type	-	4	4		- 4	
External Sound Pressure		dB(A)	65		65		65	
Height (A)		mm	906		906		999	
Width (B)		mm	412,5		412,5		412,5	
Depth (C)		mm	271,5		271,5		286	
Weight		kg	46		46		48	



CVO20

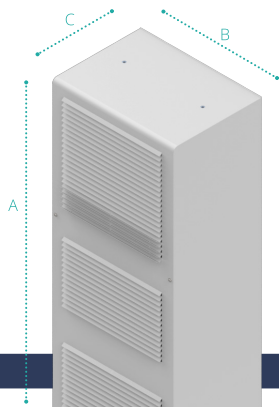
CODE		M.U.	CVO20U12208000		CVO20U12038000		CVO20U12628000	
UL Listed			✓		✓		✓	
Rated Voltage		V, ~	230,1		115,1	400,3	460,3	
Nominal Frequency		Hz	50	60	60	50	60	
Cooling Capacity	L35L35	W	-	2200	2200	-	2100	
Cooling Capacity	L35L50	W	-	1850	1850	-	1800	
Power Consumption	L35L50	W	-	1240	1240	-	1200	
Current Compsuntion	CEL35L35	A	4,8	5,5	-	1,7	1,8	
	UL L45L55	A	-	6,3	13,64	-	2,88	
Start-up Current	CE	A	34		-	40		
Internal operating temperatures	min/max	°C	+25 / +45		+25 / +45		+25 / +45	
External operating temperatures	min/max	°C	-40 / +55		-40 / +55		-40 / +55	
Internal Circuit Protection Degree	CE	IP	55		-	55		
	UL	Type	-	4	4	-	4	
External Sound Pressure		dB(A)	67		66	67		
Height (A)		mm	999		999	999		
Width (B)		mm	412,5		412,5	412,5		
Depth (C)		mm	286		286	286		
Weight		kg	48		48	48		



CVO40

CODE		M.U.	CVO40U12208000		CVO40U12628000	
UL Listed			✓		✓	
Rated Voltage		V, ~	230,1		400,3	460,3
Nominal Frequency		Hz	50	60	50	60
Cooling Capacity	L35L35	W	-	4100	-	4050
Cooling Capacity	L35L50	W	-	3300	-	3260
Power Consumption	L35L50	W	-	1850	-	1840
Current Compsuntion	CE L35L35	A	2,3	7,3	2,8	3,1
	UL L45L55	A	-	8,3	-	5,26
Start-up Current	CE	A	36		19	
Internal operating temperatures	min/max	°C	+25 / +45		+25 / +45	
External operating temperatures	min/max	°C	-40 / +55		-40 / +55	
Internal Circuit Protection Degree	CE	IP	55		55	
	UL	Type	-	4	-	4
External Sound Pressure		dB(A)	67		67	
Height (A)		mm	1211		1211	
Width (B)		mm	514		514	
Depth (C)		mm	370		370	
Weight		kg	80		85	

CVO60



CODE			M.U.	CVO60U12628000	
UL Listed				✓	
Rated Voltage			V, ~	400,3	460,3
Nominal Frequency			Hz	50	60
Cooling Capacity	L35L35	W		-	5950
Cooling Capacity	L35L50	W		-	4850
Power Consumption	L35L50	W		-	3600
Current Compsuntion	CE L35L35	A		4,2	5,7
	UL L45L55	A		-	9,46
Start.-up Current	CE	A		53	
Internal operating temperatures	min/max	°C		+25 / +45	
External operating temperatures	min/max	°C		-40 / +55	
Internal Circuit Protection Degree	CE	IP		55	
	UL	Type		-	4
External Sound Pressure			dB(A)	71	
Height (A)			mm	1399	
Width (B)			mm	556	
Depth (C)			mm	428	
Weight			kg	100	

Optional Protherm Outdoor CVO

CODE	Special Colour (only for CE units)	Stainless Steel AISI304 Housing	Stainless Steel AISI316 Housing	LN Version (only for 230V units)	Control Phase Module (only for three-phase units)	Condenser Protective Treatment	Electrical Heating (only for 230V units)
CVO05	OCASC05	OCAINO0405	OCAINO1605	OCALN05	--	OCATC05 (1)	--
CVO08	OCASC05	OCAINO0405	OCAINO1605	OCALN08	--	OCATC05 (1)	--
CVO11	OCASC05	OCAINO0411	OCAINO1611	OCALN08	--	OCATC11 (1)	RSC1
CVO15	OCASC05	OCAINO0411	OCAINO1611	OCALN08	OCACFM	OCATC11 (1)	RSC1
CVO20	OCASC05	OCAINO0411	OCAINO1611	OCALN20	OCACFM	OCATC11 (1)	RSC1
CVO40	OCASC30	OCAINO0430	OCAINO1630	OCALN40	OCACFM	OCATC40 (1)	RSC1-RSC3
CVO60	OCASC60	OCAINO0460	OCAINO1660	OCALN60	OCACFM	OCATC40 (1)	--

(1) Standard on UL Listed units

Accessories Protherm Outdoor CVO

CODE	Filter	Keypad	Semi-flush Mounting Frame	Flush Mounting Frame	IP55 Gasket (only for CE units)	Sequencing Cable	Modbus Serial Port	SE ² Remote Probe
CVO05	ACAFLTO05	ACAHPD	ACASEF05	ACATEF05	ACAG03	ACASEQ	ACASPM	ACARES
CVO08	ACAFLTO05	ACAHPD	ACASEF05	ACATEF05	ACAG03	ACASEQ	ACASPM	ACARES
CVO11	ACAFLTO11	ACAHPD	ACASEF11	ACATEF11	ACAG11	ACASEQ	ACASPM	ACARES
CVO15	ACAFLTO11	ACAHPD	ACASEF11/20 (1)	ACATEF11/20 (1)	ACAG11	ACASEQ	ACASPM	ACARES
CVO20	ACAFLTO11	ACAHPD	ACASEF20	ACATEF20	ACAG11	ACASEQ	ACASPM	ACARES
CVO40	ACAFLTO30	ACAHPD	ACASEF30	ACATEF30	ACAG11	ACASEQ	ACASPM	ACARES
CVO60	ACAFLTO60	ACAHPD	--	--	ACAG11	ACASEQ	ACASPM	ACARES

(1) Check the model

Compact Protherm

Indoor & Outdoor

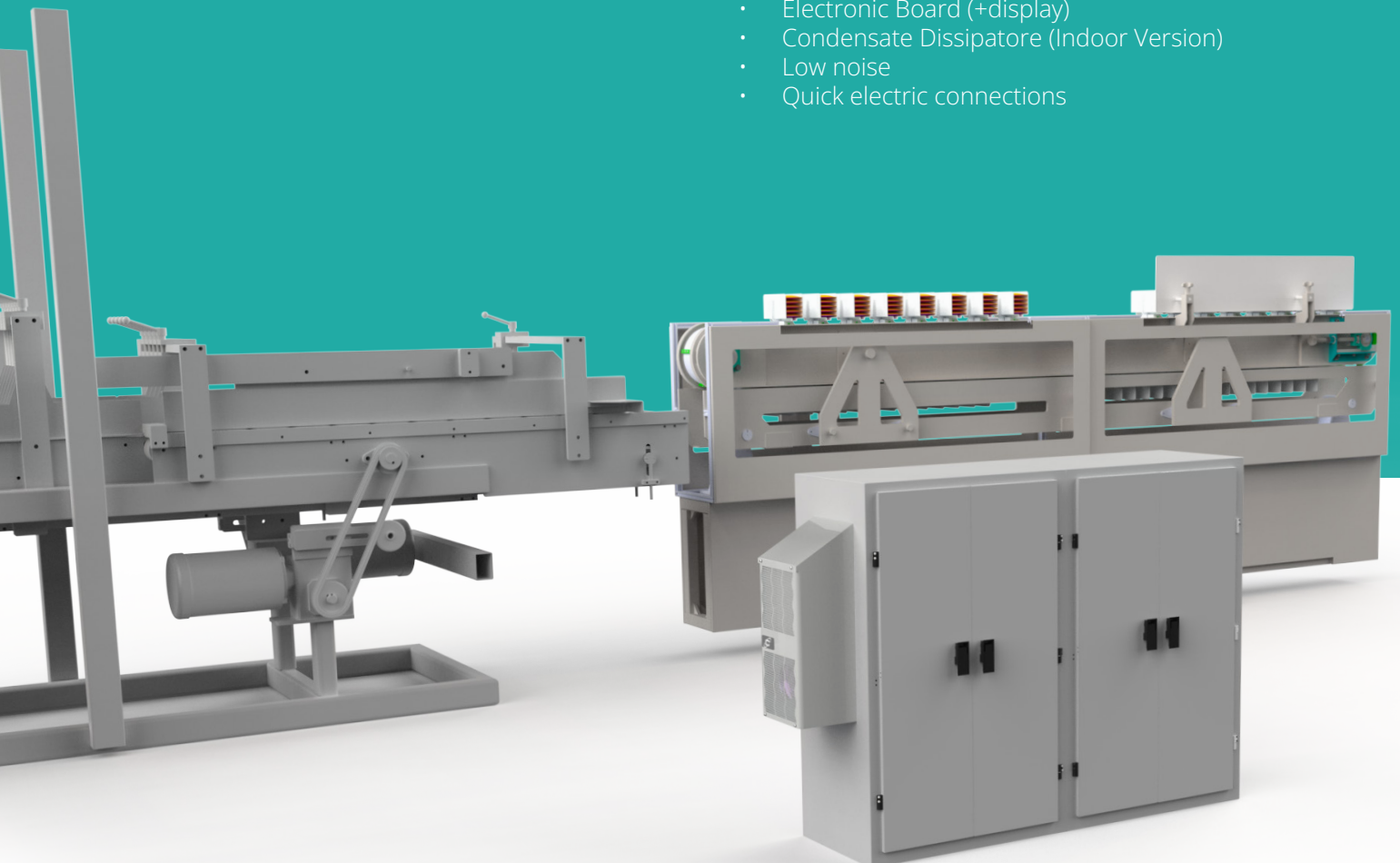
Compact Protherm is the range of industrial air conditioners designed for installations where units with **small overall dimensions** in terms of width or height are required. The technical solutions available distinguish these compact air conditioners for electrical panels for **flexibility, reliability and efficiency**.

In industrial automation, production space is an increasingly valuable asset and there is a need to find solutions that combine **high performance** with **optimised layouts**. However, the optimisation of the space also generates a greater density of electronic control components, worsening the thermal conditions of the system, which must be protected even more carefully against overheating in order to guarantee **continuity of service**. **Compact Protherm**, an evolution of our bestseller, offers a Thermal Management solution suitable for placement on the side of all electrical cabinets **up to 300mm deep**, thanks to a **width of only 280mm**. In addition, the range also features a low height of 565mm, allowing it to be installed in electrical boxes integrated into machine tools.

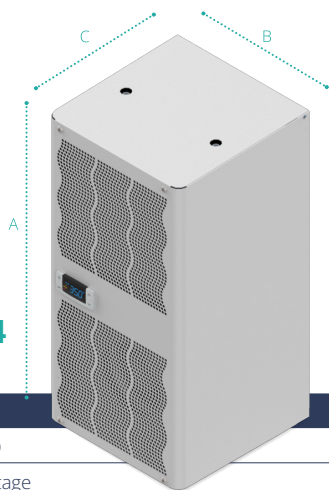
This new range of air conditioners responds to the needs of sectors where attention to hygiene is essential, such as the Food & Beverage. The main features that make **Compact Protherm** perfect for this kind of application are: **possibility of stainless steel coating, high IP55/Type4/4x protection degree, dedicated layout and some** and a few Accessories available, such as the **roof inclined at 30°**, which avoid the deposit of dust and liquids on the roof, meeting the requirements of hygiene and safety.

Main Features

- Application Indoor (CNE) and Outdoor (CNO)
- Compact dimensions - Two sizes , one cut-out
- Cooling Capacity: 400W...1000W
- High Efficiency
- Wide power supply range
- Certifications: CE, UL, EAC
- Protection Degree: IP54/55, Type12/4-4x
- Electronic Board (+display)
- Condensate Dissipatore (Indoor Version)
- Low noise
- Quick electric connections

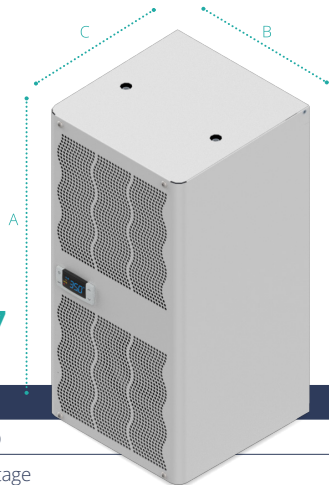


CNE04



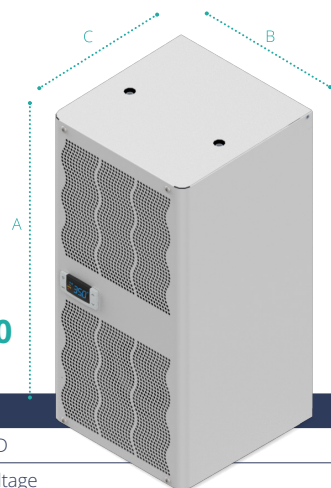
CODE		M.U.	CNE04U122080000		CNE04U122880000		CNE04U120380000
UL LISTED			✓		✓		✓
Rated Voltage		V, ~	230, 1		400,2	460,2	115, 1
Nominal Frequency		Hz	50	60	50	60	60
Cooling Capacity	L35L35	W	--	495	--	490	455
Cooling Capacity	L35L50	W	--	385	--	380	335
Power Consumption	L35L50	W	--	220	--	220	255
Max current consumption.		A	1,2	1,25	0,6	---	2,49
Start-up current	CE	A	4,6		2,6		--
Internal operating temp..	min/max	°C	+20 / +45		+20 / +45		+25 / +45
External operating temp.	min/max	°C	+20 / +55		+20 / +55		+20 / +50
Protection Degree internal circuit	CE	IP	54		54		--
	UL	Type	--	12	--	12	12
External sound pressure		dB(A)	55		55		55
Height (A)		mm	565		565		565
Width (B)		mm	280		280		280
Depth (C)		mm	220		278		220
Weight		kg	17		21		17

CNE07



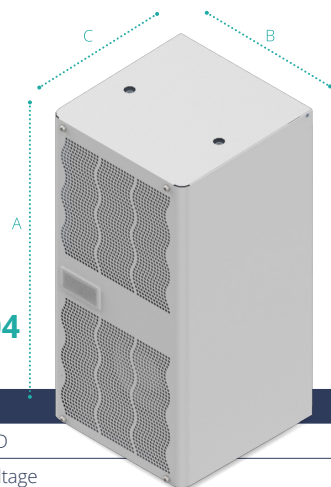
CODE		M.U.	CNE07U122080000		CNE07U122880000		CNE07U120380000
UL LISTED			✓		✓		✓
Rated Voltage		V, ~	230, 1		400,2	460,2	115, 1
Nominal Frequency		Hz	50	60	50	60	60
Cooling Capacity	L35L35	W	--	670	--	655	625
Cooling Capacity	L35L50	W	--	490	--	480	460
Power Consumption	L35L50	W	--	360	--	360	335
Max current consumption.		A	2	1,59	1	---	3,21
Start-up current	CE	A	7		4,5		--
Internal operating temp..	min/max	°C	+20 / +45		+20 / +45		+25 / +45
External operating temp.	min/max	°C	+20 / +55		+20 / +55		+20 / +50
Protection Degree internal circuit	CE	IP	54		54		--
	UL	Type	--	12	--	12	12
External sound pressure		dB(A)	55		55		55
Height (A)		mm	565		565		565
Width (B)		mm	280		280		280
Depth (C)		mm	220		278		220
Weight		kg	18		22		18

CNE10



CODE		M.U.	CNE10U122080000	CNE10U122880000	CNE10U120380000
UL LISTED			✓	✓	✓
Rated Voltage		V, ~	230, 1		400,2 460,2 115, 1
Nominal Frequency		Hz	50 60	50 60	60
Cooling Capacity	L35L35	W	-- 1075	-- 1050	950
Cooling Capacity	L35L50	W	-- 830	-- 825	700
Power Consumption	L35L50	W	-- 530	-- 530	555
Max current consumption.		A	2,5 2,4	1,4 ---	5,09
Start-up current	CE	A	46		4,5 --
Internal operating temp..	min/max	°C	+20 / +45		+25 / +45
External operating temp.	min/max	°C	+20 / +55		+20 / +50
Protection Degree internal circuit	CE	IP	54		--
	UL	Type	-- 12	-- 12	12
External sound pressure		dB(A)	58		58
Height (A)		mm	565		565
Width (B)		mm	280		280
Depth (C)		mm	278		278
Weight		kg	20		23 20

CNO04



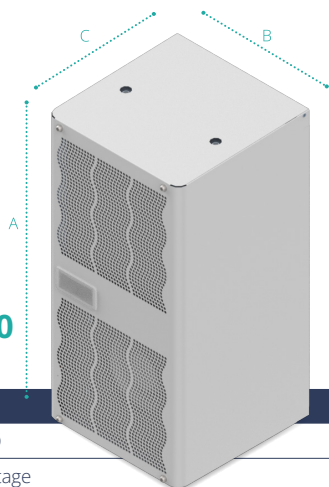
CODE		M.U.	CNO04U122080000	CNO04U122880000	CNO04U120380000
UL LISTED			✓	✓	✓
Rated Voltage		V, ~	230, 1		400,2 460,2 115, 1
Nominal Frequency		Hz	50 60	50 60	60
Cooling Capacity	L35L35	W	-- 495	-- 490	455
Cooling Capacity	L35L50	W	-- 385	-- 380	335
Power Consumption	L35L50	W	-- 220	-- 220	255
Max current consumption.		A	1,2 1,25	0,6 ---	2,49
Start-up current	CE	A	4,6		2,6 --
Internal operating temp..	min/max	°C	+20 / +45		+25 / +45
External operating temp.	min/max	°C	-20 / +55		-20 / +55
Protection Degree internal circuit	CE	IP	55		--
	UL	Type	-- 4	-- 4	4
External sound pressure		dB(A)	55		55
Height (A)		mm	565		565
Width (B)		mm	280		280
Depth (C)		mm	220		278 220
Weight		kg	17		21 17

CNO07



CODE		M.U.	CNO07U122080000		CNO07U122880000		CNO07U120380000
UL LISTED			✓		✓		✓
Rated Voltage		V, ~	230, 1		400,2	460,2	115, 1
Nominal Frequency		Hz	50	60	50	60	60
Cooling Capacity	L35L35	W	--	670	--	655	625
Cooling Capacity	L35L50	W	--	490	--	480	460
Power Consumption	L35L50	W	--	360	--	360	335
Max current consumption.		A	2	1,59	1	---	3,71
Start-up current	CE	A	7		4,5		--
Internal operating temp..	min/max	°C	+20 / +45		+20 / +45		+25 / +45
External operating temp.	min/max	°C	-20 / +55		-20 / +55		-20 / +55
Protection Degree internal circuit	CE	IP	55		55		--
	UL	Type	--	4	--	4	4
External sound pressure		dB(A)	55		55		55
Height (A)		mm	565		565		565
Width (B)		mm	280		280		280
Depth (C)		mm	220		278		220
Weight		kg	18		22		18

CNO10



CODE		M.U.	CNO10U122080000		CNO10U122880000		CNO10U120380000
UL LISTED			✓		✓		✓
Rated Voltage		V, ~	230, 1		400,2	460,2	115, 1
Nominal Frequency		Hz	50	60	50	60	60
Cooling Capacity	L35L35	W	--	1075	--	1050	950
Cooling Capacity	L35L50	W	--	830	--	825	700
Power Consumption	L35L50	W	--	530	--	530	555
Max current consumption.		A	2,5	2,4	1,4	---	5,09
Start-up current	CE	A	46		4,5		--
Internal operating temp..	min/max	°C	+20 / +45		+20 / +45		+25 / +45
External operating temp.	min/max	°C	-20 / +55		-20 / +55		-20 / +55
Protection Degree internal circuit	CE	IP	55		55		--
	UL	Type	--	4	--	4	4
External sound pressure		dB(A)	58		58		58
Height (A)		mm	565		565		565
Width (B)		mm	280		280		280
Depth (C)		mm	278		278		278
Weight		kg	20		23		20

Optional Compact Protherm Indoor CNE

CODE	Colore Speciale	Carpenteria INOX AISI304	Carpenteria INOX AISI316	Sonda remota	Trattamento Protettivo Condensatore
CNE04	OCASCCP	OCAINI0404/10	OCAINI1604/10	OCARESCP	OCATC04
CNE07	OCASCCP	OCAINI0404/10	OCAINI1604/10	OCARESCP	OCATC07
CNE10	OCASCCP	OCAINI0410	OCAINI1610	OCARESCP	OCATC07

Accessories Compact Protherm Indoor CNE

CODE	Filtro aria	Deflettore aria	Guarnizione IP55	Cavo per sequencing	Porta seriale Modbus	Tappi chiusura	Tetto inclinato 30°
CNE04	ACAFLTI04 (1)	ACABAF04	ACAG03 (2)	ACASEQ	ACASPM	ACACAP	ACATOP04/10
CNE07	ACAFLTI04 (1)	ACABAF04	ACAG03 (2)	ACASEQ	ACASPM	ACACAP	ACATOP04/10
CNE10	ACAFLTI04 (1)	ACABAF10	ACAG03 (2)	ACASEQ	ACASPM	ACACAP	ACATOP10

(1) Available only for units in painted sheet metal

(2) Only for CE units

Option for Accessories Compact Protherm Indoor CNE

CODE	Colore speciale	Inox 304	Carpenteria Inox 316
ACAFLTI04	OCASCFLTI04	---	---
ACATOP04	OCASCTOP04	OCAINI04T04	OCAINI16T04
ACATOP10	OCASCTOP10	OCAINI04T10	OCAINI16T10

Optional Compact Protherm Outdoor CNO

CODE	Colore speciale (solo modelli CE)	Carpenteria INOX 304	Carpenteria INOX 316	Trattamento protettivo sul condensatore	Sonda remota	Riscaldamento elettrico
CNO04	OCASCCP	OCAINI0404/10	OCAINI1604/10	OCATC04	OCARESCP (1)	RSC06 (2)
CNO07	OCASCCP	OCAINI0404/10	OCAINI1604/10	OCATC07	OCARESCP (1)	RSC06 (2)
CNO10	OCASCCP	OCAINI0410	OCAINI1610	OCATC07	OCARESCP (1)	RSC06 (2)

(1) Only with electrical heater

(2) Only for 230V-400V/460V tension

Accessories Compact Protherm Outdoor CNO

CODE	Guarnizione IP55 (solo modelli CE)	Cavo per sequencing	Porta seriale Modbus	Keypad	Tappi chiusura	Tetto inclinato 30°
CNO04	ACAG03	ACASEQ	ACASPM	ACAKPD	ACACAP	ACATOP04/10
CNO07	ACAG03	ACASEQ	ACASPM	ACAKPD	ACACAP	ACATOP04/10
CNO10	ACAG03	ACASEQ	ACASPM	ACAKPD	ACACAP	ACATOP10

Options for Accessories Compact Protherm Outdoor

CODE	Colore speciale	INOX 304	Carpenteria Inox 316
ACATOP04	OCASCTOP04	OCAINI04T04	OCAINI16T04
ACATOP10	OCASCTOP10	OCAINI04T10	OCAINI16T10

SlimIn

Indoor

SlimIn is the range of extra-flat air conditioners designed for external, semi-flush or flush mounting, ideal for installations requiring small overall dimensions and reduced protrusion from the panel. The characteristics of the unit allow easy and quick installation.

Efficiency at the forefront

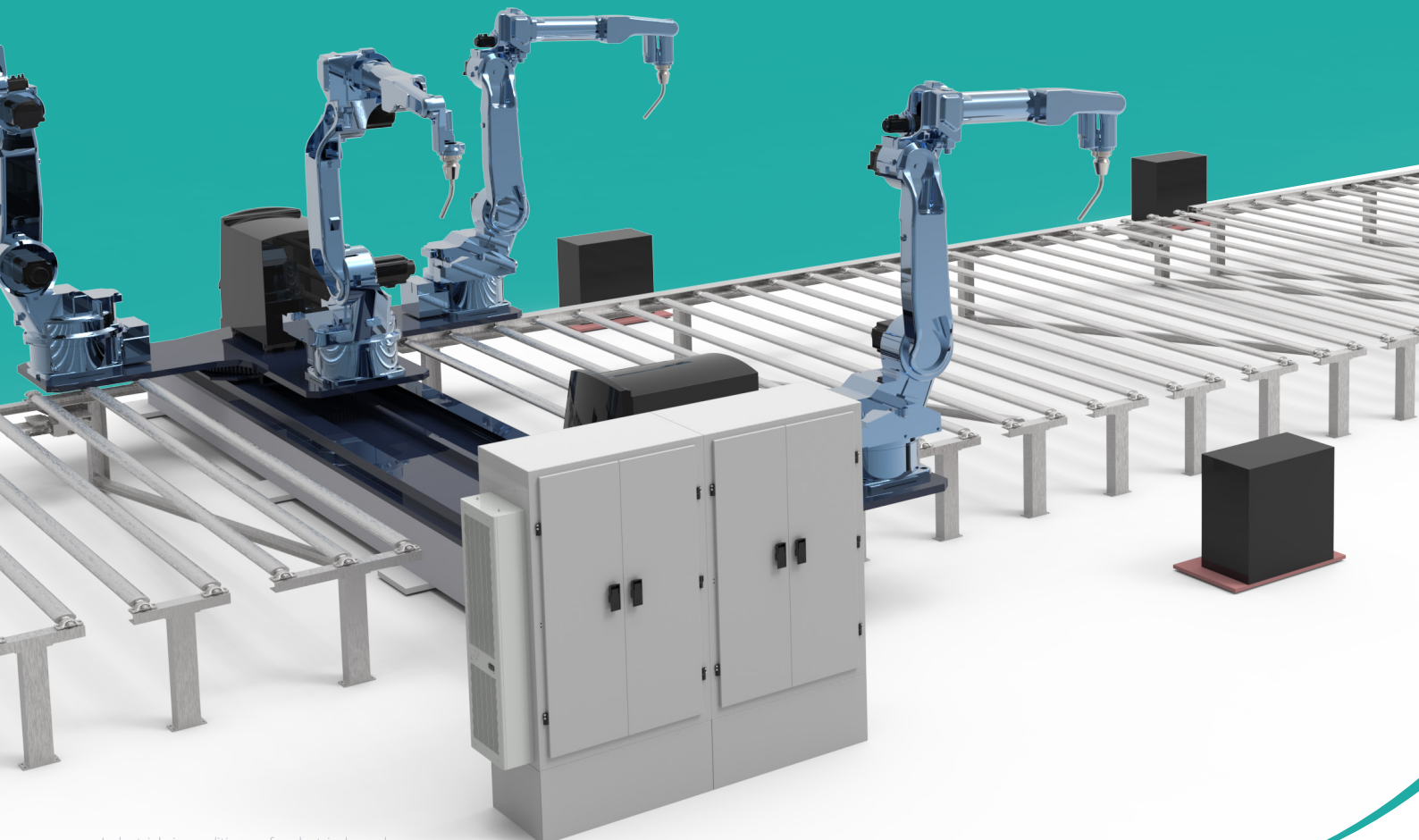
Slim In has high EER values and consequent cost savings thanks to the use of:

- high performance compressors and fans
- micro-channel condenser, which with its reduced thickness allows better air flow
- energy saving functions (SEM and SEM2)

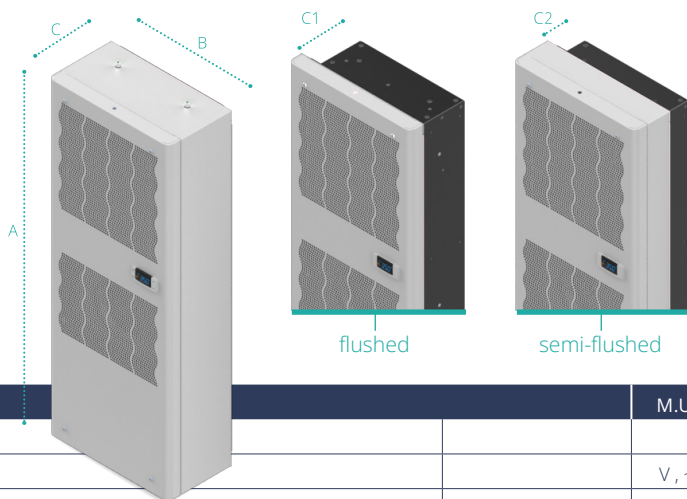
The SlimIn CDE range of air conditioners guarantees considerable economic savings, up to values of 50%, and time savings, thanks to the solutions adopted, which make the installation of the air conditioner and any maintenance activities easier and quicker to carry out.

Main Features

- High Efficiency
- Cooling Capacity: 500 - 4000 W
- XCB electronic board + display
- Installation: Flush, semi-flush, external mounting
- Quick electric connections
- Sequencing and Modbus
- μ channel condenser (from CDE14)
- Condensate Dissipator (from CDE14)
- General alarm and remote enable contacts
- Gasket already installed on the air conditioner
- Functioning up to +60°C external temperature
- Certifications: CE, UL Listed, EAC

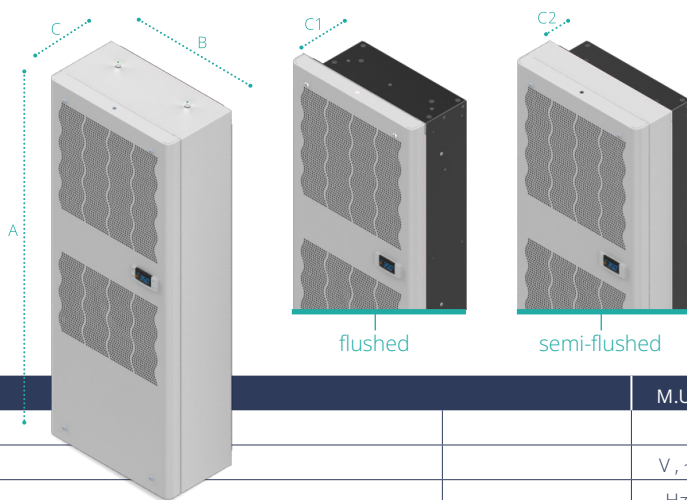


CDE05

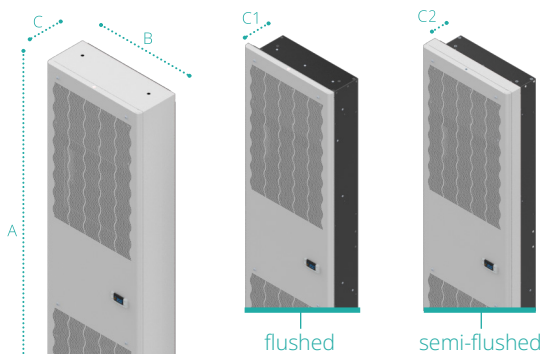


CODE		M.U.	CDE05U320380000	CDE05U322080000	
UL LISTED			✓	✓	
Rated Voltage		V, ~	115,1	230,1	
Nominal Frequency		Hz	60	50	60
Cooling Capacity	L35L35	W	520	--	670
Cooling Capacity	L35L50	W	420	--	540
Power Consumption	L35L50	W	350	--	387
Max current consumption.		A	4	2,3 (2,4 60°C)	2,4
Start-up current	CE	A	--	7,5	
Internal operating temp..	min/max	°C	25/45	25/45	
External operating temp.	min/max	°C	20/55	20/60	20/55
Protection Degree internal circuit	CE	IP	--	54	
	UL	Type	12	--	12
External sound pressure		dB(A)	54	54	
Height (A)		mm	956	956	
Wirthd (B)		mm	375	375	
Depth (C - C1 - C2)		mm	196 - 155 - 89	196 - 155 - 89	
Weight		kg	30	30	

CDE10

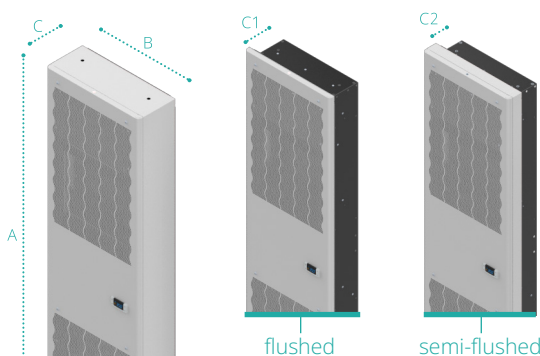


CODE		M.U.	CDE10U320380000	CDE10U322080000	
UL LISTED			✓	✓	
Rated Voltage		V, ~	115,1	230,1	
Nominal Frequency		Hz	60	50	60
Cooling Capacity	L35L35	W	975	---	1050
Cooling Capacity	L35L50	W	700	---	800
Power Consumption	L35L50	W	551	---	730
Max current consumption		A	5,74	3,5 (3,6 60°C)	4
Start-up current	CE	A	---	20	
Internal operating temp..	min/max	°C	25/40	25/45	
External operating temp.	min/max	°C	20/50	20/60	20/55
Protection Degree internal circuit	CE	IP	---	54	
	UL	Type	12	---	12
External sound pressure		dB(A)	56	56	
Height (A)		mm	956	956	
Wirthd (B)		mm	375	375	
Depth (C - C1 - C2)		mm	196 - 155 - 89	196 - 155 - 89	
Weight		kg	34	34	



CDE14

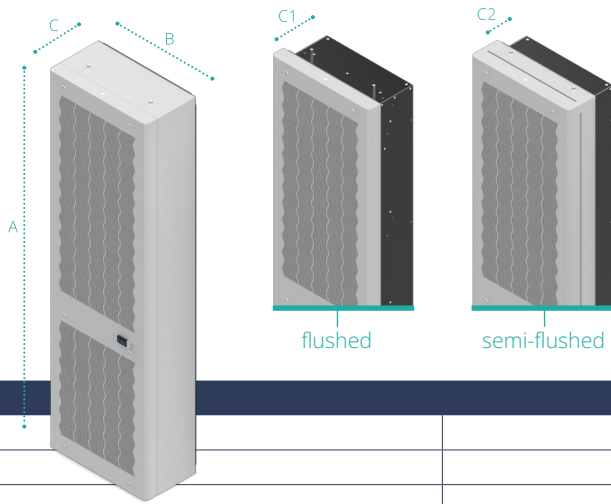
CODE		M.U.	CDE14U320380000	CDE14U322080000	
UL LISTED			✓	✓	
Rated Voltage		V, ~	115,1	230,1	
Nominal Frequency		Hz	60	50	60
Cooling Capacity	L35L35	W	1400	---	1500
Cooling Capacity	L35L50	W	1150	---	1250
Power Consumption	L35L50	W	930	---	820
Max current consumption.		A	9,41	3,9 (4,1 60°C)	4,23
Start-up current	CE	A	---	28	
Internal operating temp..	min/max	°C	25/45	25/45	
External operating temp.	min/max	°C	20/55	20/60	20/55
Protection Degree internal circuit	CE	IP	---	54	
	UL	Type	12	---	12
External sound pressure		dB(A)	60	60	
Height (A)		mm	1666	1666	
Width (B)		mm	454	454	
Depth (C - C1 - C2)		mm	181 - 156 - 111	181 - 156 - 111	
Weight		kg	51	51	



CDE20

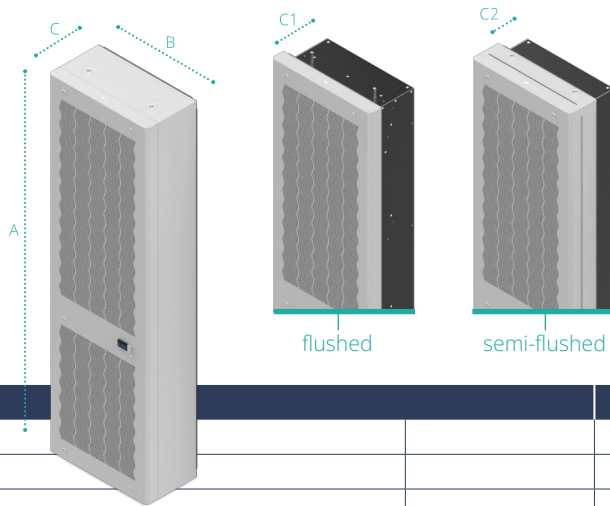
CODE		M.U.	CDE20U320380000	CDE20U322080000		CDE20U326280000	
UL LISTED			✓	✓		✓	
Rated Voltage		V, ~	115,1	230,1		400,3	460,3
Nominal Frequency		Hz	60	50	60	50	60
Cooling Capacity	L35L35	W	2000	---	2200	---	2200
Cooling Capacity	L35L50	W	1550	---	1700	---	1700
Power Consumption	L35L50	W	1320	---	1460	---	1250
Max current consumption		A	14,52	6,3 (6,6 60°C)	7,2	2,2 (2,2 60°C)	2,36
Start-up current	CE	A	---	34		40	
Internal operating temp..	min/max	°C	25/45	25/45		25/45	
External operating temp.	min/max	°C	20/45	20/60	20/55	20/60	20/55
Protection Degree internal circuit	CE	IP	---	54		54	
	UL	Type	12	---	12	---	12
External sound pressure		dB(A)	68	68		68	
Height (A)		mm	1666	1666		1666	
Width (B)		mm	454	454		454	
Depth (C - C1 - C2)		mm	181 - 156 - 111	181 - 156 - 111		181 - 156 - 111	
Weight		kg	55	55		55	

CDE30



CODE		M.U.	CDE30U322080000		CDE30U326280000	
UL LISTED			✓		✓	
Rated Voltage		V, ~	230,1		400,3	460,3
Nominal Frequency		Hz	50	60	50	60
Cooling Capacity	L35L35	W	---	3200	---	3200
Cooling Capacity	L35L50	W	---	2750	---	2750
Power Consumption	L35L50	W	---	1600	---	1650
Max current consumption.		A	6,3 (6,6 60°C)	7,6	3 (3,1 60°C)	2,9
Start-up current	CE	A	36		62	
Internal operating temp..	min/max	°C	25/45		25/45	
External operating temp.	min/max	°C	20/60	20/55	20/60	20/55
Protection Degree internal circuit	CE	IP	54		54	
	UL	Type	---	12	---	12
External sound pressure		dB(A)	69		69	
Height (A)		mm	1666		1666	
Wirth (B)		mm	496		496	
Depth (C - C1 - C2)		mm	221 -195 - 121		221 -195 - 121	
Weight		kg	59		69	

CDE40



CODE		M.U.	CDE40A326180000		CDE40U326280000	
UL LISTED			--		✓	
Rated Voltage		V, ~	400,3	460,3	400,3	460,3
Nominal Frequency		Hz	50	60	50	60
Cooling Capacity	L35L35	W	3950	4090	--	4090
Cooling Capacity	L35L50	W	3210	3400	--	3400
Power Consumption	L35L50	W	1895	2390	--	1990
Max current consumption.		A	4,2	4,7	3,3	3,5
Start-up current	CE	A	25		21	
Internal operating temp..	min/max	°C	25/45		25/45	
External operating temp.	min/max	°C	20/60		20/55	
Protection Degree internal circuit	CE	IP	54		54	
	UL	Type	---	--	12	
External sound pressure		dB(A)	72		72	
Height (A)		mm	1666		1666	
Wirth (B)		mm	496		496	
Depth (C - C1 - C2)		mm	256 -195 - 121		256 -195 - 121	
Weight		kg	79		79	

Optional SlimIn CDE

CODE	Colore Speciale	Pannello INOX AISI304	Pannello INOX AISI316	Modulo controllo fasi (solo modelli trifase)	Sonda Remota
CDE05	OCASCCDE	OCAINCDE0405	OCAINCDE1605	--	OCARESCDE
CDE10	OCASCCDE	OCAINCDE0405	OCAINCDE1605	--	OCARESCDE
CDE14	OCASCCDE	OCAINCDE0414	OCAINCDE1614	--	OCARESCDE
CDE20	OCASCCDE	OCAINCDE0414	OCAINCDE1614	OCACFM	OCARESCDE
CDE30	OCASCCDE	OCAINCDE0430	OCAINCDE1630	OCACFM	OCARESCDE
CDE40	OCASCCDE	OCAINCDE0440	OCAINCDE1640	OCACFM	OCARESCDE

Accessories SlimIn CDE

CODE	Cornici Montaggio Semi-flushed	Cornici Montaggio Esterno	Filtro aria - solo per versione in lamiera verniciata	Cavo di sequencing
CDE05	ACASFRCE05	ACAFRCDE05	ACAFLTCDE05	ACASEQ
CDE10	ACASFRCE05	ACAFRCDE05	ACAFLTCDE05	ACASEQ
CDE14	ACASFRCE14	ACAFRCDE14	ACAFLTCDE14	ACASEQ
CDE20	ACASFRCE14	ACAFRCDE14	ACAFLTCDE14	ACASEQ
CDE30	ACASFRCE30	ACAFRCDE30	ACAFLTCDE30	ACASEQ
CDE40	ACASFRCE30	ACAFRCDE30	ACAFLTCDE30	ACASEQ

Optional for Accessories SlimIn CDE

CODE	Colore Speciale	Inox AISI 304	Inox AISI 316
ACASFRCE05	OCASCFRCDE	OCAFRCDE05	OCAFRCCE05
ACAFRCDE05	OCASCFRCDE	OCAFRCDE05	OCAFRCCE14
ACASFRCE14	OCASCFRCDE	OCAFRCDE14	OCAFRCCE14
ACAFRCDE14	OCASCFRCDE	OCAFRCDE14	OCAFRCCE14
ACASFRCE30	OCASCFRCDE	OCAFRCDE30	OCAFRCCE30
ACAFRCDE30	OCASCFRCDE	OCAFRCDE30	OCAFRCCE30
ACAFLTCDE05	OCASCFRTCDE	--	--
ACAFLTCDE14	OCASCFRTCDE	--	--
ACAFLTCDE30	OCASCFRTCDE	--	--

FlexIn

Indoor

Industrial air conditioners with inverter technology

In the last few years all sectors have been transformed to achieve a better exchange of information in the shortest time possible. The need of connectivity between systems increased also in the industrial field, to improve the production processes. We have just entered the fourth industrial revolution, also known as Industry 4.0: all the systems should be designed to interact, with integrated connectivity to improve processes. Industrial air conditioning has adapted to this growing demand and the units have been improved with the introduction of the Modbus RTU serial connection and, in the last period, driven by the digitalisation of the production process, the Ethernet connection.

Connectivity 4.0

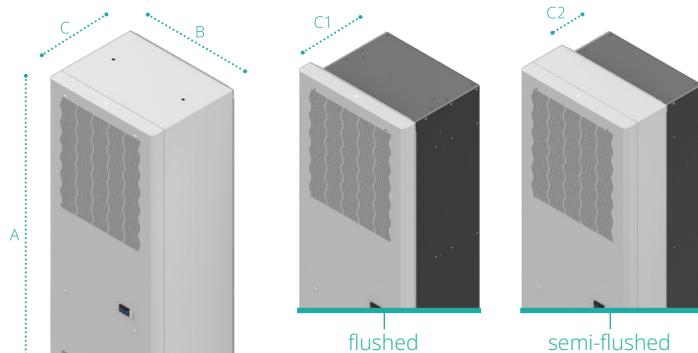
Thanks to the **Ethernet port**, integrated in the electronic controller of the FLEX In Inverter CDI the air conditioners can be **monitored** and **controlled** from any remote position 24 hours a day. Many parameters can be read and recorded, giving the possibility to **increase the efficiency** of the air conditioners and adopt the **predictive maintenance** and so the reliability, decreasing in this way possible faults of the air conditioner and of the whole system, without additional costs for interface device.

With its integrated Ethernet port, that allows the direct connection to the air conditioner with the most common industrial protocols (HTTP, SNMP, Modbus TCP/IP), the air conditioner CDI is perfectly integrated into Industry 4.0 and Smart Factory, leading to greater automation, real time production, **efficiency and flexibility**.

Main Features

- Inverter Technology air conditioner
- High energy savings and High efficiency
- External, semi-flush or flush mounting
- Cooling Capacity: 2000W / 2600W / 4200W
- Quick electric connections
- Sequencing and Ethernet
- µchannel condenser with protective treatment
- Condensate Dissipator
- General alarm and remote enable contacts
- Gasket already installed on the air conditioner
- Functioning up to +60°C external temperature
- Low noise
- Certifications: CE, UL Listed, EAC

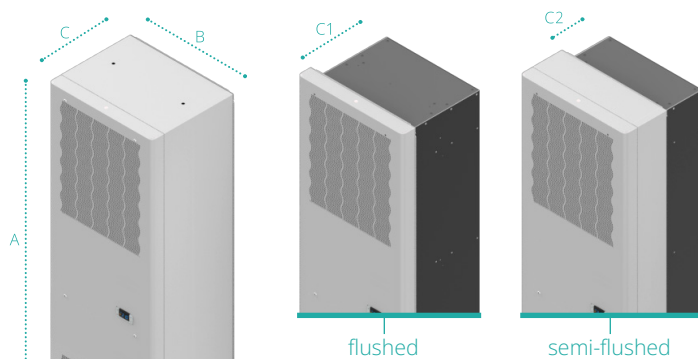




CDI20

CODE		M.U.	CDI20U(1-3)23G90000*	CDI20U(1-3)23H90000*
UL Listed			✓	✓
Rated Voltage		V, ~	110...240,1	380...480,3
Nominal Frequency		Hz	50...60	50...60
Cooling Capacity	L35L35	W	2000	2000
Cooling Capacity	L35L50	W	1420	1420
Power Consumption	L35L50	W	610	575
Internal operating temp..	min/max	°C	+20...+45	+20...+45
External operating temp.	min/max	°C	-20...+60	-20...+60
Protection Degree internal circuit	CE	IP	54	54
	UL	Type	12	12
External sound pressure		dB(A)	61,5	61,5
Height (A)		mm	1666	1666
Width (B)		mm	454	454
Depth (C - C1 - C2)		mm	294 - 250 - 111	294 - 250 - 111

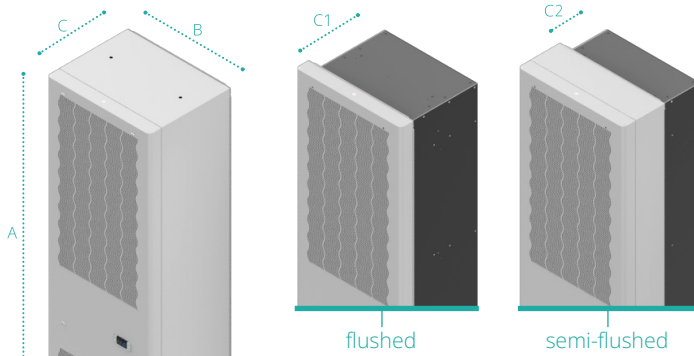
* 1: External mounting 3: Flush mounting



CDI26

CODE		M.U.	CDI 26U(1-3)23G90000*	CDI 26U(1-3)23H90000*
UL Listed			✓	✓
Rated Voltage		V, ~	110...240,1	380...480,3
Nominal Frequency		Hz	50...60	50...60
Cooling Capacity	L35L35	W	2600	2600
Cooling Capacity	L35L50	W	2100	2100
Power Consumption	L35L50	W	1060	980
Internal operating temp..	min/max	°C	+20...+45	+20...+45
External operating temp.	min/max	°C	-20...+60	-20...+60
Protection Degree internal circuit	CE	IP	54	54
	UL	Type	12	12
External sound pressure		dB(A)	62,5	62,5
Height (A)		mm	1666	1666
Width (B)		mm	496	496
Depth (C - C1 - C2)		mm	294 - 232 - 121	294 - 232 - 121

* 1: External mounting 3: Flush mounting



CDI40

CODE		M.U.	CDI40U(1-3)23G90000*	CDI40U(1-3)23H90000*
UL Listed			✓	✓
Rated Voltage		V, ~	110...240,1	380...480,3
Nominal Frequency		Hz	50...60	50...60
Cooling Capacity	L35L35	W	4200	4200
Cooling Capacity	L35L50	W	3350	3350
Power Consumption	L35L50	W	1385	1325
Internal operating temp..	min/max	°C	+20...+45	+20...+45
External operating temp.	min/max	°C	-20...+60	-20...+60
Protection Degree internal circuit	CE	IP	54	54
	UL	Type	12	12
External sound pressure		dB(A)	66	66
Height (A)		mm	1666	1666
Width (B)		mm	496	496
Depth (C - C1 - C2)		mm	393 - 332 - 121	393 - 332 - 121

* 1: External mounting 3: Flush mounting

Optional Flex In CDI

CODE	Special Colour	Stainless Steel AISI304 Panel	Stainless Steel AISI316 Panel
CDI20	OCASCCDI(U1-U3)	OCAINCDI04(U1-U3)	OCAINCDI16(U1-U3)
CDI26	OCASCCDI(U1-U3)	OCAINCDI04(U1-U3)	OCAINCDI16(U1-U3)
CDI40	OCASCCDI(U1-U3)	OCAINCDI04(U1-U3)	OCAINCDI16(U1-U3)

Accessories Flex In CDI

CODE	Semi-flush mounting frame	Air filter - only for units in painted sheet metal	Sequencing cable	LAN doubler for sequencing	Remote probe
CDI20	ACASFRCDI20	ACAFLTCDI20	ACASEQCDI	ACADLCDI	ACARESCDI
CDI26	ACASFRCDI26	ACAFLTCDI26	ACASEQCDI	ACADLCDI	ACARESCDI
CDI40	ACASFRCDI40	ACAFLTCDI26	ACASEQCDI	ACADLCDI	ACARESCDI

Optional Per Accessories Flex In CDI

CODE	Special Colour	Stainless steel AISI304	Stainless steel AISI316
ACASFRCDI20	OCASCSFRCDI	OCAFRCIDI	OCAFRCDDI
ACASFRCDI26	OCASCSFRCDI	OCAFRCIDI	OCAFRCDDI
ACASFRCDI40	OCASCSFRCDI	OCAFRCIDI	OCAFRCDDI
ACAFLTCDI20	OCASCSFRCDI	--	--
ACAFLTCDI26	OCASCSFRCDI	--	--
ACAFLTCDI40	OCASCSFRCDI	--	--

Module

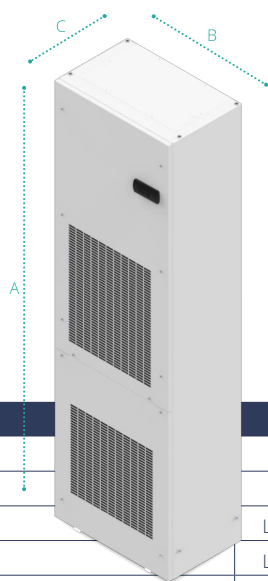
Indoor

Industrial air conditioners for modular electrical enclosures. **Module** air conditioners are the best technical and economical solution for conditioning long rows of cabinets, where large cooling capacities are required.

Machine tools, such as for die-casting or extrusion, may require large automation and control systems with high thermal loads, even above 4kW. In this case, the **Module** range with 6kW to 10kW enables the required cooling needs to be met optimally.

Main Features

- Air conditioner for modular enclosures
- Cooling Capacity: 5800-10000 W
- Digital Thermostat ECB
- General alarm contacts and remote control as standard
- Certifications: CE, EAC



EVE60-80-A0

CODE		M.U.	EVE60002617000		EVE80002617000		EVEA0002617000	
Rated Voltage		V, ~	400, 3	460, 3	400, 3	460, 3	400, 3	460, 3
Nominal Frequency		Hz	50	60	50	60	50	60
Cooling Capacity	L35L35	W	5800		8000		10000	
Cooling Capacity	L35L50	W	4500		5900		7800	
Power Consumption	L35L50	W	2614		3619		4500	
Current consumption	CE, 35L35	A	5,8		7		7	
Start-up current	CE	A	28		28		40	
Internal operating temp..	min/max	°C	+25 / +45		+25 / +45		+25 / +45	
External operating temp.	min/max	°C	+20 / +50		+20 / +50		+20 / +50	
Internal circuit protection degree	CE	IP	54		54		54	
External sound pressure		dB(A)	75		76		76	
Height (A)		mm	2000		2000		2000 x 800 x 383	
Width (B)		mm	600		800		800	
Depth (C)		mm	383		383		383	
Weighth		kg	100		110		150	

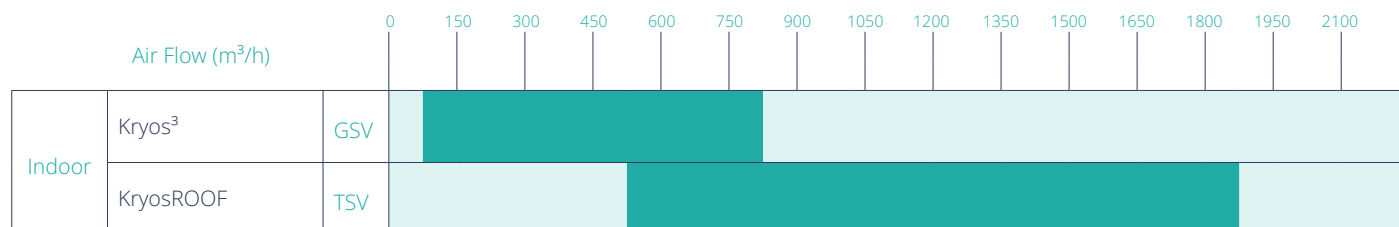
Industrial Ventilation for electrical panels

Wall and Roof Filter fans for electrical panels

A wall-mounted or roof-mounted fan draws in cold ambient air or exhausts warm air from the electrical panel. They provide simple and economical heat dissipation and offer a compact and efficient solution.

They are recommended if:

- the outside air has a lower temperature value than the inside air (approx. $\Delta T=10^{\circ}\text{C}$)
- a low cooling capacity is required
- little maintenance is required
- the ambient air is not excessively oily or dusty
- outside air and humidity can enter the cabinet



Kryos³

Filter fans for electrical panels
Application: Indoor

pag. 43



KryosROOF

Roof mounted fans for electrical panels
Application: Indoor

pag. 47

New design, unaltered quality

Kryos³ GS filter fans, for the ventilation of electrical enclosures, are the optimal solution when the ambient temperature is lower than the temperature inside the cabinet, and can be installed, thanks to their reduced depth, on various types of panels.

Together with a new modern design, **Kryos³** filter fans offer the same wide range of sizes and power supplies as previous generations, allowing you to choose the most suitable solution for your installation and geographical area.

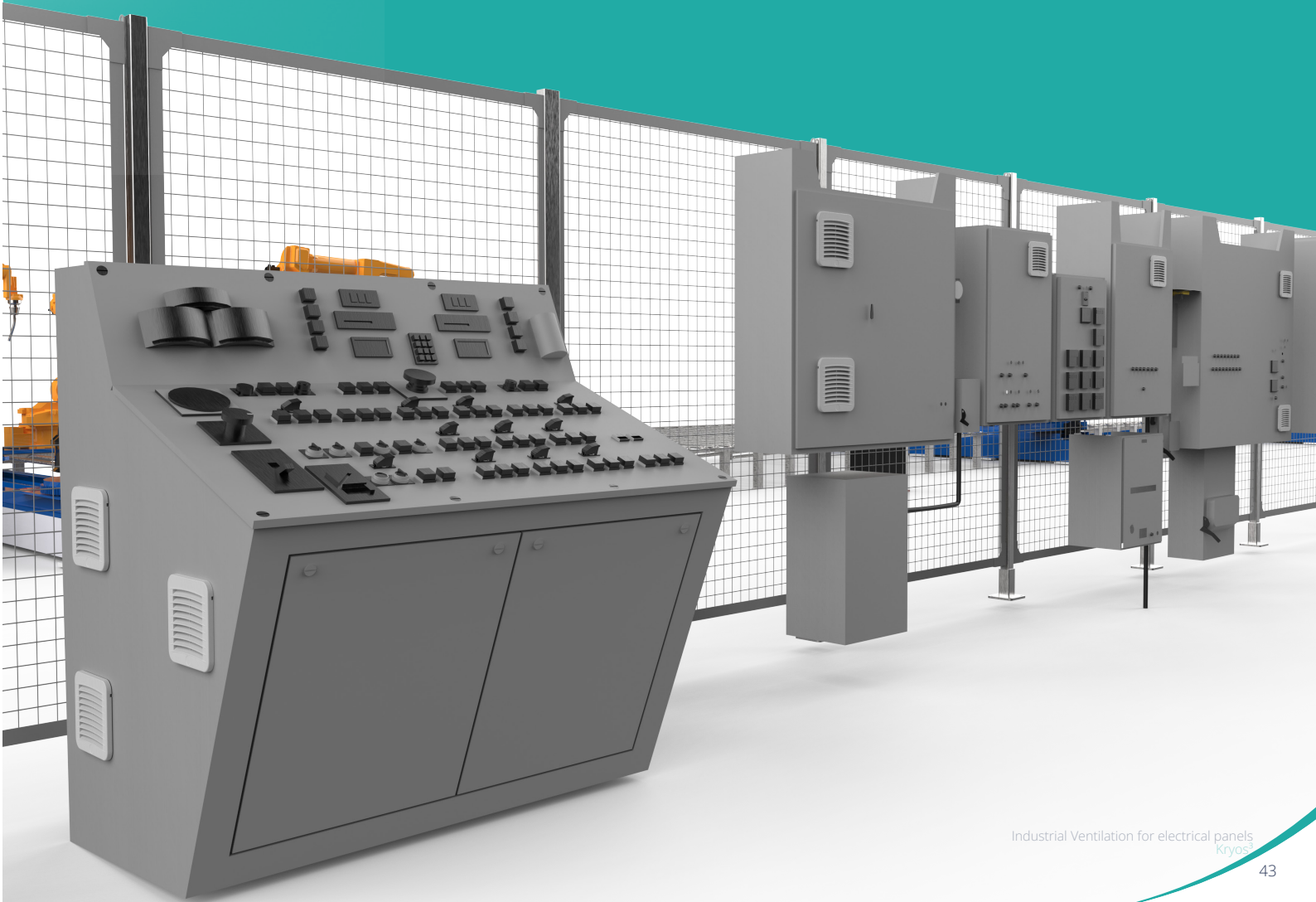
With the **Kryos³** product range, **cosmotec** offers ventilation solutions that use ambient air to directly cool the enclosure while maintaining an adequate degree of protection from dust or water ingress (externally certified tests). The wide range of sizes and power supplies and the reduced depth allow the most suitable choice for the characteristics of the specific application.

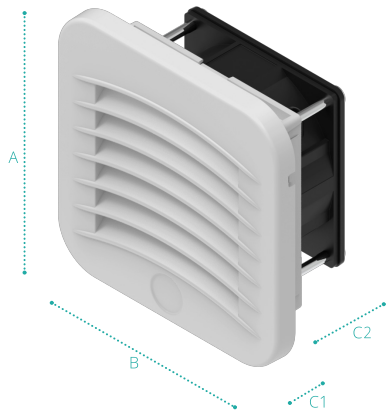
User Friendly Installation

Easy to install without the use of tools or screws thanks to the clips on the rear grille, which provide an adequate seal between the grille and the cabinet. The filter fans can be installed on different types of enclosures with thicknesses between 0.8 and 3 mm for CNx10 between 0.8 and 2 mm. Fixing with screws is possible for larger thicknesses; each article is provided with embossments on the rear grille.

Main Features

- Easy opening for filter replacement/cleaning
- Screwless fixing system
- In ABS BLEND (RAL7035)
- Air Flow: 35 - 850 m³/h
- Suction/pressure fan orientation
- Protection Degree IP54
- MTBF: 40000 hours
- Certifications: CE, UL Recognized, UL Listed FTTA7, CSA, EAC

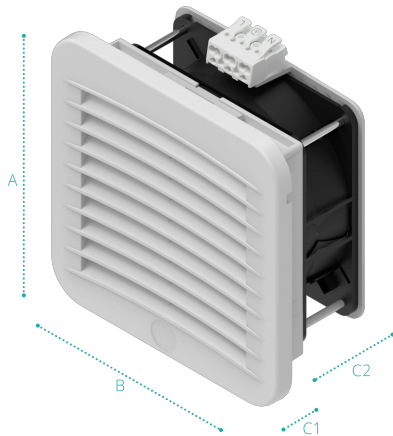




GSV10

CODE	M.U.	GSF10	GSV1000220	GSV1000203	GSV1000211
UL Recognized - UL Listed FTTA/FTTA7		✓	✓	✓	✓
Rated Voltage	V, ~	--	230, 1	115, 1	24VDC
Nominal Frequency	Hz	--	50 60	50 60	--
Fan Flow GSV	m³/h	--	35	35	50
Fan Flow GSV+GSF10/GSF15	m³/h	--	24/27	24/27	32/38
Absorbed Power	W	--	11 13	3,6 2,86	6,3
Absorbed Current	A	--	0,07 0,08	0,22 0,175	0,265
Internal operating Temp. min/max	CE	°C	--	-10 / +70	-10 / +70
	UL			-10 / +55	-10 / +55
Protection Degree	CE	IP	54	54	54
	UL	Type	12	12	12
External Sound pressure		dB(A)	--	33	53
Height (A)	mm	119	119	119	119
Width (B)	mm	119	119	119	119
Depth (C1-C2)	mm	10,3 - 18,2	10,3 - 60,2	10,3 - 47,2	10,3 - 47,2

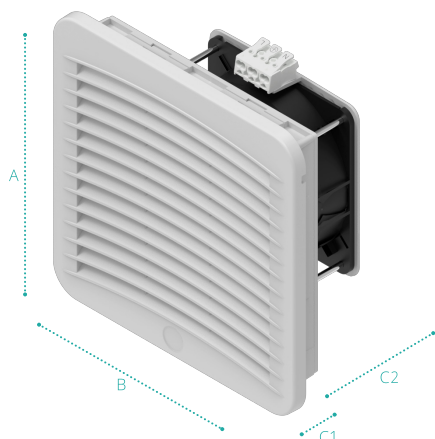
* No UL FTTA



GSV15

CODE	M.U.	GSF15	GSV1500220	GSV1500203	GSV1500211
UL Recognized - UL Listed FTTA/FTTA7		✓	✓	✓	✓
Rated Voltage	V, ~	--	230, 1	115, 1	24VDC
Nominal Frequency	Hz	--	50 60	50 60	--
Fan Flow GSV	m³/h	--	67	67	67
Fan Flow GSV+GSF15/GSF20	m³/h	--	50/58	50/58	50/58
Absorbed Power	W	--	22 22	22 25	8,1
Absorbed Current	A	--	0,14 0,14	0,26 0,3	0,335
Internal operating Temp. min/max	CE	°C	--	-10 / +70	-10 / +70
	UL			-10 / +55	-10 / +55
Protection Degree	CE	IP	54	54	54
	UL	Type	12	12	12
External Sound pressure		dB(A)	--	49	48
Height (A)	mm	152	152	152	152
Width (B)	mm	152	152	152	152
Depth (C1-C2)	mm	10,3 - 22,2	10,3 - 64,7	10,3 - 64,7	10,3 - 64,7

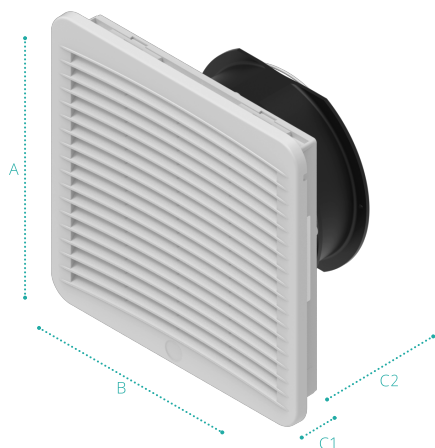
* No UL FTTA



GSV20

CODE	M.U.	GSF20	GSV2000220	GSV2000203	GSV2000211
UL Recognized - UL Listed FTTA/FTTA7		✓	✓	✓	✓
Rated Voltage	V, ~	--	230, 1	115, 1	24 VDC
Nominal Frequency	Hz	--	50 60	50 60	--
Fan Flow GSV	m³/h	--	108	108	108
Fan Flow GSV+GSF20/GSF25	m³/h	--	75/88	75/88	75/88
Absorbed Power	W	--	22 22	22 24,5	8,1
Absorbed Current	A	--	0,14 0,14	0,26 0,29	0,335
Internal operating Temp. min/max	CE	°C	-10 / +70	-10 / +70	-10 / +70
	UL		-10 / +55	-10 / +55	-10 / +55
Protection Degree	CE	IP	54	54	54
	UL	Type	12	12	12
External Sound pressure		dB(A)	--	49	49
Height (A)		mm	204	204	204
Width (B)		mm	204	204	204
Depth (C1-C2)		mm	10,3 - 23,2	10,3 - 82,7	10,3 - 82,7

* No UL FTTA

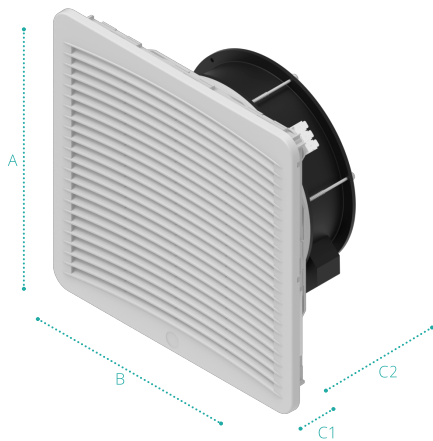


GSV25

CODE	M.U.	GSF25	GSV2500220	GSV2500203	GSV2500211	GSV2501220	GSV2501203
UL Recognized - UL Listed FTTA/FTTA7		✓	✓	✓	✓	✓	✓
Rated Voltage	V, ~	--	230, 1	115, 1	24VDC	230, 1	115, 1
Nominal Frequency	Hz	--	50 60	50 60	--	50 60	50 60
Fan Flow GSV	m³/h	--	190	190	230	270	270
Fan Flow GSV+GSF25/GSF30	m³/h	--	130/160	130/160	190/210	200/220	200/220
Absorbed Power	W	--	25 70	39 38	26,6	50 66	50 75
Absorbed Current	A	--	0,24 0,31	0,59 0,575	0,86	0,25 0,33	0,42 0,63
Internal operating Temp. min/max	CE	°C	-10 / +70	-10 / +70	-10 / +70	-10 / +70	-10 / +70
	UL		-10 / +55	-10 / +55	-10 / +55	-10 / +55	-10 / +55
Protection Degree	CE	IP	54	54	54	54	54
	UL	Type	12	12	12	12	12
External Sound pressure		dB(A)	--	55	59	62	62
Height (A)		mm	250	250	250	250	250
Width (B)		mm	250	250	250	250	250
Depth (C1-C2)		mm	10,3 - 37,2	10,3 - 102,2	10,3 - 102,2	10,3 - 88,2	10,3 - 88,2

* No UL FTTA

Industrial Ventilation for electrical panels
Kryos²



GSV30

CODE	M.U.	GSF30	GSV3000220	GSV3000203	GSV3001220	GSV3001203	GSV3002220	GSV30002203	GSV3002262
UL Recognized - UL Listed FTTA/FTTA7		✓	✓	✓	✓	✓	✓	✓	✓
Rated Voltage	V, ~	--	230, 1	115, 1	230, 1	115, 1	230, 1	115, 1	400,3 460,3
Nominal Frequency	Hz	--	50 60	50 60	50 60	50 60	50 60	50 60	50 60
Fan Flow GSV	m³/h	--	500	500	700	700	850	850	850
Fan Flow GSV+GS-F30/2xGSF30	m³/h	--	380/450	380/450	600/670	600/670	600/670	600/670	600/670
Absorbed Power	W	--	50 63	50 72	115 173	125 170	142 182	115 196	115 204
Absorbed Current	A	--	0,25 0,315	0,42 0,61	0,51 0,77	1,1 1,5	0,63 0,81	1,02 1,24	0,23 0,355
Internal operating Temp. min/max	CE	°C	-10 / +60	-10 / +60	-10 / +55	-25 / +50	-25 / +55	-25 / +55	-25 / +60
	UL	°C	-10 / +55	-10 / +55	-10 / +55	-25 / +55	-25 / +55	-25 / +55	-25 / +55
Protection Degree	CE	IP	54	54	54	54	54	54	54
	UL	Type	12	12	12	12	12	12	12
External Sound pressure	dB(A)	--	62	62	65	68	65	71	65
Height (A)	mm	318	318	318	318	318	318	318	318
Width (B)	mm	318	318	318	318	318	318	318	318
Depth (C1-C2)	mm	10,3 - 23,2	10,3 - 128,7	10,3 - 128,7	10,3 - 128,2	10,3 - 128,7	10,3 - 150,2	10,3 - 150,2	10,3 - 150,2

* No UL FTTA

Spare Air Filter

CODE	10 Filters
GSF10 - GSV10	AVAFAGS10
GSF15 - GSV15	AVAFAGS15
GSF20 - GSV20	AVAFAGS20
GSF25 - GSV25	AVAFAGS25
GSF30 - GSV30	AVAFAGS30



Features

- Material = chemical fibers
- Weight 200 g/m²
- Thickness 14 mm
- Dust holding capacity 600g/m²
- IP54

Additional Air Filter Protection Degree IP55

CODE	5 filters Package
GSF15-GSV15	AVAFLGS15
GSF20-GSV20	AVAFLGS20
GSF25-GSV25	AVAFLGS25
GSF30-GSV30	AVAFLGS30

Features

- Material = chemical fibers
 - Weight 200 g/m²
 - Thickness 7 mm
 - Dust holding capacity 597g/m²
- Installation technical notes in the manual

Hose-proof hood IP56 Protection Degree

CODE	1 Hose-proof hood	Dimensions
GSF10 - GSV10	AVAFSGS10	231 x 150 x 30,7
GSF15 - GSV15	AVAFSGS15	246 x 176 x 45,7
GSF20 - GSV20	AVAFSGS20	331 x 233 x 45,7
GSF25 - GSV25	AVAFSGS25	392,5 x 282 x 75,7
GSF30 - GSV30	AVAFSGS30	482,5 x 350 x 100,7

Features

- Material = galvanised sheet
- Option = AISI304 Stainless Steel



KryosROOF

Indoor

New design, more flexibility

KryosRoof roof mounted fans are the ideal industrial ventilation solution for extracting warm air from the roof. Their compact dimensions allow them to be installed on various types of electrical panels, while the layout and fans ensure high flow rates and operating efficiency. The TSF/TSV feature a new design, compact dimensions and the flexibility properties typical of **cosmotec** products.

Performance and Efficiency

The radial fans on **KryosROOF** provide high flow rates and heads to ensure the correct airflow within the cabinet. In addition, there is a high efficiency version with EC fans and an active control probe, supplied as standard, which adjusts the fan speed to reduce electricity consumption and ensure optimum air flow according to the temperatures in the electrical panel. Electrical consumption can already be reduced by 20/30% at maximum operating conditions.

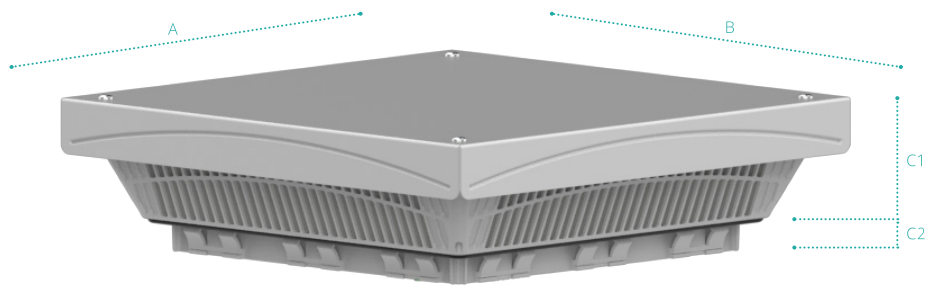
Energy efficiency eliminates energy waste and generates savings that last. Rational use of energy and investment in energy-efficient technological solutions increase the profitability of operations and make them more competitive, modern and efficient. Improving the energy efficiency of production processes helps to reduce fixed production costs, increase the market value of the product and reduce environmental impact. **KryosROOF** extraction towers regulate the air

flow optimally for each operating condition and heat load.

Main Features

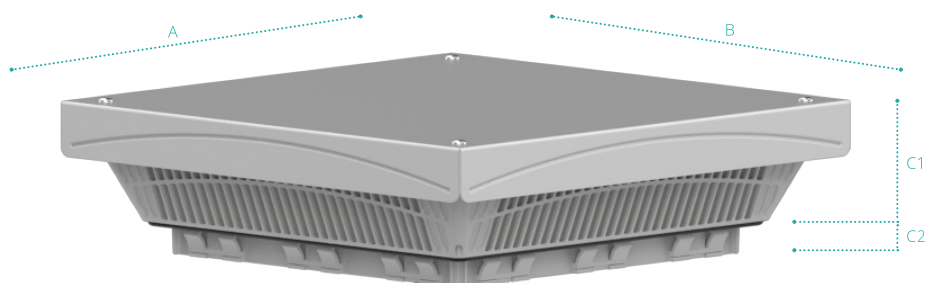
- ABS Blend base and galvanised sheet metal cover
- Screwless fixing system
- Air Flow: 500...1870 m³/h
- Version without fan available
- Protection Degree: IP43/Type1 - IP54/Type12
- MTBF: 40000 hours
- RAdial fans with minimum pressure losses
- Certifications: CE, UL Recognized, UL Listed, EAC





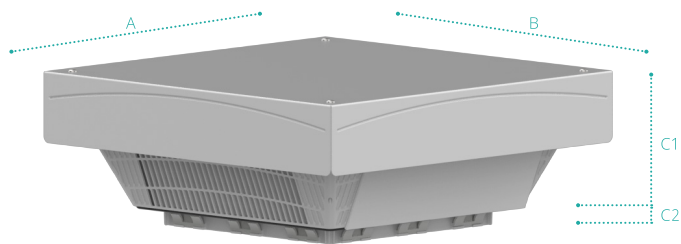
TSF/TSV19

CODE	M.U.	TSF19U0 20000000	TSF19U1 20000000	TSV19U0 22000000	TSV19U1 22000000	TSV19U0 20300000	TSV19U1 20300000
UL Recognized - UL Listed FTTA/FTTA7		✓	✓	✓	✓	✓	✓
Rated Voltage	V, ~	--	--	230,1	230,1	115,1	115,1
Nominal Frequency	Hz	--	--	50/60	50/60	60	60
Fan Flow TSV	m ³ /h	--	--	540/575	500/535	555	515
Fan Flow TSV+GSF30	m ³ /h	--	--	460/495	420/455	475	435
Absorbed Power	W	--	--	52/65	52/65	70	70
Absorbed Current	A	--	--	0,21/0,29	0,21/0,29	0,61	0,61
Internal operating Temp.	min/max °C	-40/+60	-40/+60	-25/+55	-25/+55	-25/+55	-25/+55
Protection Degree	CE	IP 43	IP 54	IP 43	IP 54	IP 43	IP 54
	UL	Type 1	Type 12	Type 1	Type 12	Type 1	Type 12
External Sound pressure	dB(A)	--	--	53	53	53	53
Height (A)	mm	395	395	395	395	395	395
Width (B)	mm	395	395	395	395	395	395
Depth (C)	mm	108	108	112	112	112	112



TSV22

CODE	M.U.	TSV22U0 22000000	TSV22U1 22000000	TSV22U0 20300000	TSV22U1 20300000
UL Recognized - UL Listed FTTA/FTTA7		✓	✓	✓	✓
Rated Voltage	V, ~	230,1	230,1	115,1	115,1
Nominal Frequency	Hz	50/60	50/60	60	60
Fan Flow TSV	m ³ /h	800/810	715/725	785	710
Fan Flow TSV+GSF30	m ³ /h	615/625	530/540	600	525
Absorbed Power	W	88/116	88/116	108	108
Absorbed Current	A	0,37/0,49	0,37/0,49	0,9	0,9
Internal operating Temp.	min/max °C	-25/+55	-25/+55	-25/+55	-25/+55
Protection Degree	CE	IP 43	IP 54	IP 43	IP 54
	UL	Type 1	Type 12	Type 1	Type 12
External Sound pressure	dB(A)	54	52	54	52
Height (A)	mm	395	395	395	395
Width (B)	mm	395	395	395	395
Depth (C)	mm	112	112	112	112



TSF/TSV25

CODE	M.U.	TSF25U0 20000000	TSF25U1 20000000	TSV25U0 22000000	TSV25U1 22000000	TSV25U0 20300000	TSV25U1 20300000
UL Recognized - UL Listed FTTA/FTTA7		✓	✓	✓	✓	✓	✓
Rated Voltage	V, ~	--	--	230,1	230,1	115,1	115,1
Nominal Frequency	Hz	--	--	50/60	50/60	60	60
Fan Flow TSV	m³/h	--	--	1425/1520	1365/1480	1470	1420
Fan Flow TSV+GSF30	m³/h	--	--	1310/1405	1250/1365	1355	1305
Absorbed Power	W	--	--	230/340	230/340	300	300
Absorbed Current	A	--	--	0,85/1,15	0,85/1,15	2,5	2,5
Internal operating Temp.	min/max °C	-40/+60	-40/+60	-25/+55	-25/+55	-25/+55	-25/+55
Protection Degree	CE IP	43	54	43	54	43	54
External Sound pressure	UL Type	1	12	1	12	1	12
Height (A)	mm	--	--	63	62	63	62
Width (B)	mm	490	490	490	490	490	490
Depth (C)	mm	490	490	490	490	490	490
	mm	188	188	191	191	191	191

TSV35

CODE	M.U.	TSV35U0 22000000	TSV35U1 22000000
UL Recognized - UL Listed FTTA/FTTA7		✓	✓
Rated Voltage	V, ~	230,1	230,1
Nominal Frequency	Hz	50/60	50/60
Fan Flow TSV	m³/h	1870	1700
Fan Flow TSV+GSF30	m³/h	1520	1350
Absorbed Power	W	168	168
Absorbed Current	A	1,4/1,4	1,4/1,4
Internal operating Temp.	min/max °C	-25/+55	-25/+55
Protection Degree	CE IP	43	54
External Sound pressure	UL Type	1	12
Height (A)	mm	57	57
Width (B)	mm	490	490
Depth (C)	mm	490	490
	mm	191	191

Optional KryosROOF TSV

CODE	Spacial Colour	Stainless Stell 316 housing
TSF/TSV19	OCAXNS12 (1)	AVAIN01 (1)
TSF/TSV22	OCAXNS12 (1)	AVAIN01 (1)
TSF/TSV25	OCAXNS12 (1)	AVAIN02 (1)
TSF/TSV35	OCAXNS12 (1)	AVAIN02 (1)

(1) Only Cover



cosmotec
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