

Copeland™ CR Series

For Medium & High Temperature Applications
- R407C





About Emerson

Emerson is a global technology and engineering company providing innovative solutions for customers in industrial, commercial, and residential markets. Our Emerson Automation Solutions business helps process, hybrid, and discrete manufacturers maximize production, protect personnel and the environment while optimizing their energy and operating costs. Our Emerson Commercial and Residential Solutions business helps ensure human comfort and health, protect food quality and safety, advance energy efficiency, and create sustainable infrastructure.

Emerson provides advanced compressors, condensing units, flow control systems and electronic controls to protect food quality while enabling operators to maximize equipment uptime and increase energy efficiency.

CR Series Compressors

Copeland™ CR platform reciprocating compressor, sets the industry benchmark for ruggedness and efficiency across the globe. Different series of CR models evolved over a period of time, like CR6, CR7, CRKQ, etc. to meet the continuously evolving customer requirements and market needs.

Living up to its status of thought-leader and innovator to the industry, Emerson has developed the next generation CR Series Compressors which utilize R407C refrigerant. These new CRK6ME & CRKQME reciprocating models provide customers with the opportunity to switch from R22 refrigerant to R407C refrigerant. These compressors are available with POE oil which allows oil and refrigerant to mix well, and provides ideal oil return back to the compressor. These highly efficient, silent and reliable CR compressors make them the best-in-class available models in the market.

These compressors deliver superior performance, have a wide operating range, offer multiple electrical options and come with a host of other features.

CRKXME Models Nomenclature

Digit	Heater
1	No Heater
2	1 Ph Heater
3	3 Ph Heater

Digit	Suction	Discharge	Process
0	Tube Upward	Tube	Tube Upward
1	Tube Angular	Tube	Tube Upward
2	Tube Angular	Tube	Other
3	Spud	Spud	Upward

Digit	Mounting	Mounting Kit	Terminal Fence
1	Long Leg	Standard	Standard
2	Long Leg	Standard	Rectangular

Typical Electrical Codes		
Code	50 Hz	60 Hz
"V"		208-230 V
"Z"	220-240 V	
"D"	380-420 V	380-460 V
"M"	380-420 V	
"5"		208-230 V
"1"	230 V	

Motor Protection Type	
"F"	Internal Protection use with Single or Three Phase Contactor

Motor Type	
"P"	Single Phase Permanent Split Capacitor
"T"	Three Phase

C R 2 4 K 6 M E - P F V - 1 0 1

Bill of Material (BOM)
Suffix

Oil Type	
"Blank"	Mineral Oil (R22)
"E"	POE Oil (R407C)

Identifier	
"M"	Optimized Design

Product Family Variations	
"6, 7, 8"	CR
"Q"	CR Large

Capacity	
XX	First two digits of nominal capacity Btu/h @ 60 Hz
"K"	x1,000 multiplier

Compressor Family Series	
"CR"	CR Series Compressor

Mounting Kit Nomenclature

Standard Standard Mounting Kit & Fence Design
Other Indicates Non Standard Requirements-
suffixed by two digits

Terminal Fence Nomenclature

Standard Half Round for CR21/29TFM
Half Round for CR22/30PF1
Square for CR35/41TFM

Series	Compressor Model	Voltage Rating (V-Phase-Hz)	Cooling Capacity (Btu/hr)	Input Power (Watts)	EER (Btu/W-Hr)	Input Current (A)	LRA(A)	Displacement (cc/Rev.)	Weight (Approx.)	Motor Circuit	Start Capacitor Mfd	Start Capacitor VAC	Run Capacitor Mfd	Run Capacitor VAC	Standard BOM
CRK6ME	CR22K6ME-PF1	230V - 1Ph - 50Hz	16650	1700	9.79	7.90	54	40.8	33.1	PSC/CSCR	80-100	230	36	440	111DM
	CR30K6ME-PF1	230V - 1Ph - 50Hz	23500	2280	10.30	10.30	72	51.47	33.1	PSC/CSCR	150-200	230	45	440	111DE 111DM
	CR36K6ME-PFZ	220 to 240V - 1Ph - 50Hz	27400	2715	10.09	13.40	85	59.65	36	CSCR	130-156 43-52	250 330	40 45	370 370	121DM
	CR42K6ME-PFZ	220 to 240V - 1Ph - 50Hz	32350	3100	10.43	15	104	72.08	36	CSCR	64-77 189-227	330 330	60 65	370 370	101DM
	CR21K6ME-TFM	380 to 480V - 3 Ph - 50Hz	17250	1610	10.71	3.20	20	40.8	30	3 Phase	N/A	N/A	N/A	N/A	111DM
	CR29K6ME-TFM	380 to 480V - 3 Ph - 50Hz	24200	2260	10.70	4.15	28	51.47	30.6	3 Phase	N/A	N/A	N/A	N/A	111DM
	CR35K6ME-TFM	380 to 420V - 3Ph - 50Hz	29350	2650	11.07	4.80	41	59.66	32.1	3 Phase	N/A	N/A	N/A	N/A	121DM
	CR41K6ME-TFM	380 to 420V - 3Ph - 50Hz	33160	3070	10.80	5.90	45	72.09	34	3 Phase	N/A	N/A	N/A	N/A	101DM
CRKQME	CR47KQME-TFD	380 to 420V - 3Ph - 50Hz	37595	3580	10.50	6.90	60 @ 420 66 @ 480	78.78	37.5	3 Phase	N/A	N/A	N/A	N/A	203DM 233DM
	CR53KQME-TFD	380 to 420V - 3Ph - 50Hz	42436	4110	10.32	7.60	61 @ 420	88.28	37.5	3 Phase	N/A	N/A	N/A	N/A	203DM 233DM
	CR57KQME-TFD	380 to 420V - 3Ph - 50Hz	46350	4450	10.41	8.20	61 @ 420	94.61	37.5	3 Phase	N/A	N/A	N/A	N/A	203DM 233DM
	CR62KQME-TFD	380 to 420V - 3Ph - 50Hz	50985	4890	10.42	8.90	55 @ 420 65 @ 480	101.92	37.5	3 Phase	N/A	N/A	N/A	N/A	203DM 233DM

ASRE/T Rating Conditions

Rating Conditions	Evaporating Temperature °C(F)	Condensing Temperature °C(F)	Ambient Temperature °C(F)	Liquid Temperature °C(F)	Return Gas Temperature °C(F)
ASRE/T	7.2(45)	54.4(130)	35(95)	46(115)	35(95)

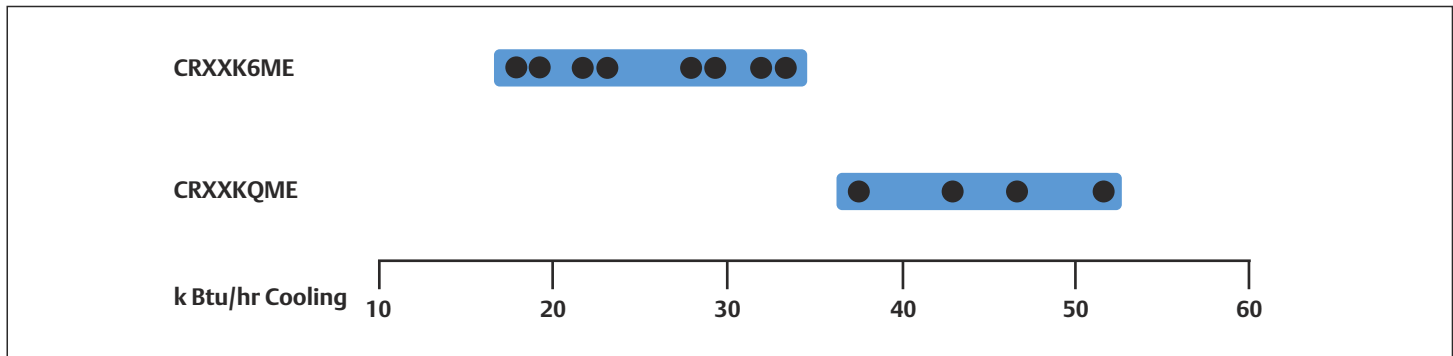
Motor Circuit

PSC	Permanent Split Capacitor
CSCR	Capacitor Start Capacitor Run

Notes: • Cooling capacity and power consumption are nominal values at specified rating conditions and subject to $\pm 5\%$ variation.
• Cooling type(CFM)-400 • Oil charge quantity-1330cc (Approx.)

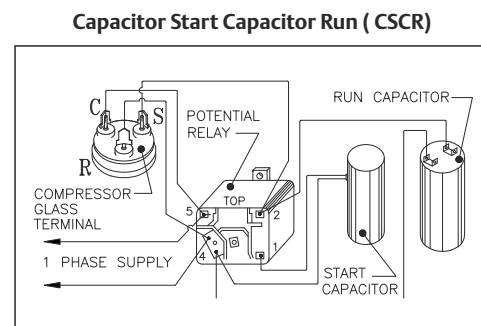
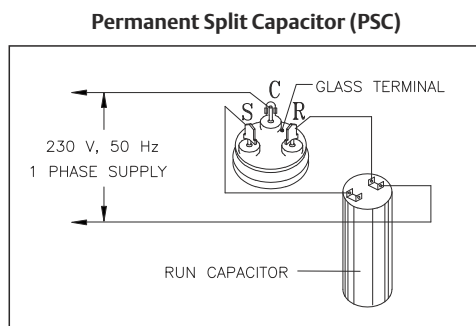
Product Range

R407C - 50Hz



Notes: The above capacity data are given at the following conditions.
Ambient Temperature: 35°C, Evaporating Temperature: 7.2°C, Return Gas Temperature: 35°C, Condensing Temperature: 54.4°C

Wiring Diagram



Performance Data - R407C, 50Hz, 1Ph

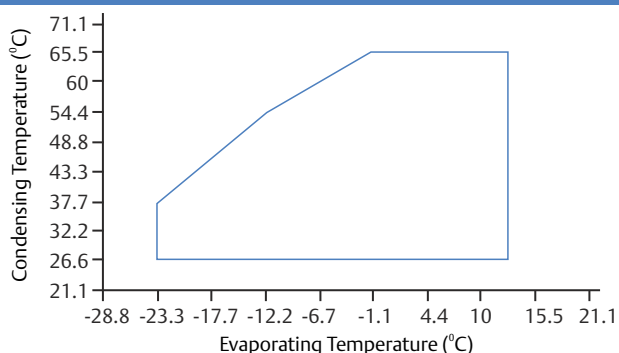
Compressor Models	Condensing Temperature (°C)	Refrigeration Capacity in (Btu/hr)								
		Evaporating Temperature (°C)								
		-23.3	-17.8	-12.2	-6.7	-1.1	4.4	7.2	10	12.8
CR22K6ME-PF1	43.3	-	4350	7300	10500	14000	18150	20500	23000	25800
	54.4	-	-	5200	8100	11200	14700	16650	18850	21200
CR30K6ME-PF1	43.3	-	6824	10393	14650	19600	25200	28300	31500	34900
	54.4	-	-	7227	11200	15700	20750	23500	26400	29500
CR36K6ME-PFZ	43.3	-	7100	11400	16500	22600	29900	34100	38700	43700
	54.4	-	-	8200	12400	17500	23772	27400	31425	35850
CR42K6ME-PFZ	43.3	-	8300	13450	19500	26650	35300	40250	45650	51600
	54.4	-	-	9600	14600	20650	28050	32350	37100	42325

Performance Data - R407C, 50Hz, 3Ph

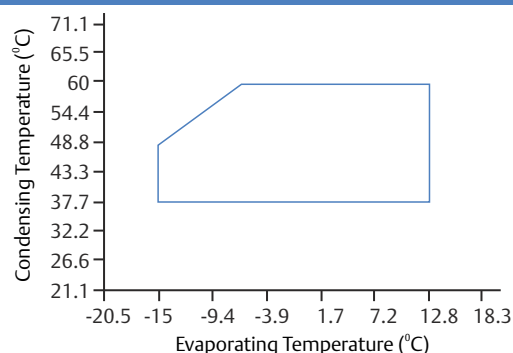
Compressor Models	Condensing Temperature (°C)	Refrigeration Capacity in (Btu/hr)								
		Evaporating Temperature (°C)								
		-23.3	-17.8	-12.2	-6.7	-1.1	4.4	7.2	10	12.8
CR21K6ME-TFM	43.3	-	4900	7900	11970	14500	18750	21300	24100	27300
	54.4	-	-	5400	8300	11400	15100	17250	19600	22300
CR29K6ME-TFM	43.3	-	6900	10750	15200	20300	26050	29200	32500	36050
	54.4	-	-	7500	11550	16150	21300	24200	27100	30300
CR35K6ME-TFM	43.3	-	7600	12200	17650	24175	32000	36500	41400	46750
	54.4	-	-	8800	13250	18725	25450	29350	33625	38350
CR41K6ME-TFM	43.3	-	8500	13800	20000	27400	36250	41300	46900	52950
	54.4	-	-	9900	15000	21200	28800	33200	38100	43450
CR47KQME-TFD	43.3	-	9600	15750	22825	31200	41150	46850	53050	59825
	54.4	-	-	10725	16825	24000	32600	37400	42925	48850
CR53KQME-TFD	43.3	-	10700	17600	25565	34975	46140	52500	59450	67025
	54.4	-	-	12040	18900	26975	36620	42200	48175	54800
CR57KQME-TFD	43.3	-	11700	19250	27975	38250	50500	57450	65050	73300
	54.4	-	-	13175	20675	29500	40050	46100	52700	59950
CR62KQME-TFD	43.3	-	12900	21200	30750	42050	55500	63125	71488	80600
	54.4	-	-	14450	22700	32450	44050	50700	57950	65900

Operating Envelopes

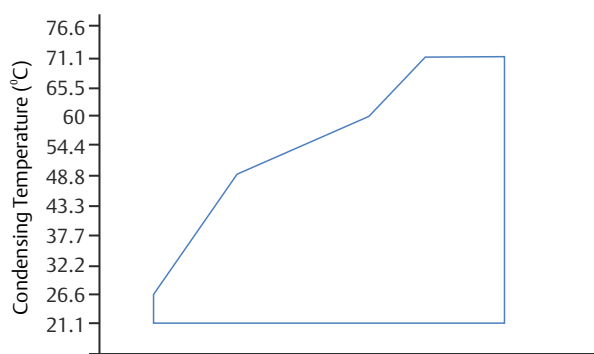
CR22K6ME-PF1, CR30K6ME-PF1, CR35K6ME-TFM, CR47KQME-TFD, CR53KQME-TFD, CR57KQME-TFD, CR62KQME-TFD



CR41K6ME-TFM



CR36K6ME-PFZ, CR42K6ME-PFZ, CR21K6ME-TFM, CR29K6ME-TFM,



R407C Models

Compressor Model	View	Mount Type	Dist 'A'	Suction Tube ID		Discharge Tube ID	
			inch	inch	mm	inch	mm
CR22K6ME-PF1-111DM	P	Square	14.22	0.507	12.88	0.382	9.7
CR30K6ME-PF1-111DM/DE	P		14.22	0.632	16.05	0.382	9.7
CR36K6ME-PFZ-121DM	S		14.63	0.632	16.05	0.382	9.7
CR42K6ME-PFZ-101DM	T		15.13	0.758	19.25	0.382	9.7
CR21K6ME-TFM-111DM	P		14.46	0.507	12.88	0.382	9.7
CR29K6ME-TFM-111DM	P		14.46	0.632	16.05	0.382	9.7
CR35K6ME-TFM-121DM	S		14.38	0.632	16.05	0.382	9.7
CR41K6ME-TFM-101DM	T		14.88	0.758	19.25	0.382	9.7

Large CRs (with Suction & Discharge Tube)

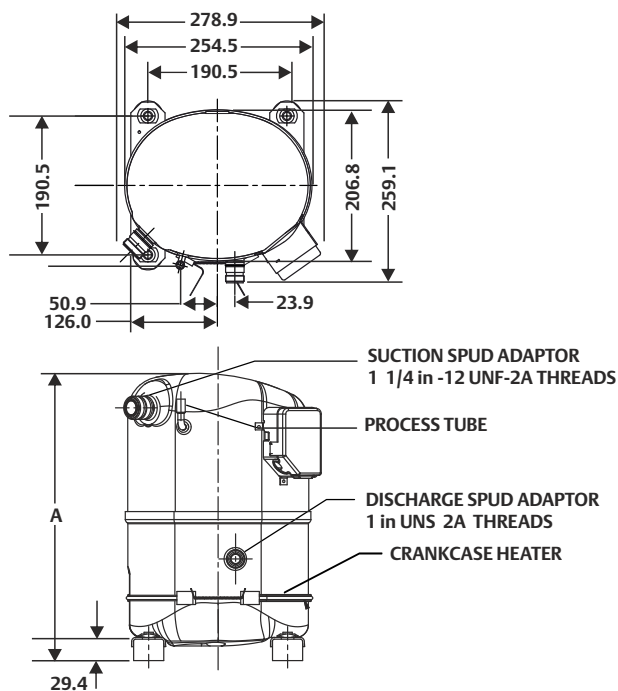
Compressor Model	View	Mount Type	Dist 'A'	Suction Tube ID		Discharge Tube ID		Process Tube ID	
			inch	inch	mm	inch	mm	inch	mm
CR47KQME-TFD-203DM	Q	Square	15.51	0.883	22.43	0.508	12.9	0.383	9.7
CR53KQME-TFD-203DM	Q		15.51	0.883	22.43	0.508	12.9	0.383	9.7
CR57KQME-TFD-203DM	Q		15.51	0.883	22.43	0.508	12.9	0.383	9.7
CR62KQME-TFD-203DM	Q		15.51	0.883	22.43	0.508	12.9	0.383	9.7

Large CRs (with Suction & Discharge Spud)

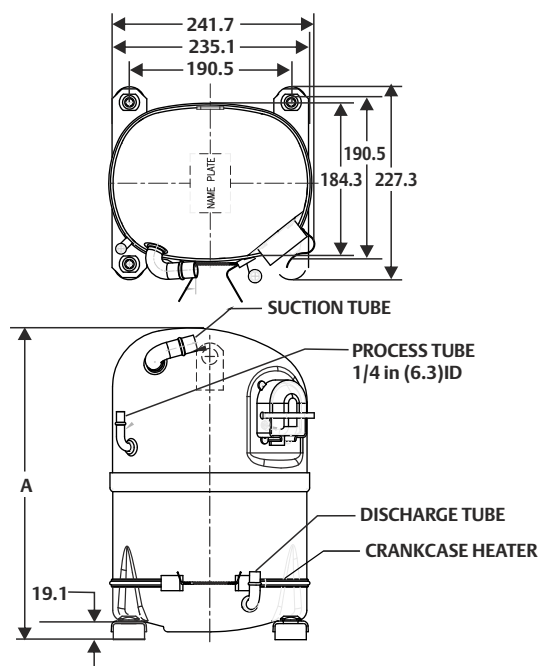
Compressor Model	View	Mount Type	Dist 'A'	Suction Spud Dimensions	Discharge Spud Dimensions	Process Tube ID	
			inch	inch	inch	inch	mm
CR47KQME-TFD-233DM	R	Square	15.51	1 1/4	1	0.383	9.7
CR53KQME-TFD-233DM	R		15.51	1 1/4	1	0.383	9.7
CR57KQME-TFD-233DM	R		15.51	1 1/4	1	0.383	9.7
CR62KQME-TFD-233DM	R		15.51	1 1/4	1	0.383	9.7



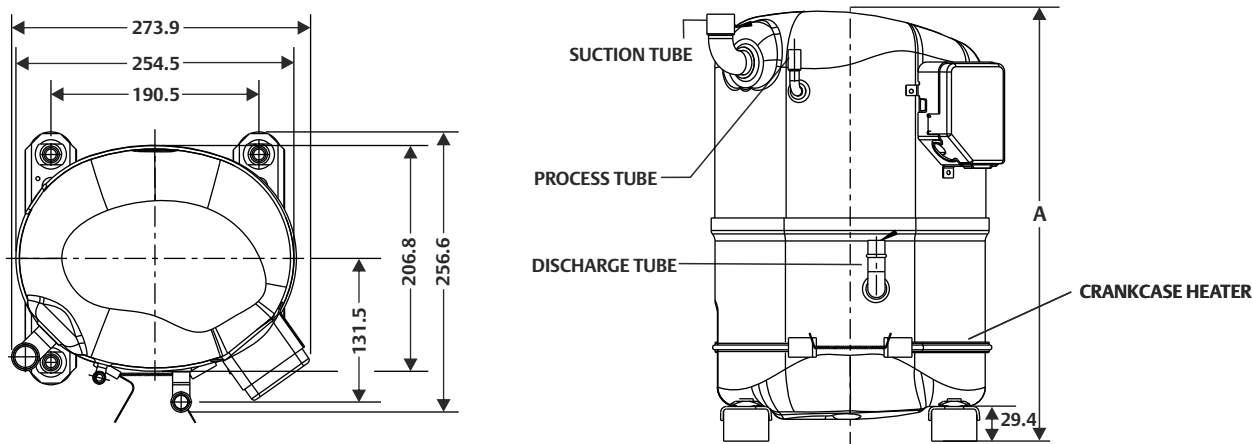
View R - Square Mount with Suction & Discharge Spud



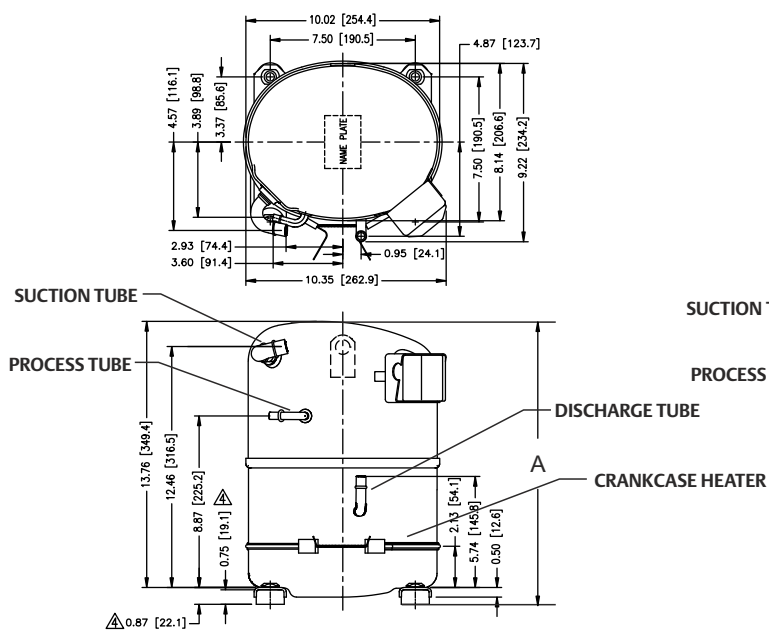
View P - Square Mount



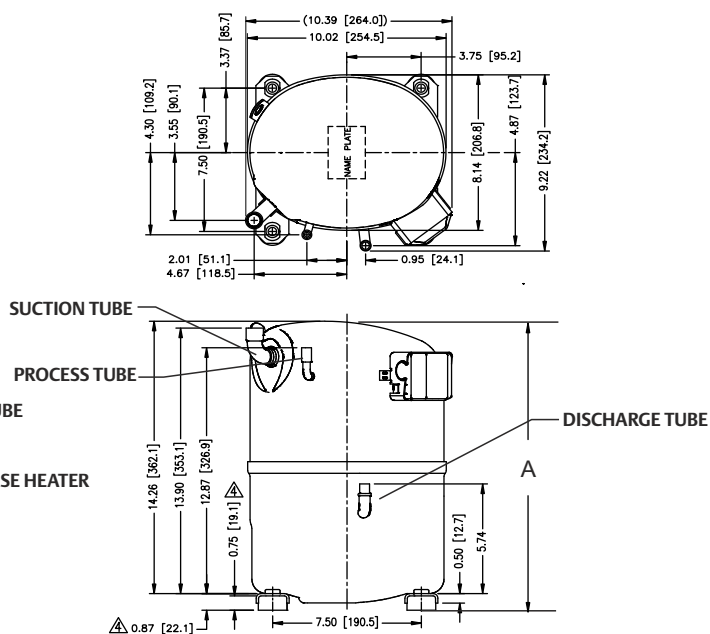
View Q - Square Mount



View S - Square Mount with Suction & Discharge Tube



View T - Square Mount



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Note

The components listed in this catalogue are not released for use with caustic, poisonous or flammable substances. Emerson cannot be held responsible for any damage caused by using these substances.

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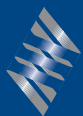




Air-Conditioning Scroll Compressors
Compresseurs Scroll Pour Climatisation
Scroll Klimaverdichter



Product Selection Catalogue / Catalogue de Sélection / Produktauswahl


EMERSON
Climate Technologies



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GB

Copeland Scroll™ Compressor

The Copeland Scroll™ compressor is the result of large scale research and development efforts underway since 1979. These efforts have led to the production of the most advanced scroll compressor design currently available for air-conditioning, heat pump and medium temperature applications in the 1.3 to 60 hp range.

Today, Copeland Scroll™ compressors are produced in top-modern manufacturing facilities located in Belgium, Northern Ireland, U.S.A., Thailand and China.

Why Scroll Compressors?

System manufacturers choose scroll compressors over other compressor technologies for several reasons: lower sound, superior efficiency and reliability, compatibility with heat pump applications and ease of design.

Why Copeland Scroll™?

Customers prefer to use Copeland Scroll™ for many reasons, including:

- The unique design patented by Emerson Climate Technologies. It guarantees a scroll compressor with the lowest sound and highest efficiency and durability available on the market.
- Proven track record: Over 60 million scroll compressors are installed worldwide.
- Global supply: Emerson Climate Technologies has nine scroll compressor plants on three continents, all applying production technologies that comply with the same strict quality standards. Compressors supplied worldwide for initial installations or for field service have the exact same high quality design.
- Customer support: Emerson Climate Technologies has offices and wholesaler networks across Europe and across the world to support all customers, no matter where they are.

F

Le Compresseur Copeland Scroll™

Le compresseur Copeland Scroll™ est le résultat de vastes efforts de recherche et développement menés depuis 1979. Ces efforts ont abouti à la fabrication du compresseur à spirale le plus avancé, aujourd'hui disponible pour les applications d'air conditionné, de moyenne température et de pompes à chaleur de 1,3 à 60 hp.

Les compresseurs Copeland Scroll™ sont actuellement fabriqués dans nos centres de production situés en Belgique, Irlande du Nord, Etats Unis, Thaïlande et Chine.

Pourquoi Les Compresseurs Scroll?

Les fabricants de systèmes complets privilégient les compresseurs scroll par rapport aux autres technologies pour divers raisons: la réduction du niveau sonore, un rendement et une fiabilité supérieure, la compatibilité avec les applications de pompes à chaleur, et leurs mise en oeuvre facile.

Pourquoi Le Compresseur Copeland Scroll™?

Les clients préfèrent utiliser le Copeland Scroll™ pour diverses raisons, dont les suivantes :

- La conception unique brevetée par Emerson Climate Technologies garantit les niveaux sonores les plus bas, les rendements les plus élevés et fournit le compresseur scroll le plus fiable du marché.
- Un succès à toute épreuve: plus de 60 millions de compresseurs scroll installés.
- Un approvisionnement mondial: Emerson Climate Technologies dispose de neuf usines de compresseurs scroll implantées sur trois continents et possédant des technologies de production qui respectent les mêmes standards de qualité. Les compresseurs fournis à l'échelle mondiale pour de nouvelles installations ou pour le service après vente sont conformes aux mêmes exigences.
- Un support clientèle: Emerson Climate Technologies peut renseigner tous les clients, où qu'ils soient, en Europe ou dans le monde entier, grâce à son réseau d'agences et de distributeurs.

D

Copeland Scroll™ Verdichter

Der Copeland Scroll™ Verdichter ist das Ergebnis umfangreicher Forschungs- und Entwicklungsarbeiten seit 1979. Diese Arbeiten haben zur Fertigung der fortschrittlichsten Verdichter hermetischer Bauart geführt, die gegenwärtig für Anwendungen in der Klimatechnik, in Wärmepumpen und für die Normalkühlung im Bereich 1,3 bis 60 PS erhältlich sind.

Die Copeland Scroll™ Verdichter werden heute in hochmodernen Werken in Belgien, Nordirland, den USA, Thailand und China gefertigt.

Warum Scroll-Verdichter?

Systemhersteller bevorzugen Scroll-Verdichter gegenüber anderen Verdichtertechnologien aus folgenden Gründen: niedriger Geräuschlevel, hohe Effizienz und Zuverlässigkeit, Kompatibilität mit Wärmepumpen-Anwendungen und Einfachheit des Designs.

Warum Copeland Scroll™?

Kunden bevorzugen aus vielen Gründen Copeland Scroll™:

- Das einzigartige, patentiert Design von Emerson Climate Technologies garantiert den leisesten, effizientesten und langlebigsten Scroll-Verdichter, den es zur Zeit auf dem Markt gibt.
- Nachgewiesener Erfolg: bisher sind über 60 Millionen Scroll-Verdichter installiert worden.
- Weltweites Angebot: Emerson Climate Technologies betreibt neun Werke auf drei Kontinenten, die alle nach strikten Produktionsstandards fertigen. Die gelieferten Verdichter für Erstinstallationen oder Service erfüllen daher weltweit die gleichen hohen Qualitätsstandards.
- Kundendienst: Emerson Climate Technologies hat Niederlassungen und Großhändler-Netzwerke in Europa und der ganzen Welt. Damit kann jeder Kunde vor Ort unterstützt werden.

Copeland Scroll Digital™- A Simple Solution for Continuous Modulation

Many techniques have been used to enhance the operation of the air-conditioning equipment and its ability to match a load at low energy consumption. Traditional schemes of modulation are often complicated and lead to reliability problems.

Emerson Climate Technologies has solved these challenges by bringing innovation into the air-conditioning industry with the Digital Scroll™ technology. Products incorporating this innovative digital technology are:

- ZPD models for use with the refrigerant R410A
- ZRD models for use with the refrigerant R407C

Based on the unique Copeland Compliant Scroll® design, The Digital Scroll™ technology is a simple mechanical control method that provides several additional benefits:

- best applied cost for air-conditioning chillers, heat pumps, rooftops, dryer, process cooling and multi-evaporator systems
- perfect match of capacity and power consumption to the desired load, providing optimum energy efficiency
- widest range of continuous modulation from 10% to 100%
- highest performance at full load (EER/COP)
- precise suction pressure control with associated energy savings
- ease of design
- no need for expensive and complicated high power inverters and therefore no electromagnetic interferences
- Optimum system oil: Digital Scroll™ compressors run at full speed at all time, never slowing or stopping oil flow to the bearings
- superior humidity and temperature control for improved human comfort

Copeland Scroll Digital™ - Une Solution Simple Pour Une Régulation de Puissance Continue

De nombreuses technologies ont été utilisées pour améliorer le fonctionnement des équipements de conditionnement d'air et leur capacité à s'adapter au besoins tout en conservant une faible consommation énergétique. Les concepts de régulation de puissance classiques sont souvent compliqués et entraînent à des problèmes de fiabilité.

Emerson Climate Technologies a relevé ces défis en introduisant dans l'industrie de conditionnement d'air la technologie innovante Digital Scroll™. Les produits qui incorporent cette technologie innovante sont:

- Les modèles ZPD fonctionnant au R410A
- Les modèles ZRD fonctionnant au R407C

La technologie Digital Scroll™ est une méthode mécanique de régulation simple, rendue possible grâce au système Copeland Compliant Scroll®, et offrant les avantages suivants:

- Le meilleur coût d'utilisation pour les applications de refroidisseurs, pompes à chaleur, rooftops, sécheur, process de refroidissement et installation à évaporateurs multiples
- Adaptation parfaite de la puissance frigorifique et de la consommation d'énergie aux besoins, fournissant un rendement énergétique optimal
- La plus large plage de régulation de puissance continue de 10% à 100 %
- Les performances les plus élevées en pleine charge (EER/COP)
- Contrôle précis de la pression d'aspiration avec réduction de la consommation énergétique
- Conception facile
- Pas besoin de variateur de fréquence coûteux et compliqué, donc absence de d'interférences électromagnétiques.
- Retour d'huile optimal: les compresseurs Digital Scroll™ fonctionnent en permanence à vitesse nominale, ne ralentissant ni n'interrompant jamais le flux d'huile vers les paliers
- Très bon contrôle de l'humidité et de la température pour un confort amélioré

Copeland Scroll Digital™- Eine Einfache Lösung zur Stufenlosen Leistungsregelung

Es gibt zahlreiche Technologien zur Optimierung des Betriebs von Klimaanlagen und genauen Abstimmung der Leistung auf den Bedarf bei gleichzeitiger Energieersparnis. Allerdings sind die traditionellen Arten der Leistungsregelung oft kompliziert und wirken sich negativ auf die Zuverlässigkeit der Anlagen aus.

Emerson Climate Technologies hat mit der innovativen Digital Scroll™ Technologie eine Lösung für diese Anforderungen gefunden. Folgende Produkte sind mit der neuen Technologie ausgestattet:

- ZPD Modelle zum Einsatz mit R410A
- ZRD Modelle zum Einsatz mit R407C

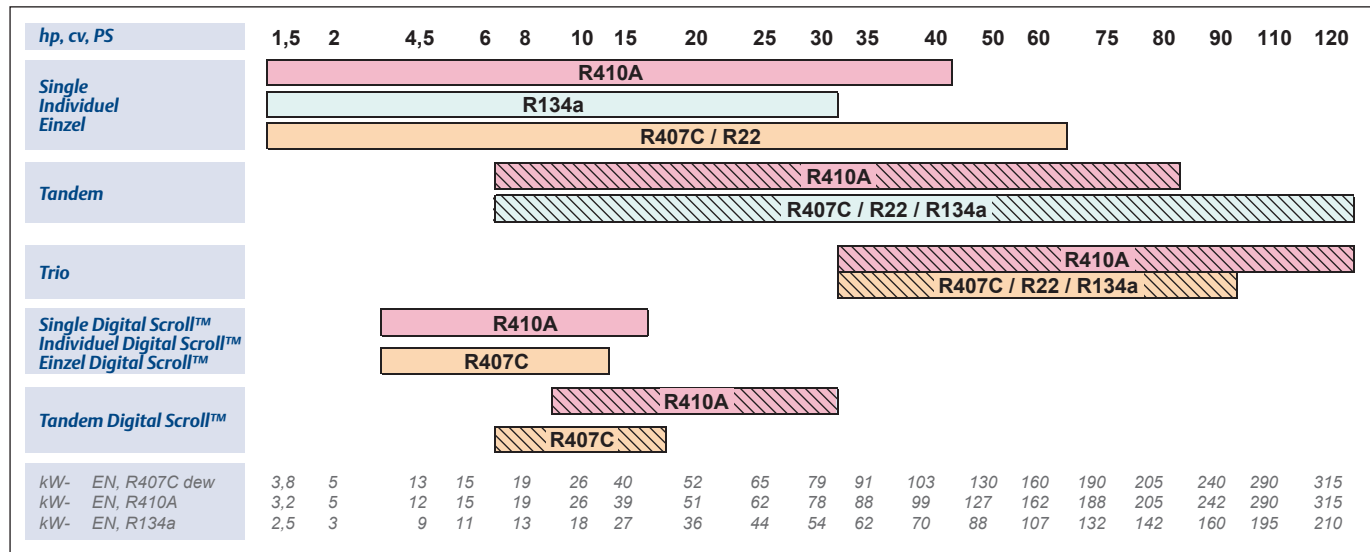
Basierend auf dem einzigartigen Copeland Compliant Scroll® Design ist die Digital Scroll™ Technologie eine einfache mechanische Art der Leistungsregelung, die gleich mehrere Vorteile mit sich bringt:

- Geringste Betriebskosten für Kaltwassersätze für Klimaanwendungen, Wärmepumpen, Rooftops, Trockner, Prozesskühlung und Systeme mit mehreren Verdampfern
- Genaue Anpassung von Leistung und Stromverbrauch an den entsprechenden Bedarf zur optimalen Energieeffizienz
- Breitesten stufenlosen Leistungsregelung von 10% bis 100%
- Höchste Leistung bei Volllast (EER/COP)
- Genaue Saugdruckregelung bei gleichzeitiger Energieersparnis
- Einfaches Design
- Kostenaufwendige und komplizierte Invertertechnologie ist nicht erforderlich. Elektromagnetische Interferenzen werden so vermieden.
- Optimale Ölrückführung: Digital Scroll™ Verdichter laufen grundsätzlich bei voller Geschwindigkeit, so dass der Ölfluss zu den Lagern nie verlangsamt oder gestoppt wird
- Hervorragende Feuchtigkeits- und Temperaturregelung für optimalen Komfort

Product Range

Gamme de produits

Produktpalette



 Assembled by customer / Assemblés par le client / Von Kunden gefertigt

Note: Low temperature refrigeration scroll products and condensing units are also available from Emerson Climate Technologies.

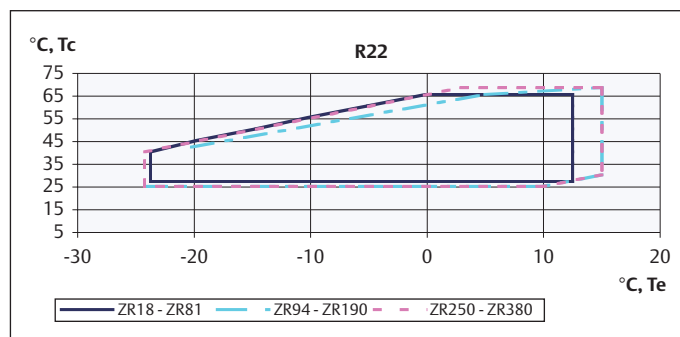
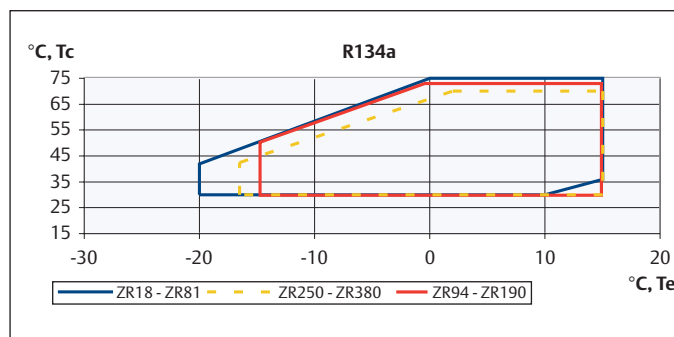
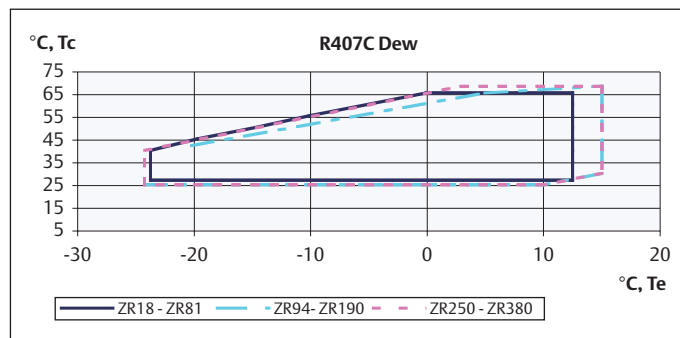
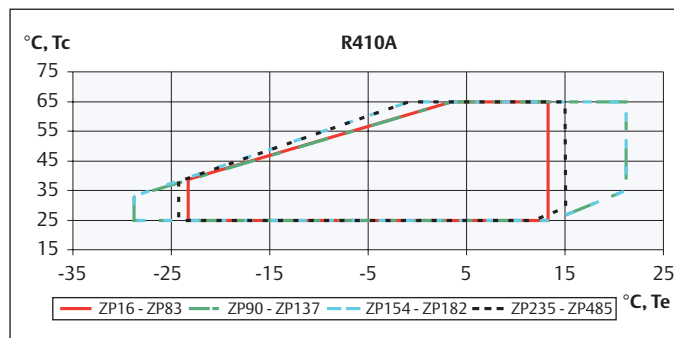
Note: Les produits scroll pour la réfrigération basse température et des groupes de condensation sont aussi disponibles chez Emerson Climate Technologies.

Anmerkung: Scroll-Verdichter für Tieftemperaturanwendungen sowie Verflüssigungssätze sind ebenfalls von Emerson Climate Technologies erhältlich.

Application Envelopes

Plages d'application

Anwendungsbereiche



Te = Evaporating temperature / Température d'évaporation / Verdampfungstemperatur
Tc = Condensing temperature / Température de condensation / Verflüssigungstemperatur

Notes: Envelopes are close approximations @ 10K Superheat. Please see Copeland® brand products Selection Software for detailed envelopes. Single compressor envelopes valid for tandem and trio assemblies.

Notes: Les plages d'applications sont des approximations avec 10K surchauffe. Veuillez vous référer au logiciel de Sélection Copeland® brand products pour les plages d'applications détaillées. les plages d'applications de compresseur individuel sont aussi valables pour les ensembles Tandem et Trio.

Anmerkung: Die Anwendungsbereiche sind Näherungswerte @ 10K Sauggasüberhitzung. Weitere Informationen entnehmen Sie bitte dem Auswahlprogramm Copeland® brand products Selection Software. Anwendungsbereiche von Einzelverdichtern sind auch für Tandem und Trio gültig.

Model Designation

Désignation des modèles

Modellbezeichnung

Z	P			24 K	S	E	- TFM	- 522
Z	R	D		42 K	C	E	- PFJ	- 522
Z	R		T	122 K	C	E	- TFD	- XXX
1	2	3	4	5	6	7	8	9

1 Z = Scroll compressor / Compresseur scroll / Scroll-Verdichter

2 P = R410A
R = R407C / R22 / R134a

3 D = Digital Scroll™
Y = Trio

4 T = Tandem compressor even / Compresseurs tandem égal / gleicher Tandem Verdichter
U = Tandem compressor uneven / Compresseur tandem inégal / ungleicher Tandem Verdichter

5 Nominal capacity rating in BTU / h ("K" = x 1000, "M" = x 10000) at 60Hz and ARI conditions (R22 for ZR)
Puissance frigorifique nominale en BTU/h ("K" = x 1000, "M" = x 10000) à 60Hz aux conditions ARI (R22 pour ZR)
Nenn-Kälteleistung in BTU / h ("K" = x 1000, "M" = x 10000) bei 60Hz und ARI Bedingungen (R22 für ZR)

6 Model variation / Indice d'évolution du modèle / Modell-Variation

7 Lubricant type: E = Ester oil, Blank = Mineral oil
Type de lubrifiant: E = Huile ester, espace = Huile minérale
Öl-Typ: E = Ester-Öl, ohne = Mineral

8 Motor version / Version du moteur / Motorversion

9 Bill of material number / Variante pour l'équipement / Ausrüstungsvariante

Compressor Configurations

Configuration de compresseur

Verdichter-Konfiguration

	ZP (R410A)				ZR (R407C, R134a, R22)				
	ZP16K*... ZP31K*	ZP36K*... ZP83K*	ZP90K*... ZP182K*	ZP235K*... ZP485K*	ZR18K*... ZR40K*	ZR48K*	ZR61K*... ZR81K*	ZR94K*... ZR190K*	ZR250K*... ZR380K*
Braze version Version brasé Version mit Lötanschluss	X	X	X	X	X	X	X	X	X
Rotalock version Version Rotalock Rotalock Version						X ⁽¹⁾	X ⁽¹⁾		X
Sight Glass Voyant d'huile Schauglas			X	X				X	X
Rotalock version with Schraeder valve on discharge and suction fitting Version Rotalock avec vanne Schraeder sur raccord de refoulement et d'aspiration Rotalock Version mit Schraeder-Ventil am Druckleitungs- und Saugleitungsanschluss									X
Schraeder connection for oil fill Raccord Schraeder pour la charge d'huile Schraeder-Verbindung zum Einfüllen des Öls			X	X				X	X

Tandem capable / Version pour Tandem / Tandemfähige Version

Uses sight glass fitting for gas and oil equalization Utiliser le raccord voyant pour l'égalisation de gaz et d'huile Verwendet den Schauglas-Anschluss für den Gas- und Öl-Ausgleich			X	X				X	X
Gas equalization fitting Raccord d'égalisation de gaz Gas-Ausgleichsanschluss		X				X	X		
Oil equalization fitting Raccord d'égalisation d'huile Öl-Ausgleichsanschluss		X				X	X		

⁽¹⁾ TFD motor only / Uniquement TFD / Nur für TFD Motor

Product Overview

Gamme de produits

Produktübersicht

	Compressor Data Données compresseurs Verdichter-Daten						Motor Versions ⁽⁶⁾ Version de moteur Motor-Versionen		Configuration Configuration Konfiguration	
Model Modèle Modell	Nominal Horsepower Puissance nominale Motornennleistung	Cooling Capacity Puissance frigorifique Kälteleistungsdaten	Displacement Volume balayé Volumenstrom	Oil Quantity Quantité d'huile Ölmenge	Gross Weight (with Packaging) Poids brut (avec emballage) Gewicht brutto (mit Verpackung)	Net Weight Poids Net Gewicht netto	220/240 - 1 - 50	380/420 - 3 - 50 460 - 3 - 60	Brazing Connections Raccords à braser Lötanschlüsse	Brazing Connections - Tandem Capable Raccords à braser - version pour Tandem Lötanschlüsse - tandemfähige Version
	hp / cv / PS	kW ⁽¹⁾ R410A	m³/h	Liters	kg	kg				
Single / Individuel / Einzel ZP										
News/Novosti/Neu	ZP 16 KSE	1,3	3,2	2,6	0,7	25	PFZ ⁽⁷⁾	TFM ⁽⁷⁾	522	
News/Novosti/Neu	ZP 24 KSE	2,0	5,1	4,0	0,7	25				
News/Novosti/Neu	ZP 29 KSE	2,5	6,1	4,8	0,7	26				
News/Novosti/Neu	ZP 31 KSE	2,7	6,5	5,1	0,7	26				
News/Novosti/Neu	ZP 36 KSE	2,9	7,7	6,0	1,3	32				
News/Novosti/Neu	ZP 42 KSE	3,5	8,9	7,0	1,3	34				422 ⁽²⁾
News/Novosti/Neu	ZP 54 KSE	4,6	11,5	8,9	1,3	37				
	ZP 61 KCE	5,0	13,1	9,9	1,7	43				
	ZP 72 KCE	6,0	15,3	11,7	1,7	43				
	ZP 83 KCE	7,0	17,7	13,4	1,7	43				
	ZP 90 KCE	7,5	19,4	14,6	2,5	66		425		
	ZP 103 KCE	9,0	22,5	16,8	3,3	69				
	ZP 120 KCE	10,0	26,5	19,8	3,3	71				
	ZP 137 KCE	12,0	29,9	22,1	3,3	70				
	ZP 154 KCE	13,0	33,5	24,8	3,3	74				
	ZP 182 KCE	15,0	39,6	29,1	3,3	75		TWD	522 ⁽⁴⁾ 524 ⁽⁵⁾	
	ZP 235 KCE	20,0	50,6	37,8	4,7	168				
	ZP 295 KCE	25,0	63,5	46,7	6,8	188				
	ZP 385 KCE	30,0	82,4	60,8	6,3	201				
News/Novosti/Neu	ZP 485 KCE	40,0	104,4	78,3	6,3	215				
Tandem ZPT - Tandem Uneven ZPU - Trio ZPY										
	ZPT 72 KSE ⁽³⁾	2 x 2.9	15,2	12,0	2,5	59	TFD or TWD			
	ZPT 82 KSE ⁽³⁾	2 x 3.5	17,6	13,9	2,5	62				
	ZPT 108 KSE ⁽³⁾	2 x 4.6	22,8	17,8	2,5	68				
	ZPT 122 KCE	2 x 5	25,9	19,8	3,3	80				
	ZPT 144 KCE	2 x 6	30,3	23,4	3,3	80				
	ZPT 166 KCE	2 x 7	35,0	26,8	3,3	80				
	ZPT 180 KCE ⁽³⁾	2 x 7.5	38,4	29,2	5,0	114				
	ZPT 206 KCE ⁽³⁾	2 x 9	44,6	33,6	6,5	120				
	ZPU 223 KCE ⁽³⁾	9 + 10	48,5	36,6	6,5	122				
	ZPT 240 KCE ⁽³⁾	2 x 10	52,5	39,6	6,5	124				
	ZPU 240 KCE ⁽³⁾	9 + 12	51,9	38,9	6,5	121				
	ZPU 257 KCE ⁽³⁾	10 + 12	55,8	41,9	6,5	123				
	ZPT 274 KCE ⁽³⁾	2 x 12	59,2	44,2	6,5	122				
	ZPU 274 KCE ⁽³⁾	10 + 13	59,4	48,4	6,5	127				
	ZPU 285 KCE ⁽³⁾	9 + 15	61,5	45,5	6,5	126				
	ZPU 302 KCE ⁽³⁾	10 + 15	65,4	48,5	6,5	128				
	ZPT 308 KCE ⁽³⁾	2 x 13	66,3	57,2	6,5	130				
	ZPU 319 KCE ⁽³⁾	12 + 15	68,8	50,8	6,5	127				
	ZPU 336 KCE ⁽³⁾	13 + 15	72,4	57,3	6,5	131				
	ZPY 360 KCE ⁽³⁾	3 x 10	78,3	59,4	9,8	186				
	ZPT 364 KCE ⁽³⁾	2 x 15	78,4	57,4	6,5	132				
	ZPY 411 KCE ⁽³⁾	3 x 12	88,4	66,3	9,8	183				
	ZPU 417 KCE ⁽³⁾	15 + 20	89,3	65,0	8,0	206				
	ZPU 449 KCE ⁽³⁾	13 + 25	72,4	71,5	6,5	131				
	ZPY 462 KCE ⁽³⁾	3 x 13	99,0	74,4	9,8	195				
	ZPT 470 KCE ⁽³⁾	2 x 20	100	75,6	9,4	280				
	ZPU 477 KCE ⁽³⁾	15 + 25	102	75,8	10,1	226				
	ZPU 530 KCE ⁽³⁾	20 + 25	113	84,5	11,5	300				
	ZPY 546 KCE ⁽³⁾	3 x 15	116	74,4	9,8	198				
	ZPU 567 KCE ⁽³⁾	15 + 30	121	85,6	9,6	242				
	ZPT 590 KCE ⁽³⁾	2 x 25	126	93,4	13,6	320				
	ZPU 680 KCE ⁽³⁾	25 + 30	144	108	13,1	336				
	ZPY 705 KCE ⁽³⁾	3 x 20	150	113	14,1	420				
	ZPT 770 KCE ⁽³⁾	2 x 30	162	121	12,6	352				
News/Novosti/Neu	ZPT 970 KCE ⁽³⁾	2 x 40	205	157	12,6	380				
	ZPY 885 KCE ⁽³⁾	3 x 25	188	140	20,4	480				
	ZPY 116 MCE ⁽³⁾	3 x 30	243	182	18,9	528				
News/Novosti/Neu	ZPY 145 MCE ⁽³⁾	3 x 40	309	235	18,9	570				

⁽¹⁾ EN 12900: Evaporating 5°C, Condensing 50°C, Superheat 10K, Subcooling 0K
Evaporation 5°C, Condensation 50°C, Surchauffe aspiration 10K, Sous refroidissement 0K
Verdampfung 5°C, Kondensation 50°C, Sauggasüberhitzung 10K, Unterkühlung 0K.

⁽²⁾ TFD/TFM motor only
Uniquement moteur TFD/TFM
Nur TFD/TFM Motor.

⁽⁴⁾ 115/230 V AC Motor protection module
Module de protection moteur
Motorschutzmodul

⁽⁵⁾ 24 V AC Motor protection module
Module de protection moteur
Motorschutzmodul

⁽⁶⁾ For other voltage contact your Emerson Climate Technologies representative.
Contacter votre représentant Emerson Climate Technologies pour les autres tensions.

Für Informationen über andere Spannungen kontaktieren Sie bitte Ihr Emerson Climate Technologies Verkaufsbüro.

Product Overview

Gamme de produits

Produktübersicht

	Compressor Data Données compresseurs Verdichter-Daten								Motor Versions ⁽⁹⁾ Version de moteur Motor-Versionen		Configuration Configuration Konfiguration			
Model Modèle Modell	Nominal Horsepower Puissance nominale Motorenleistung	Cooling Capacity Puissance frigorifique Kälteleistungsdaten			Displacement Volume balayé Volumenstrom	Oil Quantity Quantité d'huile Ölmenge	Gross Weight (with Packaging) Poids brut (avec emballage) Gewicht brutto (mit Verpackung)	Net Weight Poids Net Gewicht netto	220/240 - 1 - 50 380/420 - 3 - 50 460 - 3 - 60	Brazing Connections Raccords à braser Lötlanschlüsse	Brazing Connections - Tandem Capable Raccords à braser - version pour Tandem Lötlanschlüsse - tandemfähige Version	Rotolock Connections Raccords Rotolock Rotalock-Anschlüsse	Rotolock Connections - Tandem Capable Raccords Rotolock - version pour Tandem Rotalock-Anschlüsse - tandemfähige Version	
	hp / cv / PS	kW ⁽²⁾ R407C	kW ⁽²⁾ R134a	kW ⁽¹⁾ R22	m³/h	Liters	kg	kg						
Single / Individuel / Einzel ZR														
ZR 18 K3E	1,5	3,7	2,5	4,4	4,4	0,7	21	19	PFJ	TFD	522			
ZR 22 K3E	1,8	4,6	3,2	5,4	5,3	1,0	26	24			522 ⁽⁴⁾⁽⁸⁾			
ZR 28 K3E	2,5	5,9	4,2	7,0	6,8	1,0	27	25						
ZR 34 K3E	3,0	7,0	4,9	8,3	8,0	1,1	30	28						
ZR 40 K3E	3,5	8,2	5,7	9,8	9,4	1,1	31	28						
ZR 48 K3E	4,0	10,1	6,9	11,9	11,5	1,4	33	31		TFM	522	422 ⁽⁵⁾		
ZR 61 KSE	5,0	13,1	-	-	14,7	1,4	32	30						
ZR 72 KCE	6,0	14,8	10,5	17,6	17,0	1,7	44	40						
ZR 81 KCE	6,5	16,7	11,8	19,9	18,7	1,7	45	41						
ZR 94 KCE	7,5	20,6	13,4	23,4	22,1	2,5	66	57						
ZR 108 KCE	7,5	23,0	15,4	26,7	24,9	3,3	69	59		TFD	425			
ZR 125 KCE	10,0	26,9	17,6	30,7	29,1	3,3	71	61						
ZR 144 KCE	12,0	30,9	20,9	34,8	33,2	3,3	70	61						
ZR 160 KCE	13,0	33,4	22,8	37,4	36,4	3,3	74	64						
ZR 190 KCE	15,0	39,2	27,2	45,0	43,4	3,3	75	66						
ZR 250 KCE	20,0	52,2	35,4	60,0	56,6	4,7	168	140		TWD	522 ⁽⁶⁾ 524 ⁽⁷⁾	523 ⁽⁶⁾ 525 ⁽⁷⁾		
ZR 310 KCE	25,0	65,0	43,8	74,2	71,4	6,8	188	160						
ZR 380 KCE	30,0	81,7	55,4	92,0	87,5	6,3	201	176						
Tandem ZRT - Tandem Uneven ZRU - Trio ZRY														
ZRT 96 K3E	2 x 4	20,0	13,8	23,8	23,0	2,8	--	62		TFD or TWD				
ZRT 122 K3E	2 x 5	25,8	--	--	28,8	2,8	--	60						
ZRT 144 KCE	2 x 6	29,2	21,0	35,2	34,0	3,4	--	80						
ZRT 162 KCE	2 x 6.5	33,1	23,6	39,8	38,4	3,4	--	82						
ZRT 188 KCE ⁽³⁾	2 x 8	40,8	26,8	46,8	44,2	5,0	--	114						
ZRT 216 KCE ⁽³⁾	2 x 9	45,5	30,8	53,4	49,8	6,6	--	120						
ZRT 250 KCE ⁽³⁾	2 x 10	53,3	35,2	61,4	58,2	6,6	--	124						
ZRT 288 KCE ⁽³⁾	2 x 12	61,2	41,8	69,6	66,2	6,6	--	122						
ZRU 315 KCE ⁽³⁾	10 + 15	65,5	44,8	75,7	72,5	6,6	--	128						
ZRT 320 KCE ⁽³⁾	2 x 13	66,1	45,6	74,8	72,8	6,6	--	130						
ZRU 350 KCE ⁽³⁾	13 + 15	72,0	50,0	82,4	79,8	6,6	--	131						
ZRT 380 KCE ⁽³⁾	2 x 15	77,8	54,4	90,0	86,8	6,6	--	132						
ZRU 440 KCE ⁽³⁾	15 + 20	90,6	62,6	105	100	8,0	--	206						
ZRY 480 KCE ⁽³⁾	3 x 13	98,7	68,4	112	109	9,9	--	195						
ZRT 500 KCE ⁽³⁾	2 x 20	103,4	70,8	120	113	9,4	--	280						
ZRU 500 KCE ⁽³⁾	15 + 25	103	71,0	119	115	10,1	--	226						
ZRU 560 KCE ⁽³⁾	20 + 25	116	79,2	134	128	11,5	--	300						
ZRY 570 KCE ⁽³⁾	3 x 15	116	81,6	135	130	9,9	--	198						
ZRT 620 KCE ⁽³⁾	2 x 25	129	87,6	148	143	13,6	--	320						
ZRU 690 KCE ⁽³⁾	25 + 30	145	99,2	166	159	13,1	--	336						
ZRY 750 KCE ⁽³⁾	3 x 20	154	106	180	170	14,1	--	420						
ZRT 760 KCE ⁽³⁾	2 x 30	162	111	184	175	12,6	--	352						
ZRY 930 KCE ⁽³⁾	3 x 25	192	131	223	214	20,4	--	480						
ZRY 114 MCE ⁽³⁾	3 x 30	241	166	276	262	18,9	--	528						

⁽¹⁾ ARI: Evaporating 7.2°C, Condensing 54.4°C, Superheat 11K, Subcooling 8.3K
Evaporation 7.2°C, Condensation 54.4°C, Surchauffe aspiration 11K, Sous refroidissement 8.3K
Verdampfung 7.2°C, Kondensation 54.4°C, Sauggasüberhitzung 11K, Unterkühlung 8.3K

⁽²⁾ EN 12900: Evaporating 5°C, Condensing 50°C, Superheat 10K, Subcooling 0K - (R407C Dew)
Evaporation 5°C, Condensation 50°C, Surchauffe aspiration 10K, Sous refroidissement 0K - (R407C Point de rosée)
Verdampfung 5°C, Kondensation 50°C, Sauggasüberhitzung 10K, Unterkühlung 0K - (R407C Taupunkt)

⁽³⁾ Tandem / Trio assemblies by system manufacturers, Emerson Climate Technologies can provide full technical support.
Tandem / Trio assemblés par les fabricants de systèmes, Emerson Climate Technologies fournit le support technique complet.
Tandem / Trio System von System-Herstellern, Emerson Climate Technologies liefert volle technische Unterstützung.

⁽⁶⁾ 115/230 V AC Motor protection module
Module de protection de moteur
Motorschutzmodul

⁽⁷⁾ 24 V AC Motor protection module
Module de protection de moteur
Motorschutzmodul

⁽⁸⁾ 512 Three foots mounting model
Modèle à trois pieds de fixation
Drei-Punkt Befestigungsmodell

ZPD Product Overview

ZPD Gamme de produits

ZPD Produktübersicht

		Compressor Data Données compresseurs Verdichter-Daten					Motor Versions ⁽⁴⁾ Version de moteur Motor-Versionen		Configuration Configuration Konfiguration	
Model Modèle Modell	Nominal Horsepower Puissance nominale Motorenleistung	Cooling Capacity Puissance frigorifique Kälteleistungsdaten	Displacement Volume balayé Volumenstrom	Oil Quantity Quantité d'huile Ölmenge	Gross Weight (with Packaging) Poids brut (avec emballage) Gewicht brutto (mit Verpackung)	Net Weight Poids Net Gewicht netto	220/240 - 1 - 50	380/420 - 3 - 50 460 - 3 - 60	Brazing Connections Raccords à braser Lötanschlüsse	Brazing Connections - Tandem Capable Raccords à braser - version pour tandem Lötanschlüsse - tandemfähige Version
	hp / cv / PS	kW ⁽¹⁾ R410A	m³/h	Liters	kg	kg				
Single / Individuel / Einzel ZPD										
New/Discontinued/Neu	ZPD 34 KCE	3,0	8,2	5,7	1,2	33	30	PFZ	TFD	522
New/Discontinued/Neu	ZPD 42 KCE	3,5	9,1	6,9	1,2	34	31			
New/Discontinued/Neu	ZPD 54 KCE	4,6	11,7	8,9	1,2	36	33			
	ZPD 61 KCE	5,0	13,2	10,1	1,9	48	45			
	ZPD 72 KCE	6,0	15,3	11,6	1,8	48	45			
	ZPD 83 KCE	7,0	17,7	13,4	1,8	48	45			422 ⁽²⁾
New/Discontinued/Neu	ZPD 120 KCE	10,0	26,3	19,8	3,3	64	61			425 ⁽²⁾
New/Discontinued/Neu	ZPD 137 KCE	12,0	29,5	22,1	3,3	64	61			
Tandem ZPDT - Tandem Uneven ZPDU										
	ZPDT 122 KCE ⁽³⁾	2 x 5	26,0	20,2	3,8	-	90	TFD		
	ZPDU 133 KCE ⁽³⁾	5 + 6	28,0	21,7	3,7	-	90			
	ZPDT 144 KCE ⁽³⁾	2 x 6	30,2	23,3	3,5	-	90			
	ZPDT 166 KCE ⁽³⁾	2 x 7	35,0	26,9	3,5	-	90			
New/Discontinued/Neu	ZPDT 240 KCE ⁽³⁾	2 x 10	52,4	39,5	6,5	-	122			
New/Discontinued/Neu	ZPDT 274 KCE ⁽³⁾	2 x 12	58,8	44,2	6,5	-	122			

⁽¹⁾ EN 12900: Evaporating 5°C, Condensing 50°C, Superheat 10K, Subcooling 0K
Evaporation 5°C, Condensation 50°C, Surchauffe aspiration 10K, Sous refroidissement 0K
Verdampfung 5°C, Kondensation 50°C, Sauggasüberhitzung 10K, Unterkühlung 0K.

⁽³⁾ Tandem / Trio assemblies by system manufacturers. Emerson Climate Technologies can provide full technical support.
Tandem / Trio assemblés par les fabricants de systèmes. Emerson Climate Technologies fournit le support technique complet.
Tandem / Trio System von System-Herstellern. Emerson Climate Technologies liefert volle technische Unterstützung.

⁽²⁾ TFD motor only
Uniquement moteur TFD
Nur TFD Motor

⁽⁴⁾ For other voltage contact your Emerson Climate Technologies representative.
Contacter votre représentant Emerson Climate Technologies pour les autres tensions.
Für Informationen über andere Spannungen kontaktieren Sie bitte Ihr Emerson Climate Technologies Verkaufsbüro.

ZRD Product Overview

ZRD Gamme de produits

ZRD Produktübersicht

	Compressor Data Données compresseurs Verdichter-Daten						Motor Versions ⁽⁵⁾ Version de moteur Motor-Versionen		Configuration Configuration Konfiguration	
Model Modèle Modell	Nominal Horsepower Puissance nominale Motorenleistung	Cooling Capacity Puissance frigorifique Kälteleistungsdaten	Displacement Volume balayé Volumenstrom	Oil Quantity Quantité d'huile Ölmenge	Gross Weight (with Packaging) Poids brut (avec emballage) Gewicht brutto (mit Verpackung)	Net Weight Poids Net Gewicht netto	220/240 - 1 - 50	380/420 - 3 - 50 460 - 3 - 60	Brazing Connections Raccords à braser Lötanschlüsse	Brazing Connections - Tandem Capable Raccords à braser - version pour Tandem Lötanschlüsse - tandemfähige Version
	hp / cv / PS	kW ⁽²⁾ R407C	m³/h	Liters	kg	kg				
Single / Individuel / Einzel ZRD										
ZRD 42 KCE	3,5	8,9	10,0	1,2	34	31	PFJ	TFD	522	422 ⁽⁴⁾
ZRD 48 KCE	4,0	10,8	13,8	1,4	36	33				
ZRD 61 KCE	5,0	12,4	17,3	1,9	41	38				
ZRD 72 KCE	6,0	15,5	20,6	1,9	44	40				
ZRD 81 KCE	6,5	17,0	18,8	1,9	44	41				
ZRD 94 KCE	7,5	21,0	22,1	2,5	63	58			522	
ZRD 125 KCE	10,0	27,7	28,8	3,3	68	62				
Tandem ZRDT - Tandem Uneven ZRDU										
ZRDT 96 KCE ⁽³⁾	2 x 4	20,7	27,6	2,7	-	65	TFD			
ZRDT 122 KCE ⁽³⁾	2 x 5	25,2	34,7	3,8	-	76				
ZRDU 133 KCE ⁽³⁾	5 + 6	28,3	37,9	3,8	-	78				
ZRDT 144 KCE ⁽³⁾	2 x 6	30,0	41,2	3,8	-	80				
ZRDT 162 KCE ⁽³⁾	2 x 6.5	33,3	37,5	3,8	-	82				

⁽²⁾ EN12900: Evaporating 5°C, Condensing 50°C, Superheat 10K, Subcooling 0K
Evaporation 5°C, Condensation 50°C, Surchauffe aspiration 10K, Sous refroidissement 0K
Verdampfung 5°C, Kondensation 50°C, Sauggasüberhitzung 10K, Unterkühlung 0K

⁽⁴⁾ TFD & PFJ motors only
Uniquement les moteurs TFD & PFJ
Nur TFD & PFJ Motoren

⁽³⁾ Tandem / Trio assemblies by system manufacturers. Emerson Climate Technologies can provide full technical support.
Tandem / Trio assemblés par les fabricants de systèmes. Emerson Climate Technologies fournit le support technique complet.
Tandem / Trio System von System-Herstellern. Emerson Climate Technologies liefert volle technische Unterstützung.

⁽⁵⁾ For other voltage contact your Emerson Climate Technologies representative.
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50Hz

Compressor Compresseur Verdichter	Cond./ Verfl. Temp. °C	Evaporating Temperature Température d'évaporation °C Verdampfungstemperatur								
		-20	-15	-10	-5	0	5	7	10	12,5
ZP16KSE-PFZ	Q	30	1,25	1,70	2,25	2,85	3,55	4,35	4,70	5,75
		40	1,00	1,40	1,90	2,50	3,10	3,80	4,10	5,05
		50			1,50	2,00	2,60	3,20	3,50	4,30
Single-phase only Seulement monophasé Nur einphasig	P	30	0,80	0,79	0,78	0,77	0,75	0,73	0,72	0,69
		40	1,03	1,03	1,01	1,00	0,98	0,96	0,96	0,94
		50			1,32	1,30	1,27	1,25	1,25	1,23
ZP24KSE-TFM	Q	30	2,40	3,00	3,75	4,60	5,55	6,65	7,15	8,60
		40	2,05	2,60	3,25	4,05	4,90	5,90	6,30	7,60
		50			2,70	3,40	4,20	5,05	5,45	6,60
	P	30	1,18	1,17	1,15	1,12	1,10	1,07	1,06	1,04
		40	1,51	1,50	1,48	1,45	1,43	1,40	1,39	1,37
		50			1,89	1,87	1,84	1,81	1,80	1,78
ZP29KSE-TFM	Q	30	2,75	3,60	4,50	5,50	6,65	8,00	8,60	10,40
		40	2,10	2,95	3,85	4,80	5,85	7,10	7,60	9,25
		50			3,05	3,95	4,95	6,05	6,50	7,95
	P	30	1,40	1,41	1,39	1,37	1,34	1,30	1,29	1,25
		40	1,76	1,78	1,77	1,75	1,72	1,69	1,67	1,63
		50			2,25	2,24	2,21	2,18	2,17	2,12
ZP31KSE-TFM	Q	30	2,95	3,85	4,85	5,95	7,15	8,60	9,25	11,20
		40	2,30	3,20	4,15	5,15	6,30	7,65	8,20	9,95
		50			3,30	4,30	5,35	6,50	7,05	8,60
	P	30	1,49	1,50	1,49	1,46	1,43	1,39	1,37	1,33
		40	1,88	1,89	1,89	1,87	1,84	1,80	1,78	1,74
		50			2,40	2,39	2,36	2,32	2,31	2,27
ZP36KSE-TFM	Q	30	3,65	4,60	5,65	6,85	8,25	9,95	10,70	13,00
		40	3,00	3,95	4,95	6,10	7,40	8,90	9,55	11,60
		50			4,05	5,15	6,35	7,70	8,25	10,00
	P	30	1,70	1,69	1,68	1,66	1,64	1,61	1,60	1,56
		40	2,20	2,16	2,13	2,11	2,08	2,06	2,06	2,05
		50			2,76	2,70	2,65	2,62	2,61	2,59
ZP42KSE-TFM	Q	30	4,10	5,30	6,65	8,15	9,80	11,75	12,60	15,15
		40	3,30	4,40	5,70	7,10	8,70	10,45	11,20	13,55
		50			4,55	5,85	7,30	8,00	9,60	11,70
	P	30	1,94	1,92	1,91	1,89	1,86	1,83	1,82	1,79
		40	2,51	2,47	2,44	2,41	2,39	2,36	2,36	2,34
		50			3,16	3,10	3,06	3,02	3,01	2,99
ZP54KSE-TFM	Q	30	5,55	7,00	9,65	10,55	12,70	15,15	16,25	19,55
		40	4,60	6,00	7,55	9,25	11,20	13,45	14,40	17,35
		50			6,20	7,80	9,55	11,55	12,40	15,00
	P	30	2,45	2,43	2,40	2,37	2,34	2,30	2,28	2,23
		40	3,14	3,12	3,09	3,06	3,02	2,97	2,95	2,89
		50			3,97	3,94	3,89	3,84	3,81	3,74
ZP61KCE-TFD	Q	30	6,10	7,80	9,65	11,75	14,15	16,90	18,10	21,70
		40	4,80	6,50	8,35	10,35	12,60	15,20	16,30	19,70
		50			6,70	8,60	10,70	13,05	14,10	17,20
	P	30	2,99	2,95	2,91	2,86	2,81	2,76	2,73	2,66
		40	3,78	3,73	3,68	3,61	3,54	3,46	3,43	3,38
		50			4,60	4,52	4,43	4,34	4,30	4,17
ZP72KCE-TFD	Q	30	7,65	9,50	11,60	14,05	16,80	20,00	21,40	25,60
		40	6,60	8,30	10,20	12,40	14,90	17,80	19,10	22,90
		50			8,65	10,55	12,80	15,40	16,50	19,90
	P	30	3,13	3,14	3,15	3,16	3,18	3,21	3,22	3,27
		40	3,93	3,95	3,96	3,97	3,98	3,99	4,00	4,02
		50			4,99	5,00	5,00	5,00	5,00	5,00
ZP83KCE-TFD	Q	30	8,75	10,90	13,35	16,10	19,20	22,80	24,40	29,20
		40	7,45	9,40	11,60	14,15	17,10	20,40	21,90	26,30
		50			9,75	12,05	14,65	17,70	19,00	23,10
	P	30	3,45	3,48	3,52	3,55	3,60	3,67	3,71	3,77
		40	4,44	4,47	4,49	4,51	4,55	4,59	4,62	4,71
		50			5,75	5,75	5,75	5,80	5,80	5,85

Q(kW) = Capacity / Puissance frigorifique / Kälteleistung
P(kW) = Power Input / Puissance absorbée / Leistungsaufnahme

Operating Conditions / Conditions de fonctionnement / Einsatzbedingungen
10K Suction Superheat / Surchauffe / Sauggasüberhitzung
0K Liquid subcooling / Sous-refroidissement du liquide / Flüssigkeitsunterkühlung

50Hz

Compressor Compresseur Verdichter	Cond./ Verfl. Temp. °C	Evaporating Temperature Température d'évaporation °C Verdampfungstemperatur								
		-20	-15	-10	-5	0	5	7	10	12,5
ZP90KCE-TFD	Q	30	9,60	11,85	14,50	17,50	21,10	25,10	26,80	29,60
		40	8,35	10,40	12,80	15,60	18,80	22,40	24,00	26,50
		50			10,85	13,35	16,20	19,40	20,80	23,10
	P	30	4,06	4,05	4,05	4,06	4,09	4,13	4,16	4,20
		40	5,00	5,00	4,99	4,99	5,00	5,05	5,10	5,15
		50			6,30	6,25	6,25	6,25	6,25	6,30
ZP103KCE-TFD	Q	30	10,80	13,50	16,60	20,20	24,30	28,90	31,00	34,00
		40	9,05	11,70	14,60	17,90	21,60	25,80	27,60	30,50
		50			12,10	15,20	18,60	22,40	24,00	26,60
	P	30	4,52	4,53	4,52	4,51	4,51	4,56	4,59	4,66
		40	5,75	5,70	5,65	5,65	5,65	5,65	5,70	5,75
		50			7,25	7,15	7,05	7,05	7,05	7,15
ZP120KCE-TFD	Q	30	12,85	16,10	19,70	23,80	28,40	33,50	36,00	39,50
		40	10,65	13,65	17,10	21,00	25,30	30,00	32,50	35,50
		50			14,15	17,60	21,60	26,00	27,90	31,00
	P	30	5,20	5,20	5,20	5,15	5,20	5,25	5,30	5,35
		40	6,65	6,65	6,60	6,55	6,55	6,55	6,55	6,60
		50			8,45	8,40	8,30	8,25	8,25	8,25
ZP137KCE-TFD	Q	30	14,45	18,00	21,90	26,50	32,00	38,00	40,50	45,00
		40	11,95	15,40	19,20	23,40	28,10	33,50	36,00	40,00
		50			15,80	19,80	24,10	29,00	31,00	34,50
	P	30	5,85	5,85	5,85	5,90	5,90	5,95	6,00	6,05
		40	7,35	7,35	7,35	7,35	7,35	7,35	7,40	7,45
		50			9,20	9,20	9,20	9,20	9,20	9,25
ZP154KCE-TFD	Q	30	16,60	20,50	25,00	30,00	36,00	43,00	46,00	
		40	14,05	17,90	22,10	26,80	32,00	38,50	41,00	45,50
		50			18,70	23,00	27,80	33,00	35,50	39,50
	P	30	6,50	6,55	6,60	6,75	6,85	7,00	7,10	
		40	8,10	8,15	8,20	8,30	8,40	8,50	8,55	8,65
		50			10,30	10,30	10,40	10,50	10,50	10,60
ZP182KCE-TFD	Q	30	19,40	24,00	29,30	35,50	42,00	50,50	54,00	60,00
		40	16,60	21,10	26,00	31,50	37,50	45,00	48,00	53,00
		50			22,20	27,10	32,50	39,00	42,00	46,50
	P	30	7,70	7,80	7,90	8,00	8,15	8,25	8,25	8,30
		40	9,50	9,60	9,70	9,80	9,90	10,00	10,10	10,20
		50			12,00	12,10	12,10	12,20	12,30	12,40
ZP235KCE-TWD	Q	30	24,40	30,50	37,50	46,00	55,50	66,00	71,00	85,00
		40	21,00	26,50	33,00	40,50	49,00	58,50	63,00	69,50
		50			28,10	34,50	42,00	50,50	54,50	60,50
	P	30	10,10	10,30	10,40	10,50	10,70	10,90	10,90	11,10
		40	12,40	12,40	12,50	12,70	12,80	13,00	13,10	13,20
		50			15,50	15,60	15,70	15,90	15,90	16,10
ZP295KCE-TWD	Q	30	31,50	39,00	47,50	57,50	69,00	82,00	88,00	97,00
		40	27,50	34,00	42,00	51,00	61,50	73,50	78,50	87,00
		50			36,00	44,00	53,00	63,50	68,50	75,50
	P	30	12,50	12,70	12,90	13,00	13,20	13,40	13,50	13,70
		40	15,40	15,50	15,60	15,80	15,90	16,10	16,20	16,40
		50			19,30	19,40	19,50	19,60	19,70	19,80
ZP385KCE-TWD	Q	30	40,00	49,50	61,00	74,00	89,50	107,0	114,5	126,5
		40	35,00	43,50	54,00	66,00	79,50	95,00	102,0	113,0
		50			46,50	56,50	68,50	82,50	88,50	98,00
	P	30	16,20	16,40	16,50	16,80	17,10	17,40	17,60	17,80
		40	20,40	20,30	20,40	20,50	20,70	20,90	21,70	21,30
		50			25,40	25,30	25,40	25,60	25,70	25,90
ZP485KCE-TWD	Q	30	55,40	67,00	80,40	95,95	114,0	134,5	143,6	158,0
		40	48,50	59,00	71,20	85,30	101,6	120,3	128,5	141,5
		50			61,00	73,45	87,90	104,5	111,7	123,4
	P	30	22,54	22,74	22,89	23,04	23,20	23,41	23,50	23,67
		40	25,84	26,12	26,33	26,50	26,64	26,79	26,86	26,97
		50			31,69	31,95	32,15	32,32	32,39	32,49

Q(kW) = Capacity / Puissance frigorifique / Kälteleistung

P(kW) = Power Input / Puissance absorbée / Leistungsaufnahme

Operating Conditions / Conditions de fonctionnement / Einsatzbedingungen

10K Suction Superheat / Surchauffe / Sauggasüberhitzung

0K Liquid subcooling / Sous-refroidissement du liquide / Flüssigkeitsunterkühlung

50Hz

Compressor Compresseur Verdichter		Cond./ Verfl. Temp. °C	Evaporating Temperature Température d'évaporation °C Verdampfungstemperatur								
			-20	-15	-10	-5	0	5	7	10	12,5
ZPD34KSE-TFD	Q	30	3,55	4,55	5,70	7,05	8,60	10,30	11,05	12,25	13,25
		40	3,00	3,90	5,00	6,20	7,65	9,20	9,90	11,00	12,00
		50			4,20	5,30	6,60	8,05	8,70	9,70	10,60
Preliminary	P	30	1,69	1,68	1,65	1,63	1,59	1,56	1,54	1,52	1,51
		40	2,14	2,13	2,11	2,08	2,04	2,00	1,98	1,96	1,93
		50			2,68	2,64	2,60	2,55	2,53	2,50	2,48
ZPD42KSE-TFD	Q	30	4,30	5,45	6,70	8,15	9,90	11,90	12,80	14,20	15,50
		40	3,70	4,75	5,95	7,25	8,80	10,55	11,30	12,60	13,70
		50			5,05	6,25	7,60	9,15	9,80	10,90	11,90
Preliminary	P	30	1,80	1,84	1,89	1,91	1,91	1,87	1,84	1,77	1,70
		40	2,26	2,29	2,34	2,37	2,39	2,38	2,37	2,33	2,28
		50			2,93	2,97	3,01	3,02	3,02	3,00	2,97
ZPD54KSE-TFD	Q	30	6,05	7,40	8,90	10,70	12,75	15,11	16,15	17,80	19,30
		40	5,20	6,50	7,90	9,50	11,40	13,50	14,45	15,95	17,30
		50			6,70	8,20	9,85	11,75	12,60	13,90	15,10
Preliminary	P	30	2,45	2,44	2,42	2,40	2,37	2,35	2,35	2,34	2,34
		40	3,13	3,11	3,08	3,05	3,02	3,00	2,99	2,99	2,98
		50			3,99	3,94	3,89	3,84	3,83	3,81	3,80
ZPD61KCE-TFD	Q	30	6,40	7,95	9,80	11,95	14,40	17,25	18,50	20,40	22,20
		40	5,50	6,95	8,60	10,50	12,75	15,30	16,40	18,15	19,75
		50			7,30	9,00	10,95	13,20	14,15	15,70	17,10
Preliminary	P	30	2,60	2,67	2,72	2,76	2,81	2,87	2,89	2,94	2,99
		40	3,19	3,31	3,39	3,46	3,51	3,55	3,57	3,59	3,62
		50			4,17	4,29	4,38	4,44	4,46	4,49	4,51
ZPD72KCE-TFD	Q	30	7,60	9,35	11,45	13,90	16,65	19,80	21,20	23,45	25,40
		40	6,60	8,20	10,10	12,25	14,75	17,60	18,90	20,90	22,70
		50			8,60	10,50	12,70	15,25	16,35	18,10	19,70
Preliminary	P	30	3,09	3,16	3,22	3,27	3,33	3,39	3,42	3,48	3,53
		40	3,76	3,89	3,99	4,07	4,12	4,17	4,19	4,22	4,25
		50			4,87	5,01	5,11	5,19	5,21	5,24	5,27
ZPD83KCE-TFD	Q	30	9,10	11,10	13,50	16,30	19,45	23,00	24,55	27,00	29,10
		40	7,90	9,70	11,85	14,35	17,20	20,50	21,90	24,15	26,10
		50			10,10	12,30	14,80	17,70	19,00	21,00	22,80
Preliminary	P	30	3,54	3,63	3,70	3,76	3,82	3,89	3,93	3,99	4,05
		40	4,32	4,48	4,59	4,68	4,74	4,80	4,82	4,86	4,89
		50			5,61	5,77	5,89	5,98	6,01	6,04	6,07
ZPD120KCE-TFD	Q	30	13,00	16,35	20,00	24,15	28,80	34,00	36,25	39,80	42,90
		40	10,80	13,85	17,30	21,20	25,60	30,55	32,70	36,05	39,05
		50			14,30	17,85	21,80	26,35	28,00	31,40	34,15
Preliminary	P	30	5,25	5,24	5,23	5,22	5,25	5,31	5,35	5,43	5,51
		40	6,71	6,70	6,67	6,64	6,61	6,62	6,63	6,66	6,71
		50			8,54	8,47	8,41	8,35	8,34	8,33	8,33
ZPD137KCE-TFD	Q	30	14,55	18,25	22,35	27,00	32,20	38,00	40,50	44,50	48,00
		40	12,05	15,50	19,35	23,75	28,65	34,20	36,55	40,35	43,70
		50			15,95	19,95	24,40	29,45	31,65	35,15	38,20
Preliminary	P	30	5,89	5,88	5,87	5,86	5,88	5,95	6,00	6,09	6,18
		40	7,52	7,52	7,48	7,45	7,42	7,42	7,44	7,48	7,52
		50			9,57	9,50	9,43	9,37	9,35	9,34	9,35

Q(kW) = Capacity / Puissance frigorifique / Kälteleistung
P(kW) = Power Input / Puissance absorbée / Leistungsaufnahme

Operating Conditions / Conditions de fonctionnement / Einsatzbedingungen
 10K Suction Superheat / Surchauffe / Sauggasüberhitzung
 0K Liquid subcooling / Sous-refroidissement du liquide / Flüssigkeitsunterkühlung

50Hz

Compressor Compresseur Verdichter		Cond./ Verfl. Temp. °C	Evaporating Temperature Température d'évaporation °C Verdampfungstemperatur								
			-20	-15	-10	-5	0	5	7	10	12,5
ZR18K4E-PFJ	Q	30	1,63	2,06	2,57	3,15	3,85	4,70	5,05	5,65	6,15
		40	1,38	1,78	2,26	2,82	3,45	4,20	4,55	5,10	5,60
		50			1,91	2,42	3,00	3,70	4,00	4,50	4,95
Single-phase only Seulement monophasé Nur einphasig	P	30	0,79	0,78	0,79	0,80	0,80	0,81	0,81	0,81	0,81
		40	1,00	0,99	0,99	0,99	1,00	1,00	1,00	1,01	1,01
		50			1,26	1,25	1,25	1,25	1,25	1,25	1,25
ZR22K3E-TFD	Q	30	1,89	2,39	3,00	3,75	4,65	5,65	6,10	6,80	7,45
		40	1,61	2,08	2,67	3,40	4,20	5,15	5,60	6,25	6,85
		50			2,28	2,90	3,65	4,55	4,90	5,55	6,05
	P	30	0,95	0,94	0,94	0,94	0,93	0,92	0,92	0,91	0,90
		40	1,21	1,21	1,21	1,21	1,20	1,19	1,18	1,17	1,15
		50			1,56	1,56	1,55	1,53	1,52	1,50	1,48
ZR28K3E-TFD	Q	30	2,34	3,05	3,85	4,90	6,05	7,35	7,90	8,85	9,60
		40	2,09	2,70	3,45	4,40	5,45	6,70	7,25	8,10	8,85
		50			2,95	3,80	4,75	5,90	6,35	7,15	7,85
	P	30	1,22	1,21	1,21	1,20	1,20	1,18	1,18	1,16	1,15
		40	1,55	1,56	1,56	1,56	1,55	1,53	1,52	1,50	1,48
		50			2,00	2,00	1,99	1,97	1,95	1,93	1,90
ZR34K3E-TFD	Q	30	2,90	3,75	4,70	5,85	7,20	8,75	9,40	10,50	11,50
		40	2,47	3,25	4,15	5,20	6,45	7,90	8,55	9,55	10,50
		50			3,50	4,50	5,65	6,95	7,55	8,50	9,35
	P	30	1,43	1,42	1,41	1,41	1,40	1,38	1,38	1,36	1,34
		40	1,83	1,83	1,83	1,83	1,82	1,80	1,78	1,76	1,74
		50			2,36	2,36	2,35	2,32	2,30	2,27	2,24
ZR40K3E-TFD	Q	30	3,30	4,25	5,45	6,80	8,40	10,25	11,05	12,30	13,45
		40	2,89	3,75	4,85	6,15	7,65	9,35	10,10	11,30	12,35
		50			4,15	5,30	6,65	8,20	8,90	10,00	11,00
	P	30	1,68	1,67	1,67	1,66	1,65	1,64	1,63	1,61	1,59
		40	2,15	2,15	2,15	2,15	2,14	2,11	2,10	2,07	2,04
		50			2,76	2,76	2,75	2,71	2,69	2,66	2,62
ZR48K3E-TFD	Q	30	4,35	5,50	6,90	8,55	10,45	12,70	13,65	15,30	16,70
		40	3,75	4,85	6,10	7,65	9,40	11,45	12,35	13,80	15,10
		50			5,30	6,65	8,25	10,10	10,95	12,30	13,50
	P	30	2,14	2,13	2,11	2,09	2,05	2,00	1,97	1,92	1,87
		40	2,66	2,64	2,63	2,61	2,59	2,56	2,55	2,52	2,49
		50			3,30	3,29	3,27	3,25	3,25	3,23	3,21
ZR61KSE-TFM	Q	30	5,75	7,10	8,75	10,70	13,05	15,90	17,20	19,35	21,35
		40	5,05	6,60	8,25	10,10	12,20	14,70	15,80	17,60	19,25
		50			7,05	8,90	10,85	13,10	14,05	15,60	17,00
	P	30	2,38	2,41	2,47	2,52	2,54	2,50	2,46	2,37	2,27
		40	3,04	3,03	3,06	3,11	3,16	3,17	3,16	3,12	3,07
		50			3,96	3,98	4,02	4,04	4,05	4,04	4,01
ZR72KCE-TFD	Q	30	6,40	8,20	10,35	12,80	15,60	18,90	20,30	22,60	24,70
		40	5,30	7,00	9,00	11,25	13,85	16,80	18,20	20,30	22,20
		50			7,60	9,65	12,05	14,75	16,00	17,90	19,60
	P	30	2,82	2,86	2,89	2,90	2,92	2,95	2,97	3,01	3,05
		40	3,55	3,62	3,66	3,67	3,68	3,69	3,70	3,71	3,73
		50			4,59	4,63	4,65	4,66	4,66	4,66	4,66
ZR81KCE-TFD	Q	30	6,85	8,95	11,35	14,10	17,30	20,90	22,60	25,20	27,60
		40	5,75	7,80	10,05	12,65	15,60	19,00	20,60	23,00	25,30
		50			8,55	10,90	13,60	16,70	18,10	20,40	22,40
	P	30	3,12	3,16	3,19	3,22	3,26	3,31	3,34	3,39	3,44
		40	4,01	4,05	4,07	4,09	4,12	4,17	4,19	4,24	4,28
		50			5,25	5,25	5,25	5,25	5,30	5,30	5,35

Q(kW) = Capacity / Puissance frigorifique / Kälteleistung

P(kW) = Power Input / Puissance absorbée / Leistungsaufnahme

Operating Conditions / Conditions de fonctionnement / Einsatzbedingungen

10K Suction Superheat / Surchauffe / Sauggasüberhitzung

0K Liquid subcooling / Sous-refroidissement du liquide / Flüssigkeitsunterkühlung

50Hz

Compressor Compresseur Verdichter		Cond./ Verfl. Temp. °C	Evaporating Temperature Température d'évaporation °C Verdampfungstemperatur								
			-20	-15	-10	-5	0	5	7	10	12,5
ZR94KCE-TFD	Q	30	9,05	11,45	14,20	17,40	21,10	25,30	27,20	30,50	33,00
		40	7,30	9,85	12,60	15,70	19,30	23,30	25,00	27,90	30,50
		50			10,25	13,35	16,80	20,60	22,30	24,90	27,20
	P	30	3,87	3,92	3,95	3,97	3,98	3,98	3,97	3,97	3,97
		40	4,89	4,94	4,97	4,98	4,98	4,96	4,96	4,94	4,93
		50			6,30	6,30	6,30	6,25	6,25	6,20	6,20
ZR108KCE-TFD	Q	30	10,15	12,80	15,90	19,60	23,90	29,00	31,00	35,00	38,00
		40	8,80	11,25	14,15	17,60	21,50	26,20	28,20	31,50	34,50
		50			12,20	15,30	18,90	23,00	24,90	27,90	30,50
	P	30	4,26	4,30	4,34	4,38	4,45	4,56	4,62	4,74	4,85
		40	5,30	5,40	5,45	5,45	5,50	5,50	5,55	5,60	5,65
		50			6,80	6,85	6,85	6,85	6,85	6,90	6,90
ZR125KCE-TFD	Q	30	11,85	14,95	18,60	22,80	27,80	33,50	36,00	40,00	43,50
		40	10,10	13,10	16,50	20,50	25,20	30,50	33,00	36,50	40,00
		50			14,00	17,70	22,00	27,00	29,10	32,50	36,00
	P	30	4,97	5,00	5,05	5,10	5,15	5,25	5,30	5,40	5,50
		40	6,20	6,30	6,30	6,35	6,40	6,45	6,45	6,50	6,55
		50			7,95	8,00	8,05	8,05	8,05	8,10	8,10
ZR144KCE-TFD	Q	30	12,95	16,70	21,00	25,90	31,50	38,00	41,00	45,50	49,50
		40	10,60	14,45	18,70	23,40	28,90	35,00	37,50	42,00	46,00
		50			15,50	20,10	25,20	31,00	33,50	37,50	41,00
	P	30	5,55	5,65	5,70	5,75	5,80	5,90	5,95	6,05	6,10
		40	6,95	7,05	7,15	7,20	7,20	7,25	7,30	7,30	7,35
		50			9,00	9,05	9,10	9,10	9,15	9,15	9,15
ZR160KCE-TFD	Q	30	13,60	17,80	22,80	28,70	35,50	43,50	47,00	52,50	58,00
		40	10,95	14,85	19,50	24,90	31,50	38,50	42,00	47,50	52,00
		50			15,90	20,80	26,70	33,50	36,50	41,50	45,50
	P	30	6,30	6,35	6,45	6,55	6,60	6,75	6,80	6,85	6,95
		40	7,95	8,05	8,10	8,15	8,20	8,30	8,30	8,40	8,45
		50			10,20	10,30	10,30	10,30	10,30	10,40	10,40
ZR190KCE-TFD	Q	30	16,60	21,30	26,80	33,00	40,50	49,00	52,50	58,50	64,00
		40	13,85	18,50	23,80	29,80	36,50	44,50	48,00	54,00	59,00
		50			19,80	25,50	32,00	39,50	42,50	47,50	52,50
	P	30	7,65	7,75	7,80	7,90	8,05	8,25	8,40	8,60	8,80
		40	9,55	9,65	9,75	9,75	9,85	9,90	10,00	10,10	10,20
		50			12,20	12,30	12,30	12,30	12,30	12,40	12,40
ZR250KCE-TWD	Q	30	23,30	29,30	36,50	45,00	54,50	66,00	70,50	78,50	85,50
		40	20,10	25,70	32,00	40,00	49,00	59,50	64,00	71,50	78,00
		50			27,50	34,50	42,50	52,00	56,50	63,00	69,50
	P	30	9,95	10,00	10,20	10,30	10,30	10,30	10,20	10,10	9,90
		40	12,50	12,50	12,60	12,70	12,90	13,00	13,00	13,00	13,00
		50			15,90	15,90	16,10	16,30	16,30	16,40	16,50
ZR310KCE-TWD	Q	30	28,50	36,50	46,00	57,00	69,50	84,50	91,00	101,50	111,00
		40	24,00	31,00	39,50	49,50	61,50	75,00	81,00	90,50	99,50
		50			33,50	42,50	53,00	65,00	70,50	79,00	87,00
	P	30	12,30	12,50	12,70	12,90	13,20	13,50	13,70	13,90	14,10
		40	15,60	15,60	15,70	15,80	16,00	16,30	16,40	16,60	16,80
		50			19,90	19,90	20,00	20,20	20,20	20,40	20,50
ZR380KCE-TWD	Q	30	34,00	44,00	56,00	69,00	85,00	104,00	112,50	126,00	139,00
		40	28,00	38,00	49,00	61,50	76,00	93,00	100,50	113,00	124,50
		50			41,00	53,00	66,00	81,50	88,50	99,50	109,50
	P	30	14,60	14,80	14,90	15,20	15,50	16,00	16,20	16,60	17,10
		40	18,30	18,60	18,80	18,90	19,10	19,40	19,50	19,80	20,00
		50			23,50	23,70	23,90	24,10	24,10	24,30	24,40

Q(kW) = Capacity / Puissance frigorifique / Kälteleistung
P(kW) = Power Input / Puissance absorbée / Leistungsaufnahme

Operating Conditions / Conditions de fonctionnement / Einsatzbedingungen
10K Suction Superheat / Surchauffe / Sauggasüberhitzung
0K Liquid subcooling / Sous-refroidissement du liquide / Flüssigkeitsunterkühlung

50Hz

Compressor Compresseur Verdichter	Cond./ Verfl. Temp. °C	Evaporating Temperature Température d'évaporation °C Verdampfungstemperatur								
		-20	-15	-10	-5	0	5	7	10	12,5
ZRD42KCE-TFD	Q	30	3,80	4,85	6,10	7,55	9,25	11,25	12,10	13,55
		40	3,30	4,25	5,40	6,70	8,30	10,10	10,90	12,20
		50			4,70	5,90	7,30	8,90	9,65	10,80
	P	30	1,53	1,61	1,65	1,68	1,70	1,72	1,73	1,76
		40	1,86	1,99	2,08	2,14	2,18	2,21	2,23	2,25
		50			2,58	2,68	2,75	2,80	2,82	2,85
ZRD48KCE-TFD	Q	30	4,30	5,60	7,20	9,00	11,20	13,75	14,85	16,70
		40	3,70	4,90	6,35	8,05	10,00	12,30	13,35	15,00
		50			5,45	6,95	8,70	10,75	11,70	13,15
	P	30	1,96	2,04	2,09	2,12	2,16	2,21	2,24	2,29
		40	2,37	2,50	2,59	2,64	2,68	2,72	2,74	2,78
		50			3,14	3,25	3,34	3,40	3,43	3,47
ZRD61KCE-TFD	Q	30	3,15	4,95	7,10	9,55	12,40	15,60	17,05	19,30
		40	2,50	4,20	6,15	8,40	11,05	14,05	15,40	17,50
		50			5,15	7,20	9,60	12,35	13,60	15,50
	P	30	2,13	2,22	2,31	2,40	2,50	2,61	2,66	2,74
		40	2,78	2,87	2,95	3,05	3,15	3,26	3,32	3,40
		50			3,78	3,87	3,97	4,09	4,15	4,23
ZRD72KCE-TFD	Q	30	2,90	5,35	8,25	11,60	15,50	19,90	21,85	24,95
		40	2,05	4,30	7,00	10,10	13,70	17,85	19,65	22,50
		50			5,60	8,50	11,80	15,55	17,20	19,85
	P	30	2,83	2,95	3,08	3,21	3,35	3,51	3,58	3,69
		40	3,59	3,71	3,82	3,95	4,09	4,25	4,32	4,43
		50			4,75	4,87	5,00	5,16	5,23	5,34
ZRD81KCE-TFD	Q	30	7,10	9,10	11,50	14,25	17,50	21,25	22,90	25,60
		40	6,00	8,00	10,20	12,80	15,75	19,20	20,70	23,15
		50			8,75	11,15	13,85	16,95	18,35	20,55
	P	30	3,47	3,50	3,54	3,59	3,65	3,72	3,75	3,81
		40	4,30	4,32	4,35	4,40	4,46	4,55	4,59	4,65
		50			5,43	5,44	5,48	5,55	5,58	5,64
ZRD94KCE-TFD	Q	30	9,00	11,55	14,50	17,90	21,85	26,35	28,30	31,40
		40	7,65	9,95	12,75	16,00	19,75	24,05	25,95	28,95
		50			10,70	13,60	17,05	21,00	22,75	25,55
	P	30	3,97	3,99	4,02	4,05	4,10	4,19	4,23	4,32
		40	5,00	5,04	5,06	5,07	5,08	5,11	5,13	5,16
		50			6,32	6,35	6,36	6,37	6,38	6,40
ZRD125KCE-TFD	Q	30	11,75	15,40	19,65	24,45	29,70	35,25	37,55	41,05
		40	10,30	13,20	16,90	21,30	26,30	31,75	34,05	37,60
		50			14,30	18,05	22,55	27,65	29,85	33,30
	P	30	4,80	4,87	4,92	4,98	5,05	5,17	5,24	5,35
		40	6,41	6,51	6,58	6,63	6,69	6,78	6,82	6,90
		50			8,20	8,29	8,36	8,44	8,48	8,55

Q(kW) = Capacity / Puissance frigorifique / Kälteleistung
P(kW) = Power Input / Puissance absorbée / Leistungsaufnahme

Operating Conditions / Conditions de fonctionnement / Einsatzbedingungen
10K Suction Superheat / Surchauffe / Sauggasüberhitzung
0K Liquid subcooling / Sous-refroidissement du liquide / Flüssigkeitsunterkühlung

50Hz

Compressor Compresseur Verdichter		Cond./ Verfl. Temp. °C	Evaporating Temperature Température d'évaporation °C Verdampfungstemperatur								
			-20	-15	-10	-5	0	5	7	10	12,5
ZR18K4E-PFJ	Q	30	0,93	1,25	1,63	2,07	2,59	3,20	3,45	3,85	
		40	0,78	1,08	1,43	1,84	2,31	2,86	3,10	3,45	3,80
		50		0,90	1,23	1,60	2,03	2,52	2,74	3,10	3,40
Single-phase only Seulement monophasé Nur einphasig	P	30	0,66	0,66	0,67	0,67	0,68	0,68	0,68	0,67	
		40	0,79	0,78	0,78	0,79	0,80	0,81	0,81	0,82	0,82
		50		0,95	0,94	0,94	0,95	0,96	0,97	0,98	0,99
ZR22K3E-TFD	Q	30	1,23	1,60	2,05	2,60	3,25	4,00	4,35	4,90	
		40	1,06	1,40	1,82	2,32	2,90	3,60	3,90	4,40	4,85
		50		1,17	1,56	2,02	2,56	3,20	3,45	3,90	4,30
	P	30	0,72	0,72	0,71	0,70	0,69	0,67	0,66	0,64	
		40	0,92	0,91	0,90	0,89	0,88	0,87	0,86	0,85	0,84
		50		1,18	1,16	1,14	1,12	1,11	1,10	1,09	1,08
ZR28K3E-TFD	Q	30	1,54	2,03	2,65	3,40	4,25	5,30	5,70	6,40	
		40	1,36	1,79	2,34	3,00	3,80	4,70	5,10	5,75	6,30
		50		1,55	2,04	2,65	3,35	4,20	4,55	5,10	5,60
	P	30	0,89	0,90	0,90	0,89	0,87	0,85	0,85	0,84	
		40	1,12	1,14	1,15	1,15	1,13	1,12	1,12	1,11	1,11
		50		1,44	1,45	1,45	1,44	1,42	1,42	1,41	1,40
ZR34K3E-TFD	Q	30	1,95	2,53	3,20	4,05	5,00	6,10	6,60	7,40	
		40	1,70	2,23	2,86	3,60	4,50	5,55	6,00	6,70	7,40
		50		1,92	2,49	3,15	3,95	4,90	5,30	6,00	6,60
	P	30	1,10	1,09	1,07	1,05	1,03	1,01	1,00	0,99	
		40	1,40	1,39	1,37	1,35	1,33	1,30	1,30	1,28	1,28
		50		1,76	1,74	1,72	1,69	1,66	1,65	1,64	1,63
ZR40K3E-TFD	Q	30	2,22	2,90	3,75	4,75	5,85	7,10	7,65	8,50	
		40	1,83	2,48	3,25	4,15	5,20	6,40	6,95	7,75	8,50
		50		2,09	2,78	3,60	4,60	5,70	6,20	6,95	7,65
	P	30	1,20	1,17	1,15	1,15	1,14	1,14	1,13	1,12	
		40	1,61	1,56	1,53	1,51	1,50	1,50	1,50	1,49	1,49
		50		2,01	1,95	1,92	1,90	1,89	1,89	1,89	1,88
ZR48K3E-TFD	Q	30	2,73	3,55	4,55	5,70	7,05	8,65	9,35	10,50	
		40	2,29	3,10	4,05	5,10	6,35	7,80	8,45	9,45	10,40
		50		2,55	3,40	4,40	5,55	6,85	7,45	8,40	9,25
	P	30	1,39	1,39	1,40	1,41	1,41	1,40	1,39	1,37	
		40	1,84	1,81	1,80	1,80	1,81	1,83	1,83	1,83	1,82
		50		2,35	2,30	2,28	2,27	2,28	2,29	2,30	2,31
ZR61KCE-TFD	Q	30	3,45	4,55	5,80	7,25	9,00	11,00	11,90	13,35	
		40	3,05	4,05	5,20	6,55	8,10	9,95	10,75	12,10	13,30
		50		3,50	4,55	5,75	7,20	8,85	9,60	10,80	11,90
	P	30	1,67	1,71	1,73	1,75	1,76	1,78	1,79	1,80	
		40	2,07	2,11	2,14	2,16	2,18	2,20	2,22	2,24	2,26
		50		2,62	2,65	2,67	2,69	2,71	2,73	2,75	2,77
ZR72KCE-TFD	Q	30	4,30	5,55	7,05	8,80	10,85	13,25	14,30	16,00	
		40	3,75	4,80	6,15	7,80	9,70	11,90	12,90	14,45	15,80
		50		4,15	5,30	6,75	8,45	10,45	11,35	12,80	14,10
	P	30	2,02	2,01	2,01	2,02	2,04	2,06	2,07	2,09	
		40	2,59	2,57	2,56	2,57	2,58	2,60	2,61	2,62	2,63
		50		3,27	3,24	3,23	3,23	3,24	3,25	3,26	3,26
ZR81KCE-TFD	Q	30	4,90	6,20	7,85	9,75	12,00	14,60	15,80	17,60	
		40	4,30	5,55	7,00	8,75	10,80	13,20	14,25	16,00	17,50
		50		4,80	6,15	7,70	9,55	11,75	12,70	14,25	15,60
	P	30	2,25	2,28	2,29	2,30	2,31	2,33	2,35	2,37	
		40	2,81	2,84	2,86	2,87	2,89	2,92	2,93	2,96	2,99
		50		3,55	3,57	3,58	3,60	3,62	3,64	3,67	3,70

Q(kW) = Capacity / Puissance frigorifique / Kälteleistung
P(kW) = Power Input / Puissance absorbée / Leistungsaufnahme

Operating Conditions / Conditions de fonctionnement / Einsatzbedingungen
10K Suction Superheat / Surchauffe / Sauggasüberhitzung
0K Liquid subcooling / Sous-refroidissement du liquide / Flüssigkeitsunterkühlung

50Hz

Compressor Compresseur Verdichter		Cond./ Verfl. Temp. °C	Evaporating Temperature Température d'évaporation °C Verdampfungstemperatur								
			-20	-15	-10	-5	0	5	7	10	12,5
ZR94KCE-TFD	Q	30		7,10	9,00	11,20	13,75	16,70	18,00	20,10	22,00
		40		6,30	8,00	10,00	12,40	15,10	16,30	18,30	20,00
		50			6,95	8,80	10,95	13,45	14,55	16,30	17,90
	P	30		2,69	2,71	2,76	2,82	2,88	2,90	2,91	2,91
		40		3,36	3,37	3,42	3,47	3,51	3,52	3,52	3,50
		50			4,15	4,21	4,27	4,30	4,31	4,29	4,27
ZR108KCE-TFD	Q	30		8,15	10,25	12,80	15,70	19,10	20,60	23,00	25,10
		40		7,20	9,15	11,45	14,20	17,30	18,70	20,90	22,90
		50			7,95	10,05	12,50	15,40	16,60	18,70	20,50
	P	30		3,00	3,02	3,08	3,15	3,21	3,23	3,25	3,26
		40		3,74	3,77	3,82	3,88	3,92	3,93	3,92	3,91
		50			4,64	4,71	4,77	4,81	4,81	4,80	4,77
ZR125KCE-TFD	Q	30		9,35	11,80	14,70	18,10	22,00	23,70	26,40	28,80
		40		8,25	10,45	13,10	16,30	19,90	21,50	24,00	26,20
		50			9,10	11,50	14,30	17,60	19,10	21,40	23,50
	P	30		3,52	3,54	3,61	3,70	3,77	3,79	3,80	3,79
		40		4,39	4,42	4,48	4,54	4,59	4,60	4,59	4,56
		50			5,45	5,50	5,55	5,60	5,60	5,60	5,55
ZR144KCE-TFD	Q	30		12,50	15,20	18,40	22,00	25,90	27,60	30,00	32,50
		40		11,05	13,55	16,50	19,90	23,70	25,30	27,80	29,90
		50			11,50	14,20	17,40	20,90	22,50	24,80	26,80
	P	30		3,75	3,81	3,86	3,96	4,17	4,31	4,57	4,86
		40		4,73	4,88	4,94	4,97	5,05	5,10	5,20	5,35
		50			6,15	6,30	6,30	6,30	6,30	6,35	6,35
ZR160KCE-TFD	Q	30		13,10	16,20	19,70	23,50	27,90	29,80	33,00	35,50
		40		11,00	14,25	17,70	21,40	25,50	27,30	30,00	32,50
		50			11,45	15,00	18,80	22,80	24,50	27,10	29,40
	P	30		4,35	4,45	4,52	4,56	4,51	4,46	4,35	4,22
		40		5,35	5,40	5,50	5,60	5,65	5,70	5,70	5,65
		50			6,80	6,75	6,80	6,90	6,95	6,95	7,00
ZR190KCE-TFD	Q	30		15,50	19,20	23,40	28,10	33,50	36,00	39,50	43,00
		40		13,25	16,90	21,00	25,50	30,50	32,50	36,00	39,50
		50			14,05	18,00	22,40	27,20	29,30	32,50	35,50
	P	30		5,25	5,35	5,45	5,55	5,65	5,70	5,75	5,80
		40		6,55	6,60	6,70	6,75	6,85	6,85	6,95	6,95
		50			8,20	8,25	8,30	8,35	8,40	8,40	8,45
ZR250KCE-TWD	Q	30		18,80	23,60	29,30	36,00	44,00	47,50	53,00	58,00
		40		16,60	21,00	26,30	32,50	39,50	43,00	48,00	53,00
		50			18,40	23,10	28,80	35,50	38,50	43,00	47,50
	P	30		7,10	7,15	7,20	7,30	7,45	7,50	7,60	7,70
		40		8,75	8,80	8,85	8,95	9,05	9,10	9,20	9,30
		50			10,90	11,00	11,00	11,10	11,20	11,30	11,30
ZR310KCE-TWD	Q	30		23,20	29,10	36,00	44,50	54,00	58,50	65,50	72,00
		40		20,50	26,00	32,50	40,00	49,00	53,00	59,50	65,50
		50			22,80	28,70	35,50	44,00	47,50	53,50	58,50
	P	30		8,90	9,00	9,05	9,15	9,30	9,35	9,45	9,55
		40		11,00	11,00	11,10	11,20	11,30	11,40	11,40	11,50
		50			13,60	13,70	13,80	13,90	13,90	14,00	14,10
ZR380KCE-TWD	Q	30		29,10	36,50	45,50	55,50	67,50	72,50	81,00	88,00
		40		26,00	33,00	41,00	51,00	62,00	66,50	74,50	81,50
		50			29,00	36,50	45,00	55,50	60,00	67,00	73,50
	P	30		10,60	10,80	11,00	11,10	11,10	11,10	11,10	11,10
		40		13,00	13,30	13,50	13,70	13,90	14,00	14,10	14,10
		50			16,20	16,50	16,80	17,10	17,20	17,30	17,40

Q(kW) = Capacity / Puissance frigorifique / Kälteleistung
P(kW) = Power Input / Puissance absorbée / Leistungsaufnahme

Operating Conditions / Conditions de fonctionnement / Einsatzbedingungen
10K Suction Superheat / Surchauffe / Sauggasüberhitzung
0K Liquid subcooling / Sous-refroidissement du liquide / Flüssigkeitsunterkühlung

50Hz

Compressor Compresseur Verdichter	Cond./ Verfl. Temp. °C	Evaporating Temperature Température d'évaporation °C Verdampfungstemperatur								
		-20	-15	-10	-5	0	5	7	10	12,5
ZR18K4-PFJ	Q	30	1,75	2,21	2,73	3,35	4,00	4,80	5,15	6,15
		40	1,53	1,96	2,46	3,00	3,65	4,40	4,70	5,60
		50			2,13	2,67	3,25	3,95	4,20	5,05
Single-phase only Seulement monophasé Nur einphasig	P	30	0,81	0,82	0,83	0,84	0,84	0,84	0,84	0,83
		40	1,04	1,03	1,02	1,02	1,02	1,02	1,02	1,02
		50			1,29	1,26	1,24	1,24	1,23	1,24
ZR22K3E-TFD	Q	30	2,11	2,67	3,35	4,10	4,95	5,95	6,35	7,65
		40	1,85	2,38	3,00	3,70	4,45	5,35	5,75	6,95
		50			2,61	3,25	4,00	4,85	5,20	6,25
	P	30	0,99	0,99	0,99	0,98	0,97	0,95	0,95	0,94
		40	1,28	1,27	1,26	1,25	1,25	1,24	1,24	1,25
		50			1,65	1,62	1,59	1,58	1,57	1,57
ZR28K3E-TFD	Q	30	2,83	3,55	4,40	5,35	6,45	7,70	8,25	9,85
		40	2,51	3,20	3,95	4,85	5,85	7,00	7,50	9,00
		50			3,50	4,30	5,25	6,30	6,75	8,15
	P	30	1,28	1,27	1,26	1,25	1,23	1,21	1,20	1,19
		40	1,61	1,61	1,60	1,59	1,57	1,55	1,54	1,52
		50			2,02	2,00	1,98	1,96	1,95	1,93
ZR34K3E-TFD	Q	30	3,35	4,25	5,25	6,40	7,70	9,20	9,80	11,75
		40	3,00	3,80	4,70	5,75	7,00	8,35	8,95	10,75
		50			4,15	5,15	6,25	7,50	8,05	9,75
	P	30	1,52	1,51	1,50	1,48	1,46	1,44	1,43	1,41
		40	1,91	1,91	1,90	1,88	1,86	1,83	1,82	1,80
		50			2,39	2,37	2,34	2,31	2,30	2,28
ZR40K3E-TFD	Q	30	4,00	5,00	6,15	7,50	9,05	10,80	11,55	13,85
		40	3,55	4,45	5,55	6,80	8,20	9,85	10,55	12,70
		50			4,90	6,05	7,35	8,85	9,50	11,50
	P	30	1,79	1,78	1,77	1,75	1,72	1,70	1,69	1,66
		40	2,24	2,24	2,23	2,21	2,19	2,16	2,15	2,12
		50			2,80	2,78	2,76	2,73	2,71	2,67
ZR48K3E-TFD	Q	30	4,75	6,00	7,40	9,05	10,90	13,00	13,90	16,70
		40	4,15	5,35	6,70	8,25	10,00	11,95	12,80	15,50
		50			5,90	7,30	8,90	10,75	11,55	13,95
	P	30	2,29	2,30	2,30	2,27	2,23	2,16	2,12	2,06
		40	2,85	2,85	2,84	2,83	2,80	2,75	2,72	2,68
		50			3,52	3,49	3,46	3,42	3,39	3,32
ZR61KCE-TFD	Q	30	5,55	7,10	8,95	11,05	13,45	16,00	17,10	20,20
		40	4,85	6,25	7,95	9,95	12,20	14,70	15,70	18,70
		50			6,90	8,70	10,80	13,10	14,05	16,90
	P	30	2,42	2,47	2,51	2,54	2,59	2,68	2,73	2,82
		40	3,02	3,08	3,12	3,15	3,20	3,29	3,34	3,53
		50			3,89	3,90	3,94	4,01	4,05	4,22
ZR72KCE-TFD	Q	30	7,35	9,20	11,25	13,65	16,30	19,40	20,70	24,70
		40	6,50	8,25	10,20	12,45	14,95	17,80	19,00	22,70
		50			8,95	11,00	13,35	15,90	17,10	20,50
	P	30	3,16	3,16	3,16	3,17	3,19	3,22	3,24	3,31
		40	3,90	3,88	3,87	3,87	3,88	3,89	3,90	3,95
		50			4,80	4,78	4,78	4,78	4,78	4,81
ZR81KCE-TFD	Q	30	7,95	10,05	12,50	15,20	18,20	21,50	22,80	26,70
		40	7,10	8,95	11,20	13,85	16,80	20,00	21,30	25,30
		50			9,85	12,20	14,95	18,00	19,30	23,20
	P	30	3,31	3,35	3,39	3,43	3,48	3,54	3,57	3,62
		40	4,09	4,14	4,18	4,22	4,27	4,32	4,34	4,43
		50			5,15	5,20	5,25	5,30	5,30	5,40

Q(kW) = Capacity / Puissance frigorifique / Kälteleistung
P(kW) = Power Input / Puissance absorbée / Leistungsaufnahme

Operating Conditions / Conditions de fonctionnement / Einsatzbedingungen
10K Suction Superheat / Surchauffe / Sauggasüberhitzung
0K Liquid subcooling / Sous-refroidissement du liquide / Flüssigkeitsunterkühlung

50Hz

Compressor Compresseur Verdichter		Cond./ Verfl. Temp. °C	Evaporating Temperature Température d'évaporation °C Verdampfungstemperatur								
			-20	-15	-10	-5	0	5	7	10	12,5
ZR94KC-TFD	Q	30	9,10	11,65	14,55	17,80	21,50	25,70	27,50	30,50	33,00
		40	7,60	10,15	12,95	16,10	19,60	23,50	25,30	28,00	30,50
		50			11,05	14,05	17,40	21,10	22,70	25,30	27,60
	P	30	3,86	3,88	3,90	3,92	3,97	4,05	4,10	4,18	4,28
		40	4,85	4,87	4,88	4,88	4,91	4,96	4,99	5,05	5,10
		50			6,15	6,10	6,10	6,10	6,15	6,15	6,20
ZR108KC-TFD	Q	30	10,90	13,55	16,70	20,20	24,30	28,90	31,00	34,00	37,00
		40	9,70	12,25	15,10	18,40	22,20	26,50	28,40	31,50	34,00
		50			13,40	16,50	20,00	23,90	25,60	28,40	31,00
	P	30	4,16	4,24	4,30	4,36	4,43	4,54	4,60	4,70	4,80
		40	5,20	5,30	5,35	5,40	5,45	5,55	5,60	5,70	5,75
		50			6,70	6,75	6,75	6,80	6,85	6,90	6,95
ZR125KC-TFD	Q	30	12,85	16,00	19,70	24,00	28,80	34,00	36,50	40,00	43,00
		40	11,55	14,40	17,80	21,70	26,20	31,00	33,50	36,50	39,50
		50			15,80	19,40	23,50	28,10	30,00	33,50	36,00
	P	30	4,83	4,93	5,00	5,10	5,15	5,30	5,35	5,45	5,55
		40	6,10	6,20	6,30	6,35	6,45	6,55	6,55	6,65	6,75
		50			7,95	8,00	8,05	8,10	8,15	8,20	8,25
ZR144KC-TFD	Q	30	14,85	18,50	22,80	27,60	33,00	39,00	41,50		
		40	13,20	16,50	20,40	25,00	30,00	36,00	38,00	42,00	45,00
		50			17,80	21,90	26,70	32,00	34,50	38,00	41,00
	P	30	5,50	5,60	5,70	5,75	5,90	6,10	6,20		
		40	6,90	7,05	7,15	7,20	7,30	7,40	7,50	7,60	7,75
		50			8,95	9,05	9,10	9,15	9,20	9,25	9,35
ZR160KC-TFD	Q	30	15,60	19,90	24,60	29,80	35,50	42,00	45,00	49,50	54,00
		40	11,95	16,70	21,70	26,90	32,50	38,50	41,50	45,50	49,50
		50			17,50	22,90	28,60	34,50	37,00	41,00	44,50
	P	30	6,35	6,45	6,60	6,70	6,75	6,70	6,60	6,45	6,25
		40	7,95	7,95	8,00	8,15	8,30	8,40	8,45	8,45	8,40
		50			10,10	10,00	10,10	10,20	10,30	10,30	10,40
ZR190KC-TFD	Q	30	18,30	23,40	29,00	35,50	42,50	50,50	54,00	59,50	64,50
		40	14,85	20,00	25,60	31,50	38,50	46,00	49,50	54,50	59,50
		50			21,30	27,30	34,00	41,00	44,00	49,00	53,50
	P	30	7,65	7,80	7,90	8,05	8,20	8,35	8,45	8,50	8,60
		40	9,55	9,65	9,75	9,90	10,00	10,10	10,20	10,20	10,30
		50			12,10	12,20	12,30	12,40	12,40	12,50	12,50
ZR250KCE-TWD	Q	30	24,80	31,00	38,00	45,50	54,50	65,50	70,00	77,50	84,50
		40	21,10	27,40	34,00	41,50	50,00	59,50	64,00	70,50	77,00
		50			29,60	37,00	45,00	54,00	58,00	64,00	69,50
	P	30	10,10	10,30	10,40	10,60	10,80	11,00	11,10	11,30	11,40
		40	12,50	12,70	12,80	12,90	13,10	13,30	13,30	13,50	13,60
		50			15,80	15,90	16,00	16,10	16,20	16,30	16,30
ZR310KC-TWD	Q	30	30,00	37,50	46,50	56,50	68,00	81,00	86,50	96,00	104,00
		40	26,30	33,50	41,50	51,00	62,00	74,50	80,00	88,50	96,50
		50			36,50	45,00	55,50	67,00	72,00	80,50	87,50
	P	30	12,70	12,60	12,60	12,70	13,00	13,50	13,80	14,20	14,70
		40	16,10	15,90	15,80	15,90	16,00	16,30	16,50	16,90	17,20
		50			19,90	19,80	19,90	20,10	20,20	20,40	20,70
ZR380KC-TWD	Q	30	39,00	48,10	58,40	70,10	83,50	98,50	105,00	116,00	125,50
		40	33,50	43,00	53,00	64,50	77,00	91,50	97,50	107,50	116,00
		50			46,00	57,50	69,50	83,00	89,00	98,00	106,00
	P	30	15,10	15,30	15,50	15,80	16,20	16,80	17,00	17,50	18,00
		40	18,60	18,90	19,10	19,40	19,70	20,10	20,30	20,70	21,00
		50			23,40	23,70	24,10	24,50	24,60	24,90	25,20

Q(kW) = Capacity / Puissance frigorifique / Kälteleistung
P(kW) = Power Input / Puissance absorbée / Leistungsaufnahme

Operating Conditions / Conditions de fonctionnement / Einsatzbedingungen
10K Suction Superheat / Surchauffe / Sauggasüberhitzung
0K Liquid subcooling / Sous-refroidissement du liquide / Flüssigkeitsunterkühlung

New Generation of Copeland Scroll™ Compressors

ZPKS for the residential and light commercial markets

The Copeland Scroll™ ZPKS products are optimized for both cooling and heating system applications and designed to meet the highest efficiency standards. ZPKS products feature technology improvements resulting in:

- +2 to +7% improved efficiency
- quiet operation (66 to 68 dBA)
- reduced weight and dimensions
- improved quality and reliability over today highly successful ZPK3 series

The ZPKS product line is designed for both air-conditioning and heat pump applications and features seven different capacities from 1.3 hp to 5 hp for 50 Hz single and three-phase applications.

New range for the commercial market

The new series of commercial scroll compressors from 7 to 15 hp offers several benefits:

- Weight is 40 kg lighter on average
- Dimensions are reduced by 30%
- Mounting footprint is smaller by 15%
- Seasonal efficiency increases by up to 10%
- Sound levels are up to 7 dBA lower

Six different capacities are available from 7.5 hp to 15 hp. The compressors are designed for use with R410A (ZP Models) and R407C, R22, R134a (ZR Models) refrigerants. Because it is built in a uniform platform design, this new series simplifies engineering and system manufacturing for OEMs.

Nouvelle Génération de Compresseurs Copeland Scroll™

Les ZPKS pour le marché résidentiel et le petit commercial

Les compresseurs Copeland Scroll™ ZPKS sont optimisés aussi bien pour des applications de refroidissement que de chauffage et conçus pour satisfaire les standards les plus exigeants en rendement énergétiques. Les améliorations technologiques des produits ZPKS se traduisent par :

- Rendement amélioré de +2 à +7%
- Fonctionnement silencieux (66 à 68 dBA)
- Poids et dimensions réduites
- Qualité et fiabilité améliorées par rapport aux déjà très performant ZPK3

La gamme ZPKS est conçue aussi bien pour des applications de conditionnement d'air que de chauffage et se décline en 7 puissances allant de 1,3 cv à 5 cv, en monophasé et triphasé.

Nouvelle gamme pour le marché commercial

La nouvelle série de compresseurs commerciaux scroll de 7.5 à 15 cv offre plusieurs avantages:

- Poids moyen inférieur de 40 kg en moyenne
- Dimensions réduites de 30%
- Encombrement au sol réduit de 15%
- Augmentation du rendement saisonnier de 10%
- Diminution du niveaux sonores jusqu'à 7 dBA

Six tailles de puissance sont disponibles de 7.5 cv à 15 cv. Les compresseurs sont conçus pour fonctionner au fluides R410A (modèles ZP) et R407C, R22, R134a (modèles ZR). Une seule et unique plateforme étant utilisée pour concevoir ses compresseurs, cette nouvelle série simplifie son intégration dans les systèmes fabriqués par les OEM.

Eine neue Generation von Copeland Scroll™-Verdichtern

ZPKS für Haushalts- und Gewerbeanwendungen

ZPKS Modelle wurden für den Einsatz mit höchsten Effizienzwerten in Kälte- und Heizsystemen optimiert. Sie zeichnen sich aus durch folgende technische Verbesserungen:

- +2 bis +7% erhöhte Effizienz
- geräuscharmer Betrieb (66 bis 68 dBA)
- verringertes Gewicht und Baumaße
- stetig verbesserte Qualität und Zuverlässigkeit gegenüber der heutigen sehr erfolgreichen ZPK3 Scroll-Verdichterbaureihe.

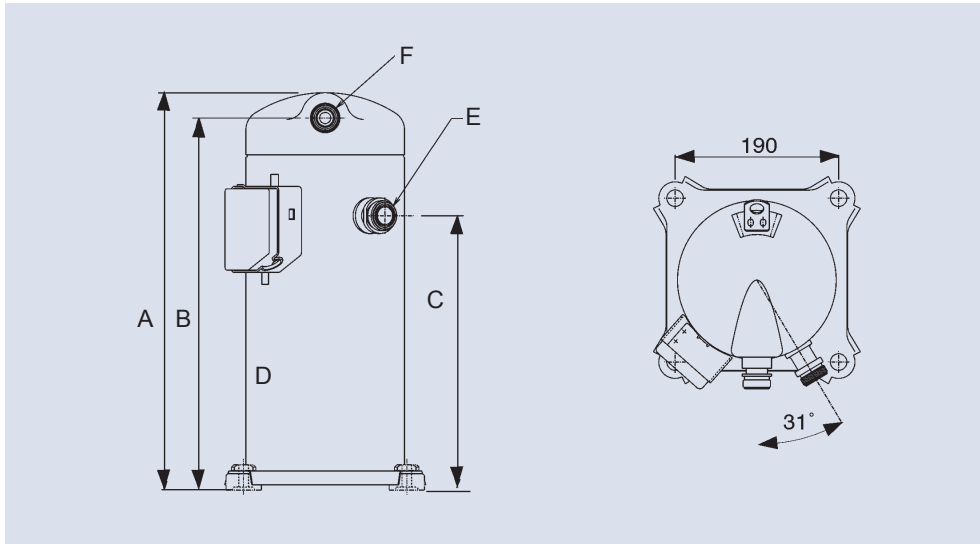
Die ZPKS Produktlinie wurde sowohl für Klima- als auch für Wärmepumpenanwendungen entwickelt und steht in sieben Leistungsstufen von 1,3 bis 5 PS Motorleistung für einphasige und dreiphasige 50 Hz Anwendungen zur Verfügung.

Neue Baureihe für den Industrie- und Handelsmarkt

Die neue Baureihe der Scroll-Verdichter von 7.5 bis 15 PS bietet folgende Vorteile:

- Gewicht um durchschnittlich 40 kg reduziert
- Gehäusedimensionen um ca. 30% reduziert
- Fußlochabstände um ca. 15% verkleinert
- Erhöhung der jahreszeitlichen Effizienz um bis zu 10%
- Verringerung der Schallwerte um bis zu 7 dBA

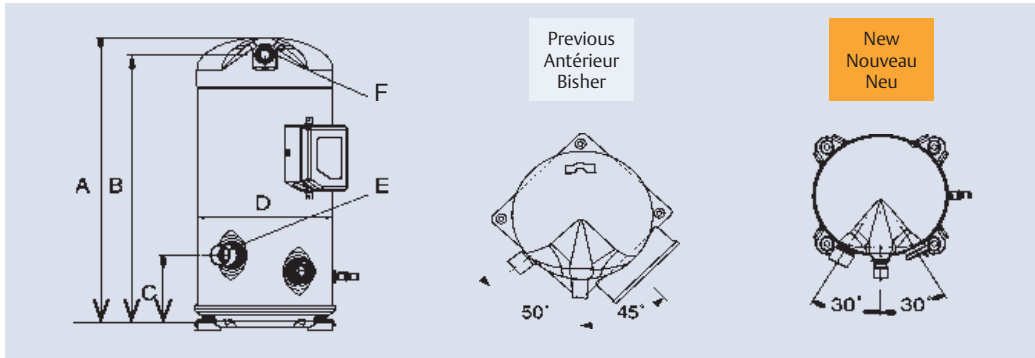
Modelle in sechs verschiedenen Leistungen verfügbar, Motorleistungsaufnahme zwischen 7,5 bis 15 PS. Die Scroll-Verdichtermodelle sind für R410A (ZP Baureihe) und für R407C, R134a und R22 (ZR Baureihe) freigegeben. Aufgrund einer gemeinsamen Verdichterplattform vereinfacht sich für OEM-Kunden die Systementwicklung und -fertigung.



R410A	ZP16	ZP23	ZP24	ZP26	ZP29	ZP31	ZP32	ZP36	ZP41	ZP42	ZP54	ZP54
Nominal Horsepower Puissance nominale hp / cv / PS Motormennleistung	1,3	1,8	2,0	2,2	2,5	2,7	2,7	2,9	3,5	3,5	4,6	4,6
kW (EN 12900) @ 50Hz	3,2	4,9	5,4	5,4	6,1	6,7	6,7	7,8	8,8	8,9	11,7	11,5
COP (W/W)	2,55	2,61	2,78	2,63	2,81	2,78	2,64	2,94	2,73	2,85	2,95	3
Sound Power Puissance Sonore dBA Schall-Leistung	66	65	66	65	66	66	67	68	67	68	69	68
A [mm]	406	383	406	383	406	406	405	436	419	436	436	436
B [mm]	381	357	381	357	381	381	380	411	394	411	411	411
C [mm]	282	264	282	264	282	282	284	314	296	314	313	302
Shell Diameter Diamètre de l'enveloppe D [mm] Gehäusedurchmesser	139	167	139	167	139	139	167	167	167	167	185	167
Suction Diameter Diamètre d'aspiration E "(inch) Saugleitungsdurchmesser	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	7/8"	3/4"	7/8"	7/8"	7/8"
Discharge Diameter Diamètre de refoulement F "(inch) Druckleitungsdurchmesser	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Net Weight Poids Net (kg) Gewicht netto	22	28	22	29	23	23	31	29	32	31	38	34
Foot mounting Pied de fixation [mm²] Montagelöcher	190 x 190	190 x 190	190 x 190	190 x 190	190 x 190	190 x 190	190 x 190	190 x 190	190 x 190	190 x 190	190 x 190	190 x 190

R407C	ZR61	ZR61
Nominal Horsepower Puissance nominale hp / cv / PS Motormennleistung	5,0	5,0
kW (EN 12900) @ 50Hz	12,4	13,1
COP (W/W)	3,09	3,23
Sound Power Puissance Sonore dBA Schall-leistung	71	72
A [mm]	476	436
B [mm]	429	411
C [mm]	316	302
Shell Diameter Diamètre de l'enveloppe D [mm] Gehäusedurchmesser	185	167
Suction Diameter Diamètre d'aspiration E "(inch) Saugleitungsdurchmesser	7/8"	7/8"
Discharge Diameter Diamètre de refoulement F "(inch) Druckleitungsdurchmesser	1/2"	1/2"
Net Weight Poids Net (kg) Gewicht netto	36	30
Foot mounting Pied de fixation [mm²] Montagelöcher	190 x 190	190 x 190

New / Nouveau / Neu Existing / Actuelle / Bisher

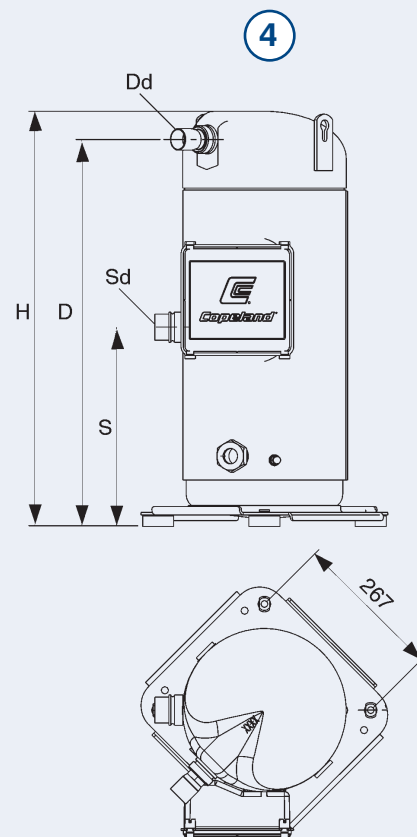
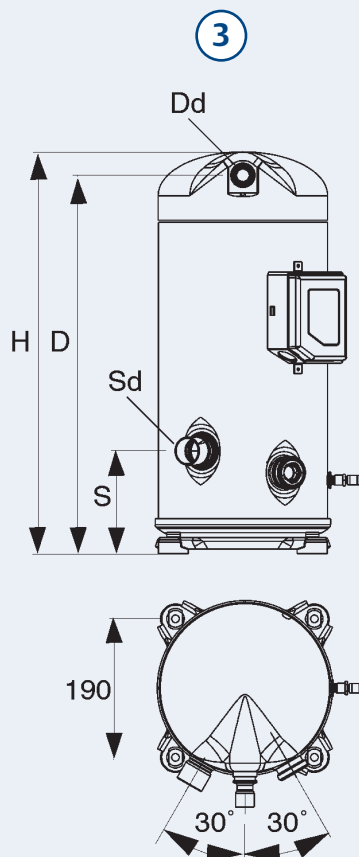
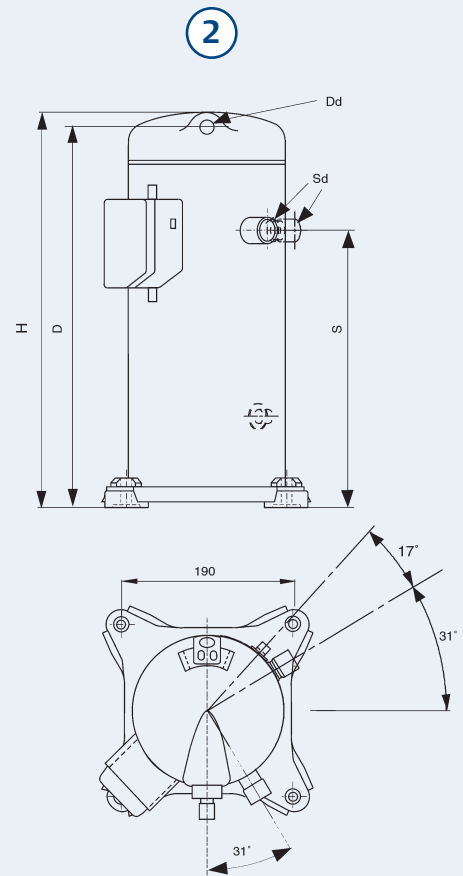
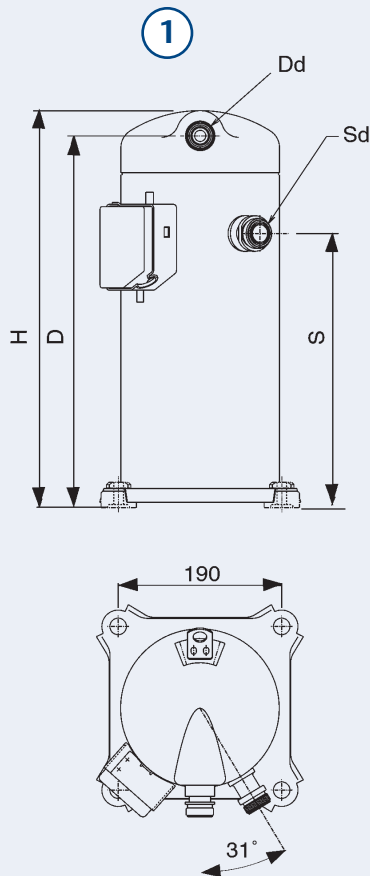


R410A	ZP90	ZP103	ZP120	ZP137	ZP154	ZP180	ZP182
Nominal Horsepower Puissance nominale hp / cv / PS Motorenleistung	7,5	9,0	10,0	12,0	13,0	15,0	15,0
kW (EN 12900) @ 50Hz	19,4	22,5	26,6	29,9	33,5	38,9	39,6
COP (W/W)	3,10	3,19	3,24	3,21	3,24	3,20	3,21
Sound Power Puissance Sonore dBA Schall-Leistung	72	74	74	75	76	8	77
A [mm]	495	552	552	552	570	578	570
B [mm]	463	520	520	520	538	533	519
C [mm]	112	141	141	141	159	305	159
Shell Diameter Diamètre de l'enveloppe D [mm] Gehäusedurchmesser	232	232	232	232	232	283	232
Suction Diameter Diamètre d'aspiration E "(inch) Saugleitungsdurchmesser	1"1/8	1"3/8	1"3/8	1"3/8	1"3/8	1"5/8	1"3/8
Discharge Diameter Diamètre de refoulement F "(inch) Druckleitungsdurchmesser	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"
Sight Glass External Diameter Diamètre voyant d'huile "(inch) Schauglas (Durchmesser)	1"1/4 UNF	1"1/4 UNF	1"1/4 UNF	1"1/4 UNF	1"1/4 UNF	1"3/4 UNF	1"1/4 UNF
Net Weight Poids Net (kg) Gewicht netto	56	59	61	61	64	119	66
Foot mounting Pied de fixation [mm²] Montagelöcher	190 x 190	190 x 190	190 x 190	190 x 190	190 x 190	220 x 220	190 x 190

R407C	ZR90	ZR94	ZR11	ZR108	ZR12	ZR125	ZR144	ZR16	ZR160	ZR19	ZR190
Nominal Horsepower Puissance nominale hp / cv / PS Motorenleistung	7,5	7,5	9,0	9,0	10,0	10,0	12,0	13,0	13,0	15,0	15,0
kW (EN 12900) @ 50Hz	18,7	20,5	22,7	23,0	26,3	26,9	30,9	32,0	33,4	39,5	39,2
COP (W/W)	3,14	3,29	3,17	3,36	3,22	3,35	3,39	3,14	3,24	3,20	3,19
Sound Power Puissance Sonore dBA Schall-Leistung	77	74	78	74	78	74	75	78	78	80	80
A [mm]	524	476	524	533	524	533	533	532	551	578	551
B [mm]	484	444	484	501	484	501	501	492	519	533	519
C [mm]	305	94	305	122	305	122	122	305	140	305	140
Shell Diameter Diamètre de l'enveloppe D [mm] Gehäusedurchmesser	283	232	283	232	283	232	232	283	234	283	234
Suction Diameter Diamètre d'aspiration E "(inch) Saugleitungsdurchmesser	1"3/8	1"1/8	1"3/8	1"3/8	1"3/8	1"3/8	1"3/8	1"3/8	1"3/8	1"5/8	1"3/8
Discharge Diameter Diamètre de refoulement F "(inch) Druckleitungsdurchmesser	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"
Sight Glass External Diameter Diamètre voyant d'huile "(inch) Schauglas (Durchmesser)	1"3/4 UNF	1"1/4 UNF	1"3/4 UNF	1"1/4 UNF	1"3/4 UNF	1"1/4 UNF	1"1/4 UNF	1"3/4 UNF	1"1/4 UNF	1"3/4 UNF	1"1/4 UNF
Net Weight Poids Net (kg) Gewicht netto	94	57	96	59	100	61	61	103	64	119	66
Foot mounting Pied de fixation [mm²] Montagelöcher	220 x 220	190 x 190	220 x 220	190 x 190	220x220	190 x 190	190 x 190	220 x 220	190 x 190	220 x 220	190 x 190

New / Nouveau / Neu Existing / Actuelle / Bisher

Single compressors / Compresseurs individuels / Einzelverdichter



Dimensions

Dimensions

Abmessungen

Drawing no. Illustration Abbildung	Nominal Horsepower Puissance nominale Motorenleistung	Model Modèle Modell R410A	Cooling Capacity Puissance frigorifique Kälteleistungsdaten	H [mm]	D [mm]	S [mm]	Connection Raccords Anschluss	
	HP / CV / PS		kW ⁽¹⁾				Sd	Dd
							" (inch)	
Single / Individuel / Einzel ZP								
1	1,3	ZP 16 KSE	3,2	406	381	282	3/4"	1/2"
	2,0	ZP 24 KSE	5,1					
	2,5	ZP 29 KSE	6,1					
	2,7	ZP 31 KSE	6,5	436	411	314	7/8"	
	2,9	ZP 36 KSE	7,7					
	3,5	ZP 42 KSE	8,9					
2	4,6	ZP 54 KSE	11,5	476	429	316	7/8"	
	5,0	ZP 61 KCE	13,1					
	6,0	ZP 72 KCE	15,3					
3	7,0	ZP 83 KCE	17,7	462	433	113	1" 1/8	7/8"
	8,0	ZP 90 KCE	19,4	495	463			
	9,0	ZP 103 KCE	22,5	552	520			
	10,0	ZP 120 KCE	26,5					
	12,0	ZP 137 KCE	29,9			570	538	
	13,0	ZP 154 KCE	33,5					
4	15,0	ZP 182 KCE	39,6	713	685	352	1" 5/8	1" 3/8
	20,0	ZP 235 KCE	50,6					
	25,0	ZP 295 KCE	63,6					
	30,0	ZP 385 KCE	82,4					
	40,0	ZP 485 KCE	104,4	747	709	425		

Dimensions

Dimensions

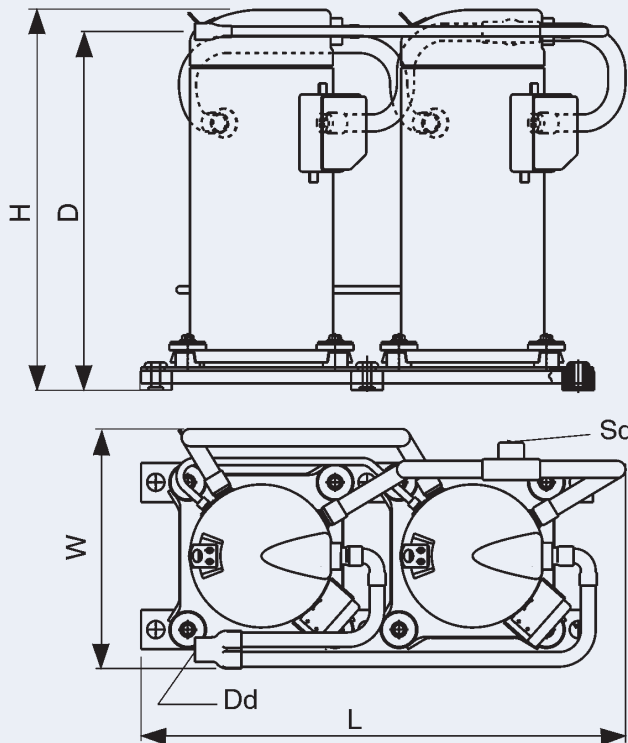
Abmessungen

Drawing no. Illustration Abbildung	Nominal Horsepower Puissance nominale Motorenleistung	Model Modèle Modell R407C R22 R134a	Cooling Capacity Puissance frigorifique Kälteleistungsdaten	H [mm]	D [mm]	S [mm]	Connection Raccords Anschluss	
							Sd	Dd
	HP / CV / PS		kW ⁽¹⁾				" (inch)	
Single / Individuel / Einzel ZR								
1	1,5	ZR 18 K3E	3,7	383	357	264	3/4"	1/2"
	1,8	ZR 22 K3E	4,6					
	2,5	ZR 28 K3E	5,9					
	3,0	ZR 34 K3E	7,0					
	3,5	ZR 40 K3E	8,2					
2	4,0	ZR 48 K3E	10,1	436	411	313	7/8"	7/8"
	5,0	ZR 61 KSE	13,1			302		
	6,0	ZR 72 KCE	14,8			316		
	6,5	ZR 81 KCE	16,7					
	3	8,0	ZR 94 KCE			20,6		
9,0		ZR 108 KCE	23,0	552	520	141	1" 3/8	
10,0		ZR 125 KCE	26,9					
12,0		ZR 144 KCE	30,9					
13,0		ZR 160 KCE	33,4					570
15,0		ZR 190 KCE	39,3					
4	20,0	ZR 250 KCE	52,2	713	685	352	1" 5/8	1" 3/8
	25,0	ZR 310 KCE	65,0	716	678	394		
	30,0	ZR 380 KCE	81,7					

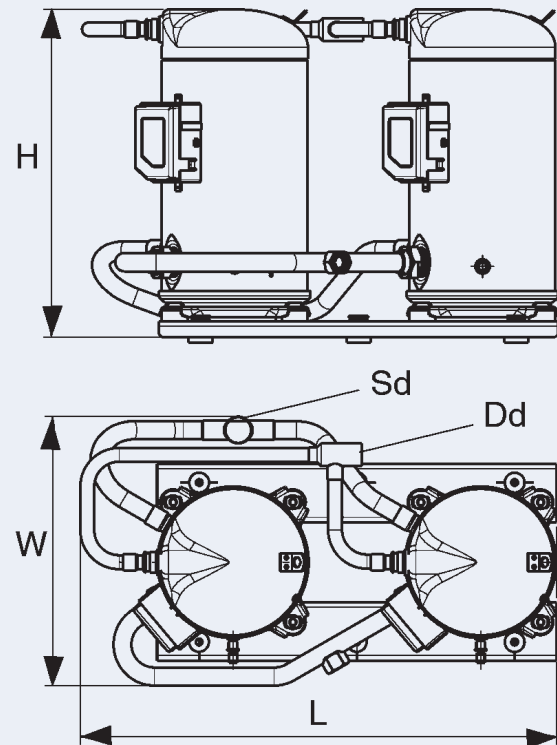
⁽¹⁾ EN 12900 Evaporating 5°C, Condensing 50°C, Superheat 10K, Subcooling 0K
Evaporation 5°C, Condensation 50°C, Surchauffe aspiration 10K, Sous refroidissement 0K
Verdampfung 5°C, Kondensation 50°C, Sauggasüberhitzung 10K, Unterkühlung 0K

Tandem assembly by system manufacturer / Tandem assemblés par les fabricants de systèmes / Tandem-System von Systemherstellern

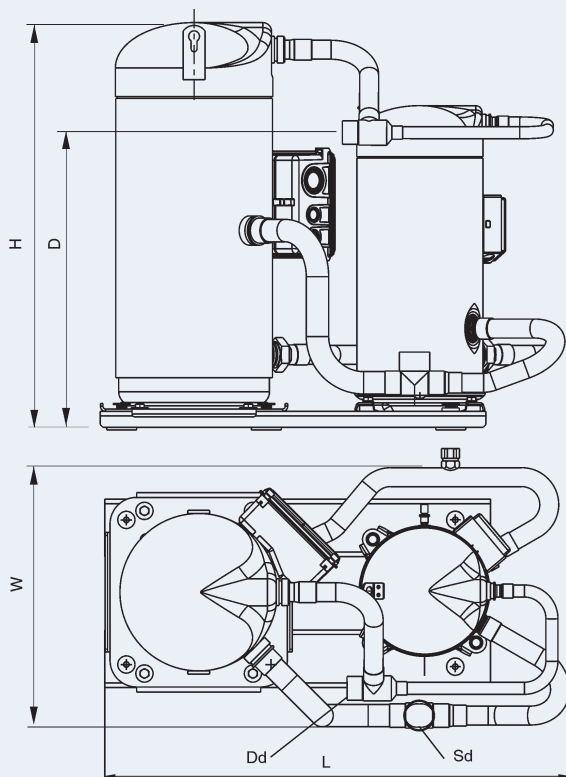
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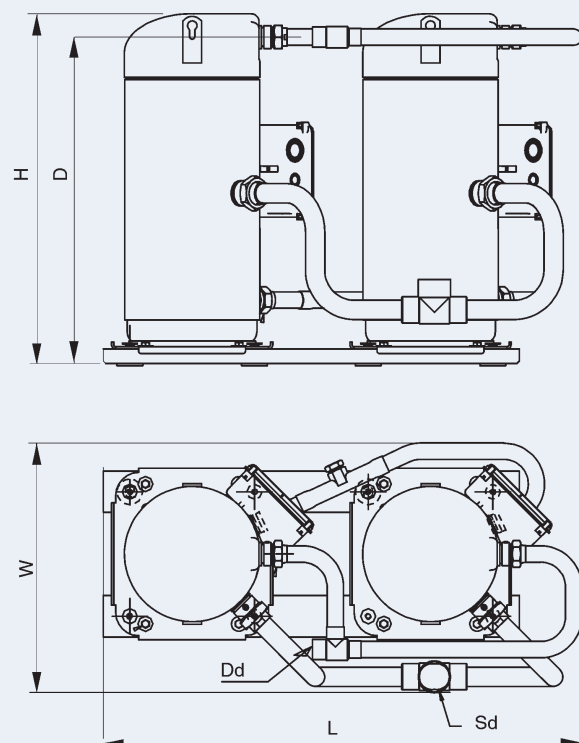
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7



8



Dimensions

Dimensions

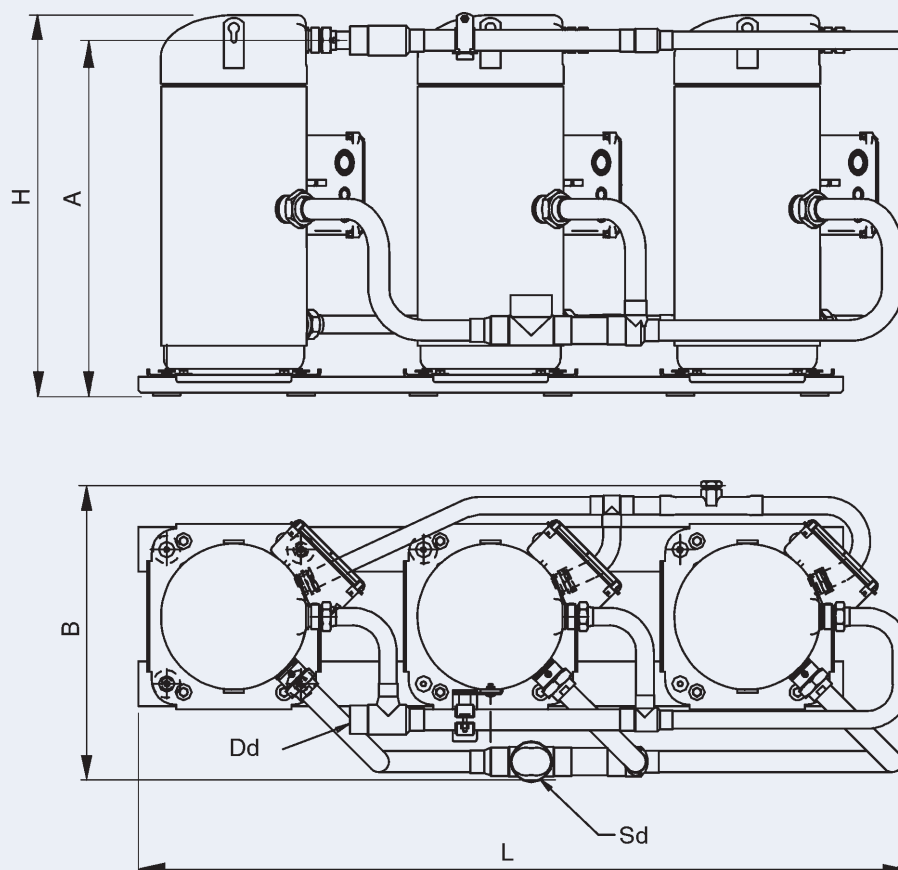
Abmessungen

Drawing no. Illustration Abbildung	Nominal Horsepower Puissance nominale Motormenn- leistung	Model Modèle Modell R410A	Cooling Capacity Puissance frigorigue Kälteleistungs- daten	H [mm]	D [mm]	Connection Raccords Anschluss		L [mm]	W [mm]
						Sd	Dd		
	HP / CV / PS		" (inch)						
Tandem ZPT/ZPU									
5	2 x 2.9	ZPT 72 KSE ⁽²⁾	15,2	TBC - End 2008					
	2 x 3.5	ZPT 82 KSE ⁽²⁾	17,6						
	2 x 4.6	ZPT 108 KSE ⁽²⁾	22,8						
	2 x 5	ZPT 122 KCE	25,9	490	458	1" 1/8	3/4"	626	297
	2 x 6	ZPT 144 KCE	30,3						
	2 x 7	ZPT 166 KCE	35,0				1" 1/8	310	
6	2 x 8	ZPT 180 KCE ⁽²⁾	38,4	528	500	1" 5/8	1" 1/8	757	430
	2 x 9	ZPT 206 KCE ⁽²⁾	44,6	586	496		1" 3/8		
	9 + 10	ZPU 223 KCE ⁽²⁾	48,5						
	2 x 10	ZPT 240 KCE ⁽²⁾	52,5						
	9 + 12	ZPU 240 KCE ⁽²⁾	51,9						
	10 + 12	ZPU 257 KCE ⁽²⁾	55,8						
	2 x 12	ZPT 274 KCE ⁽²⁾	59,2	604	514				
	10 + 13	ZPU 274 KCE ⁽²⁾	59,4						
	9 + 15	ZPU 285 KCE ⁽²⁾	61,5						
	10 + 15	ZPU 302 KCE ⁽²⁾	65,4						
	2 x 13	ZPT 308 KCE ⁽²⁾	66,3						
	12 + 15	ZPU 319 KCE ⁽²⁾	68,8						
	13 + 15	ZPU 336 KCE ⁽²⁾	72,4						
	2 x 15	ZPT 364 KCE ⁽²⁾	78,4						
7	15 + 20	ZPU 417 KCE ⁽²⁾	89,3	750	548	2" 1/8	1" 3/8	894	542
7	13 + 25	ZPU 449 KCE ⁽²⁾	72,4		568	930		570	
8	2 x 20	ZPT 470 KCE ⁽²⁾	100		705	1" 5/8		855	516
7	15 + 25	ZPU 477 KCE ⁽²⁾	102		548	1" 3/8		930	570
8	20 + 25	ZPU 530 KCE ⁽²⁾	113		700	1" 5/8		1024	535
7	15 + 30	ZPU 567 KCE ⁽²⁾	120		568	1" 3/8	930	570	
8	2 x 25	ZPT 590 KCE ⁽²⁾	126	700	3" 1/8	1" 5/8	1045	583	
	25 + 30	ZPU 680 KCE ⁽²⁾	144						
	2 x 30	ZPT 770 KCE ⁽²⁾	163						
	2 x 40	ZPT 970 KCE ⁽²⁾	206						781

Drawing no. Illustration Abbildung	Nominal Horsepower Puissance nominale Motoren- leistung	Model Modèle Modell R407C R22 R134a	Cooling Capacity Puissance frigorigue Kälteleistungs- daten	H [mm]	D [mm]	Connection Raccords Anschluss		L [mm]	W [mm]	
						Sd	Dd			
	HP / CV / PS		" (inch)							
Tandem ZRT/ZRU										
5	2 x 4	ZRT 96 K3E ⁽²⁾	20,0	464	440	1" 1/8	3/4"	626	297	
	2 x 5	ZRT 122 K3E ⁽²⁾	25,8	490	458		1" 1/8		310	
	2 x 6	ZRT 144 KCE ⁽²⁾	29,2							
	2 x 6.5	ZRT 162 KCE ⁽²⁾	33,1							
6	2 x 8	ZRT 188 KCE ⁽²⁾	40,8	528	500	1" 5/8	1" 1/8	757	430	
	2 x 9	ZRT 216 KCE ⁽²⁾	45,5	586	496		1" 3/8			
	2 x 10	ZRT 250 KCE ⁽²⁾	53,3							
	2 x 12	ZRT 288 KCE ⁽²⁾	61,2							
	10 + 15	ZRU 315 KCE ⁽²⁾	65,5							604
	2 x 13	ZRT 320 KCE ⁽²⁾	66,1							
	13 + 15	ZRU 350 KCE ⁽²⁾	72,0							
	2 x 15	ZRT 380 KCE ⁽²⁾	97,8							
7	15 + 20	ZRU 440 KCE ⁽²⁾	90,6	750	548	2" 1/8	1" 5/8	855	516	
8	2 x 20	ZRT 500 KCE ⁽²⁾	103		705	2" 5/8				
7	15 + 25	ZRU 500 KCE ⁽²⁾	104		548					
8	20 + 25	ZRU 560 KCE ⁽²⁾	116		700	3" 1/8		1" 5/8	1024	535
	2 x 25	ZRT 620 KCE ⁽²⁾	129						1045	583
	25 + 30	ZRU 690 KCE ⁽²⁾	145							
	2 x 30	ZRT 760 KCE ⁽²⁾	162							

⁽¹⁾ EN 12900: Evaporating 5°C, Condensing 50°C, Superheat 10K, Subcooling 0K
Evaporation 5°C, Condensation 50°C, Surchauffe aspiration 10K, Sous refroidissement 0K
Verdampfung 5°C, Kondensation 50°C, Sauggasüberhitzung 10K, Unterkühlung 0K

⁽²⁾ Tandem / Trio assemblies by system manufacturers. Emerson Climate Technologies can provide full technical support.
Tandem / Trio assemblés par les fabricants de systèmes. Emerson Climate Technologies fourni le support technique complet.
Tandem / Trio System von System-Herstellern. Emerson Climate Technologies liefert volle technische Unterstützung.



Dimensions

Dimensions

Abmessungen

Drawing no. Illustration Abbildung	Model Modèle Modell R407C R22 R134a	Cooling Capacity Puissance frigorifique Kälteleistungsdaten	Model Modèle Modell R410A	Cooling Capacity Puissance frigorifique Kälteleistungsdaten	H [mm]	A [mm]	Connection Raccords Anschluss		L [mm]	B [mm]
							Sd	Dd		
		kW ⁽¹⁾					kW ⁽¹⁾	" (inch)		
Trio ZRY			Trio ZPY							
9			ZPY 360 KCE ⁽²⁾	78,3	586	496	2" 5/8	1" 5/8	1140	476
			ZPY 411 KCE ⁽²⁾	88,4						
	ZRY 480 KCE ⁽²⁾	98,7	ZPY 462 KCE ⁽²⁾	99,0	604	514				
	ZRY 570 KCE ⁽²⁾	116,0	ZPY 546 KCE ⁽²⁾	117	750	597	3" 1/8	2" 1/8	1534	597
	ZRY 750 KCE ⁽²⁾	154,0	ZPY 705 KCE ⁽²⁾	149						
	ZRY 930 KCE ⁽²⁾	192,0	ZPY 885 KCE ⁽²⁾	188						
	ZRY 114 MCE ⁽²⁾	241,0	ZPY 116 MCE ⁽²⁾	243			3" 5/8	2" 1/8	1555	643
			ZPY 145 MCE ⁽²⁾	308	781	674				

⁽¹⁾ EN 12900: R407C Dew Point Evaporating 5°C, Condensing 50°C, Superheat 10K, Subcooling 0K
Evaporation 5°C, Condensation 50°C, Surchauffe aspiration 10K, Sous refroidissement 0K
Verdampfung 5°C, Kondensation 50°C, Sauggasüberhitzung 10K, Unterkühlung 0K

⁽²⁾ Tandem / Trio assemblies by system manufacturers. Emerson Climate Technologies can provide full technical support.
Tandem / Trio assemblés par les fabricants de systèmes. Emerson Climate Technologies fourni le support technique complet.
Tandem / Trio System von System-Herstellern. Emerson Climate Technologies liefert volle technische Unterstützung.

	Compressor Compresseur Verdichter	Maximum Operating Current ⁽³⁾ Intensité max. de fonctionnement ⁽³⁾ Max. Betriebsstrom ⁽³⁾ A					Locked Rotor Current ⁽⁴⁾ Courant rotor bloqué ⁽⁴⁾ Blockierter Rotorstrom ⁽⁴⁾ A					Winding Resistance Résistance bobinage Wicklungswiderstand (Ohm. Ω)				
		PFZ ⁽¹⁾	TFM ⁽¹⁾	TFD	TWC	TWD	PFZ ⁽¹⁾	TFM ⁽¹⁾	TFD	TWC	TWD	PFZ ⁽¹⁾⁽⁵⁾	TFM ⁽¹⁾	TFD	TWC	TWD
	R410A															
New/Nouveau/Neu	ZP 16KSE	10,0	-	-	-	-	44,0	-	-	-	-	1.79 / 1.79	-	-	-	-
New/Nouveau/Neu	ZP 24KSE	12,8	4,7	-	-	-	60,0	28,0	-	-	-	1.6 / 1.33	8,1	-	-	-
New/Nouveau/Neu	ZP 29KSE	16,0	6,0	-	-	-	67,0	38,0	-	-	-	1.22 / 1.15	5,9	-	-	-
New/Nouveau/Neu	ZP 31KSE	17,1	6,5	-	-	-	67,0	38,0	-	-	-	1.22 / 1.15	5,9	-	-	-
New/Nouveau/Neu	ZP 36KSE	20,0	7,0	-	-	-	87,0	46,0	-	-	-	0.88 / 0.71	4,2	-	-	-
New/Nouveau/Neu	ZP 42KSE	21,0	8,0	-	-	-	98,0	43,0	-	-	-	0.87 / 0.52	4,0	-	-	-
New/Nouveau/Neu	ZP 54KSE	31,0	10,3	-	-	-	115,0	51,5	-	-	-	0.87 / 0.52	3,2	-	-	-
	ZP 61KCE	-	-	11,8	-	-	-	-	64,0	-	-	-	-	2,80	-	-
	ZP 72KCE	-	-	15,0	-	-	-	-	75,0	-	-	-	-	2,26	-	-
	ZP 83KCE	-	-	15,0	-	-	-	-	101,0	-	-	-	-	1,79	-	-
	ZP 90KCE	-	-	16,0	-	-	-	-	95,0	-	-	-	-	1,61	-	-
	ZP 103KCE	-	-	21,0	-	-	-	-	111,0	-	-	-	-	1,37	-	-
	ZP 120KCE	-	-	22,0	-	-	-	-	118,0	-	-	-	-	1,24	-	-
	ZP 137KCE	-	-	25,0	-	-	-	-	118,0	-	-	-	-	1,24	-	-
	ZP 154KCE	-	-	31,0	-	-	-	-	140,0	-	-	-	-	1,10	-	-
	ZP 182KCE	-	-	34,0	-	-	-	-	174,0	-	-	-	-	0,83	-	-
	ZP 235KCE	-	-	-	90	40	-	-	-	480,0	225,0	-	-	-	0,14	0,63
	ZP 295KCE	-	-	-	-	48	-	-	-	-	272,0	-	-	-	-	0,51
	ZP 385KCE	-	-	-	131	65	-	-	-	599,0	320,0	-	-	-	0,10	0,35
New/Nouveau/Neu	ZP 485KCE	-	-	-	-	82	-	-	-	-	394,0	-	-	-	-	0,27

(1), (2) 50 Hz version only
Uniquement moteur 50 Hz
Nur 50 Hz Motor

(3) Values shown at lowest voltage (50 Hz)
Valeur pour la plus basse tension (50 Hz)
Werte bei niedrigster Nennspannung (50 Hz)

(4) Highest value with nominal voltage range
Valeur la plus élevée pour la plage de tension
Höchstwert im nominalen Spannungsbereich

(5) Start winding resistance / Run winding resistance
Résistance enroulement auxiliaire / Résistance enroulement principal
Hilfswicklungswiderstand / Hauptwicklungswiderstand

Compressor Compresseur Verdichter	Maximum Operating Current ⁽²⁾ Intensité max. de fonctionnement ⁽²⁾ Max. Betriebsstrom ⁽²⁾ A					Locked Rotor Current ⁽³⁾ Courant rotor bloqué ⁽³⁾ Blockierter Rotorstrom ⁽³⁾ A					Winding Resistance Résistance bobinage Wicklungswiderstand (Ohm. Ω)				
	PFJ	TF5	TFD ⁽¹⁾	TWC	TWD	PFJ	TF5	TFD ⁽¹⁾	TWC	TWD	PFJ ⁽¹⁾⁽⁴⁾	TF5	TFD ⁽¹⁾	TWC	TWD
R407C															
ZR 18K3E	10,0	-	-	-	-	35,0	-	-	-	-	3.24 / 2.25	-	-	-	-
ZR 22K3E	11,4	8,4	4,2	-	-	47,0	48,0	24,0	-	-	2.85 / 1.62	2,15	8,64	-	-
ZR 28K3E	14,8	10,2	5,1	-	-	61,0	70,0	32,0	-	-	2.23 / 1.20	1,46	5,94	-	-
ZR 34K3E	17,3	11,1	5,6	-	-	76,0	83,0	40,0	-	-	2.07 / 0.94	1,23	4,83	-	-
ZR 40K3E	23,1	13,6	7,0	-	-	100,0	95,0	46,0	-	-	1.81 / 0.75	1,00	4,03	-	-
ZR 48K3E	23,5	18,5	10,0	-	-	114,0	98,0	50,0	-	-	1.70 / 0.60	0,99	3,88	-	-
New/Novus/Neu ZR 61KSE	-	-	11,0	-	-	-	-	59,0	-	-	-	-	2,75	-	-
ZR 72KCE	-	27,0	12,1	-	-	-	172,0	74,0	-	-	-	0,56	2,27	-	-
ZR 81KCE	-	25,2	15,0	-	-	-	179,0	101,0	-	-	-	0,50	1,79	-	-
ZR 94KCE	-	-	15,9	-	-	-	-	95,0	-	-	-	-	1,61	-	-
ZR 108KCE	-	-	16,8	-	-	-	-	111,0	-	-	-	-	1,37	-	-
ZR 125KCE	-	-	19,6	-	-	-	-	118,0	-	-	-	-	1,24	-	-
ZR 144KCE	-	-	22,3	-	-	-	-	118,0	-	-	-	-	1,24	-	-
ZR 160KCE	-	-	27,0	-	-	-	-	140,0	-	-	-	-	1,10	-	-
ZR 190KCE	-	-	39,0	-	-	-	-	174,0	-	-	-	-	0,83	-	-
ZR 250KCE	-	-	-	91,0	40,0	-	-	-	480,0	225,0	-	-	-	0,14	0,63
ZR 310KCE	-	-	-	-	52,0	-	-	-	-	272,0	-	-	-	-	0,51
ZR 380KCE	-	-	-	-	62,0	-	-	-	599,0	320,0	-	-	-	0,10	0,37

⁽¹⁾ 50 Hz version only
Uniquement moteur 50 Hz
Nur 50 Hz Motor

⁽²⁾ Values shown at lowest voltage (50 Hz)
Valeur pour la plus basse tension (50 Hz)
Werte bei niedrigster Nennspannung (50 Hz)

⁽³⁾ Highest value with nominal voltage range
Valeur la plus élevée pour la plage de tension
Höchstwert im nominalen Spannungsbereich

⁽⁴⁾ Start winding resistance / Run winding resistance
Résistance enroulement auxiliaire / Résistance enroulement principal
Hilfswicklungswiderstand / Hauptwicklungswiderstand

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تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)

روبروی پالایشگاه نفت پارس، پلاک ۱۲


EMERSON
Climate Technologies

Semi-Hermetic Reciprocating Compressors

Emerson Climate Technologies offers different ranges of semi-hermetic reciprocating compressors with distinct levels of performance and technical characteristics depending on the application requirements.

BRAND CHANGE



Brand Change

To harmonize Emerson's semi-hermetic compressor ranges in terms of color and branding, Emerson is changing the product brand and the nomenclature of the semi-hermetic compressors for the K & L-Series and the Discus-range. In the future, we will start using the well-known 'Copeland brand products' label replacing "DWM Copeland" and change the compressor color from grey to black.

By this initiative, all compressor products from Emerson with both scroll and piston technology are using one and the same branding and color: Copeland™ brand products – painted in black. Our customers can better focus their marketing and communications efforts leading to improved brand and company recognition.

Over time, our product range will be streamlined to only one compressor model line. The reed valve compressors of the 2- to 8-cylinder S-series will gradually be replaced by the puck design valve compressors of our Stream and Discus series. This results in reduced inventory lines at our distribution partners. Emerson Climate Technologies will provide you with a full model list to support you in the transition phase.



S-Series 6 Cylinder

The S-Series:

Its design is based on traditional "reed" valve plates similar to what is used in reciprocating compressors offered by other manufacturers. The performance of such compressors

meets basic market requirements but cannot compete with Discus compressors in terms of efficiency. The S-Series ranges from 1.5 to 70 hp and is composed of K, L, 2S, 3S, 4S and 8S presented in this catalogue.

The Discus Range:

It is broadly recognized as the most efficient compressor whatever the running condition. This range is mainly used in refrigeration medium and low temperature applications where system efficiency is a priority for the end-user.

The key difference between Discus and other reciprocating compressors lies in its valve plate design. Traditional "reed" valves are replaced by 'puck' type valves that are integrated in the valve plate. This special design eliminates the dead volume at the



Discus 2 Cylinder

end of the compression and allows for the highest compressor efficiency. To date, no other reciprocating compressor is able to match Discus in terms of performance. Available from 4 to 60 hp, they are referred to as 2D, 3D, D4D, D6D and 8D in this catalogue.

The Stream Series:

Emerson Climate Technologies has introduced Stream, a brand new line of semi-hermetic 4 and 6 cylinder compressors. The series provides best in class performance for today's HFC-based and uprising natural and low GWP refrigerants, significantly reducing cost of operation and environmental impact compared to competing products.

The range is made of 4 and 6 cylinder models, available for inverter applications, and 4 and 6 cylinder digital models for continuous capacity modulation. The compressors can be fitted with a dedicated sound shell for sound sensitive applications.

The new Emerson Climate Technologies line-up of 4 cylinder compressors for CO₂-transcritical applications is the ideal solution for R744 medium temperature cascade and booster systems. It is characterised by a design pressure of 135 bar. Refrigerant flow and heat transfer have been optimized for best performance. In combination with the CO₂-subcritical scroll for the low temperature refrigeration side, Emerson Climate Technologies offers the most energy efficient package available on the market today.

With advanced protection and diagnostics features for system reliability, reduced service costs and increased equipment uptime, the Stream series is built to last in today's modern changing world.



Stream 4 Cylinder



Stream 6 Cylinder



Stream Digital 4 Cylinder



Stream Digital 6 Cylinder



Stream 4 Cylinder for R744



Sound Shell for Stream

Emerson CoreSense™ Diagnostics for Refrigeration

Emerson CoreSense Diagnostics is an innovative technology for Copeland Stream refrigeration compressors. It goes beyond compressor protection by assisting in system diagnosis and optimization. Providing service engineers with detailed information at the right time, system-related problems can be diagnosed faster or even before they occur. Supermarket operators benefit from increased system uptime, reduction in food loss and reduced maintenance costs.

Technical Specification

- Power supply 120/240V AC, 24V AC
- Front end: 2 x LED, green/red, yellow
- Communication protocol (Modbus®RTU)
- Bus to system controller: RS 485, 3-wire, (+, GND, -)
- Discharge temperature sensor
- Current sensor and sensor module
- Flash memory
- Alarm reset button
- IP 54

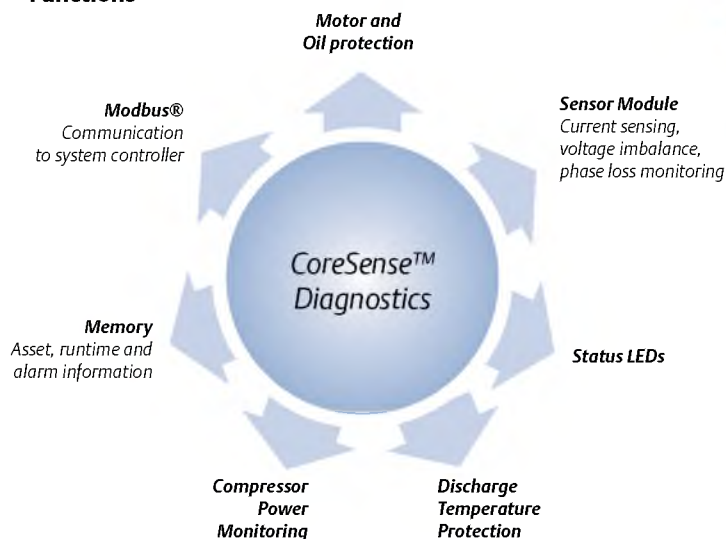
Benefits

- Reduce applied system costs
- Manage on-site compressor data
- Facilitate predictive maintenance & advanced diagnostics
- Reduce maintenance costs
- Increase system uptime / reduce food loss
- Power consumption monitoring

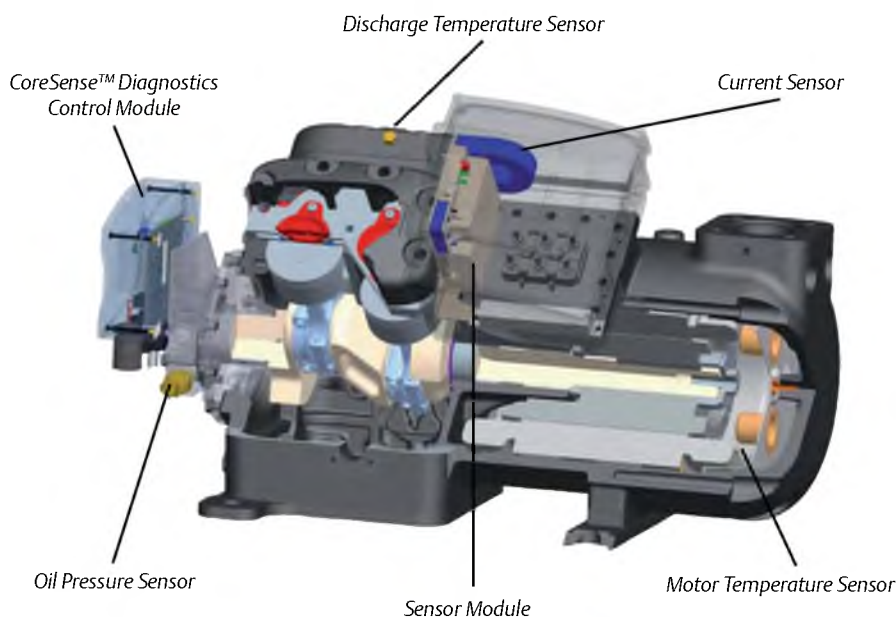


*Emerson CoreSense Diagnostics for Refrigeration.
Ensuring Best Performance over Full Lifetime.*

Functions



Scope of Supply



K and L Reciprocating Compressor Range

Small 2-cylinder semi-hermetic reciprocating compressors for medium and low temperature refrigeration applications and transport refrigeration.

Designed on the principle of standard reed valve type technology, these compressors feature an internal oil pump that guarantees optimum reliability in all operating conditions.

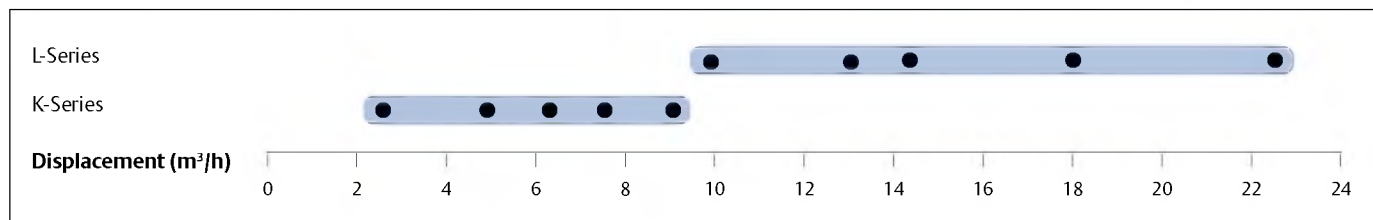
The K-series ranges from 0.5 to 2 hp and the L-series from 2 to 4 hp and provide cooling capacities from 1.5 to 9 kW in medium temperature (R404A, -10/45°C) and 0.5 to 3.5kW in low temperature (R404A, -35/40°C).

These compressors are qualified for R404A, R507, R134a and R22.



K-Series compressor

K & L Compressor Line-up



Conditions EN12900, R404A: Evaporating -10°C, Condensing 40°C, Suction Gas Temperature 20°C, Subcooling 0K

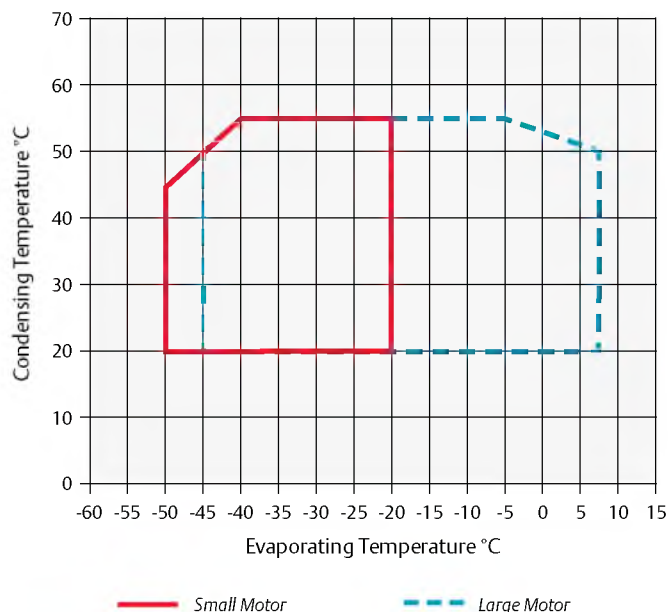
Features and Benefits

- Large operating envelope from 5°C to -45°C evaporating and up to 55°C condensing
- Two motor sizes per displacement, optimized for different applications
- Compact and light compressors
- Ideal for condensing unit or transport applications
- Integrated oil pump for maximum reliability

Maximum Allowable Pressure (PS)

- Low Side PS 22.5 bar (g)/ High Side PS 28 bar (g)

Operating Envelope R404A



Technical Overview

R404A	Nominal hp	Displacement (m ³ /h)	Capacity (kW) 1)	COP 1)	Capacity (kW) 2)	COP 2)	Oil Quantity (l)	Length/Width/ Height (mm)	Net Weight (kg)	Motor Version / Code	Maximum Operating Cur- rent (A)	Locked Rotor Current (A)	Sound Pressure @ 1 m (dBA) **
										3 Ph *	3 Ph *	3 Ph *	
KM-7X	0.8	4.0	1.8	1.9			0.65	365/235/280	39	EWL	2.4	12.2	45
KJ-10X	1.0	5.1	2.5	1.9			0.65	365/235/280	39	EWL	3	16	45
KSJ-15X	1.5	6.3	3.2	1.9			0.65	365/235/280	40	EWL	3	20	53
KL-20X	2.0	7.4	3.7	2.1			0.65	365/235/280	39	EWL	4	20	
KSL-20X	2.0	9.1	4.6	1.9			0.65	365/235/280	40	EWL	5	20	
LE-20X	2.0	9.9	4.6	2.2			2.00	470/330/385	78	EWL	6	38	51
LF-30X	3.0	12.9	6.5	2.2			2.00	470/330/385	80	EWL	7	53	51
LJ-30X	3.0	14.5	7.2	2.1			2.00	470/330/385	83	EWL	8	53	52
LL-40X	4.0	18.2	9.2	2.2			2.00	470/330/385	87	EWL	10	69	63
KM-5X	0.5	4.0			0.6	1.1	0.65	365/235/280	39	EWL	2	12	45
KJ-7X	0.8	5.1			0.8	1.1	0.65	365/235/280	39	EWL	2	12	45
KSJ-10X	1.0	6.3			1.0	1.1	0.65	365/235/280	40	EWL	3	16	50
KL-15X	1.5	7.4			1.2	1.2	0.65	365/235/280	39	EWL	3	20	47
LF-20X	2.0	12.9			1.6	1.1	2.00	470/330/385	80	EWL	5	38	51
LJ-20X	2.0	14.5			1.9	1.2	2.00	470/330/385	78	EWL	6	38	52
LL-30X	3.0	18.2			2.6	1.3	2.00	470/330/385	85	EWL	7	53	52
LSG-40X	4.0	22.5			3.5	1.4	2.00	470/330/385	77	EWL	9	69	63

(1) MT= Conditions EN12900 : Evaporating -10°C, Condensing 45°C, Suction Gas Temperature 20°C, Subcooling 0K

(2) LT= Conditions EN12900 : Evaporating -35°C, Condensing 40°C, Suction Gas Temperature 20°C, Subcooling 0K

* 3 Ph: 380-420V/ 50Hz

** @ 1m: sound pressure level at 1m distance from the compressor, free field condition

Condensing Temperature 40°C																
R404A		Cooling Capacity (kW)							R404A		Power Input (kW)					
		Evaporating Temperature (°C)									Evaporating Temperature (°C)					
Model	-45	-35	-30	-20	-10	-5	5		Model	-45	-35	-30	-20	-10	-5	5
KM-5X	0.2	0.6	0.8	1.3					KM-5X	0.3	0.5	0.6	0.7			
KM-7X	0.2	0.5	0.8	1.3	2.0	2.5	3.6		KM-7X	0.3	0.5	0.6	0.8	0.9	0.9	1.0
KJ-10X	0.3	0.7	1.0	1.8	2.8	3.4	4.9		KJ-10X	0.4	0.7	0.8	1.0	1.2	1.3	1.4
KJ-7X	0.4	0.8	1.1	1.8					KJ-7X	0.5	0.7	0.8	1.0			
KSJ-10X	0.5	1.0	1.4	2.3					KSJ-10X	0.7	0.9	1.1	1.3			
KSJ-15X	0.5	1.0	1.4	2.3	3.5	4.2	6.1		KSJ-15X	0.6	0.9	1.0	1.3	1.6	1.7	1.8
KL-15X	0.6	1.2	1.6	2.6					KL-15X	0.8	1.0	1.2	1.5			
KL-20X	0.4	1.1	1.5	2.6	4.1	5.0			KL-20X	0.6	0.9	1.1	1.4	1.7	1.8	
KSL-20X	0.7	1.5	2.0	3.3	5.1	6.1			KSL-20X	0.8	1.2	1.4	1.9	2.3	2.5	
LE-20X		1.1	1.7	3.2	5.1	6.4	9.4		LE-20X		1.0	1.2	1.6	2.0	2.2	2.5
LF-20X		1.6	2.3	4.0					LF-20X		1.4	1.7	2.2			
LF-30X	0.7	1.9	2.6	4.6	7.2	8.8	12.8		LF-30X	1.0	1.6	1.9	2.4	2.9	3.1	3.4
LJ-20X		1.9	2.8	5.0					LJ-20X		1.6	1.9	2.6			
LJ-30X	0.8	2.1	2.9	5.1	8.0	9.8	14.2		LJ-30X	1.1	1.8	2.1	2.8	3.3	3.6	3.9
LL-30X	0.9	2.6	3.7	6.5					LL-30X	1.1	2.0	2.4	3.3			
LL-40X	1.1	2.7	3.7	6.4	10.2	12.6	18.4		LL-40X	1.4	2.2	2.6	3.3	4.0	4.3	4.8
LSG-40X	1.4	3.5	4.8	8.2					LSG-40X	1.6	2.6	3.1	4.1			

Suction Gas Return 20°C / subcooling 0K

High Discharge Temp - Additional cooling required

Condensing Temperature 40°C																
R134a		Cooling Capacity (kW)							R134a		Power Input (kW)					
		Evaporating Temperature (°C)									Evaporating Temperature (°C)					
Model	-30	-20	-10	-5	5	10	15		Model	-30	-20	-10	-5	5	10	15
KM-5X		0.7	1.2	1.5	2.3	2.8			KM-5X		0.5	0.6	0.6	0.6	0.7	
KJ-7X		0.9	1.6	2.0	3.0	3.7			KJ-7X		0.6	0.7	0.7	0.8	0.9	
KSJ-10X		1.2	2.0	2.5	3.8	4.6			KSJ-10X		0.7	0.8	0.9	1.0	1.0	
KL-15X		1.4	2.3	2.8	4.3	5.2			KL-15X		0.8	1.0	1.1	1.3	1.3	
KSL-15X		1.7	2.8	3.5	5.3	6.5			KSL-15X		1.0	1.3	1.4	1.6	1.7	
KSL-20X		1.7	2.9	3.7	5.6	6.7			KSL-20X		1.0	1.2	1.4	1.6	1.6	
LE-20X		1.5	2.8	3.6	5.6	6.9			LE-20X		1.0	1.3	1.4	1.5	1.6	
LF-20X		2.2	3.8	4.9	7.5	9.1			LF-20X		1.2	1.6	1.7	1.9	2.0	
LJ-20X		2.6	4.3	5.4	8.3	10.1			LJ-20X		1.6	1.9	2.1	2.4	2.5	
LL-30X		3.2	5.5	7.0	10.9	13.2			LL-30X		1.9	2.4	2.6	3.0	3.1	
LSG-40X		4.3	7.2	9.0	13.7	16.6			LSG-40X		2.3	2.9	3.2	3.7	3.9	

Suction Gas Return 20°C / Subcooling 0K

High Discharge Temp - Additional cooling required

Condensing Temperature 40°C															
R22	Cooling Capacity (kW)							R22	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
Model	-45	-35	-30	-20	-10	-5	5	Model	-45	-35	-30	-20	-10	-5	5
KM-5X		0.4	0.6	1.2	1.9	2.3		KM-5X		0.4	0.5	0.7	0.8	0.8	
KM-75/-7X		0.4	0.6	1.2	1.9	2.4	3.5	KM-75/-7X		0.4	0.5	0.7	0.8	0.8	0.9
KJ-10X		0.7	0.9	1.6	2.6	3.2	4.7	KJ-10X		0.6	0.7	0.9	1.0	1.1	1.2
KJ-75/-7X	0.3	0.7	0.9	1.6	2.5	3.1		KJ-75/-7X	0.4	0.6	0.7	0.9	1.0	1.1	
KSJ-10X	0.4	0.9	1.2	2.0	3.2	3.9		KSJ-10X	0.5	0.8	0.9	1.1	1.3	1.4	
KSJ-15X		0.9	1.2	2.1	3.3	4.0	5.7	KSJ-15X		0.8	0.9	1.1	1.3	1.4	1.5
KL-15X	0.5	1.0	1.4	2.4	3.7	4.6		KL-15X	0.6	0.9	1.1	1.3	1.5	1.7	
KSL-20X		1.3	1.8	3.0	4.7	5.7		KSL-20X		1.1	1.3	1.6	1.9	2.1	
LE-201/-20X		1.1	1.6	2.9	4.8	6.1	9.1	LE-201/-20X		1.1	1.3	1.7	2.0	2.1	2.3
LF-201/-20X	0.6	1.6	2.3	4.1	6.7	8.3		LF-201/-20X	1.0	1.4	1.7	2.2	2.7	2.9	
LF-301/-30X		1.6	2.3	4.1	6.8	8.4	12.2	LF-301/-30X		1.4	1.7	2.2	2.6	2.8	3.0
LJ-201/-20X	0.8	1.9	2.7	4.8				LJ-201/-20X	1.1	1.6	1.9	2.5			
LJ-301/-30X		1.9	2.6	4.8	7.8	9.6	13.8	LJ-301/-30X		1.6	1.9	2.5	3.0	3.2	3.5
LL-301/-30X	1.1	2.5	3.5	6.2				LL-301/-30X	1.4	2.0	2.4	3.1			
LL-401/-40X		2.5	3.5	6.2	9.8	12.0	17.2	LL-401/-40X		2.0	2.4	3.0	3.7	3.9	4.3
LSG-401/-40X	1.6	3.5	4.8	7.9				LSG-401/-40X	1.8	2.7	3.2	4.0			

Suction Gas Return 20°C / Subcooling 0K

High Discharge Temp - Additional cooling required

Discus™ Reciprocating Compressor Range

From 2 to 8 cylinder semi-hermetic reciprocating compressors for medium / low temperature refrigeration applications.

The key difference between Discus and traditional reciprocating technologies lies in the valve plate design. The Discus valve plate allows gas to flow into the cylinders with a minimum heat gain, while suction cavities are designed to smoothly route the gas to minimize losses. These effects lead to:

- Superior cooling capacity due to no re-expansion volume
- Up to 10% higher efficiency compared to conventional “cost-effective” reed type compressors
- Lower operating costs for the end-user

The Discus ranges from 5 to 60 hp and provide cooling capacities from 8 to 96 kW in medium temperature (R404A, -10/45°C) and 2 to 35 kW in low temperature (R404A, -35/40°C). These compressors are qualified for R404A, R507, R134a and R22. All Discus compressors are designed to deliver maximum performance and reliability:

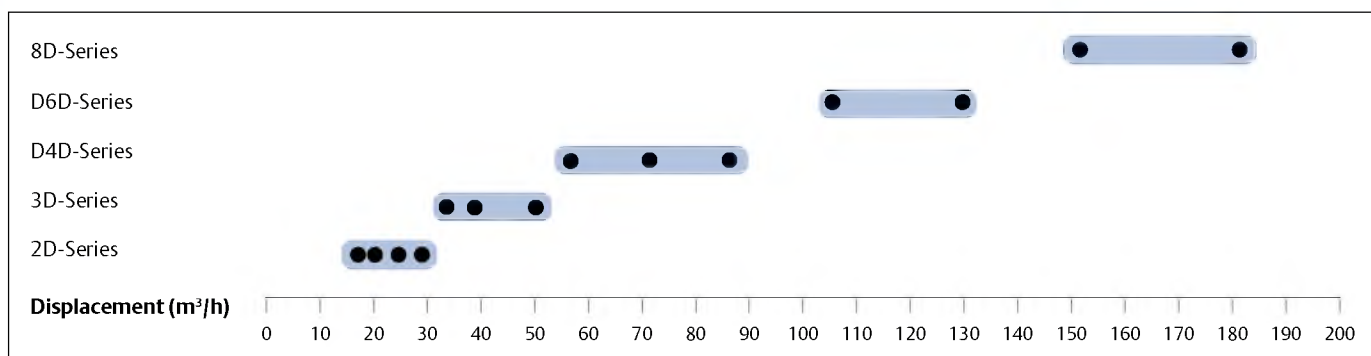
- Discus “puck” valve integrated into the valve plate for highest performance whatever the operating condition
- Positive displacement high flow oil pump guarantees high oil feeding pressure for good lubrication and bearings’ cooling



Discus compressor

- PTFE coated bearings for especially low friction and good protection at start up
- Electronic motor protection module
- Availability of two motor sizes per displacement. The small motor covers all refrigeration applications while the large motor can be used in comfort or inverter applications

Discus Compressor Line-up



Conditions: EN12900, R404A: Evaporating -10°C, Condensing 40°C, Suction Gas Temperature 20°C, Subcooling 0K

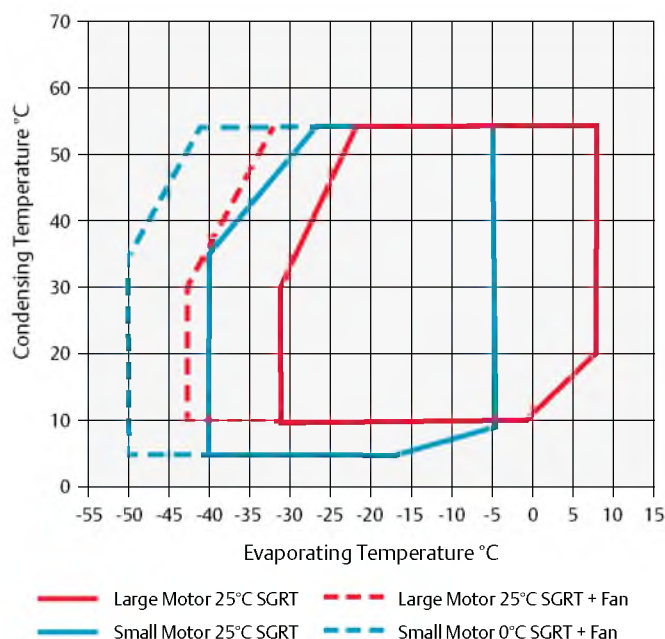
Features and Benefits

- Highest level of efficiency available on the market, whatever the refrigerant and operating condition
- Integrated oil pump and Electronic Oil Pressure Switch OPS2 for maximum reliability
- Two motor sizes per displacement, optimized for different applications
- Large operating envelope that allows medium and low temperature applications to be covered by one single model with condensing limit as low as 5°C
- Provide cooling capacity modulation either by cylinder head blocked suction or with use of frequency inverters from 25 to 60Hz
- Multi-refrigerant compressor range – one model to cover all standard refrigerants

Maximum Allowable Pressure (PS)

- Low Side PS 22.5 bar (g) / High Side PS 28 bar (g)

Operating Envelope R404A



Refer to Emerson's Select 7.7 selection software for individual model operating envelopes and other refrigerants.

R404A	Nominal hp	Displacement (m ³ /h)	Capacity (kW) 1)	COP 1)	Capacity (kW) 2)	COP 2)	Oil Quantity (l)	Length/Width/ Height (mm)	Net Weight (kg)	Motor Ver- sion / Code	Maximum Operating Current (A)	Locked Ro- tor Current (A)	Sound Pressure @1 m (dBA) **
										3 Ph*	3 Ph*	3 Ph*	
2DC-50X	5.0	16.8	7.9	2.3	2.1	1.2	2.30	590/330/470	132	AWM	9	55	65
2DD-50X	5.0	19.3	9.7	2.4	2.8	1.3	2.30	590/330/470	132	AWM	10	55	65
2DL-40X	4.0	23.7	12.0	2.3	3.8	1.4	2.30	590/330/470	131	AWM	11	55	64
2DL-75X	7.5	23.7	12.2	2.4	3.6	1.3	2.30	590/330/470	136	AWM	14	70	66
2DB-50X	5.0	28.0	14.6	2.3	4.6	1.4	2.30	590/330/470	131	AWM	13	55	64
2DB-75X	7.5	28.0	14.9	2.4	5.0	1.5	2.30	590/330/470	136	AWM	16	70	66
3DA-50X	5.0	32.2	16.3	2.2	5.7	1.4	3.70	655/370/480	146	AWM	16	55	69
3DA-75X	7.5	32.2	17.2	2.4	5.2	1.3	3.70	680/370/480	152	AWM	18	106	70
3DC-100X	10.0	38.0	20.6	2.5	6.5	1.4	3.70	680/370/480	164	AWM	21	121	70
3DC-75X	7.5	38.0	19.8	2.3	7.0	1.4	3.70	655/370/480	150	AWM	18	70	71
3DS-100X	10.0	49.9	27.1	2.3	9.6	1.5	3.70	680/370/480	162	AWM	24	121	71
3DS-150X	15.0	49.9	27.5	2.3	9.1	1.4	3.70	710/370/490	166	AWM	29	129	71
8DH-500X	50.0	151.0	81.7	2.4	26.3	1.4	7.60	835/475/610	330	AWM	88	458	79
8DL-370X	37.0	151.0	81.4	2.3	28.0	1.4	7.60	835/475/610	323	AWM	74	349	77
8DJ-600X	60.0	181.0	98.0	2.3	32.7	1.4	7.60	835/475/610	331	AWM	108	476	80
8DT-450X	45.0	181.0	96.0	2.3	34.7	1.5	7.60	835/475/610	335	AWM	91	441	78
Previous Generation - Replacement by Stream compressors													
D4DF-100X	10.0	56.0	29.1	2.3	9.7	1.4	3.30	680/535/605	179	AWM	27	105	76
D4DA-200X	20.0	56.0	30.2	2.4	9.2	1.4	3.30	650/535/495	196	AWM	33	175	72
D4DH-250X	25.0	70.8	38.6	2.4	12.2	1.4	3.30	670/535/495	209	AWM	42	199	72
D4DL-150X	15.0	70.8	38.4	2.3	13.1	1.4	3.30	680/535/605	205	AWM	35	156	77
D4DT-220X	22.0	84.7	46.5	2.3	16.2	1.5	3.30	700/535/795	215	AWM	43	175	78
D4DJ-300X	30.0	84.7	46.6	2.3	15.4	1.4	3.30	690/535/495	214	AWM	53	221	74
D6DH-350X	35.0	160.0	56.6	2.3	18.7	1.4	3.30	760/580/490	246	AWM	64	304	76
D6DL-270X	27.0	106.0	54.4	2.2	19.0	1.4	3.30	740/580/490	242	AWM	54	199	80
D6DJ-400X	40.0	127.0	68.1	2.3	22.3	1.4	6.80	760/580/545	261	AWM	83	304	76
D6DT-320X	30.0	127.0	66.2	2.2	23.6	1.4	6.80	740/580/700	261	AWM	62	255	81

(1) MT= Conditions EN12900 : Evaporating -10°C, Condensing 45°C, Suction Gas Temperature 20°C, Subcooling 0K

(2) LT= Conditions EN12900 : Evaporating -35°C, Condensing 40°C, Suction Gas Temperature 20°C, Subcooling 0K

* 3 Ph: 380-420V/ 50Hz

** @ 1m: sound pressure level at 1m distance from the compressor, free field condition

Condensing Temperature 40°C																
R404A	Cooling Capacity (kW)								R404A	Power Input (kW)						
	Evaporating Temperature (°C)									Evaporating Temperature (°C)						
Model	-45	-35	-30	-20	-10	-5	5	Model	-45	-35	-30	-20	-10	-5	5	
2DC-50X		2.1	3.0	5.4	8.8	11.0	16.5	2DC-50X		1.7	2.1	2.7	3.3	3.6	3.8	
2DD-50X		2.8	3.9	6.8	10.8	13.2	19.3	2DD-50X		2.2	2.5	3.3	3.9	4.1	4.3	
2DL-40X	1.2*	3.8	5.1	8.5	13.2	16.2		2DL-40X	1.8*	2.7	3.2	4.1	4.9	5.3		
2DL-75X		3.6	4.9	8.4	13.4	16.5	24.1	2DL-75X		2.7	3.1	4.0	4.8	5.1	5.5	
2DB-50X	1.7*	4.6	6.2	10.4	16.0	19.4		2DB-50X	2.2*	3.2	3.8	4.9	5.9	6.3		
2DB-75X		5.0	6.6	10.7	16.4	20.0	28.8	2DB-75X		3.4	3.9	5.0	5.9	6.3	6.9	
3DA-50X	2.0*	5.7	7.4	11.9	17.9	21.7		3DA-50X	2.7*	4.0	4.7	5.9	6.9	7.3		
3DA-75X		5.2	7.2	12.2	18.9	23.1	33.4	3DA-75X		3.9	4.6	5.9	6.9	7.3	7.6	
3DC-100X		6.5	8.9	14.7	22.7	27.6	39.7	3DC-100X		4.5	5.3	6.8	7.9	8.4	8.7	
3DC-75X	2.8*	7.0	9.1	14.4	21.6	26.1		3DC-75X	3.4*	4.9	5.6	7.0	8.2	8.7		
3DS-100X	4.0*	9.6	12.5	19.8	29.5	35.5		3DS-100X	4.7*	6.5	7.5	9.4	11.1	11.7		
3DS-150X		9.1	12.2	19.9	30.2	36.5	51.9	3DS-150X		6.3	7.4	9.4	11.1	11.6	12.0	
8DH-500X		26.3	35.7	58.8	89.3	108.0	153.5	8DH-500X		19.1	22.1	27.9	32.8	34.7	37.3	
8DL-370X	10.8*	28.0	36.9	59.3	88.8	106.5		8DL-370X	13.2*	19.5	22.4	27.9	32.7	34.7		
8DJ-600X		32.7	44.0	71.3	107.0	128.5	181.0	8DJ-600X		23.0	26.8	33.7	39.5	41.9	45.5	
8DT-450X	14.2*	34.7	44.9	70.6	105.0	125.5		8DT-450X	16.9*	23.7	27.2	34.0	40.2	42.8		
Previous Generation - Replacement by Stream compressors																
D4DF-100X	3.5*	9.7	12.8	20.9	32.0	38.7		D4DF-100X	4.4*	6.8	8.0	10.2	12.0	12.7		
D4DA-200X		9.2	12.8	21.6	33.2	40.4	57.9	D4DA-200X		6.5	7.8	10.1	11.9	12.6	13.3	
D4DH-250X		12.2	16.6	27.6	42.4	51.6	73.9	D4DH-250X		8.8	10.3	13.1	15.4	16.3	17.5	
D4DL-150X	5.1*	13.1	17.2	27.6	41.7	50.5		D4DL-150X	6.2*	9.1	10.5	13.3	15.6	16.6		
D4DT-220X	6.6*	16.3	21.2	33.7	50.7	61.1		D4DT-220X	7.7*	11.2	13.0	16.2	19.0	20.1		
D4DJ-300X		15.4	20.7	33.8	51.0	61.5	86.9	D4DJ-300X		10.6	12.5	15.9	18.8	19.9	21.4	
D6DL-270X	7.5*	19.1	24.8	39.7	59.8	72.1		D6DL-270X	9.2*	13.6	15.7	19.8	23.4	24.9		
D6DH-350X		18.8	25.2	41.0	61.9	74.7	106.0	D6DH-350X		13.0	15.3	19.5	22.9	24.2	26.1	
D6DJ-400X		22.3	30.0	49.1	74.8	90.7	130.0	D6DJ-400X		15.8	18.6	23.7	28.0	29.9	32.8	
D6DT-320X	9.0*	23.6	30.9	48.9	72.3	86.2		D6DT-320X	11.3*	16.4	18.9	23.6	27.9	29.8		

Suction Gas Return 20°C / Subcooling 0K

*Suction Superheat 10K / Subcooling 0K

High Discharge Temp - Additional cooling required

Condensing Temperature 40°C																	
R407C	Cooling Capacity (kW)								R407C	Power Input (kW)							
	Evaporating Temperature (°C)									Evaporating Temperature (°C)							
	Model	-30	-20	-10	-5	5	10			15	Model	-30	-20	-10	-5	5	10
2DC-50X			4.1	7.4	9.6	15.1	18.5		2DC-50X			2.1	2.7	2.9	3.3	3.3	
2DD-50X			4.9	8.7	11.2	17.4	21.3		2DD-50X			2.5	3.1	3.4	3.8	3.9	
2DL-75X			6.3	10.9	13.9	21.5	26.2		2DL-75X			3.1	3.9	4.2	4.8	4.9	
2DB-75X			8.3	13.5	16.9	25.4	30.7		2DB-75X			3.9	4.7	5.1	5.7	5.8	
3DA-75X			9.2	15.4	19.5	29.9	36.3		3DA-75X			4.5	5.5	5.9	6.4	6.5	
3DC-100X			11.3	18.5	23.2	35.3	42.7		3DC-100X			5.3	6.4	6.9	7.6	7.7	
3DS-150X			15.8	24.8	30.8	46.0	55.4		3DS-150X			7.4	8.8	9.4	10.3	10.5	
8DH-500X			40.0*	70.6	88.9	135.0	163.5		8DH-500X			22.0*	26.6	28.7	31.8	32.5	
8DJ-600X			47.9*	84.6	106.5	162.0	195.5		8DJ-600X			25.9*	31.8	34.6	39.2	40.6	
Previous Generation - Replacement by Stream compressors																	
D4DA-200X			17.2	28.0	34.9	52.3	63.1		D4DA-200X			7.7	9.4	10.3	11.4	11.7	
D4DH-250X			22.7	35.7	44.5	66.3	79.2		D4DH-250X			10.9	12.6	13.5	15.0	15.5	
D4DJ-300X			26.5	41.2	50.8	74.8	89.6		D4DJ-300X			12.9	15.7	17.0	19.2	20.0	
D6DH-350X			33.6	53.1	66.0	98.4	118.0		D6DH-350X			15.6	19.0	20.5	22.8	23.3	
D6DJ-400X			38.9	61.8	77.0	115.5	138.5		D6DJ-400X			18.5	22.8	24.9	28.1	29.1	

Suction Gas Return 20°C / Subcooling 0K

*Suction Superheat 10K / Subcooling 0K

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تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)

روبروی پالایشگاه نفت پارس، پلاک ۱۳

Condensing Temperature 40°C																
R134a	Cooling Capacity (kW)								R134a	Power Input (kW)						
	Evaporating Temperature (°C)									Evaporating Temperature (°C)						
Model	-30	-20	-10	-5	5	10	15	Model	-30	-20	-10	-5	5	10	15	
2DC-50X		2.4*	4.7*	6.3*	10.3	12.7	15.4	2DC-50X		1.6*	2.0*	2.1*	2.3	2.3	2.3	
2DD-50X		3.1*	5.8*	7.6*	12.2	15.0	18.1	2DD-50X		1.9*	2.3*	2.5*	2.7	2.7	2.6	
2DL-40X		4.0	7.2	9.2	14.4	17.6		2DL-40X		2.3	2.8	3.1	3.4	3.5		
2DL-75X		3.6*	6.8*	8.9*	14.3	17.5	21.2	2DL-75X		2.1*	2.7*	3.0*	3.3	3.4	3.4	
2DB-50X		5.2	9.1	11.6	17.9	21.8		2DB-50X		2.6	3.3	3.6	4.0	4.1		
2DB-75X		4.5*	8.2*	10.6*	17.0	20.7	25.0	2DB-75X		2.6*	3.3*	3.5*	3.9	4.0	4.0	
3DA-50X		6.0	10.2	12.9	19.8	24.1		3DA-50X		3.0	3.7	4.0	4.4	4.5		
3DA-75X		5.1*	9.6*	12.5*	20.1	24.5	29.7	3DA-75X		3.1*	3.8*	4.1*	4.5	4.6	4.5	
3DC-100X		6.8*	12.0*	15.3*	24.2	29.5	35.6	3DC-100X		3.7*	4.5*	4.8*	5.2	5.2	5.2	
3DC-75X		7.4	12.5	15.7	23.9	29.0		3DC-75X		3.6	4.5	4.8	5.3	5.4		
3DS-100X		9.7	16.2	20.4	31.0	37.5		3DS-100X		4.7	5.9	6.4	7.2	7.4		
3DS-150X		9.7*	16.3*	20.6*	31.7	38.3	45.8	3DS-150X		5.0*	6.2*	6.6*	7.3	7.4	7.3	
8DH-500X		28.6*	47.9*	60.9*	95.6	116.5	140.5	8DH-500X		15.5*	18.8*	20.2*	22.2	22.7	22.9	
8DL-370X		31.4	51.6	64.5	97.3	117.5		8DL-370X		15.1	18.5	19.9	22.2	22.8		
8DJ-600X		34.4*	57.5*	72.9*	114.0	138.0	166.5	8DJ-600X		18.1*	22.2*	24.0*	26.8	27.7	28.2	
8DT-450X		38.7	62.1	77.1	115.0	139.0		8DT-450X		18.4	22.5	24.4	27.5	28.5		
Previous Generation - Replacement by Stream compressors																
D4DF-100X		11.2	18.6	23.4	35.7	43.4		D4DF-100X		5.5	6.6	7.1	7.9	8.1		
D4DA-200X		11.0*	18.6*	23.6*	36.6	44.3	53.2	D4DA-200X		5.1*	6.4*	7.0*	7.9	8.2	8.4	
D4DH-250X		13.5*	22.9*	29*	44.9	54.4	65.2	D4DH-250X		7.0*	8.7*	9.4*	10.4	10.6	10.6	
D4DL-150X		15.0	24.5	30.5	45.7	55.2		D4DL-150X		7.0	8.7	9.4	10.5	10.9		
D4DJ-300X		16.5*	27.8*	35.1*	54.3	65.7	78.9	D4DJ-300X		8.3*	10.4*	11.4*	13.2	14.0	14.5	
D4DT-220X		18.4	29.7	37.0	55.4	66.9		D4DT-220X		8.6	10.5	11.4	12.7	13.1		
D6DH-350X		19.8*	33.5*	42.5*	66.2	80.3	96.6	D6DH-350X		10.4*	13.1*	14.3*	16.0	16.5	16.6	
D6DL-270X		21.4	35.7	44.9	68.1	82.5		D6DL-270X		10.1	12.5	13.6	15.4	15.9		
D6DJ-400X		24.6*	40.5*	50.9*	78.5	94.7	113.5	D6DJ-400X		12.2*	15.3*	16.9*	19.6	20.6	21.2	
D6DT-320X		26.8	43.2	53.7	80.1	96.5		D6DT-320X		12.7	15.6	16.9	19.1	19.9		

Suction Gas Return 20°C / Subcooling 0K

*Suction Superheat 10K / Subcooling 0K

Condensing Temperature 40°C															
R22	Cooling Capacity (kW)							R22	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
Model	-45	-35	-30	-20	-10	-5	5	Model	-45	-35	-30	-20	-10	-5	5
2DC-50X				4.9	8.4	10.6	15.9	2DC-50X				2.4	2.9	3.1	3.4
2DD-50X				5.8	9.8	12.3	18.4	2DD-50X				2.8	3.4	3.6	3.9
2DL-400 DC	1.4	3.1	4.3	7.4	11.7			2DL-400 DC	1.7	2.5	2.9	3.7	4.4		
2DL-75X				7.4	12.2	15.2	22.7	2DL-75X				3.5	4.2	4.5	4.9
2DB-500 DC	1.9	4.0	5.4	9.1	14.2			2DB-500 DC	2.3	3.2	3.6	4.5	5.2		
2DB-75X				9.5	15.0	18.4	26.7	2DB-75X				4.3	5.1	5.4	5.8
3DA-500 DC	2.1	4.5	6.0	10.1				3DA-500 DC	2.2	3.4	4.0	5.0			
3DA-75X				10.7	17.3	21.4	31.6	3DA-75X				5.0	5.9	6.3	6.6
3DC-750 DC	2.7	5.4	7.3	12.5				3DC-750 DC	2.8	4.0	4.7	6.1			
3DC-100X				12.9	20.6	25.4	37.2	3DC-100X				5.9	7.0	7.4	7.8
3DS-1000 DC	3.4	7.5	10.2	17.2				3DS-1000 DC	3.9	5.7	6.6	8.4			
3DS-150X				17.7	27.4	33.4	48.3	3DS-150X				8.1	9.4	10.0	10.6
8DH-500X				48.4*	79.3	97.6	143.0	8DH-500X				24.6*	28.9	30.7	33.1
8DJ-600X				58.0*	95.1	117.0	171.5	8DJ-600X				29.2*	34.8	37.3	41.0
Previous Generation - Replacement by Stream compressors															
D4DF-1000 DC	3.8	7.8	10.5	17.4				D4DF-1000 DC	3.7	5.8	6.8	8.8			
D4DA-200X				20.1	31.3	38.2	55.5	D4DA-200X				8.7	10.4	11.0	11.9
D4DL-1500 DC	6.0	11.6	15.2	23.6				D4DL-1500 DC	5.9	8.5	9.8	12.2			
D4DH-250X				25.7	39.5	48.1	69.3	D4DH-250X				11.5	13.6	14.4	15.6
D4DT-2200 DC	7.6	13.9	17.9	28.2				D4DT-2200 DC	7.2	10.0	11.5	14.3			
D4DJ-300X				30.7	46.4	56.2	80.4	D4DJ-300X				13.9	16.5	17.7	19.5
D6DH-350X				38.4	59.0	71.9	103.5	D6DH-350X				17.5	20.5	21.8	23.6
D6DL-2700 DC	7.5	15.0	19.9	32.1				D6DL-2700 DC	8.0	11.8	13.7	17.0			
D6DT-3200 DC	9.7	18.7	24.4	37.8				D6DT-3200 DC	10.0	14.4	16.6	20.1			
D6DJ-400X				44.6	69.0	84.3	122.0	D6DJ-400X				20.8	24.9	26.7	29.3

Suction Gas Return 20°C / Subcooling 0K

*Suction Superheat 10K / Subcooling 0K

High Discharge Temp - Additional cooling required

Copeland™ Stream With CoreSense™ Diagnostics, Semi-Hermetic Reciprocating Compressors For HFC

Stream series 4 and 6 cylinder compressors provide best-in-class performance, thereby significantly reducing cost of operation and environmental impact compared to competing products. With advanced protection and diagnostics features for system reliability, reduced service costs and increased equipment uptime, Stream series is built to last in today's modern changing world.

Features and Benefits

- Range of 16 models from 62 to 153m³/h
- Best-in-class seasonal efficiencies, up to 15% higher than market standard
- Multi-refrigerant compressor as it is compatible with R404A, R134a, R407F, R407A/C and R22
- Stepless capacity modulation by means of inverter or Digital modulation
- Wide Operating Envelope covering Low and Medium Temperature Refrigeration without cooling fan
- Reduced sound level, dimensions and weight by up to 45 kg

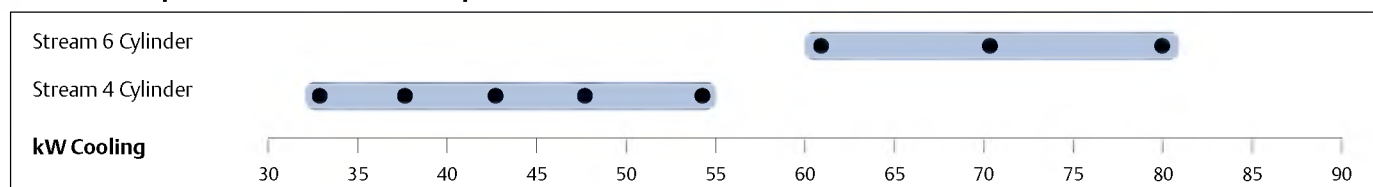


Copeland Stream compressor
Designed to Deliver Best-in-Class Performance

CoreSense Diagnostics Features

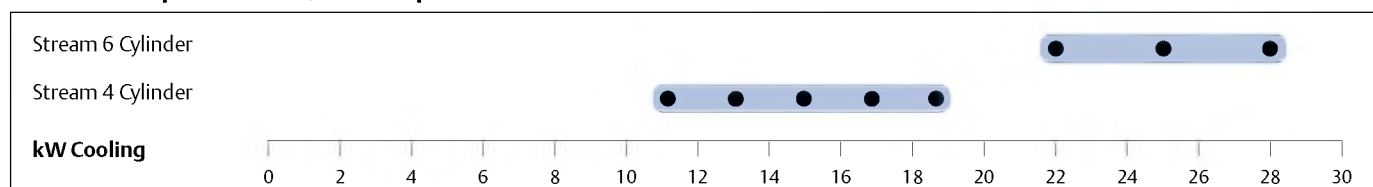
- Motor and oil protection
- Storage of compressor asset and advanced runtime information
- Runtime/alarm signalling using multi-colour LED flash-codes
- Communication to system controller via Modbus®
- Individual compressor power monitoring

Stream Line-up with R404A, Medium Temperature



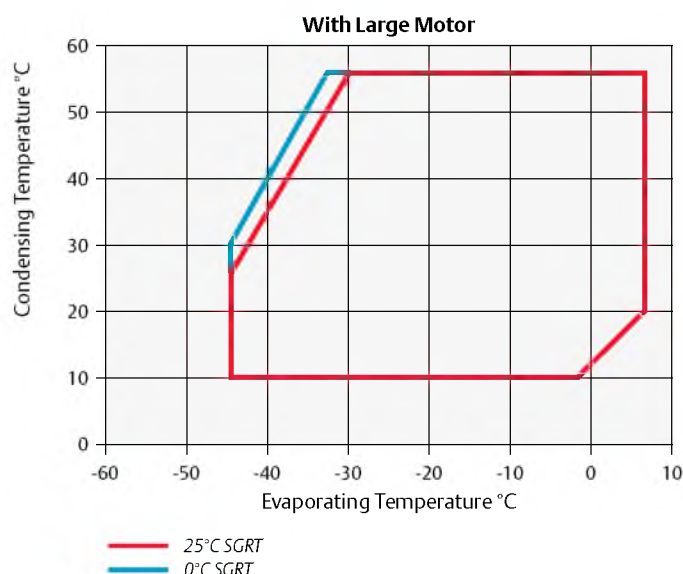
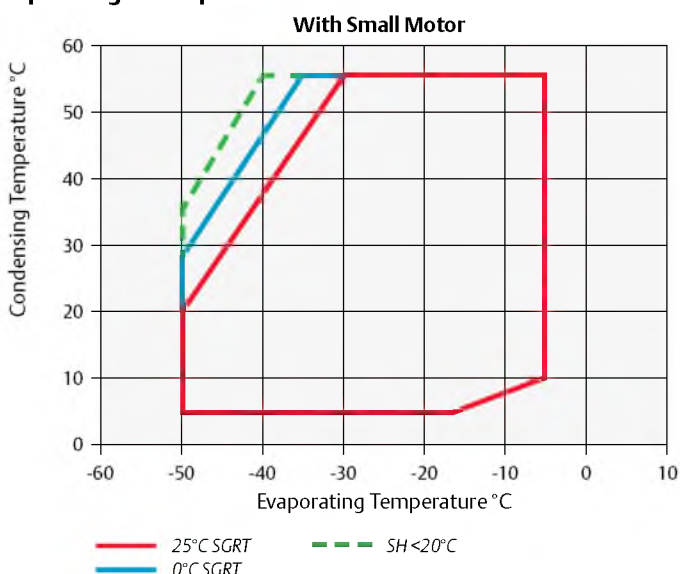
Conditions: EN12900 R404A: Evaporating -10° C, Condensing 45° C, Suction Gas Temperature 20° C, Subcooling 0K

Stream Line-up with R404A, Low Temperature



Conditions: EN12900 R404A: Evaporating -35° C, Condensing 40° C, Suction Gas Temperature 20° C, Subcooling 0K

Operating Envelope R404A



Maximum Allowable Pressure (PS)

- Low Side PS 22.5 bar(q) / High Side PS 28 bar(q)

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تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)

روبروی پالایشگاه نفت پارس، پلاک ۱۲

R404A	Nominal hp	Displacement (m ³ /h)	Capacity (kW) 1)	COP 1)	Capacity (kW) 2)	COP 2)	Oil Quantity	Length/Width/Height (mm)	Net Weight (kg)	Motor Version / Code	Maximum Operating Current (A)	Locked Rotor Current (A)	Sound Pressure @1m (dBA) **	
										3Ph*	3Ph*	3Ph*	1)	2)
4MF-13X	13	62	31.6	2.3	10.7	1.4	3.3	638/501/452	177	AWM	30.8	105	68	70
4MA-22X	22	62	32.7	2.4	10.5	1.4	3.3	638/501/452	177	AWM	36.3	175	68	75
4ML-15X	15	71	38.4	2.3	13.3	1.5	3.3	638/501/452	180	AWM	35.4	156	69	71
4MH-25X	25	71	38.5	2.4	12.4	1.4	3.3	657/501/452	187	AWM	41.6	199	69	75
4MM-20X	17	78	42.0	2.3	15.1	1.5	3.3	657/501/452	182	AWM	39.0	175	70	71
4MI-30X	27	78	42.8	2.4	14.4	1.5	3.3	657/501/452	188	AWM	46.6	221	70	75
4MT-22X	22	88	47.6	2.3	17.0	1.5	3.3	657/501/452	183	AWM	44.5	175	71	73
4MJ-33X	33	88	47.6	2.4	16.2	1.5	3.3	657/501/452	190	AWM	52.9	221	71	74
4MU-25X	25	99	53.1	2.3	18.6	1.4	3.3	657/501/452	186	AWM	51.9	199	73	72
4MK-35X	32	99	53.5	2.3	18.3	1.4	3.3	688/501/452	202	AWM	61.1	255	72	74
6MM-30X	27	120	64.2	2.3	22.7	1.4	3.3	695/547/450	215	AWM	59.7	255	72	78
6MI-40X	35	120	64.6	2.3	21.9	1.4	3.3	695/547/450	219	AWM	71.4	304	72	78
6MT-35X	32	135	72.4	2.3	25.6	1.5	3.3	725/547/450	221	AWM	67.3	255	73	77
6MJ-45X	40	135	72.4	2.3	24.3	1.4	3.3	725/547/450	223	AWM	81.5	304	74	79
6MU-40X	40	153	81.4	2.3	28.4	1.4	3.3	757/547/450	225	AWM	75.8	304	75	78
6MK-50X	50	153	80.9	2.3	27.3	1.4	3.3	773/547/450	230	AWM	92.9	393	76	80

1) MT = Conditions EN12900 : Evaporating -10°C, Condensing 45°C, Suction Gas Temperature 20°C, Subcooling 0K

2) LT = Conditions EN12900 : Evaporating -35°C, Condensing 40°C, Suction Gas Temperature 20°C, Subcooling 0K

* 3 Ph: 380-420V/ 50Hz

** @ 1m: sound pressure level at 1m distance from the compressor, free field condition

Capacity Data

Condensing Temperature: 40°C																
R404A	Cooling Capacity (kW)								R404A	Power Input (kW)						
	Evaporating Temperature (°C)									Evaporating Temperature (°C)						
Model	-45	-35	-30	-20	-10	-5	5		Model	-45	-35	-30	-20	-10	-5	5
4MA-22X		10.5	14.3	23.6	36.0	43.5	62.0		4MA-22X		7.3	8.6	11.0	13.0	13.7	14.7
4MF-13X	3.6*	10.7	14.1	22.8	34.8	42.2			4MF-13X	5.0*	7.4	8.7	11.0	13.1	13.9	
4MH-25X		12.4	16.7	27.5	42.2	51.3	73.6		4MH-25X		8.6	10.1	13.0	15.4	16.3	17.5
4ML-15X	4.8*	13.3	17.4	27.9	42.0	50.8			4ML-15X	6.3*	9.0	10.5	13.3	15.8	16.7	
4MI-30X		14.4	19.4	31.2	46.8	56.3	79.5		4MI-30X		9.8	11.5	14.5	17.0	18.0	19.5
4MM-20X	5.7*	15.1	19.6	30.9	46.1	55.4			4MM-20X	7.1*	10.1	11.6	14.6	17.1	18.2	
4MJ-33X		16.2	21.4	34.6	52.4	63.4	90.4		4MJ-33X		10.9	12.6	16.1	19.0	20.2	21.8
4MT-22X	6.7*	17.0	21.9	34.7	52.0	62.7			4MT-22X	8.0*	11.5	13.2	16.6	19.5	20.7	
4MK-35X		18.3	24.0	38.8	58.9	71.3	102.0		4MK-35X		12.6	14.6	18.5	22.0	23.5	25.7
4MU-25X	7.2*	18.6	24.1	38.5	58.1	70.2			4MU-25X	9.0*	12.9	14.9	18.8	22.3	23.7	
6MI-40X		21.9	28.9	46.7	70.8	85.8	122.5		6MI-40X		15.2	17.6	22.2	26.1	27.7	30.1
6MM-30X	8.9*	22.7	29.3	46.5	70.2	85.1			6MM-30X	11.0*	15.7	18.1	22.5	26.3	27.8	
6MJ-45X		24.3	32.3	52.5	79.5	96.1	136.5		6MJ-45X		16.8	19.6	24.9	29.5	31.4	33.9
6MT-35X	10.3*	25.6	33.0	52.5	79.3	95.9			6MT-35X	12.3*	17.5	20.1	25.3	29.7	31.5	
6MK-50X		27.3	36.3	58.7	88.6	107.0	152.0		6MK-50X		19.4	22.5	28.3	33.5	35.9	39.9
6MU-40X	11.0*	28.4	36.8	58.7	89.0	108.0			6MU-40X	13.8*	19.7	22.7	28.5	33.6	35.8	

Suction Gas Return 20°C, Subcooling 0K

* Suction Superheat 10K, Subcooling 0K

R134a	Cooling Capacity (kW)						
	Condensing Temperature: 40°C						
	Evaporating Temperature (°C)						
Model	-45	-35	-30	-20	-10	-5	5
4MA-22X				11.9*	20.2*	25.7*	40.0
4MF-13X				12.3	20.4	25.6	38.9
4MH-25X				13.6*	23.3*	29.6*	46.3
4ML-15X				15.0	24.5	30.5	46.0
4MI-30X				15.3*	25.7*	32.5*	50.6
4MM-20X				16.6	27.0	33.6	50.3
4MJ-33X				17.2*	28.7*	36.3*	56.3
4MT-22X				19.1	30.6	38.1	57.2
4MK-35X				19.3*	32.2*	40.7*	63.1
4MU-25X				20.7	33.9	42.3	63.8
6MI-40X				22.4*	38.0*	48.3*	75.8
6MM-30X				25.2	40.7	50.7	76.1
6MJ-45X				25.8*	43.1*	54.6*	85.1
6MT-35X				28.5	46.0	57.1	85.2
6MK-50X				26.5*	46.1*	59.2*	94.0
6MU-40X				31.5	50.6	62.9	94.5

R134a	Power Input (kW)						
	Condensing Temperature: 40°C						
	Evaporating Temperature (°C)						
Model	-45	-35	-30	-20	-10	-5	5
4MA-22X				5.9*	7.3*	7.9*	8.7
4MF-13X				5.8	7.2	7.8	8.7
4MH-25X				7.1*	8.7*	9.4*	10.4
4ML-15X				6.9	8.5	9.3	10.4
4MI-30X				7.6*	9.4*	10.3*	11.4
4MM-20X				7.7	9.4	10.2	11.4
4MJ-33X				8.7*	10.7*	11.5*	12.8
4MT-22X				8.7	10.8	11.7	13.1
4MK-35X				9.7*	12.2*	13.3*	14.9
4MU-25X				9.8	12.2	13.3	15.1
6MI-40X				12.0*	14.6*	15.8*	17.8
6MM-30X				11.7	14.6	15.8	17.7
6MJ-45X				13.0*	16.2*	17.8*	20.3
6MT-35X				13.3	16.5	17.9	20.0
6MK-50X				15.2*	18.8*	20.5*	23.3
6MU-40X				14.6	18.4	20.1	23.0

Suction Gas Return 20°C, Subcooling 0K

* Suction Superheat 10K, Subcooling 0K

R407F	Cooling Capacity (kW)						
	Condensing Temperature: 40°C						
	Evaporating Temperature (°C)						
Model	-45	-35	-30	-20	-10	-5	5
4MA-22X				20.7*	34.8	43.0	63.8
4MH-25X				24.2*	40.4	49.9	73.8
4MI-30X				26.9*	44.4	54.8	80.7
4MJ-33X				30.2*	49.5	60.9	89.8
4MK-35X				33.7*	55.3	68.3	101.0
6MI-40X				41.2*	67.9	83.5	122.5
6MJ-45X				45.8*	75.2	92.6	136.0
6MK-50X				51.3*	84.5	104.0	153.5

R407F	Power Input (kW)						
	Condensing Temperature: 40°C						
	Evaporating Temperature (°C)						
Model	-45	-35	-30	-20	-10	-5	5
4MA-22X				10.2*	12.4	13.2	14.4
4MH-25X				11.9*	14.4	15.4	16.8
4MI-30X				13.1*	15.8	17.0	18.6
4MJ-33X				14.8*	17.8	19.2	21.1
4MK-35X				16.8*	20.4	22.1	24.4
6MI-40X				20.2*	24.4	26.2	28.9
6MJ-45X				22.9*	27.6	29.7	32.8
6MK-50X				25.8*	31.3	33.7	37.5

Suction Gas Return 20°C, Subcooling 0K

* Suction Superheat 10K, Subcooling 0K

R22	Cooling Capacity (kW)							R22	Power Input (kW)						
	Condensing Temperature: 40°C								Condensing Temperature: 40°C						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
Model	-45	-35	-30	-20	-10	-5	5	Model	-45	-35	-30	-20	-10	-5	5
4MA-22X				22.1	34.5	42.2	61.2	4MA-22X				9.6	11.5	12.2	13.1
4MF-13X DC	4.2*	8.6*	11.5*	19.2*				4MF-13X DC	4.0*	6.4*	7.5*	9.7*			
4MH-25X				25.9	39.8	48.4	69.9	4MH-25X				11.6	13.7	14.5	15.7
4ML-15X DC	6.0*	11.7*	15.3*	23.7*				4ML-15X DC	5.9*	8.5*	9.8*	12.3*			
4MI-30X				28.3	42.9	51.9	74.3	4MI-30X				12.9	15.3	16.3	18.0
4MM-20X DC	7.0*	12.8*	16.6*	26.0*				4MM-20X DC	6.7*	9.3*	10.6*	13.2*			
4MJ-33X				31.8	48.1	58.2	83.3	4MJ-33X				14.4	17.1	18.3	20.1
4MT-22X DC	7.8*	14.4*	18.6*	29.2*				4MT-22X DC	7.5*	10.4*	11.9*	14.8*			
4MK-35X				36.0	54.5	66.0	94.4	4MK-35X				16.3	19.4	20.7	22.8
4MU-25X DC	8.9*	16.3*	21.0*	33.1*				4MU-25X DC	8.5*	11.8*	13.5*	16.8*			
6MI-40X				43.5	66.9	81.5	117.5	6MI-40X				19.8	23.3	24.7	26.7
6MJ-45X				47.4	73.4	89.5	129.5	6MJ-45X				22.1	26.5	28.3	31.2
6MK-50X				53.7	83.2	101.5	147.0	6MK-50X				25.1	30.0	32.1	35.4

Suction Gas Return 20°C, Subcooling 0K

* Suction Superheat 10K, Subcooling 0K

Additionally Cooling required

Copeland™ Stream Digital with CoreSense™ Diagnostics for Continuous Capacity Modulation

Stream Digital series 4 and 6 cylinder compressors provide an alternative means of continuous modulation to inverter. Digital modulation is the most simple and precise method of capacity control and helps to contain applied costs associated with modulation.

Digital technology is based on controlling a high cycle solenoid valve fitted on one of the cylinder heads based on cycle time. The valve actuates a piston that controls the flow of gas into the suction area of the Stream valve plate.

The compressor always run at constant speed which resolves the challenges related to oil return, mechanical and electrical stress on the system.

All compressors are equipped with CoreSense technology and offer the possibility to diagnose system related problems faster or even before they occur.

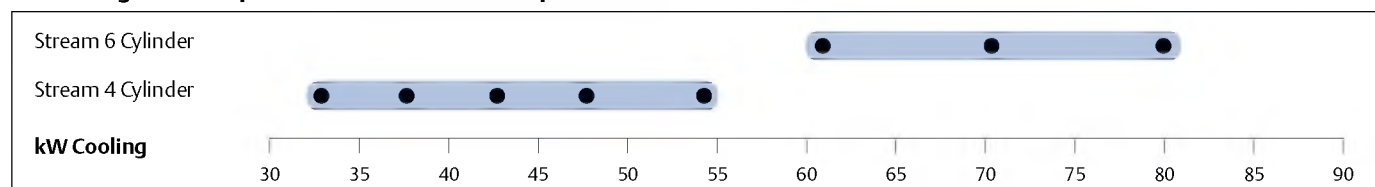


Copeland Stream Digital compressor

Features and Benefits

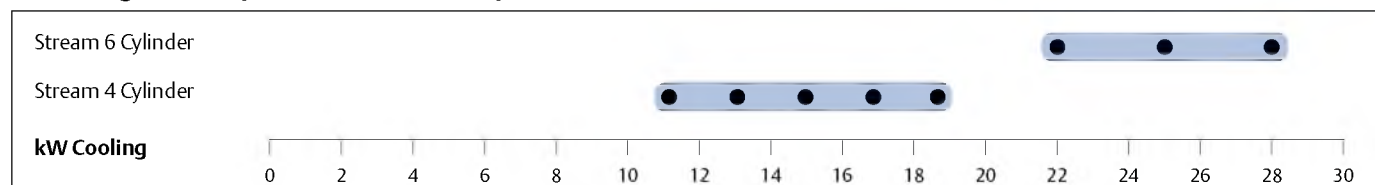
- Range of 16 Models from 62 to 153 m³/h
- Multi-refrigerant compressor as it is compatible with R404A, R407F, R407A/C, R134a and R22
- Continuous modulation from 50–100% (4-cylinder) and 33–100% (6-cylinder) ensuring a perfect match of capacity and power to refrigeration load
- Economical and reliable alternative to frequency inverters
- Precise suction pressure control with associated energy savings and stable evaporating temperatures
- Quick and easy integration into refrigeration equipment, similar to any other standard compressor
- Possibility to easily retrofit existing installations with digital cylinder head kit
- No vibrations or mechanical stress on system piping and compressor parts
- Reduced compressor cycling for longer contactor and compressor life
- Emerson CoreSense Diagnostics technology providing advanced protection, diagnostics and preventive maintenance

Stream Digital Line-up with R404A, Medium Temperature



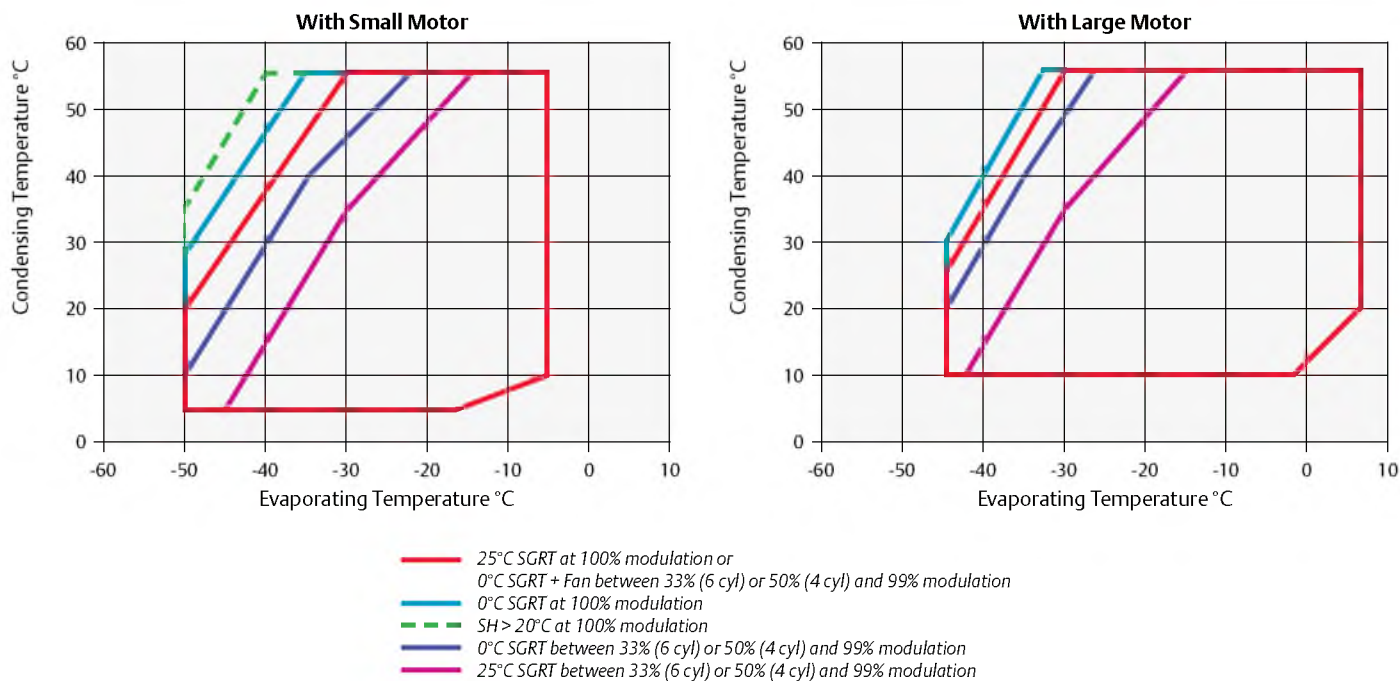
Conditions: EN12900 R404A: Evaporating -10° C, Condensing 45° C, Suction Gas Temperature 20° C, Subcooling 0K

Stream Digital Line-up with R404A, Low Temperature



Conditions: EN12900 R404A: Evaporating -35° C, Condensing 40° C, Suction Gas Temperature 20° C, Subcooling 0K

Operating Envelope R404A



Technical Overview

R404A	Nominal hp	Displacement (m ³ /h)	Capacity (kW) 1)	COP 1)	Capacity (kW) 2)	COP 2)	Oil Quantity	Length/Width/Height (mm)	Net Weight (kg)	Motor Version / Code	Maximum Operating Current (A)	Locked Rotor Current (A)	Sound Pressure @ 1m (dBA) **	
										3Ph*	3Ph*	3Ph*	1)	2)
4MFD-13X	13	62	31.3	2.3	9.5	1.3	3.3	638/501/452	177	AWM	30.8	105	68	70
4MAD-22X	22	62	32.4	2.4	9.3	1.3	3.3	638/501/452	177	AWM	36.3	175	68	75
4MLD-15X	15	71	38.0	2.3	12.1	1.3	3.3	638/501/452	180	AWM	35.4	156	69	71
4MHD-25X	25	71	38.1	2.4	11.1	1.3	3.3	657/501/452	187	AWM	41.6	199	69	75
4MMD-20X	17	78	41.6	2.3	13.7	1.4	3.3	657/501/452	182	AWM	39.0	175	70	71
4MID-30X	27	78	42.3	2.4	13.0	1.3	3.3	657/501/452	188	AWM	46.6	221	70	75
4MTD-22X	22	88	47.2	2.3	15.4	1.4	3.3	657/501/452	183	AWM	44.5	175	71	73
4MJD-33X	33	88	47.1	2.4	14.6	1.4	3.3	657/501/452	190	AWM	52.9	221	71	74
4MUD-25X	25	99	52.2	2.3	16.9	1.3	3.3	657/501/452	186	AWM	51.9	199	73	72
4MKD-35X	32	99	53.0	2.3	16.5	1.3	3.3	688/501/452	202	AWM	61.1	255	72	74
6MMD-30X	27	120	63.6	2.3	20.6	1.3	3.3	695/547/450	215	AWM	59.7	255	72	78
6MID-40X	35	120	64.0	2.3	19.7	1.3	3.3	695/547/450	219	AWM	71.4	304	72	78
6MTD-35X	32	135	71.7	2.3	23.2	1.3	3.3	725/547/450	221	AWM	67.3	255	73	77
6MJD-45X	40	135	71.7	2.3	21.9	1.3	3.3	725/547/450	223	AWM	81.5	304	74	79
6MUD-40X	40	153	80.5	2.3	25.7	1.3	3.3	757/547/450	225	AWM	75.8	304	75	78
6MKD-50X	50	153	80.1	2.3	24.5	1.3	3.3	773/547/450	230	AWM	92.9	393	76	80

1) MT = Conditions EN12900 : Evaporating -10°C, Condensing 45°C, Suction Gas Temperature 20°C, Subcooling 0K

2) LT = Conditions EN12900 : Evaporating -35°C, Condensing 40°C, Suction Gas Return Temperature 0°C, Subcooling 0K

* 3 Ph: 380-420V/ 50Hz

** @ 1m: sound pressure level at 1m distance from the compressor, free field condition

R404A	Cooling Capacity (kW)							R404A	Power Input (kW)						
	Condensing Temperature: 40°C								Condensing Temperature: 40°C						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
Model	-45	-35	-30	-20	-10	-5	5	Model	-45	-35	-30	-20	-10	-5	5
4MAD-22X		8.1 *	11.7 *	23.4	35.6	43.1	61.3	4MAD-22X		7.3 *	8.6 *	11.0	13.0	13.7	14.7
4MFD-13X		8.3 *	11.5 *	22.6	34.5	41.8		4MFD-13X		7.4 *	8.7 *	11.0	13.1	13.9	
4MHD-25X		9.6 *	13.7 *	27.2	41.7	50.7	72.9	4MHD-25X		8.6 *	10.1 *	13.0	15.4	16.3	17.5
4MLD-15X		10.6 *	14.5 *	27.6	41.6	50.2		4MLD-15X		9.0 *	10.5 *	13.3	15.8	16.7	
4MID-30X		11.4 *	16.2 *	30.9	46.3	55.7	78.7	4MID-30X		9.8 *	11.5 *	14.5	17.0	18.0	19.5
4MMD-20X		12.2 *	16.4 *	30.6	45.6	54.8		4MMD-20X		10.1 *	11.6 *	14.6	17.1	18.2	
4MJD-33X		12.9 *	17.8 *	34.2	51.9	62.7	89.5	4MJD-33X		10.9 *	12.6 *	16.1	19.0	20.2	21.8
4MTD-22X		13.7 *	18.4 *	34.3	51.5	62.1		4MTD-22X		11.5 *	13.2 *	16.6	19.5	20.7	
4MKD-35X		14.5 *	20.0 *	38.4	58.3	70.6	101.0	4MKD-35X		12.6 *	14.6 *	18.5	22.0	23.5	25.7
4MUD-25X		14.9 *	20.1 *	38.1	57.5	69.5		4MUD-25X		12.9 *	14.9 *	18.8	22.3	23.7	
6MID-40X		17.3 *	28.6 *	46.2	70.1	84.9	121.5	6MID-40X		15.2 *	17.6 *	22.2	26.1	27.7	30.1
6MMD-30X		18.2 *	29.0 *	46.0	69.5	84.3		6MMD-30X		15.7 *	18.1 *	22.5	26.3	27.8	
6MJD-45X		19.2 *	32.0 *	51.9	78.7	95.1	135.0	6MJD-45X		16.8 *	19.6 *	24.9	29.5	31.4	33.9
6MTD-35X		20.5 *	32.7 *	52.0	78.5	94.9		6MTD-35X		17.5 *	20.1 *	25.3	29.7	31.5	
6MKD-50X		21.4 *	36.0 *	58.1	87.7	106.0	150.5	6MKD-50X		19.4 *	22.5 *	28.3	33.5	35.9	39.9
6MUD-40X		22.6 *	36.5 *	58.1	88.1	107.0		6MUD-40X		19.7 *	22.7 *	28.5	33.6	35.8	

Suction Gas Return 20°C, Subcooling 0K, 100% loaded

* Suction Superheat 10K, Subcooling 0K

R134a	Cooling Capacity (kW)						
	Condensing Temperature: 40°C						
	Evaporating Temperature (°C)						
Model	-45	-35	-30	-20	-10	-5	5
4MAD-22X				11.8*	20.0*	25.4*	39.6
4MFD-13X				12.1	20.2	25.4	38.5
4MHD-25X				13.5*	23.1*	29.3*	45.8
4MLD-15X				14.8	24.2	30.2	45.5
4MID-30X				15.1*	25.4*	32.2*	50.1
4MMD-20X				16.5	26.7	33.3	49.8
4MJD-33X				17.0*	28.5*	35.9*	55.7
4MTD-22X				18.9	30.3	37.7	56.7
4MKD-35X				19.1*	31.9*	40.3*	62.5
4MUD-25X				20.5	33.5	41.9	63.2
6MID-40X				22.2*	37.6*	47.8*	75.1
6MMD-30X				24.9	40.3	50.2	75.3
6MJD-45X				25.6*	42.7*	54.0*	84.3
6MTD-35X				28.2	45.5	56.5	84.4
6MKD-50X				26.2*	45.7*	58.6*	93.1
6MUD-40X				31.2	50.1	62.3	93.6

R134a	Power Input (kW)						
	Condensing Temperature: 40°C						
	Evaporating Temperature (°C)						
Model	-45	-35	-30	-20	-10	-5	5
4MAD-22X				5.9*	7.3*	7.9*	8.7
4MFD-13X				5.8	7.2	7.8	8.7
4MHD-25X				7.1*	8.7*	9.4*	10.4
4MLD-15X				6.9	8.5	9.3	10.4
4MID-30X				7.6*	9.4*	10.3*	11.4
4MMD-20X				7.7	9.4	10.2	11.4
4MJD-33X				8.7*	10.7*	11.5*	12.8
4MTD-22X				8.7	10.8	11.7	13.1
4MKD-35X				9.7*	12.2*	13.3*	14.9
4MUD-25X				9.8	12.2	13.3	15.1
6MID-40X				12.0*	14.6*	15.8*	17.8
6MMD-30X				11.7	14.6	15.8	17.7
6MJD-45X				13.0*	16.2*	17.8*	20.3
6MTD-35X				13.3	16.5	17.9	20.0
6MKD-50X				15.2*	18.8*	20.5*	23.3
6MUD-40X				14.6	18.4	20.1	23.0

Suction Gas Return 20°C, Subcooling 0K, 100% loaded

* Suction Superheat 10K, Subcooling 0K

Capacity Data

R407F	Cooling Capacity (kW)								R407F	Power Input (kW)							
	Condensing Temperature: 40°C									Condensing Temperature: 40°C							
	Evaporating Temperature (°C)									Evaporating Temperature (°C)							
All Preliminary Data																	
Model	-45	-35	-30	-20	-10	-5	5		Model	-45	-35	-30	-20	-10	-5	5	
4MAD-22X				20.5*	34.4	42.6	63.1		4MAD-22X					10.2*	12.4	13.2	14.4
4MHD-25X				23.9*	40.0	49.4	73.1		4MHD-25X					11.9*	14.4	15.4	16.8
4MID-30X				26.6*	44.0	54.2	79.9		4MID-30X					13.1*	15.8	17.0	18.6
4MJD-33X				29.8*	49.0	60.3	88.9		4MJD-33X					14.8*	17.8	19.2	21.1
4MKD-35X				33.3*	54.8	67.6	100.0		4MKD-35X					16.8*	20.4	22.0	24.4
6MID-40X				40.7*	67.2	82.6	121.5		6MID-40X					20.2*	24.4	26.2	28.9
6MJD-45X				45.3*	74.5	91.6	135.0		6MJD-45X					22.9*	27.6	29.7	32.8
6MKD-50X				50.7*	83.7	103.0	151.5		6MKD-50X					25.8*	31.3	33.7	37.5

Suction Gas Return 20°C, Subcooling 0K, 100% loaded

* Suction Superheat 10K, Subcooling 0K

R22	Cooling Capacity (kW)						
	Condensing Temperature: 40°C						
	Evaporating Temperature (°C)						
Model	-45	-35	-30	-20	-10	-5	5
4MAD-22X				22.1	34.5	42.1	61.2
4MFD-13X DC	4.2	8.6	11.5	19.2			
4MHD-25X				25.9	39.8	48.5	69.9
4MLD-15X DC	6.0	11.6	15.2	23.7			
4MID-30X				28.3	42.9	51.9	74.3
4MMD-20X DC	7.0	12.8	16.5	26.0			
4MJD-33X				31.8	48.1	58.2	83.3
4MTD-22X DC	7.8	14.4	18.5	29.2			
4MKD-35X				36.0	54.5	66.0	94.4
4MUD-25X DC	8.9	16.3	21.0	33.1			
6MID-40X				43.5	66.9	81.5	117.6
6MMD-30X DC	9.2	17.7	23.1	35.8			
6MJD-45X				47.4	73.4	89.5	129.6
6MTD-35X DC	10.3	19.9	25.9	40.2			
6MKD-50X				53.7	83.2	101.5	147.0
6MUD-40X DC	11.7	22.5	29.4	45.5			

R22	Power Input (kW)						
	Condensing Temperature: 40°C						
	Evaporating Temperature (°C)						
Model	-45	-35	-30	-20	-10	-5	5
4MAD-22X				9.6	11.4	12.2	13.1
4MFD-13X DC	4.0	6.4	7.5	9.7			
4MHD-25X				11.6	13.64	14.5	15.7
4MLD-15X DC	5.9	8.5	9.8	12.3			
4MID-30X				12.8	15.2	16.3	18.0
4MMD-20X DC	6.7	9.3	10.6	13.2			
4MJD-33X				14.4	17.1	18.3	20.1
4MTD-22X DC	7.8	10.4	11.8	14.8			
4MKD-35X				16.3	19.4	20.7	22.8
4MUD-25X DC	8.5	11.8	13.4	16.8			
6MID-40X				19.8	23.3	24.7	26.7
6MMD-30X DC	9.4	13.7	15.7	19.1			
6MJD-45X				22.1	26.5	28.3	31.2
6MTD-35X DC	10.6	15.3	17.6	21.4			
6MKD-50X				25.1	30.0	32.1	35.4
6MUD-40X DC	12.0	17.4	19.9	24.2			

Suction Gas Return 20°C, Subcooling 0K, 100% loaded

Additional Cooling required

Copeland™ Stream Compressors with CoreSense™ Diagnostics for R744-Transcritical Applications

Stream series of 4 cylinder CO₂ compressors is the ideal solution for R744 medium temperature cascade and booster systems. It is characterized by a design pressure of 135 bar. Refrigerant flow and heat transfer have been optimized for best performance. All compressors are equipped with CoreSense technology and offer the possibility to diagnose system-related problems faster or even before they occur.

Features and Benefits

Stream provides for flexibility in pack design and operation:

- Compact dimensions
- Integrated high and low pressure relief valve
- Discharge Temperature Protection
- Service valve 360° rotation for ease of piping design
- 2 sight glasses for mounting of oil management control and visual inspection
- One additional sight glass for oil visual inspection at run time
- One oil port for oil equalization in parallel system
- Oil splasher system ensuring lubrication at constant and variable speed

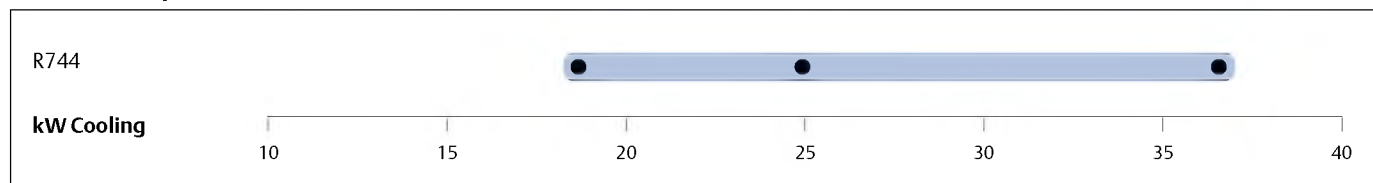
Designed for durability and performance in R744 applications:

- Low sound, low vibration and large discharge chamber to eliminate pulsation
- High design pressures of 135 bar (high side) and 90 bar (low side)
- Burst pressures in excess of safety factor 3
- Cylinder head and discharge plenum design minimizing heat transfer to suction side
- Stepless capacity modulation via inverter from 30 to 70Hz
- CoreSense™ Diagnostics
- Individual compressor power consumption monitoring



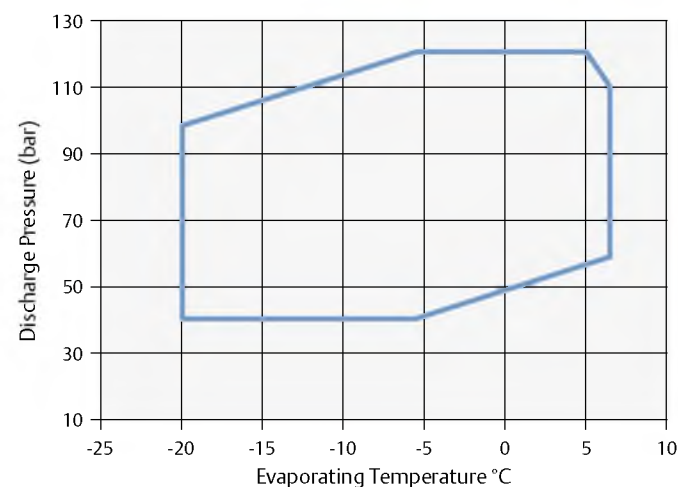
*Copeland Stream Compressors for R744 Refrigeration
Designed for Durability and Best-in-Class
Performance in R744 Transcritical Applications*

Stream Line-up for R744



Conditions: EN12900 R744: Evaporating -10°C, Gas cooler exit: 35°C/ 90 bar, Superheat: 10K

Operating Envelope R744



Technical Overview

R744	Nominal hp	Displacement (m ³ /h)	Capacity (kW)	COP	Oil Quantity (l)	Length/Width/Height (mm)	Net Weight (kg)	Motor Version / Code	Maximum Operating Current (A)	Locked Rotor Current (A)	Sound Pressure @ 1m (dBA) **
								3 Ph*	3 Ph*	3 Ph*	
4MTL-12X	12	9.5	18.3	1.7	3.30	697/445/422	170	AWM	26	145	69
4MTL-15X	15	12.5	24.9	1.8	3.30	697/445/422	170	AWM	35	156	72
4MTL-30X	30	17.9	36.5	1.8	3.30	697/445/422	175	AWM	50	221	75

Conditions EN12900 R744: Evaporating -10°C, Gas cooler exit: 35°C/90bar, Superheat: 10K

* 3 Ph: 380-420V/ 50Hz

** @ 1m: sound pressure level at 1m distance from the compressor, free field condition

Capacity Data

				Cooling capacity (kW)					Power Input (kW)				
Model		Temperature (°C)	Pressure (bar)	Evaporating Temperature (°C)					Evaporating Temperature (°C)				
				-20	-15	-10	-5	0	-20	-15	-10	-5	0
				Equivalent evaporation pressure (bar)					Equivalent evaporation pressure (bar)				
				19,7	22,9	26,5	30,5	34,9	19,7	22,9	26,5	30,5	34,9
4MTL-12X	Condensing	10	45.0	22.2	27.0	32.4	38.6		6.0	5.8	5.4	4.8	
		15	50.9	20.2	24.6	29.6	35.3	41.6	6.7	6.6	6.3	5.9	5.2
		20	57.3	18.2	22.1	26.7	31.9	37.6	7.4	7.4	7.2	6.9	6.4
		25	64.3	15.9	19.4	23.4	28.0	33.1	8.0	8.2	8.2	8.0	7.6
		30	75	12.7	15.6	18.9	22.6	26.7	8.7	8.9	9.1	9.0	8.9
	Gas Cooler	35	90	12.1	14.8	18.0	21.6	25.6	9.9	10.3	10.7	10.8	10.9
		40	100	10.4	13.1	16.0	19.3	22.9	10.6	11.3	11.8	12.1	12.3
		40	110	10.4	13.1	16.0	19.3	22.9	10.6	11.3	11.8	12.1	12.3
4MTL-15X	Condensing	10	45.0	30.3	36.8	44.1	52.4		7.67	7.44	6.98	6.26	
		15	50.9	27.6	33.6	40.4	48.1	56.5	8.54	8.46	8.17	7.63	6.81
		20	57.3	24.8	30.2	36.4	43.4	51.1	9.4	9.47	9.35	8.99	8.37
		25	64.3	21.6	26.4	31.9	38.1	45	10.25	10.45	10.5	10.35	9.93
		30	75	17.3	21.2	25.7	30.7	36.3	11.05	11.45	11.7	11.7	11.45
	Gas Cooler	35	90	16.35	20.1	24.5	29.3	34.5	12.6	13.2	13.7	13.95	13.95
		40	100	14.1	17.65	21.6	26	30.8	13.5	14.45	15.1	15.55	15.8
		40	110	14.1	17.65	21.6	26	30.8	13.5	14.45	15.1	15.55	15.8
4MTL-30X	Condensing	10	45.0	44.7	54.0	64.7	76.8		11.2	10.9	10.3	9.3	
		15	50.9	40.7	49.3	59.2	70.4	82.7	12.4	12.3	12.0	11.3	10.1
		20	57.3	36.6	44.3	53.3	63.5	74.7	13.7	13.8	13.7	13.2	12.4
		25	64.3	32.0	38.8	46.8	55.8	65.8	14.9	15.2	15.3	15.1	14.6
		30	75	25.6	31.2	37.7	45.0	53.0	16.1	16.7	17.0	17.1	16.8
	Gas Cooler	35	90	24.4	29.7	35.9	42.9	50.6	18.3	19.2	19.9	20.3	20.4
		40	100	21.1	26.3	32.0	38.3	45.3	19.6	21.0	21.9	22.6	23.0
		40	110	21.1	26.3	32.0	38.3	45.3	19.6	21.0	21.9	22.6	23.0

S-Series Reciprocating Compressor Range

From 2 to 8 cylinder semi-hermetic reciprocating compressors for medium/low temperature refrigeration and comfort applications.

The S-series ranges from 5 to 70 hp and provide cooling capacities from 11 to 90 kW in medium temperature (R404A, -10/45°C) and 4 to 29 kW in low temperature (R404A, -35/40°C). These compressors are qualified for R404A, R507, R134a, R22 and R407C (some models).

The S-series comprises the 2S, 3S, 4S, 6S and 8S models. It is suction gas cooled and uses reed valve technology, found on all reciprocating compressors except Discus™ and Stream. It is suited for numerous single- or multi-compressor applications such as condensing units or compact compressor packs for medium to large supermarkets.

All compressors are designed for unquestionable reliability:

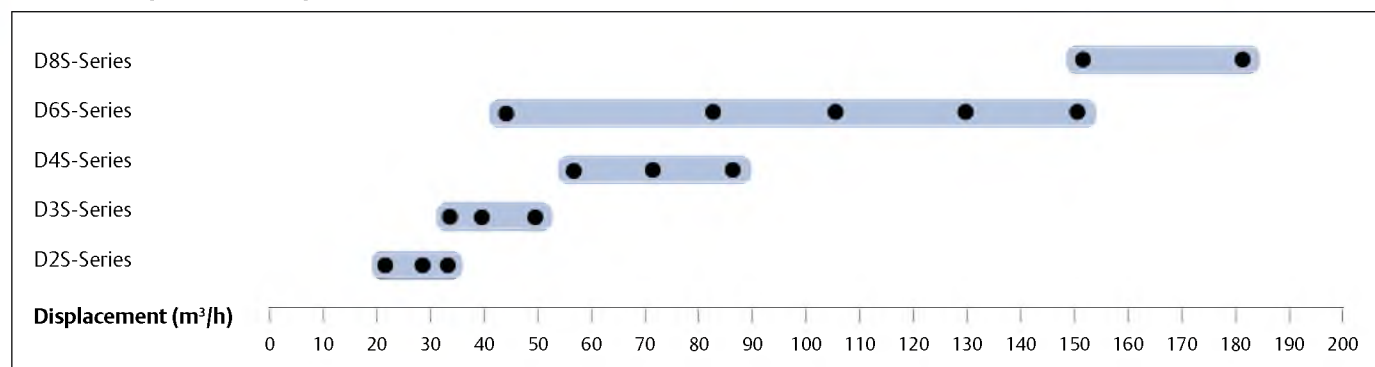
- Positive displacement high flow oil pump guarantees high oil feeding pressure for good lubrication and bearings' cooling
- PTFE coated bearings for especially low friction and good protection at start up
- Aluminium piston with optimized geometry for good performance and resistance to liquid handling
- High temperature resistant Molybdenum piston rings preventing from wear



S-Series Compressor

- Optimized bearing surface dimensions
- Valve reeds of impact resistant spring steel
- Pre-set internal pressure relief valve between suction and discharge that opens if the maximum differential pressure is exceeded
- Electronic motor protection module

S Series Compressor Line-up



Conditions: EN12900, R404A: Evaporating -10°C, Condensing 40°C, Suction Gas Temperature 20°C, Subcooling 0K

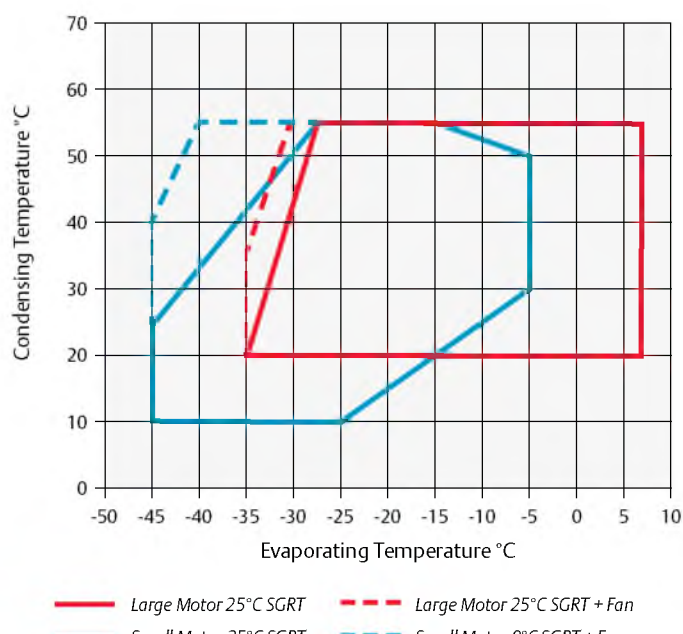
Features and Benefits

- Integrated oil pump and Electronic Oil Pressure Switch OPS2 for durability
- Two motor sizes per displacement, optimized for different applications
- Ability of the refrigeration compressors with small motor size to operate as low as 10°C condensing
- Large operating envelope that allows medium and low temperature applications to be covered by one single model
- Provide cooling capacity modulation either by cylinder head blocked suction or with use of frequency inverters from 25 to 60Hz with the standard AWM motors
- Multi-refrigerant compressor range – one model to cover all standard refrigerants

Maximum Allowable Pressure (PS)

- Low Side PS 22.5 bar (g)/ High Side PS 28 bar (g)

Operating Envelope R404A



Large Motor 25°C SGRT Large Motor 25°C SGRT + Fan
Small Motor 25°C SGRT Small Motor 25°C SGRT + Fan

Technical Overview

R404A	Nominal hp	Displacement (m ³ /h)	Capacity (kW) 1)	COP 1)	Capacity (kW) 2)	COP 2)	Oil Quantity (l)	Length/Width/ Height (mm)	Net Weight (kg)	Motor Version / Code	Maximum Operating Current (A)	Locked Rotor Current (A)	Sound Pressure @ 1 m (dBA) **
										3 Ph *	3 Ph *	3 Ph *	
D2SA-45X	4.5	22.4	11.1	2.0	3.5	1.2	2.40	560/330/395	90	EWL	11	69	
D2SA-55X	5.5	22.4	11.2	2.0			2.40	560/330/395	90	EWL	13	67	
D2SC-55X	5.5	26.8	13.4	2.0	4.1	1.3	2.40	560/330/395	91	EWL	13	74	67
D2SC-65X	6.5	26.9	13.3	2.0			2.40	560/330/395	91	EWL	16	85	
D2SK-65X	6.5	31.2	15.9	2.0	4.9	1.2	2.40	560/330/395	92	EWL	16	85	
D3SA-75X	7.5	32.2	15.6	2.2			3.70	655/370/480	159	AWM	18	82	
D3SC-100X	10.0	38.0	18.9	2.2			3.70	682/370/480	159	AWM	22	106	
D3SC-75X	10.0	38.0	18.3	2.1	5.5	1.3	3.70	655/370/480	159	AWM	19	82	66
D3SS-100X	10.0	49.9	24.5	2.0	8.2	1.3	3.70	680/370/480	162	AWM	26	109	67
D3SS-150X	15.0	49.9	25.9	2.1			3.70	680/370/480	162	AWM	30	125	
D4SA-200X	20.0	56.0	27.5	2.2			3.30	650/485/495	183	AWM	32	175	70
D4SF-100X	10.0	56.0	27.3	2.1	8.9	1.3	3.30	680/485/495	178	AWM	27	105	72
D4SH-250X	25.0	70.8	35.1	2.1			3.30	670/490/495	194	AWM	42	199	71
D4SL-150X	15.0	70.8	36.4	2.1	11.9	1.4	3.30	680/490/495	186	AWM	36	156	72
D4SJ-300X	30.0	84.5	42.8	2.2			3.30	690/515/495	210	AWM	48	221	70
D4ST-200X	20.0	84.7	43.4	2.1	14.5	1.4	3.30	700/490/495	198	AWM	42	175	72
D6SA-300X	30.0	84.0	41.8	2.2			3.30	740/540/490	214	AWM	50	221	75
D6SF-200X	20.0	84.0	41.8	2.1	13.5	1.4	3.30	740/540/490	212	AWM	38	175	
D6SJ-400X	40.0	127.0	62.7	2.2			6.80	760/565/545	252	AWM	75	304	74
D6ST-300X	32.0	127.0			21.3	1.4	6.80	740/540/545	252	AWM	63	255	
D6ST-320X	32.0	127.0	11.1	2.1	21.3	1.4	6.80	740/540/545	252	AWM	63	255	
D6SU-400X	40.0	151.8	11.1	2.1	26.6	1.4	6.80	740/540/545	265	AWM	78	304	
D6SK-500X	50.0	152.0	73.1	2.1			6.80	770/570/539	268	AWM	89	393	78
D8SH-370X	37.0	151.0	11.1	2.1	24.6	1.4	7.60	835/467/610	314	AWM	71	349	
D8SH-500X	50.0	151.0	78.2	2.2			7.60	835/467/610	326	AWM	95	458	77
D8SJ-450X	45.0	181.0	11.1	2.1	28.7	1.4	7.60	835/527/610	345	AWM	91	441	
D8SJ-600X	60.0	181.0	90.4	2.2			7.60	835/527/610	346	AWM	106	476	76

(1) MT= Conditions EN12900 : Evaporating -10°C, Condensing 45°C, Suction Gas Temperature 20°C, Subcooling 0K

(2) LT= Conditions EN12900 : Evaporating -35°C, Condensing 40°C, Suction Gas Temperature 20°C, Subcooling 0K

* 3 Ph: 380-420V/ 50Hz

** @ 1m: sound pressure level at 1m distance from the compressor, free field condition

Condensing Temperature 40°C															
R404A	Cooling Capacity (kW)							R404A	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
Model	-45	-35	-30	-20	-10	-5	5	Model	-45	-35	-30	-20	-10	-5	5
D2SA-45X	1.1 *	3.5	4.8	7.9	12.2	14.8		D2SA-45X	1.9 *	2.9	3.4	4.5	5.4	5.8	
D2SA-55X			4.7	7.9	12.3	15.0	21.5	D2SA-55X			3.3	4.3	5.2	5.6	6.2
D2SC-55X	1.1 *	4.1	5.5	9.4	14.7	18.0		D2SC-55X	1.9 *	3.2	3.9	5.2	6.3	6.8	
D2SC-65X			5.6	9.4	14.6	17.8	25.6	D2SC-65X			4.2	5.3	6.3	6.7	7.3
D2SK-65X	1.2 *	4.9	6.7	11.3	17.5	21.4		D2SK-65X	2.6 *	4.0	4.7	6.2	7.5	8.2	
D3SA-75X			6.3	10.9	17.2	21.2	30.9	D3SA-75X			4.2	5.6	7.0	7.5	8.3
D3SC-100X			8.0	13.5	20.9	25.4	36.6	D3SC-100X			5.3	6.9	8.4	9.1	10.0
D3SC-75X	1.6 *	5.5	7.5	12.9	20.3	24.9		D3SC-75X	2.8 *	4.3	5.2	6.9	8.6	9.4	
D3SS-100X	2.7 *	8.2	10.8	17.6	26.8	32.5		D3SS-100X	4.4 *	6.2	7.2	9.5	11.9	12.9	
D3SS-150X			11.4	18.6	28.3	34.4	49.2	D3SS-150X			7.6	9.8	11.8	12.7	14.3
D4SA-200X			11.3	19.3	30.4	37.2	54.0	D4SA-200X			7.5	10.0	12.1	13.1	14.4
D4SF-100X	3.0 *	8.9	11.9	19.6	30.1	36.6		D4SF-100X	4.4 *	6.8	8.0	10.5	12.7	13.6	
D4SH-250X			14.6	24.7	38.7	47.4	68.6	D4SH-250X			9.8	12.9	15.7	16.9	18.8
D4SL-150X	3.8 *	11.9	15.9	26.1	40.0	48.6		D4SL-150X	5.6 *	8.6	10.2	13.3	16.3	17.6	
D4SJ-300X			17.7	30.5	47.1	57.2	81.2	D4SJ-300X			11.2	15.1	18.5	19.9	22.0
D4ST-200X	5.2 *	14.5	19.2	31.3	47.7	57.8		D4ST-200X	6.7 *	10.2	12.0	15.8	19.5	21.3	
D6SA-300X			17.2	29.3	46.3	57.1	83.8	D6SA-300X			11.3	15.0	18.3	19.8	21.9
D6SF-200X	4.4 *	13.5	18.3	30.3	46.1	55.5		D6SF-200X	6.1 *	9.6	11.5	15.3	18.7	20.2	
D6SJ-400X			26.4	44.9	69.4	84.4	121.0	D6SJ-400X			16.6	22.3	27.8	30.2	34.3
D6ST-300X	6.6 *	21.3	28.5	46.8	71.2	85.9		D6ST-300X	10.0 *	15.5	18.3	23.9	29.3	31.8	
D6ST-320X	6.6 *	21.3	28.5	46.8	71.2	85.9		D6ST-320X	10.0 *	15.5	18.3	23.9	29.3	31.8	
D6SU-400X	9.4 *	26.6	35.0	56.2	84.4	101.5		D6SU-400X	12.4 *	18.7	22.0	28.8	35.5	38.6	
D6SK-500X			30.7	52.1	80.9	98.6	142.5	D6SK-500X			19.9	26.5	32.9	35.8	40.0
D8SH-370X	7.9 *	24.6	32.9	53.8	81.2	97.6		D8SH-370X	11.2 *	17.6	20.9	27.6	33.7	36.3	
D8SH-500X			33.7	55.6	85.9	105.0	150.5	D8SH-500X			23.0	29.1	34.6	36.9	40.1
D8SJ-450X	8.4 *	28.7	38.8	64.7	99.5	121.0		D8SJ-450X	13.4 *	20.6	24.4	32.0	39.1	42.2	
D8SJ-600X			38.9	64.7	99.6	121.5	174.5	D8SJ-600X			24.3	31.8	38.9	42.1	47.2

Suction Gas Return 20°C / Subcooling 0K

*Suction Superheat 10K / Subcooling 0K

High Discharge Temp - Additional cooling required

Condensing Temperature 40°C															
R407C	Cooling Capacity (kW)							R407C	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
Model	-30	-20	-10	-5	5	10	15	Model	-30	-20	-10	-5	5	10	15
D4SA-200X		15.7*	27.1	33.7	50.6	61.2	73.3	D4SA-200X		7.9*	9.8	10.7	12.0	12.4	12.5
D4SH-250X		19.1*	33.5	41.9	63.3	76.6	92.0	D4SH-250X		9.8*	12.4	13.5	15.3	15.9	16.3
D4SJ-300X		22.8*	40.5	50.5	75.3	90.4	107.5	D4SJ-300X		11.8*	15.3	16.8	18.9	19.6	19.9
D6SA-300X		20.1*	37.3	47.2	72.3	87.9	106.0	D6SA-300X		11.9*	14.7	15.9	18.0	18.7	19.2
D6SJ-400X		34.3*	59.9	74.7	112.0	135.0	162.0	D6SJ-400X		17.6*	22.5	24.7	28.2	29.3	29.8
D6SK-500X		38.6*	70.8	89.1	135.0	163.0	195.5	D6SK-500X		21.1*	26.7	29.2	33.2	34.7	35.7
D8SJ-600X		48.8*	86.4	107.5	160.5	193.0	230.0	D8SJ-600X		25.2*	32.7	35.8	40.5	41.8	42.3
D8SK-700X		53.8*	98.2	124.0	189.0	229.0	276.0	D8SK-700X		29.7*	38.1	41.9	47.7	49.5	50.2

Suction Gas Return 20°C / Subcooling 0K

*Suction Superheat 10K / Subcooling 0K

Condensing Temperature 40°C															
R134a	Cooling Capacity (kW)							R134a	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
Model	-30	-20	-10	-5	5	10	15	Model	-30	-20	-10	-5	5	10	15
D2SA-45X		4.2	7.0	8.9	13.7	16.8		D2SA-45X		2.5	3.0	3.3	3.6	3.7	
D2SC-55X		5.2	8.5	10.7	16.2	19.7		D2SC-55X		2.9	3.6	4.0	4.5	4.6	
D2SK-65X		5.7	9.5	12.0	18.3	22.2		D2SK-65X		3.3	4.2	4.5	5.1	5.4	
D3SC-75X		6.9	11.3	14.3	22.0	27.0		D3SC-75X		3.8	4.8	5.4	6.4	6.9	
D3SS-100X		9.0	14.9	18.7	28.8	35.3		D3SS-100X		5.0	6.4	7.1	8.3	8.8	
D4SA-100X		11.3	18.6	23.1	34.4	41.3		D4SA-100X		5.2	6.6	7.3	8.4	8.8	
D4SF-100X		10.3	17.7	22.4	34.4	41.9		D4SF-100X		5.4	6.9	7.6	8.7	9.1	
D4SH-150X		12.2	21.5	27.4	42.3	51.5		D4SH-150X		6.3	8.2	9.0	10.3	10.5	
D4SL-150X		13.6	23.0	29.0	44.1	53.6		D4SL-150X		6.8	8.7	9.6	11.2	11.8	
D4SJ-200X		17.0	28.0	34.9	52.1	62.6		D4SJ-200X		8.2	10.7	11.9	14.1	15.0	
D4ST-200X		16.5	27.7	34.8	52.9	64.2		D4ST-200X		8.1	10.5	11.6	13.6	14.3	
D6SF-200X		16.1	27.2	34.4	52.6	63.8		D6SF-200X		7.9	10.2	11.3	13.2	13.9	
D6SH-200X		20.5	33.2	41.4	62.0	74.9		D6SH-200X		10.5	13.1	14.5	16.9	17.9	
D6SJ-300X		23.9	39.6	49.7	75.3	91.3		D6SJ-300X		12.2	15.6	17.3	20.4	21.6	
D6ST-300X		24.0	41.1	52.1	79.8	97.1		D6ST-300X		12.4	15.9	17.6	20.4	21.4	
D6ST-320X		24.2	41.3	52.2	79.9	97.2		D6ST-320X		12.3	15.9	17.6	20.5	21.7	
D6SU-400X		29.9	49.6	62.1	93.9	113.5		D6SU-400X		15.2	19.2	21.1	24.5	25.9	
D6SK-400X		27.0	45.5	57.4	88.0	107.0		D6SK-400X		13.7	18.2	20.3	23.6	24.7	
D8SH-370X		28.8	47.9	60.1	90.9	110.0		D8SH-370X		14.8	18.7	20.6	23.8	25.1	
D8SH-400X		27.7	46.7	58.8	89.7	109.0		D8SH-400X		14.0	18.2	20.0	22.8	23.7	
D8SJ-500X		31.9	54.0	68.1	104.0	126.5		D8SJ-500X		17.6	22.1	24.3	28.1	29.6	
D8SJ-450X		33.4	57.4	72.7	111.5	135.5		D8SJ-450X		16.8	21.5	23.7	27.3	28.5	
D8SK-600X		36.1	62.4	79.9	123.0	148.0		D8SK-600X		18.9	24.7	27.6	32.4	33.9	

Suction Gas Return 20°C / Subcooling OK

Condensing Temperature 40°C															
R22	Cooling Capacity (kW)							R22	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
Model	-45	-35	-30	-20	-10	-5	5	Model	-45	-35	-30	-20	-10	-5	5
D2SA-45X		2.4*	3.5*	6.9	10.9	13.4		D2SA-45X		2.4*	2.9*	3.8	4.6	4.9	
D2SA-45X Air	1.1*	3.3	4.5	7.4	11.5	14.0		D2SA-45X Air	1.7*	2.5	3.0	3.8	4.6	4.9	
D2SA-55X				6.6	10.9	13.6	20.4	D2SA-55X				3.8	4.5	4.7	5.2
D2SC-55X		2.4*	4.0*	8.4	13.7	16.9		D2SC-55X		2.9*	3.5*	4.6	5.5	5.9	
D2SC-55X Air	1.3*	4.0	5.4					D2SC-55X Air	2.1*	3.1	3.6				
D2SC-65X				9.4	14.6	17.8	25.6	D2SC-65X				5.3	6.3	6.7	7.3
D2SK-65X		3.6*	5.4*	10.3	16.1	19.8		D2SK-65X		3.7*	4.3*	5.5	6.6	7.1	
D3SA-75X				9.5	15.5	19.3	29.0	D3SA-75X				5.1	6.1	6.6	7.2
D3SC-100X				11.7	18.6	23.0	34.4	D3SC-100X				6.3	7.4	7.9	8.6
D3SC-750-DTC	2.0	4.9	6.8	12.0	19.4	23.9		D3SC-750-DTC	2.6	3.9	4.6	6.0	7.5	8.2	
D3SS-150X				16.4	25.6	31.4	46.0	D3SS-150X				8.6	10.3	11.1	12.3
D3SS-1000-DTC	2.6	6.7	9.4	16.3	25.7	31.5		D3SS-1000-DTC	3.5	5.6	6.6	8.6	10.7	11.9	
D4SF-100X			9.2*	16.8*	27.0*	33.3*		D4SF-100X			7.0*	9.0*	10.8*	11.5*	
D4SA-200X				18.0*	29.2	36.0	52.7	D4SA-200X				9.0*	10.7	11.4	12.4
D4SH-250X				22.6*	37.2	45.9	67.2	D4SH-250X				11.3*	13.6	14.6	16.0
D4SL-150X			13.0*	22.4*	35.8	44.0		D4SL-150X			9.1*	11.8*	14.2	15.4	
D4SL-1500-DTC	4.5	9.7	13.3	22.7	35.8	44.0		D4SL-1500-DTC	5.3	7.8	9.1	11.8	14.2	15.4	
D4SJ-300X				25.7*	43.5	53.9	79.6	D4SJ-300X				13.1*	16.1	17.4	19.5
D4ST-200X			15.0*	26.1*	42.0	51.6		D4ST-200X			10.4*	13.5*	16.5	18.0	
D4ST-2000-DTC	5.2	11.2	15.3	26.4	41.9	51.6		D4ST-2000-DTC	6.1	8.9	10.4	13.5	16.5	18.0	
D6SA-300X				24.6*	41.9	52.0	76.8	D6SA-300X				13.4*	16.2	17.3	19.0
D6SF-200X			13.8*	24.8*	39.7*	48.9*		D6SF-200X			10.5*	13.8*	16.6*	17.7*	
D6ST-3200-DTC	7.3	16.1	22.1	38.0	60.0	73.6		D6ST-3200-DTC	9.0	13.4	15.7	20.5	25.8	28.5	
D6SJ-400X				37.2*	63.2	78.3	115.5	D6SJ-400X				20.2*	24.5	26.4	29.3
D6SU-4000-DTC	9.7	21.2	28.9	49.5	77.9	95.5		D6SU-4000-DTC	11.6	16.9	19.7	25.1	30.3	32.7	
D6SK-500X				45.8*	76.2	94.1	139.0	D6SK-500X				23.1*	28.4	30.7	34.3
D8SH-370X			27.1*	46.7*	72.3*	87.6*		D8SH-370X			18.9*	24.5*	29.2*	31.0*	
D8SJ-450X			31.6*	55.1*	87*	107*		D8SJ-450X			21.4*	28.3*	34.4*	36.9*	
D8SJ-600X				53.8*	92.0	114.0	168.5	D8SJ-600X				28.9*	35.0	37.6	41.6
D8SK-700X				62.8*	103.5	127.5	191.0	D8SK-700X				33.8*	41.1	44.3	49.2

Suction Gas Return 20°C / Subcooling 0K

*Suction Superheat 10K / Subcooling 0K

High Discharge Temp - Additional cooling required