

冷冻冷藏专用

For Refrigeration Application

- 涡旋压缩机
- SCROLL COMPRESSORS
- R290
- R1270
- R448A
- R449A
- R410A
- R404A
- R22

Johnson Controls - Hitachi Air Conditioning

HEAD QUARTER

New Pier Takeshiba South Tower

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<https://industrial.hitachiaircon.com/en/compressor/scroll>

SALES OFFICES

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Johnson Controls - Hitachi Air Conditioning North America LLC

8304 Esters Blvd. Suite 810, Irving, Texas, USA 75063

Johnson Controls - Hitachi Wanbao Compressor (Guangzhou) Co., Ltd. (China)

No.1086 Cheng Ao East Road, Conghua City,Guangzhou 510935, China

CERTIFICATION

	Concerning [Quality Management Systems] ISO 9000 series Hitachi- Johnson Controls Air Conditioning, Inc. Shimizu Factory JQA-1084 obtained in November 1995		GB/T28001-2011 / OHSAS18001:2007 Johnson Controls-Hitachi Wanbao Compressor (Guangzhou) Co., Ltd. Initial Issue Date: April 30, 2006 [Certificate No. 15918S20003R4M]
	Concerning [Environmental Management Systems] ISO 14000 series Hitachi- Johnson Controls Air Conditioning, Inc. Shimizu Factory EC97J1107 obtained in October 1997		GB/T19001-2016 / ISO9001:2015 Johnson Controls-Hitachi Wanbao Compressor (Guangzhou) Co., Ltd. Initial Issue Date: July 8, 2004 [Certificate No. 15918Q20011R6M]
	Concerning [Occupational Health and Safety Management Systems] ISO45001/ OHSAS 18001 Hitachi- Johnson Controls Air Conditioning, Inc. Shimizu Factory WC18J0002 obtained in July 2018		GB/T24001-2016 / ISO14001:2015 Johnson Controls-Hitachi Wanbao Compressor (Guangzhou) Co., Ltd. Initial Issue Date: April 30, 2006 [Certificate No. 15918E20005R4M]



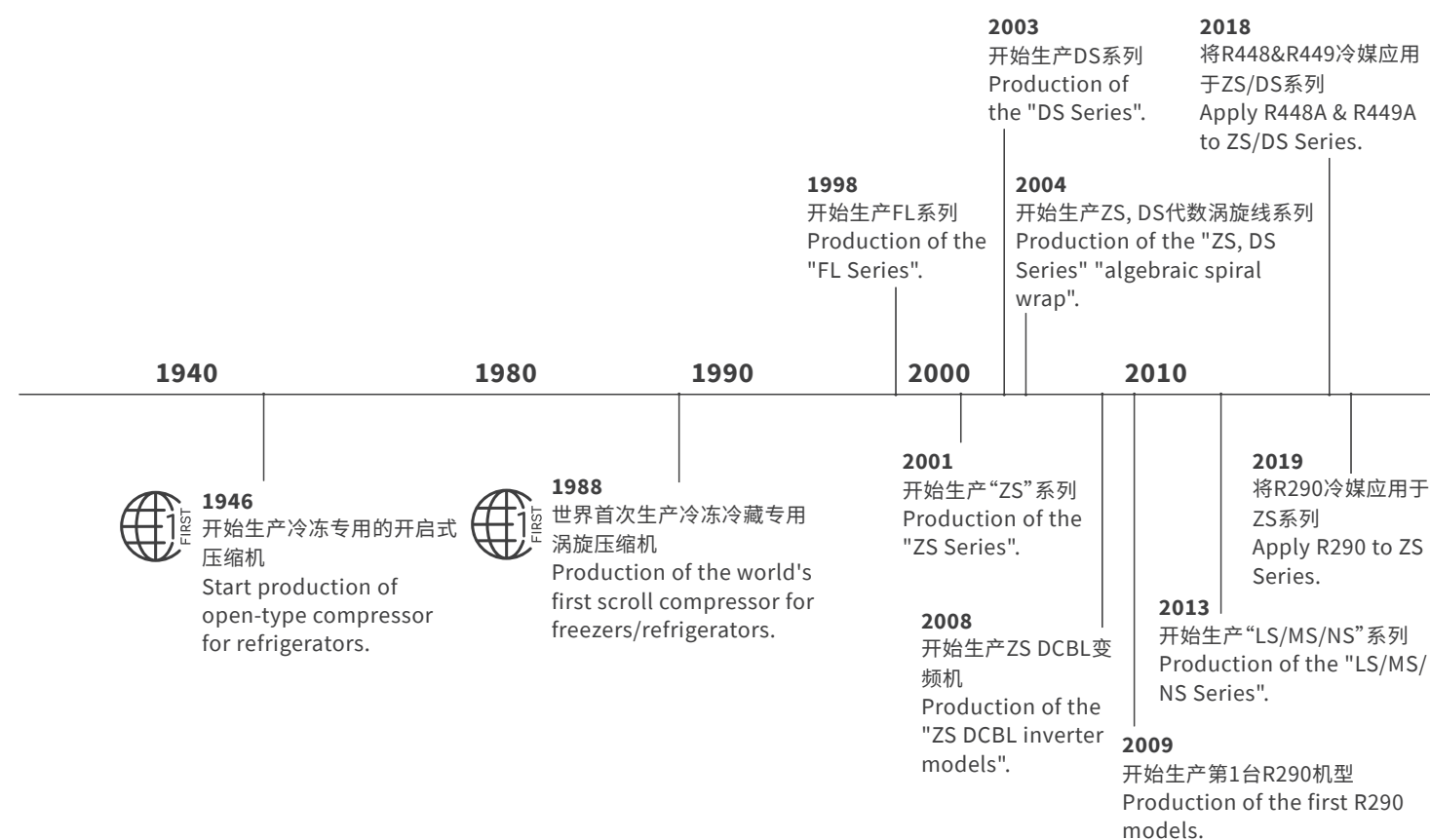


制冷, 冷冻冷藏整体解决方案 Total Solution For Refrigeration

日立高品质的压缩机给冷链的不同阶段作出了贡献, 保证了产品无论在生产, 运输还是销售过程中一直处于低温环境
Hitachi's high quality compressors contribute at various stages in the cold chain, by keeping products at low temperature without interruption between the producing, transporting and consuming processes.

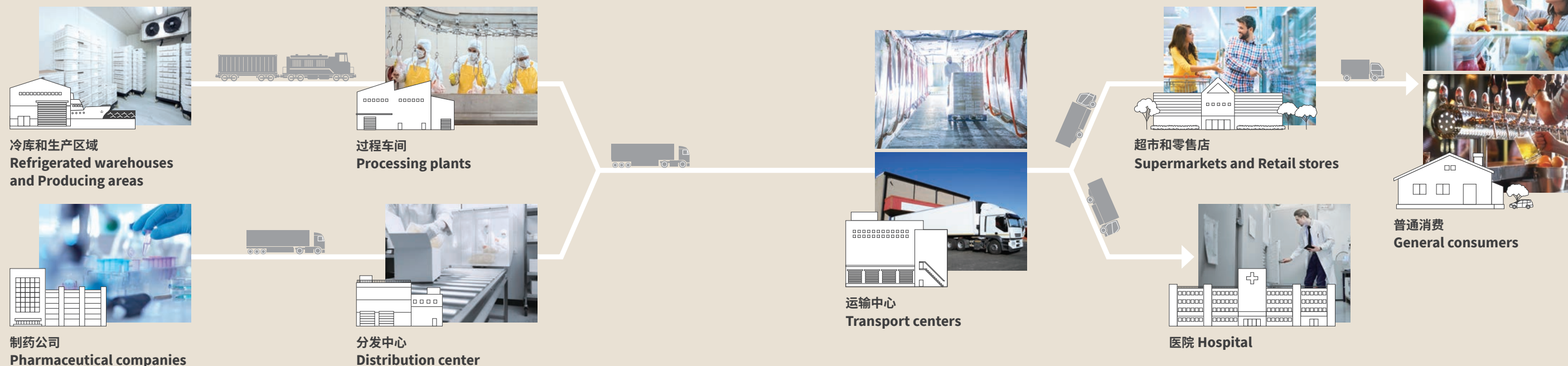
- 尺寸小,重量轻 **Compact size & lightweight**
- 低噪音,低振动 **Low sound level & Low vibration**
- 高可靠性,高品质 **High reliability & quality**
- 先进技术造就高能效 **High efficiency thanks to advanced technology**

历程 History

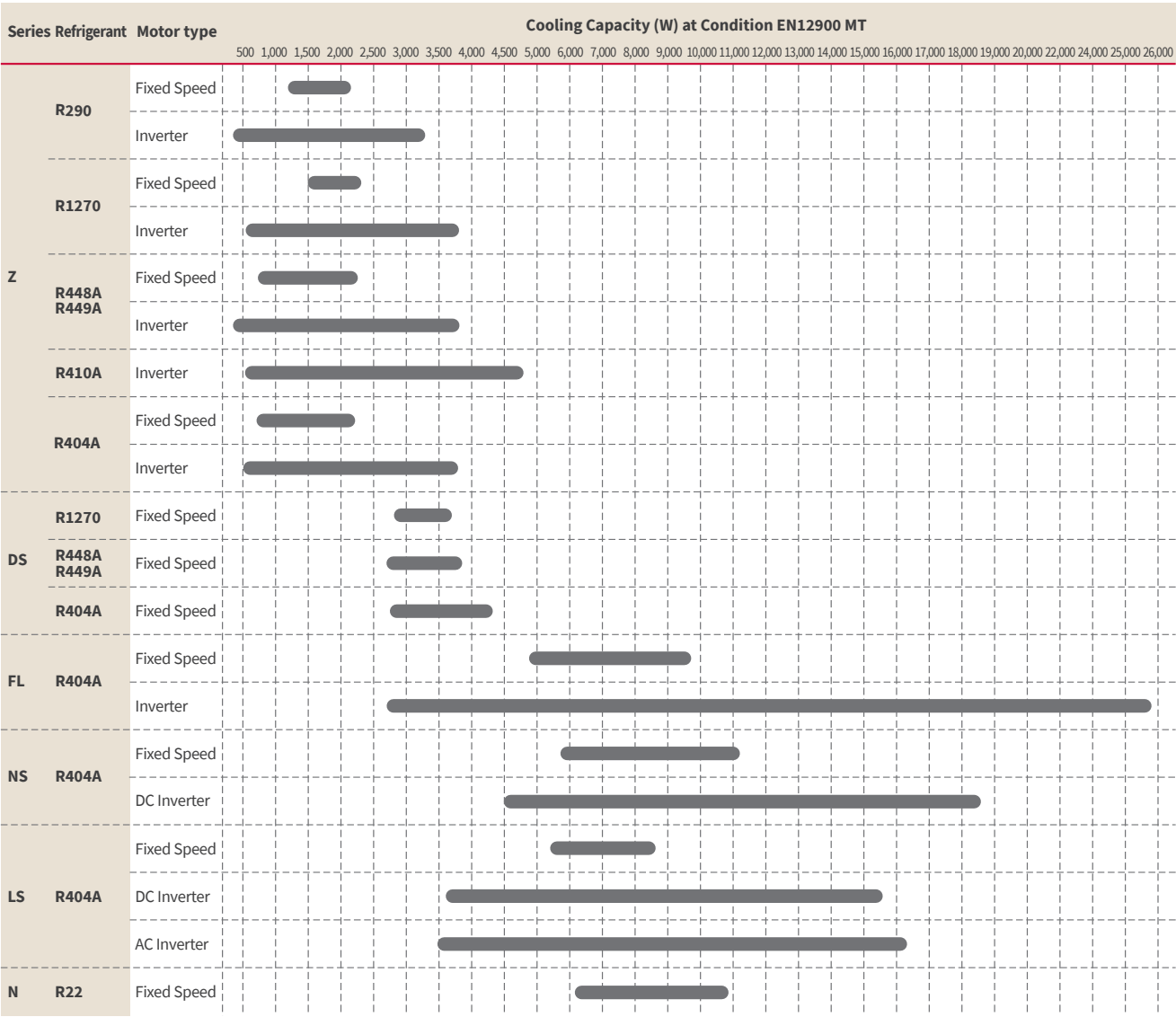


冷链管理 Cold Chain Management

冷链在新鲜果蔬的运输过程, 保证药品处于安全, 新鲜的状态都扮演了重要的角色
Cold chains play an important role in delivering fresh foods and pharmaceutical drugs in a safe, fresh state to consumers.



型谱总览 Line Up Overview



测试条件 Test Condition

	Te(°C)	Tc(°C)	SC(deg)	Ts(°C)
EN12900 MT	-10.0	45.0	0	20.0



Z 系列
Z Series



- 额定输出功率 Rated Output: 400W~1,500W
- 卧式安装高度尺寸更低
Low Height due to Horizontal Type
- R290, R1270, R448A, R449A, R410A, R404A
- BLDC 变频技术
BLDC inverter technology
- 中低温宽广的运行范围
Wide working range for Medium and Low temperature
- 适用于独立展示柜
Suitable for self-contained type showcase
- 适用于水循环解决方案 Suitable for water-loop solution

DS 系列
DS Series



- 额定输出功率 Rated Output: 1,500W~2,200W
- 卧式安装高度尺寸更低
Low Height due to Horizontal Type
- R1270, R448A, R449A, R404A
- 中低温宽广的运行范围
Wide working range for Medium and Low temperature
- 适用于独立展示柜
Suitable for self-contained type showcase
- 适用于水循环解决方案 Suitable for water-loop solution

FL 系列
FL Series



- 额定输出功率 Rated Output: 2,200W~6,000W
- 卧式安装高度尺寸更低
Low Height due to Horizontal Type
- 更大的制冷能力
Large cooling capacity
- 中低温宽广的运行范围
Wide working range for Medium and Low temperature
- 适用于从独立式到远置式展示柜的整体设计
Suitable for overall design from self-contained to remote type showcase

LS, NS, N 系列
LS, NS, N Series



- 额定输出功率 Rated Output: 2,200W~4,500W
- 立式 Vertical Type
- 特有的温度区间设计
Exclusive design for each temperature range
- 喷液技术 Liquid injection available
- 观油镜可实时观察油面 Oil sight glass available
- 可供并联 Tandem ready configurations
- 适用于冷库和展示柜
Suitable for cold room and showcases

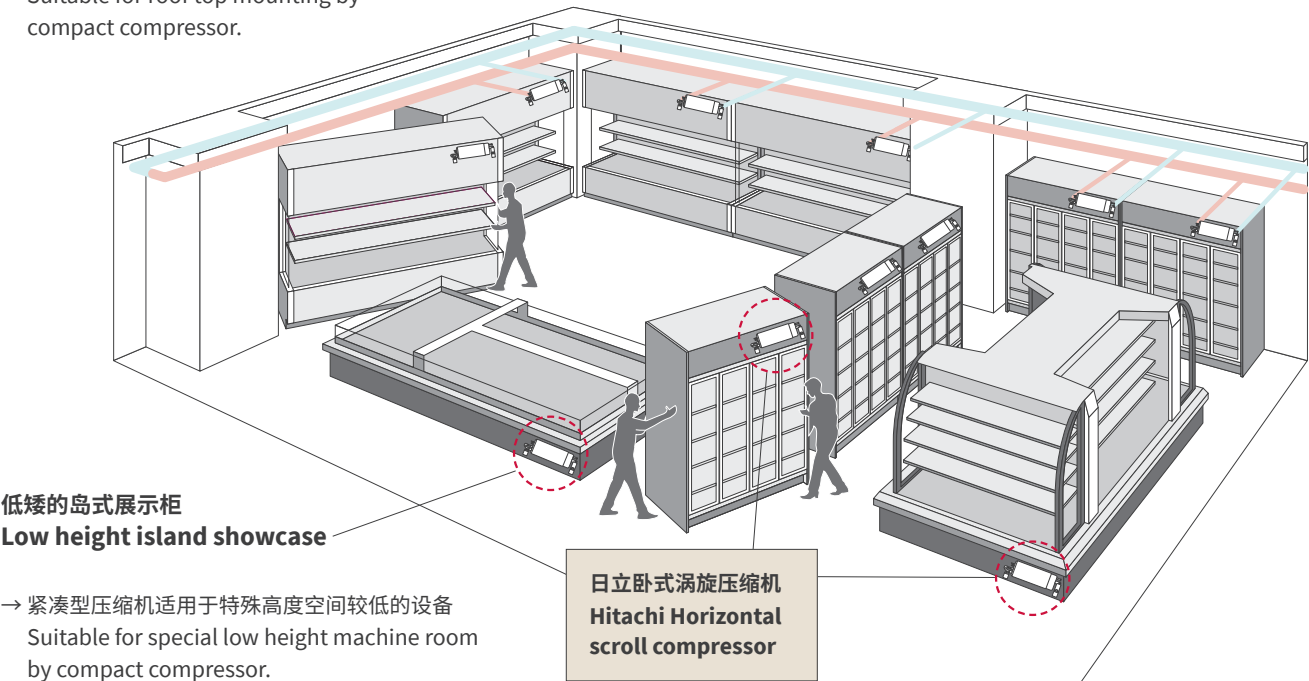
多种应用领域 Various Range Of Application

省空间的零售解决方案 Space-Saving Retail Solution

- 应用紧凑的压缩机以获得更大的展示空间 More display space by smaller machine room with compact compressor.
- 没有户外单元需要安装 No out door unit to be installed.
- 低噪音，振动小可减少维修成本 Less maintenance cost by Low-noise, low vibration.
- BLDC 变频压缩机更节能 Energy saving by BLDC inverter compressor.

独立陈列柜的水循环系统 Water-loop system by self-contained showcase

- 紧凑型压缩机便于柜顶安装
Suitable for roof top mounting by compact compressor.



低矮的岛式展示柜 Low height island showcase

- 紧凑型压缩机适用于特殊高度空间较低的设备
Suitable for special low height machine room by compact compressor.

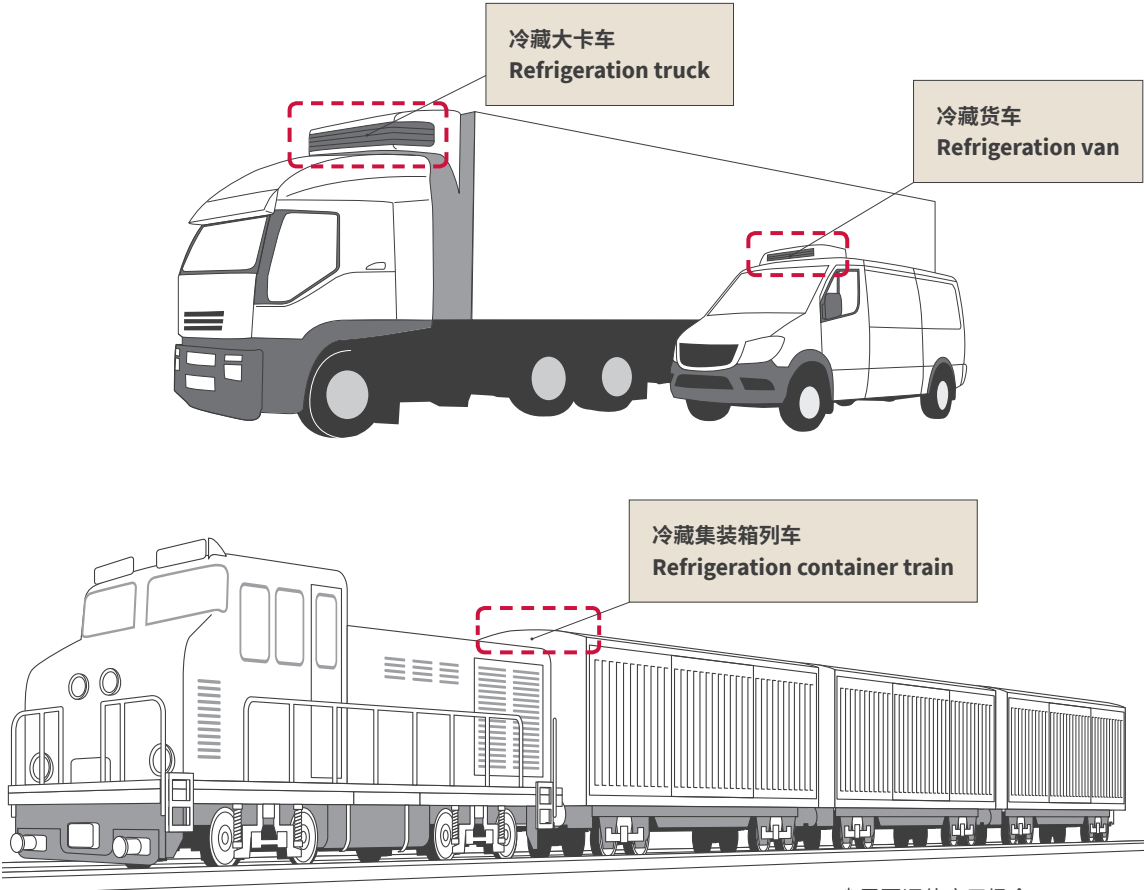
日立卧式涡旋压缩机
Hitachi Horizontal scroll compressor

独立展示柜 Self-contained showcase

- 紧凑型压缩机便于柜顶和展示空间下的安装
Suitable for roof-top mounting and under display space mounting.

运输解决方案 Transportation Solution*

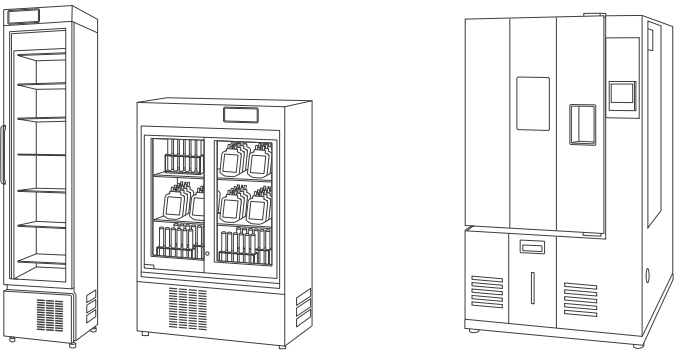
- 轻量型压缩机可节省能源 Energy saving by light compressor.
- 紧凑型压缩机使得设备占用空间小而可利用的冷藏空间更大 Small machine room and larger refrigeration space by compact compressor.
- 适用电动交通工具 Suitable for EV vehicles.
- 精确的温控 Precise temperature control.



* 需要评估应用场合
Application review is required

生物科技,制药,化工解决方案 Bio-Technological, Medical, And Chemical Solution

- -45°C的超低温
Ultra low temperature until -45.0°C.
- DCBL 变频压缩机可实现特殊精准的温控
Special precise temperature control by DCBL inverter compressor.
- 表现为低噪音低振动的高级别品质
High level quality control by Low-noise, low-vibration.
- 节省能源 Energy saving.
- 紧凑型压缩机适用于定制设计
Suitable for customized design by compact compressor.



生物医学冷冻柜
Biomedical freezer

环境检测设备
Environmental testing equipment



低噪音 & 低振动
Low Sound Level & Low Vibration

低噪音低振动的压缩机可提供安全愉悦的低温环境
Low-noise low-vibration compressors provide a safe and pleasant low-temperature environment.

特性 Features

低噪音 Low Noise

人类对低频噪音是很敏感的，所以低频率的噪音会造成极度的不舒适。日立压缩机可实现消除低频噪音，大大降低刺耳的机械声
The human ear is sensitive to low-frequency sounds, so noise generated in low frequencies causes particular discomfort. With Hitachi scroll compressors there is little low-frequency noise and ear-grating mechanical sounds are greatly reduced.

- 低振动 Low Vibration.
- 较其他型号的压缩机而言，扭矩波动更小
Less torque fluctuation than other type of compressors.



当我们在一个离压缩机表面30cm远的地点测量时 (at EVP/COND=-10.0/45.0°C)
When measured at a position 30cm away from the compressor surface (at EVP/COND=-10.0/45.0°C)

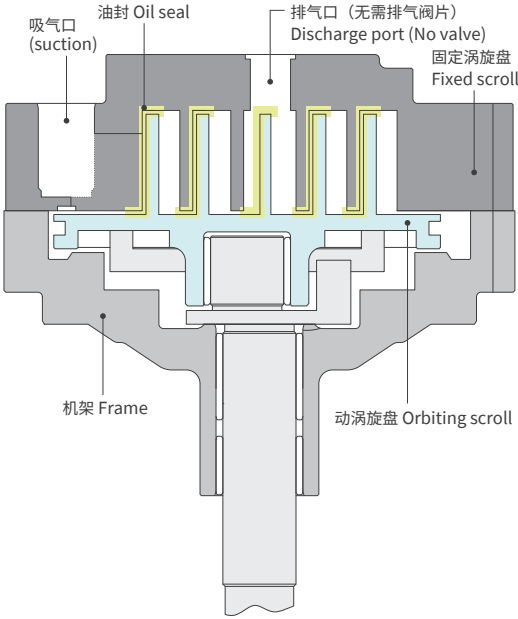
涡旋压缩机产生的噪音比转子压缩机小得多
Scroll compressors generate much less noise than rotary compressors.

优势 Benefits

低噪音低振动的压缩机在商品保鲜及维护方面很有优势，能营造一个更加愉悦也更加安全的低温环境
Using a low-noised and low-vibration compressor has advantages in terms of maintenance and freshness of the products. Creating a pleasanter and safer low-temperature environment.

使用了日立立式涡旋压缩机的展示柜
Showcase using Hitachi horizontal scroll compressor

- 低振动不会对周边设备造成损坏
Low vibration so less damage to surrounding equipment
- 降低维护成本 Reduced maintenance costs
- 没有刺耳的噪音,营造了一个愉悦的环境
Little grating noise and a pleasant environment
- 无需为解决噪音和振动问题投入成本
No expenditure on noise and vibration countermeasures
- 新鲜的产品不会变质 No deterioration of fresh produce

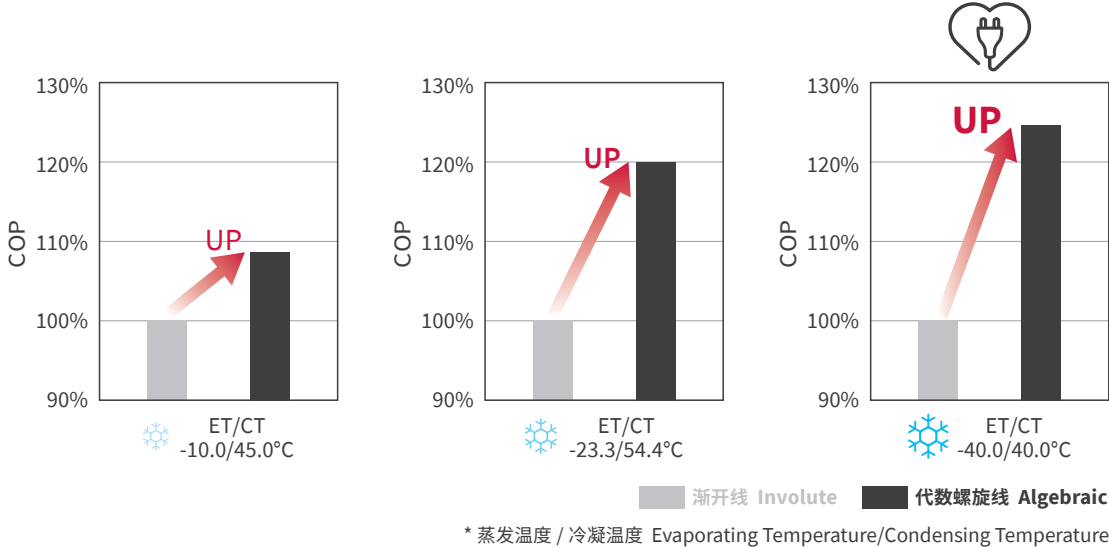
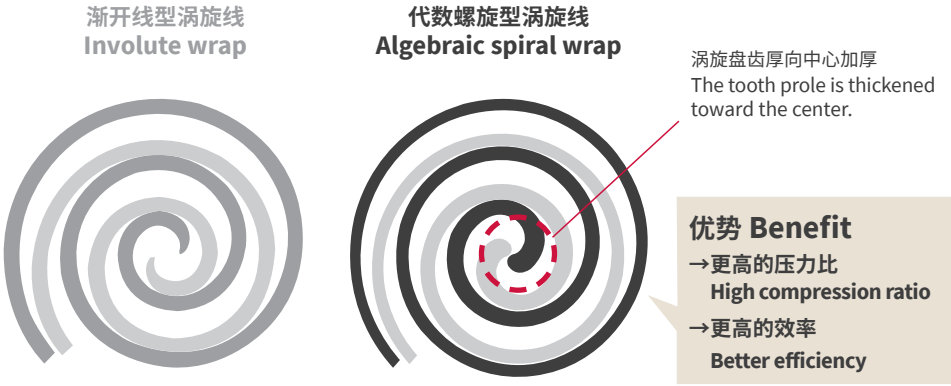


涡旋压缩机截面图
Cross section of scroll compressor

高性能得益于先进的技术
High Efficiency By Advanced Technology

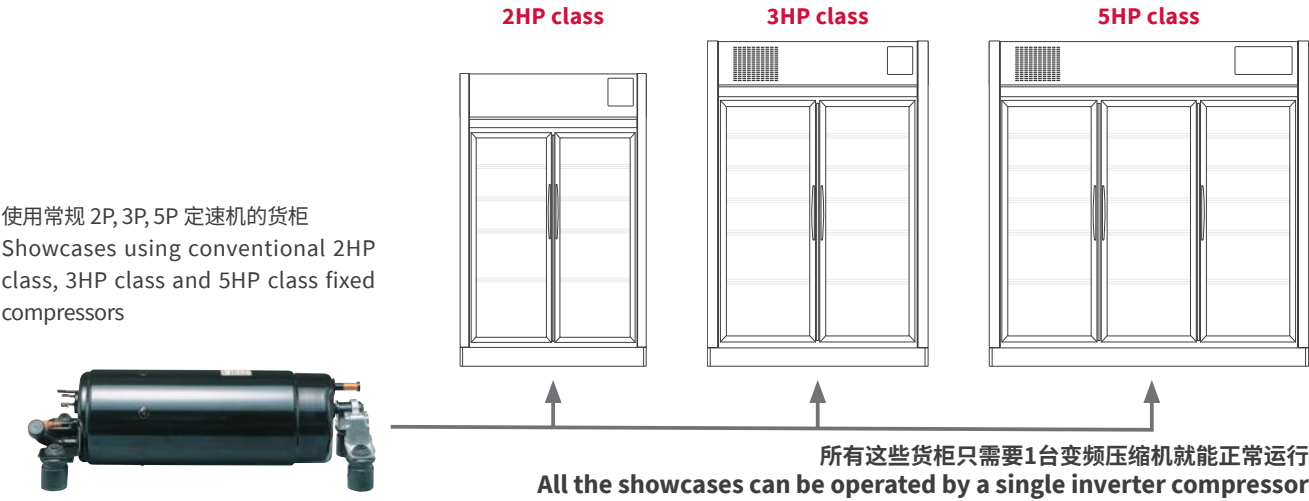
代数螺旋型涡旋线的设计，在低温环境使用时依旧具备高性能
High Efficiency At Low Temperature Usage By "Algebraic Spiral Wrap"

相比于渐开线型压缩机，涡旋压缩机腔体体积在涡旋中部更小，压缩比更大。因此压缩机在低温区域的使用效率更高效。
The compressor chamber volume in the tooth profile center is smaller and the compression ratio is larger, compared with the involute, thus efficiency is higher in a low temperature zone.



平台设计 Platform Design

基于各种能力需求的设计，我们的压缩机能够覆盖很大范围的排量要求，仅单台变频压缩机就能适用于各种形状和各种尺寸的货柜
With its ability to cover a wide range of capacities, a single inverter compressor model can be used in showcases of varying shapes and sizes.



高可靠性 & 舒适性

High Reliability & Comfortable Operation

☆ 优势 Advantages

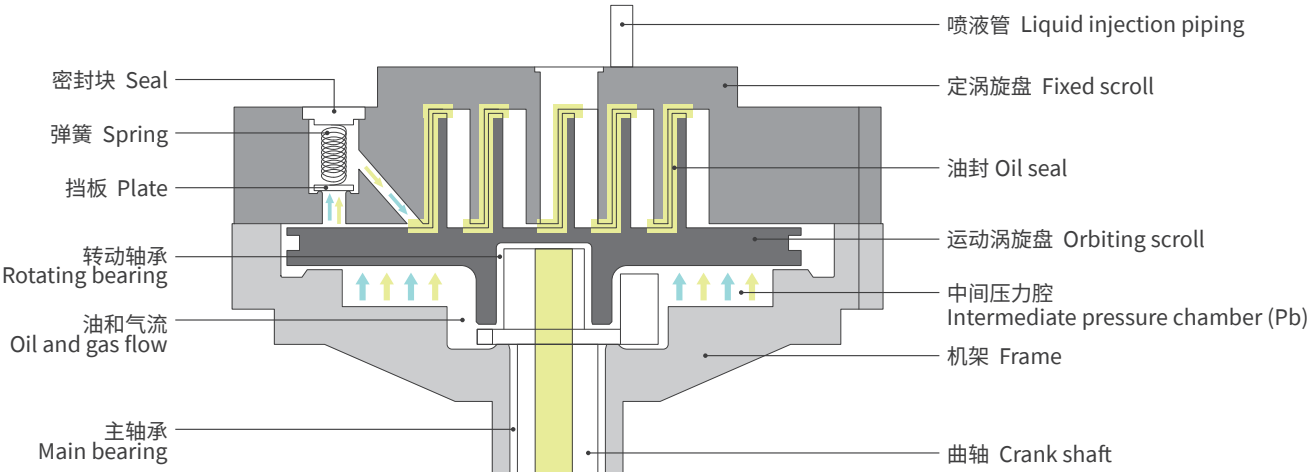
日立开创性高压腔设计的优点 Merits of Hitachi Pioneering High-Side Pressure Design

• 高可靠性 High reliability • 低噪音低振动 Low noise and low vibration • 高性能 High performance

(1) 结构简单, 零部件少 A simple structure leading to fewer superfluous parts

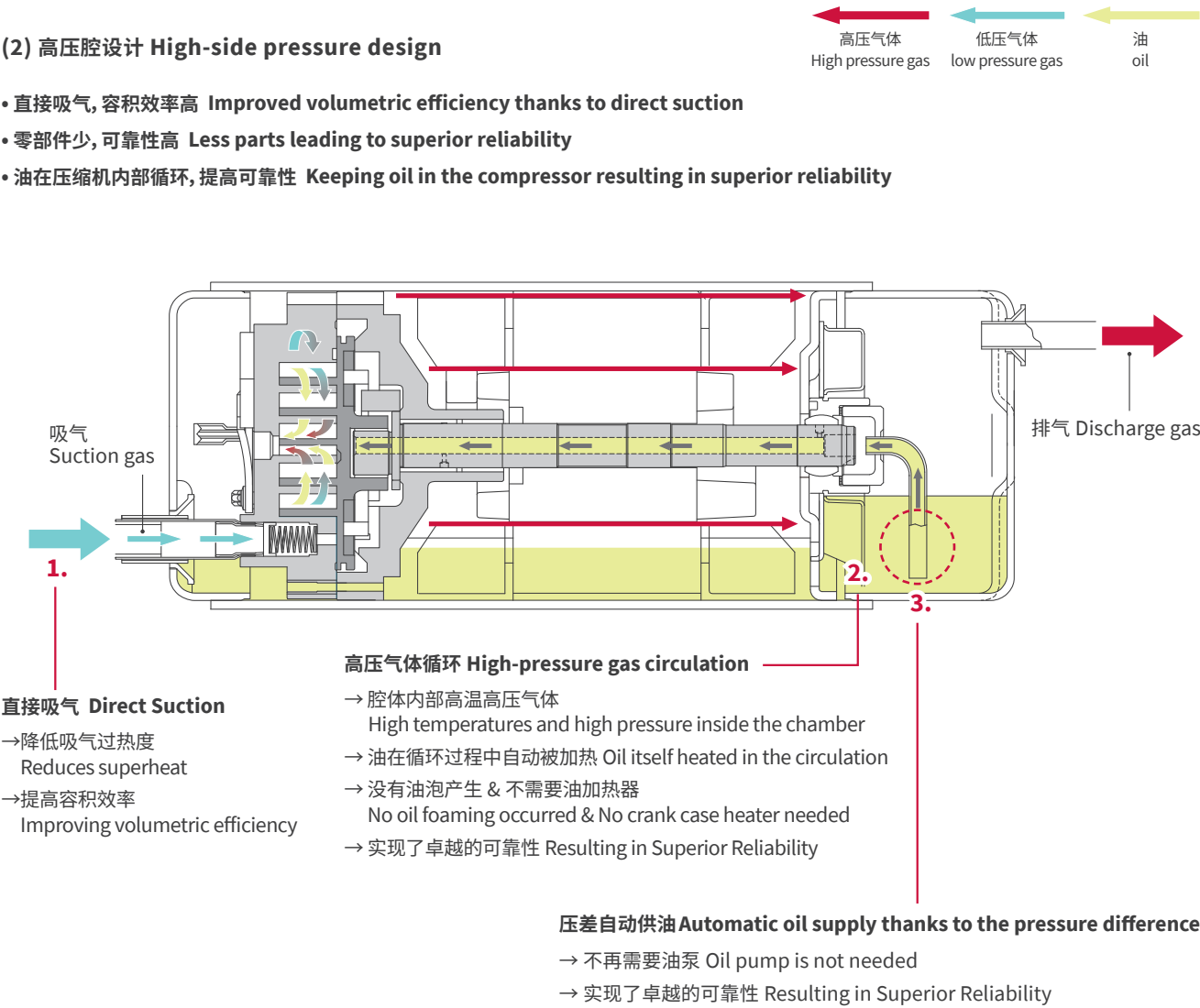
- 损坏减少, 可靠性提高 Damage is abated, improving reliability
- 压缩机效率得以提高 Compressor efficiency is improved

中间压力控制阀 Intermediate pressure control valve

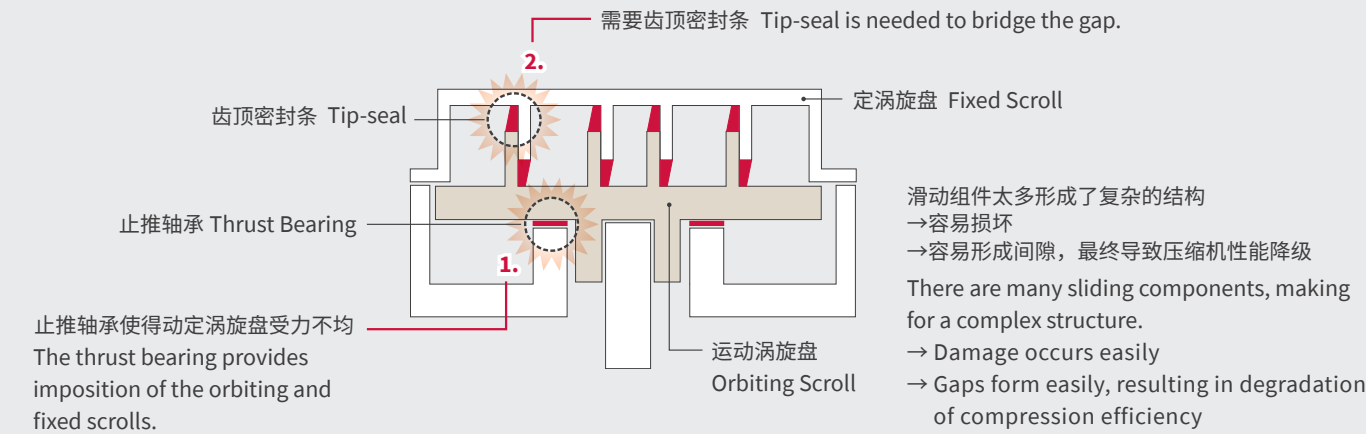


(2) 高压腔设计 High-side pressure design

- 直接吸气, 容积效率高 Improved volumetric efficiency thanks to direct suction
- 零部件少, 可靠性高 Less parts leading to superior reliability
- 油在压缩机内部循环, 提高可靠性 Keeping oil in the compressor resulting in superior reliability

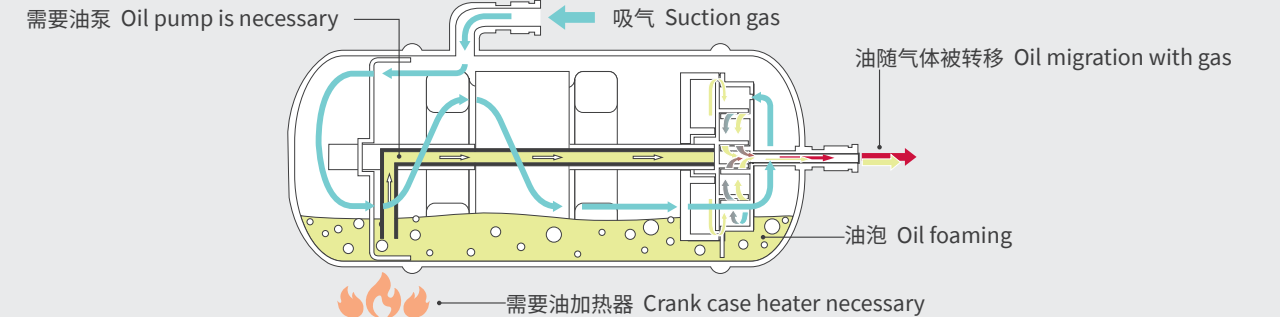


低压腔设计 (止推轴承系统) Low-side pressure design (Thrust Bearing System)



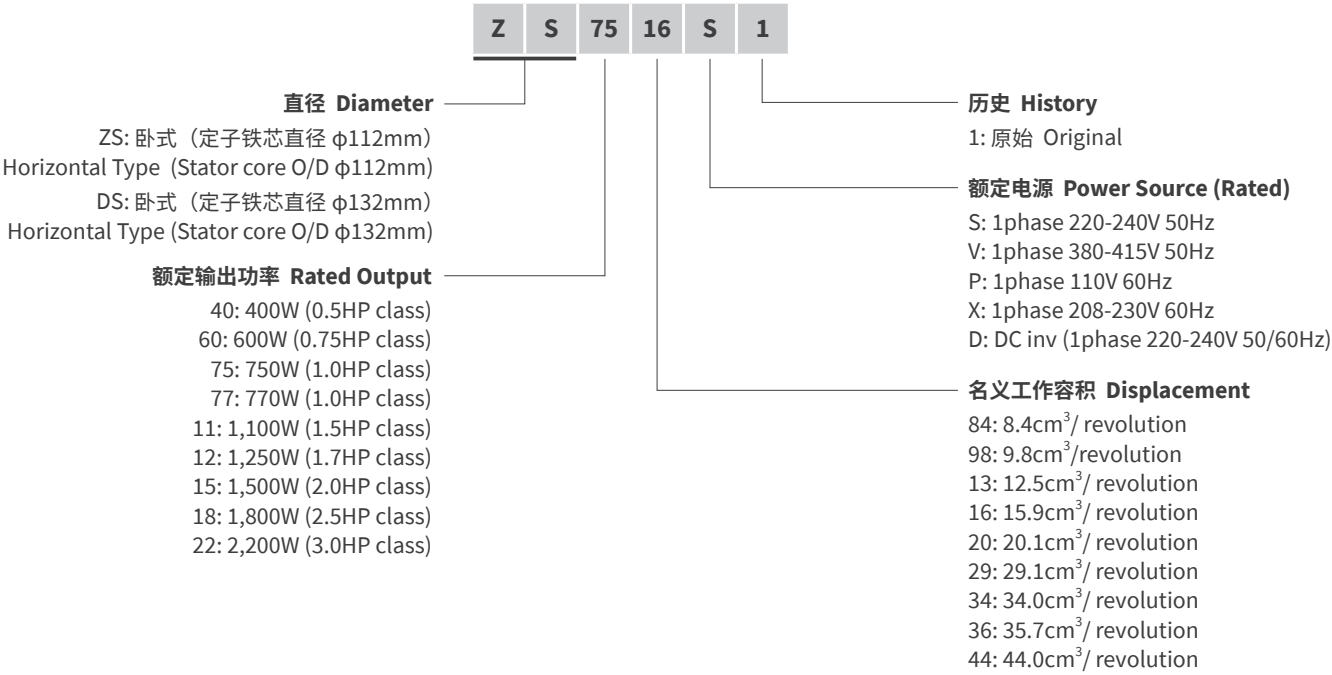
低压腔设计 Low-side pressure design

压缩机开启后, 内部压力和温度降低, 冷媒气泡从油中溢出
After starting, pressure and temperature decreases and refrigerant bubbles come over from the oil.

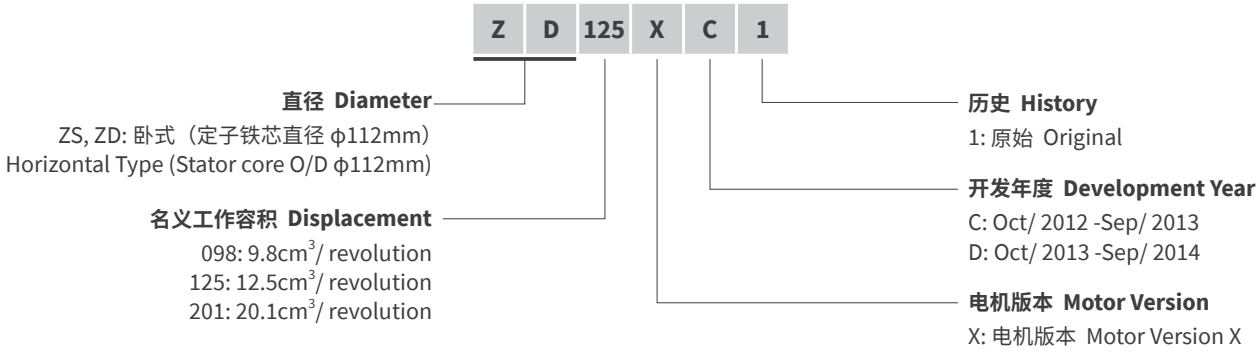


命名规则 Nomenclature

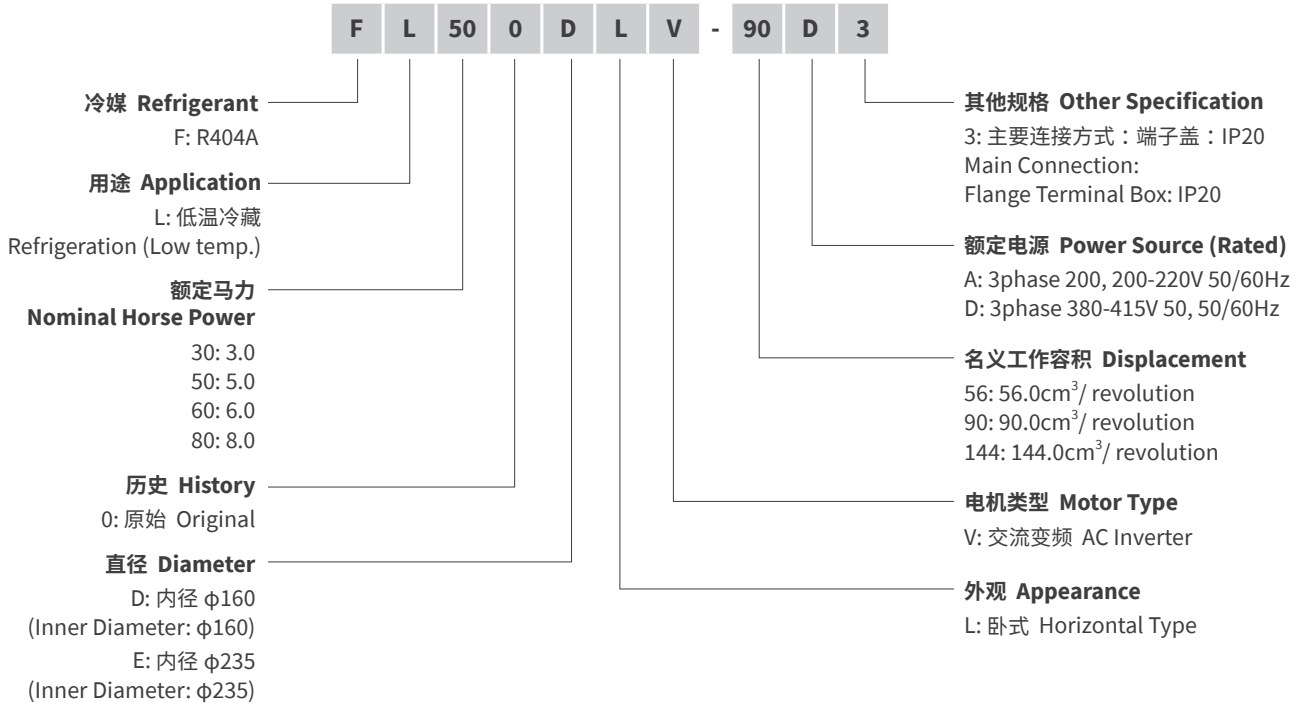
Z&DS 系列 Z Series & DS Series
(A 类 Type A)



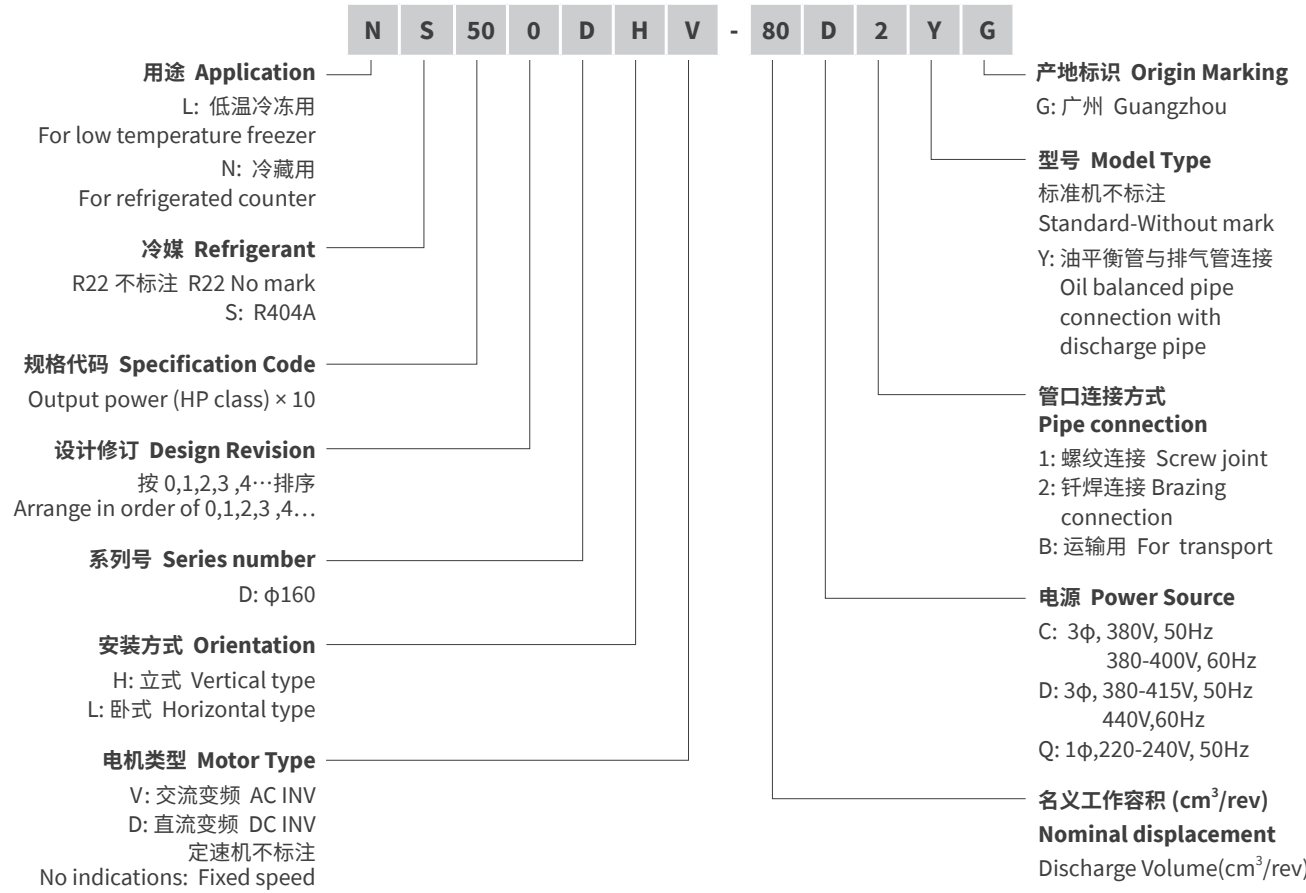
(B 类 Type B)



FL 系列 FL Series



LS, NS, N 系列 LS, NS, N Series



常规参数 General Data

Z 系列 直流变频 Z Series DC inverter

型号 Model			ZS098XL1								ZS159XL1								
额定输出功率 Rated Output		W	770								1,250								
排量 Displacement		cm³/rev.	9.8								15.9								
转速范围 Speed Range		Hz	25-100								25-100								
电源 Power supply			直流变频 DC inverter								直流变频 DC inverter								
电机形式 Motor Type			DCBL								DCBL								
过负载保护 Overload Protection			OH 热敏电阻 (温度探测器) + 变频控制 OH thermistor(Temperature detection) + Inverter control								OH 热敏电阻 (温度探测器) + 变频控制 OH thermistor(Temperature detection) + Inverter control								
涡旋型线 Scroll Profile			代数型 Algebraic								代数型 Algebraic								
重量 (含油) Weight (include oil)		kg	10.8								11.1								
		lbs	23.8								24.5								
油 Oil			POE								POE								
注油量 Oil Charge		cm³	550								650								
测试条件 Test Condition			EN12900 MT		ARI540 MT		EN12900 LT		ARI540 LT		EN12900 MT		ARI540 MT		EN12900 LT		ARI540 LT		
		N(Hz)	25	100	25	100	25	100	25	100	25	100	25	100	25	100	25	100	
性能 Performance	R290	制冷量 Cooling Capacity	W	343	1,580	352	1,656	152	618	175	699	645	2,584	653	2,726	264	1,040	308	1,183
		BTU/h	1,171	5,395	1,202	5,657	520	2,110	596	2,387	2,204	8,826	2,228	9,311	901	3,552	1,051	4,040	
证书 Certificate			CE								CE								

型号 Model			ZS201XL1								ZS098XJ1								
额定输出功率 Rated Output		W	1,500								770								
排量 Displacement		cm³/rev.	20.1								9.8								
转速范围 Speed Range		Hz	25-91.7								25-100								
电源 Power supply			直流变频 DC inverter								直流变频 DC inverter								
电机形式 Motor Type			DCBL								DCBL								
过负载保护 Overload Protection			OH 热敏电阻 (温度探测器) + 变频控制 OH thermistor(Temperature detection) + Inverter control								OH 热敏电阻 (温度探测器) + 变频控制 OH thermistor(Temperature detection) + Inverter control								
涡旋型线 Scroll Profile			代数型 Algebraic								代数型 Algebraic								
重量 (含油) Weight (include oil)		kg	10.9								10.8								
		lbs	24.0								23.8								
油 Oil			POE								POE								
注油量 Oil Charge		cm³	650								550								
测试条件 Test Condition			EN12900 MT		ARI540 MT		EN12900 LT		ARI540 LT		EN12900 MT		ARI540 MT		EN12900 LT		ARI540 LT		
性能 Performance	R290	制冷量 Cooling Capacity	W	860	3,058	884	3,173	349	1,304	395	1,474	-	-	-	-	-	-	-	
		BTU/h	2,937	10,444	3,020	10,836	1,194	4,454	1,348	5,035	-	-	-	-	-	-	-		
	R1270	制冷量 Cooling Capacity	W	-	-	-	-	-	-	-	-	433	2,023	447	2,138	194	782	223	894
		BTU/h	-	-	-	-	-	-	-	-	-	1,479	6,909	1,525	7,302	663	2,670	761	3,052
证书 Certificate			CE								CE								

型号 Model			ZS159XJ1								ZS201XJ1								
额定输出功率 Rated Output		W	1,250								1,500								
排量 Displacement		cm³/rev.	15.9								20.1								
转速范围 Speed Range		Hz	25-100								25-91.7								
电源 Power supply			直流变频 DC inverter								直流变频 DC inverter								
电机形式 Motor Type			DCBL								DCBL								
过负载保护 Overload Protection			OH 热敏电阻 (温度探测器) +变频控制 OH thermistor(Temperature detection) + Inverter control								OH 热敏电阻 (温度探测器) +变频控制 OH thermistor(Temperature detection) + Inverter control								
涡旋型线 Scroll Profile			代数型 Algebraic								代数型 Algebraic								
重量 (含油) Weight (include oil)		kg	11.1								10.9								
		lbs	24.5								24.0								
油 Oil			POE								POE								
注油量 Oil Charge		cm³	650								650								
测试条件 Test Condition			EN12900 MT		ARI540 MT		EN12900 LT		ARI540 LT		EN12900 MT		ARI540 MT		EN12900 LT		ARI540 LT		
		N(Hz)	25	100	25	100	25	100	25	100	25	91.7	25	91.7	25	91.7	25	91.7	
性能 Performance	R1270	制冷量 Cooling Capacity	W	816	3,313	843	3,525	323	1,299	381	1,488	1,088	3,868	1,130	4,078	416	1,622	495	1,842
		BTU/h	2,786	11,314	2,878	12,037	1,105	4,436	1,301	5,082	3,717	13,210	3,861	13,927	1,420	5,538	1,689	6,291	
证书 Certificate			CE								CE								

测试条件 Test Condition

	Te(°C)	Tc(°C)	SC(deg)	Ts(°C)
EN12900 MT	-10.0	45.0	0	20.0
EN12900 LT	-35.0	40.0	0	20.0
ARI540 MT	-6.7	48.9	0	18.3
ARI540 LT	-31.7	40.6	0	18.3

备注 Note:
代数型: 一种在低温条件下依旧具备良好性能
的涡旋线
Algebraic: Type of scroll wrap improved performance at low temperature condition.

型号 Model			ZS7798D1								ZS1216D1									
额定输出功率 Rated Output		W	770								1,250									
排量 Displacement		cm³/rev.	9.8								15.9									
转速范围 Speed Range		Hz	25-100								25-100									
电源 Power supply			直流变频 DC inverter								直流变频 DC inverter									
电机形式 Motor Type			DCBL								DCBL									
过负载保护 Overload Protection			OHR(过热继电器 Overheat relay)								OHR(过热继电器 Overheat relay)									
涡旋型线 Scroll Profile			代数型 Algebraic								代数型 Algebraic									
重量 (含油) Weight (include oil)		kg	10.8								11.1									
		lbs	23.8								24.5									
油 Oil			POE								POE									
注油量 Oil Charge		cm³	550								650									
测试条件 Test Condition					EN12900 MT		ARI540 MT		EN12900 LT		ARI540 LT		EN12900 MT		ARI540 MT		EN12900 LT		ARI540 LT	
			N(Hz)		25	100	25	100	25	100	25	100	25	100	25	100	25	100	25	100
性能 Performance	R448A	制冷量 Cooling Capacity	W	400	1,871	416	1,995	160	642	187	746	755	3,067	787	3,295	262	1,047	314	1,226	
		BTU/h	1,366	6,391	1,422	6,812	548	2,193	638	2,548	2,578	10,473	2,688	11,253	893	3,575	1,073	4,185		
	R449A	制冷量 Cooling Capacity	W	400	1,871	416	1,995	160	642	187	746	755	3,067	787	3,295	262	1,047	314	1,226	
		BTU/h	1,366	6,391	1,422	6,812	548	2,193	638	2,548	2,578	10,473	2,688	11,253	893	3,575	1,073	4,185		
	R404A	制冷量 Cooling Capacity	W	419	1,958	425	2,034	181	729	208	835	790	3,211	802	3,359	301	1,207	355	1,390	
		BTU/h	1,431	6,686	1,451	6,946	617	2,489	710	2,853	2,698	10,967	2,740	11,470	1,027	4,124	1,214	4,747		
证书 Certificate			CE/UL (R404A/R448A only)								CE/UL (R404A/R448A only)									

常规参数 General Data

Z 系列 定速 Z Series Fixed speed

型号 Model			ZS7516S3	ZS1120S3	ZS4084S1	ZS6013S1	ZS7516S1	ZS1120S1	ZS1120S2		
额定输出功率 Rated Output			W	750	1,100	400	600	750	1,100	1,100	
排量 Displacement			cm³/rev.	15.9	20.1	8.4	12.5	15.9	20.1	20.1	
电源 Power supply	相数 Phase	φ	1	1	1	1	1	1	1	1	
	电压 Voltage	V	220-230	220-230	220-240	220-240	220-240	220-240	220-240	220-240	
	频率 Frequency	Hz	50	50	50	50	50	50	50	50	
电机形式 Motor Type			CSR	CSR	CSR	CSR	CSR	CSR	CSR	CSR	
过负载保护 Overload Protection			内置保护器 Internal protector	内置保护器 Internal protector	内置保护器 Internal protector	内置保护器 Internal protector	内置保护器 Internal protector	内置保护器 Internal protector	内置保护器 Internal protector		
涡旋型线 Scroll Profile			渐开线型 Involute	渐开线型 Involute	渐开线型 Involute	渐开线型 Involute	渐开线型 Involute	渐开线型 Involute	代数型 Algebraic		
重量 (含油) Weight (include oil)	kg		12.9	13.6	12.4	12.6	12.9	13.6	13.6		
	lbs		28.4	30.0	27.3	27.8	28.4	30.0	30.0		
油 Oil			POE	POE	POE	POE	POE	POE	POE		
注油量 Oil Charge			cm³	550	650	550	550	650	650		
测试条件 Test condition			EN12900 MT	EN12900 MT	EN12900 MT	EN12900 MT	EN12900 MT	EN12900 MT	EN12900 MT	EN12900 LT	
性能 Performance	R290	制冷量 Cooling Capacity	W	50	50	50	50	50	50	50	
			BTU/h	1,174	1,521	-	-	-	-	-	-
			BTU/h	4,011	5,194	-	-	-	-	-	-
			BTU/h	-	-	-	-	-	-	-	-
	R1270	制冷量 Cooling Capacity	W	-	-	-	-	1,644	2,118	-	-
			BTU/h	-	-	-	-	5,616	7,234	-	-
	R449A	制冷量 Cooling Capacity	W	-	-	748	1,136	1,452	1,871	-	-
			BTU/h	-	-	2,554	3,879	4,961	6,390	-	-
R404A	制冷量 Cooling Capacity	W	-	-	838	1,273	1,628	2,097	2,153	838	
		BTU/h	-	-	2,862	4,347	5,559	7,161	7,352	2,862	
证书 Certificate			CE	CE	CE	CE	CE/CCC	CE/CCC	CE/CCC		

型号 Model			ZS6013X3		ZS7516X3		ZS1120X3		ZS4084P1		ZS6013P1		ZS6013X1		ZS7516X1		ZS1120X1				
额定输出功率 Rated Output		W	600		750		1,100		400		600		600		750		1,100				
排量 Displacement		cm³/rev.	12.5		15.9		20.1		8.4		12.5		12.5		15.9		20.1				
相数 Phase		φ	1		1		1		1		1		1		1		1				
电源 Power supply		电压 Voltage	V	208-230		208-230		208-230		115		115		208-230		208-230		208-230			
频率 Frequency		Hz	60		60		60		60		60		60		60		60				
电机形式 Motor Type			CSR		CSR		CSR		CSR		CSR		CSR		CSR		CSR				
内置保护器 Internal protector			内置保护器 Internal protector		内置保护器 Internal protector		内置保护器 Internal protector		内置保护器 Internal protector		内置保护器 Internal protector		内置保护器 Internal protector		内置保护器 Internal protector		内置保护器 Internal protector				
过负载保护 Overload Protection			内置保护器 Internal protector		内置保护器 Internal protector		内置保护器 Internal protector		内置保护器 Internal protector		内置保护器 Internal protector		内置保护器 Internal protector		内置保护器 Internal protector		内置保护器 Internal protector				
涡旋型线 Scroll Profile			渐开线型 Involute		渐开线型 Involute		渐开线型 Involute		渐开线型 Involute		渐开线型 Involute		渐开线型 Involute		渐开线型 Involute		渐开线型 Involute				
重量 (含油) Weight (include oil)			kg	12.6		12.7		13.6		12.4		12.4		12.6		12.7		13.6			
			lbs	27.8		28.0		30.0		27.3		27.3		27.8		28.0		30.0			
油 Oil			POE		POE		POE		POE		POE		POE		POE		POE				
注油量 Oil Charge			cm³	550		550		650		550		550		550		550		650			
测试条件 Test condition			EN12900 MT		ARI540 MT		EN12900 MT		ARI540 MT		EN12900 MT		ARI540 MT		EN12900 MT		ARI540 MT				
			N(Hz)		60 60		60 60		60 60		60 60		60 60		60 60		60 60				
性能 Performance			R290	制冷量 Cooling Capacity	W	1,155	1,224	1,551	1,643	1,986	2,105	-	-	-	-	-	-	-	-		
				BTU/h	3,946	4,181	5,296	5,611	6,783	7,187	-	-	-	-	-	-	-	-	-		
			R448A	制冷量 Cooling Capacity	W	-	-	-	-	-	-	-	-	-	-	1,363	1,445	1,774	1,879	2,189	2,310
				BTU/h	-	-	-	-	-	-	-	-	-	-	-	4,654	4,936	6,057	6,417	7,477	7,889
			R449A	制冷量 Cooling Capacity	W	-	-	-	-	-	-	-	-	-	-	1,363	1,445	1,774	1,879	2,189	2,310
				BTU/h	-	-	-	-	-	-	-	-	-	-	-	4,654	4,936	6,057	6,417	7,477	7,889
			R404A	制冷量 Cooling Capacity	W	-	-	-	-	-	-	1,013	1,046	1,523	1,575	1,527	1,580	1,987	2,054	2,453	2,526
				BTU/h	-	-	-	-	-	-	-	3,460	3,574	5,200	5,377	5,214	5,395	6,787	7,016	8,377	8,626
证书 Certificate			UL		UL		UL		UL		UL		UL		UL		UL				

测试条件 Test Condition

	Te(°C)	Tc(°C)	SC(deg)	Ts(°C)
EN12900 MT	-10.0	45.0	0	20.0
EN12900 LT	-35.0	40.0	0	20.0
ARI540 MT	-6.7	48.9	0	18.3
ARI540 LT	-31.7	40.6	0	18.3

备注 Note:
代数型: 一种在低温条件下依旧具备良好性能的
涡旋线
Algebraic: Type of scroll wrap improved
performance at low temperature
condition.

※电机形式 Motor Type
CSR: 电容器开始运行 Capacitor Starting Run
IM: 感应电机 Induction Motor

DS 系列 定速 DS Series Fixed speed

型号 Model			DS1529S1		DS1836S1	DS1529V1		DS1834V1		DS2244V1		
额定输出功率 Rated Output		W	1,500		1,800	1,500		1,800		2,200		
排量 Displacement		cm³/rev.	29.1		35.7	29.1		34.0		44.0		
相数 Phase		φ	1		1	3		3		3		
电源 Power supply	电压 Voltage	V	220-240		220-240	380-415		380-415		380-415		
频率 Frequency		Hz	50		50	50		50		50		
电机形式 Motor Type			CSR		CSR	IM		IM		IM		
过负载保护 Overload Protection			内置保护器 Internal protector		内置保护器 Internal protector	内置保护器 Internal protector		内置保护器 Internal protector		内置保护器 Internal protector		
涡旋型线 Scroll Profile			代数型 Algebraic		渐开线型 Involute	代数型 Algebraic		代数型 Algebraic		代数型 Algebraic		
重量 (含油) Weight (include oil)		kg	22.6		22.9	21.8		21.7		23.7		
		lbs	49.8		50.5	48.1		47.8		52.2		
油 Oil			POE		POE	POE		POE		POE		
注油量 Oil Charge		cm³	850		850	850		850		850		
测试条件 Test condition			EN12900 MT	EN12900 LT	EN12900 MT	EN12900 MT	EN12900 LT	EN12900 MT	EN12900 LT	EN12900 MT	EN12900 LT	
性能 Performance	R1270	制冷量 Cooling Capacity	W	50	50	50	50	50	50	50	50	
			BTU/h	2,991	1,210	3,561	-	-	-	-	-	-
		制冷量 Cooling Capacity	W	10,215	4,132	12,162	-	-	-	-	-	-
			BTU/h	2,868	1,019	3,475	-	-	-	-	-	-
	R449A	制冷量 Cooling Capacity	W	9,794	3,479	11,867	-	-	-	-	-	-
			BTU/h	2,950	1,139	3,568	2,908	1,135	3,343	1,317	4,158	1,660
	R404A	制冷量 Cooling Capacity	W	10,075	3,889	12,187	9,930	3,876	11,415	4,498	14,200	5,671
			BTU/h									
证书 Certificate			CE/CCC		CE/CCC	CE		CE		CE		

型号 Model			DS1529X1				DS1834X1				
额定输出功率 Rated Output		W	1,500				1,800				
排量 Displacement		cm³/rev.	29.1				34.0				
相数 Phase		φ	1				1				
电源 Power supply	电压 Voltage	V	208-230				208-230				
频率 Frequency		Hz	60				60				
电机形式 Motor Type			CSR				CSR				
过负载保护 Overload Protection			内置保护器 Internal protector				内置保护器 Internal protector				
涡旋型线 Scroll Profile			代数型 Algebraic				代数型 Algebraic				
重量 (含油) Weight (include oil)		kg	22.7				22.6				
		lbs	50.0				49.8				
油 Oil			POE				POE				
注油量 Oil Charge		cm³	850				850				
测试条件 Test condition			EN12900 MT	ARI540 MT	EN12900 LT	ARI540 LT	EN12900 MT	ARI540 MT	EN12900 LT	ARI540 LT	
性能 Performance	R448A	制冷量 Cooling Capacity	W	3,319	3,522	1,208	1,403	3,881	4,123	1,413	1,634
			BTU/h	11,336	12,028	4,126	4,790	13,253	14,080	4,825	5,580
		制冷量 Cooling Capacity	W	3,319	3,522	1,208	1,403	3,881	4,123	1,413	1,634
			BTU/h	11,336	12,028	4,126	4,790	13,253	14,080	4,825	5,580
	R449A	制冷量 Cooling Capacity	W	3,412	3,527	1,347	1,543	3,992	4,130	1,572	1,794
			BTU/h	11,654	12,045	4,601	5,268	13,633	14,105	5,369	6,128
	R404A	制冷量 Cooling Capacity	W	3,412	3,527	1,347	1,543	3,992	4,130	1,572	1,794
			BTU/h	11,654	12,045	4,601	5,268	13,633	14,105	5,369	6,128
证书 Certificate			UL				UL				

常规参数 General Data

FL 系列 交流变频 / 定速 FL Series AC inverter / Fixed speed

型号 Model		交流变频型 AC Inverter				定速型 Fixed speed	
		FL300DLV-56A3	FL600DLV-90A3	FL800ELV-144A3	FL800ELV-144D3	FL300DL-56C3	FL500DL-90C3
额定输出功率 Rated Output	W	2,200	4,500	6,000	6,000	2,200	3,750
排量 Displacement	cm³/rev.	56.0	90.0	144.0	144.0	56.0	90.0
转速范围 Speed Range	Hz	25-60	30-70	25-75	25-75	-	-
3 相输入电压 Primary power supply 3 phase Voltage	V	200	200	200-220	380-415	-	-
电源 Power supply	相数 Phase	φ	-	-	-	3	3
	电压 Voltage	V	-	-	-	346-380/380-400	346-380/380-400
	频率 Frequency	Hz	-	-	-	50/60	50/60
电机形式 Motor Type		IM	IM	IM	IM	IM	IM
过负载保护 Overload Protection		排气温控器 + 变频控制 Thermostat + Inverter control				排气温控器 Thermostat	
涡旋型线 Scroll Profile		渐开线型 Involute				渐开线型 Involute	
重量 (含油) Weight (include oil)	kg	37	51	94	94	37	51
	lbs	81.6	112.4	207.2	207.2	81.6	112.4
油 Oil		PVE	PVE	PVE	PVE	PVE	PVE
注油量 Oil Charge	cm³	1,200	1,700	3,000	3,000	1,200	1,700
测试条件 Test condition		A	A	A	A	A	A
	N(Hz)	60	60	60	60	50	50
	W	5,910	9,596	20,400	20,400	4,910/5,910	7,970/9,600
性能 Performance	R404A	制冷量 Cooling Capacity	BTU/h	20,184	32,771	69,610	69,610
		输入功率 Input	W	3,904	5,984	10,000	10,000
				2,910/3,440	9,600/5,500		
证书 Certificate		-	-	-	-	-	-

LS 系列 直流变频 / 交流变频 / 定速 LS Series DC inverter / AC inverter / Fixed speed

型号 Model*		直流变频型 DC Inverter		交流变频型 AC Inverter			
		LS400DHD-64DB(Y)G	LS600DHD-90DB(Y)G	LS300DHV-47D2(Y)G	LS400DHV-64D2(Y)G	LS500DHV-80D2(Y)G	LS600DHV-95D2(Y)G
额定输出功率 Rated Output	W	3,000	4,500	2,200	3,000	3,700	4,500
排量 Displacement	cm³/rev.	64	90	47	64	80	95
转速范围 Speed Range	Hz	30-90	30-90	30-90	30-90	30-90	30-90
3 相输入电压 Primary power supply 3 phase Voltage	V	380-415/440	380-415/440	380-415/440	380-415/440	380-415/440	380-415/440
电机形式 Motor Type		DCBL	DCBL	IM	IM	IM	IM
过负载保护 Overload Protection		排气温控器 + 变频控制 Thermostat + Inverter control		排气温控器 + 变频控制 Thermostat + Inverter control			
涡旋型线 Scroll Profile		渐开线型 Involute		渐开线型 Involute			
重量 (含油) Weight (include oil)	kg	34	37	36	36	37	38
	lbs	70.5	81.6	79.4	79.4	81.6	83.8
油 Oil		PVE	PVE	PVE	PVE	PVE	PVE
注油量 Oil Charge	cm³	1,800	1,800	1,800	1,800	1,800	1,800
测试条件 Test condition		A	A	A	A	A	A
	N(Hz)	120	120	60	60	60	60
	W	7,521	10,530	5,329	7,111	8,900	11,098
性能 Performance	R404A	制冷量 Cooling Capacity	BTU/h	25,684	35,907	18,201	24,287
		输入功率 Input	W	4,050	5,400	3,115	4,064
				4,800	6,006		
证书 Certificate		CE	CE	CE	CE	CE	CE

型号 Model*		定速型 Fixed speed		
		LS350DH-64D2(Y)G	LS500DH-83D2(Y)G	LS600DH-95D2(Y)G
额定输出功率 Rated Output	W	3,000	3,700	4,500
排量 Displacement	cm³/rev.	64	83	95
电源 Power supply	相数 Phase	φ	3	3
	电压 Voltage	V	380-415/440	380-415/440
	频率 Frequency	Hz	50/60	50/60
电机形式 Motor Type		IM	IM	IM
过负载保护 Overload Protection		内置保护器 + 排气温控器 Internal protector + Thermostat		
涡旋型线 Scroll Profile		渐开线型 Involute		
重量 (含油) Weight (include oil)	kg	36	37	37
	lbs	79.4	79.4	81.6
油 Oil		PVE	PVE	PVE
注油量 Oil Charge	cm³	1,800	1,800	1,800
测试条件 Test condition		A	A	A
	N(Hz)	50	50	50
	W	5,800	7,603	8,820
性能 Performance	R404A	制冷量 Cooling Capacity	BTU/h	19,808
		输入功率 Input	W	3,410
				4,351
证书 Certificate		CE/CCC	CE/CCC	CE/CQC

*型号带Y表示有油平衡管可并联使用
Models with (Y) is with oil pipe for multiple use

测试条件 Test Condition

	Te(°C)	Tc(°C)	SC(deg)	Ts(°C)
A	-15	45	5	18
B	-6.7	48.9	5	4.4

※电机形式 Motor Type
IM: 感应电机 Induction Motor

NS 系列 直流变频 / 定速 NS Series DC inverter / Fixed speed

型号 Model*		直流变频型 DC Inverter	
		NS400DHD-64DB(Y)G	NS600DHD-90DB(Y)G
额定输出功率 Rated Output	W	3,000	4,500
排量 Displacement	cm³/rev.	64	90
转速范围 Speed Range	Hz	30-90	30-90
3 相输入电压 Primary power supply 3 phase Voltage	V	380-415/440	380-415/440
电机形式 Motor Type		DCBL	DCBL
过负载保护 Overload Protection		排气温控器 + 变频控制 Thermostat + Inverter control	
涡旋型线 Scroll Profile		渐开线型 Involute	
重量 (含油) Weight (include oil)	kg	34	37
	lbs	75.0	81.6
油 Oil		PVE	PVE
注油量 Oil Charge	cm³	1,800	1,800
测试条件 Test condition		B	B
	N(Hz)	120	120
	W	8,900	12,300
性能 Performance	R404A	制冷量 Cooling Capacity	BTU/h
		输入功率 Input	W
证书 Certificate		CE	CE

型号 Model*		定速型 Fixed speed					
		NS300DH-56D2(Y)G	NS350DH-64D2(Y)G	NS500DH-83D2(Y)G	NS600DH-95D2(Y)G	NS300DH-56Q2(Y)G	NS350DH-64Q2(Y)G
额定输出功率 Rated Output	W	2,600	3,000	3,700	4,500	2,600	3,000
排量 Displacement	cm³/rev.	56	64	83	95	56	64
电源 Power supply	相数 Phase	φ	3	3	3	1	1
	电压 Voltage	V	380-415/440	380-415/440	380-415/440	380-415/440	220-240
	频率 Frequency	Hz	50/60	50/60	50/60	50/60	50
电机形式 Motor Type		IM	IM	IM	IM	IM	IM
过负载保护 Overload Protection		内置保护器 + 排气温控器 Internal protector + Thermostat					
涡旋型线 Scroll Profile		渐开线型 Involute					
重量 (含油) Weight (include oil)	kg	36	36	36	37	36	37
	lbs	79.4	79.4	79.4	81.6	79.4	79.4
油 Oil		PVE	PVE	PVE	PVE	PVE	PVE
注油量 Oil Charge	cm³	1,800	1,800	1,800	1,800	1,800	1,800
测试条件 Test condition		B	B	B	B	B	B
	N(Hz)	50	50	50	50	50	50
	W	6,235	7,076	9,401	10,749	6,250	7,250
性能 Performance	R404A	制冷量 Cooling Capacity	BTU/h	21,293	24,165	32,106	36,711
		输入功率 Input	W	3,405	3,846	4,721	5,400
				4,800	6,006		
证书 Certificate		CE/CCC	CE/CCC	CE/CCC	CE/CQC	CE	CE

*型号带Y表示有油平衡管可并联使用 Models with (Y) is with oil pipe for multiple use

N 系列 定速 N Series Fixed speed

型号 Model*		定速型 Fixed speed					
		N300DH-56D2(Y)G	N350DH-64D2(Y)G	N500DH-83D2(Y)G	N600DH-95D2(Y)G	N300DH-56Q2(Y)G	N350DH-64Q2(Y)G
额定输出功率 Rated Output	W	2,600	3,000	3,700	4,500	2,600	3,000
排量 Displacement	cm³/rev.	56	64	83	95	56	64
电源 Power supply	相数 Phase	φ	3	3	3	1	1
	电压 Voltage	V	380-415/440	380-415/440	380-415/440	380-415/440	220-240
	频率 Frequency	Hz	50/60	50/60	50/60	50/60	50
电机形式 Motor Type		IM	IM	IM	IM	IM	IM
过负载保护 Overload Protection		内置保护器 + 排气温控器 Internal protector + Thermostat					
涡旋型线 Scroll Profile		渐开线型 Involute					
重量 (含油) Weight (include oil)	kg	36	36	36	37	36	36
	lbs	79.4	79.4	79.4	81.6	79.4	79.4
油 Oil		mineral	mineral	mineral	mineral	mineral	mineral
注油量 Oil Charge	cm³	1,800	1,800	1,800	1,800	1,800	1,800
测试条件 Test condition		B	B	B	B	B	B
	N(Hz)	50	50	50	50	50	50
	W	6,270	7,000	9,070	10,540	6,100	6,900
性能 Performance	R22	制冷量 Cooling Capacity	BTU/h	21,390	23,880	30,950	35,960
		输入功率 Input	W	2,850	3,160	4,080	4,640
				4,080	4,640	3,050	3,450
证书 Certificate		CCC	CCC	CCC	CQC	-	-

*型号带Y表示有油平衡管可并联使用 Models with (Y) is with oil pipe for multiple use

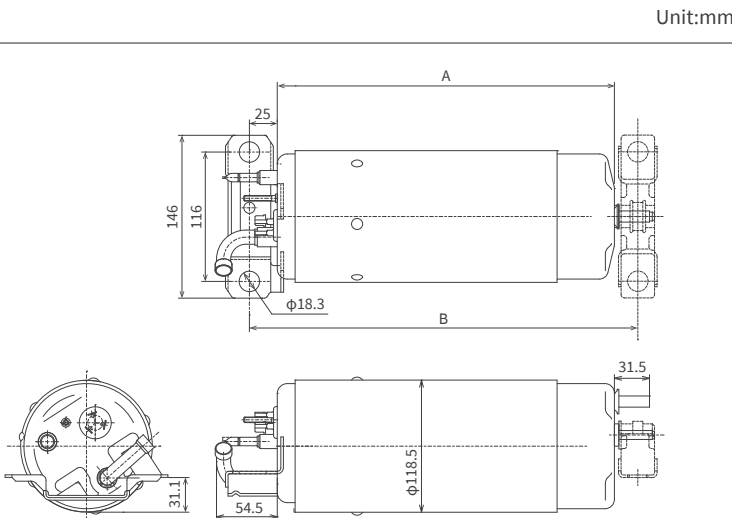
规格 Specification

Z 系列 Z Series



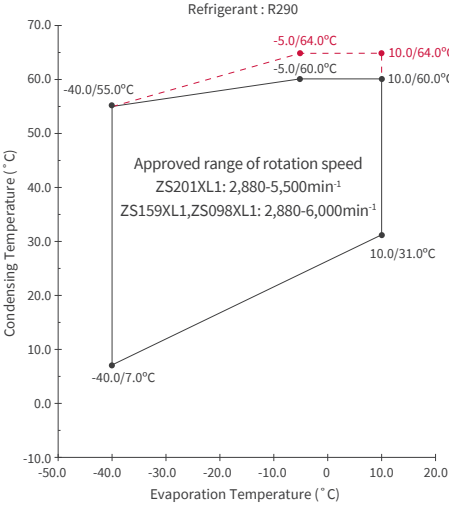
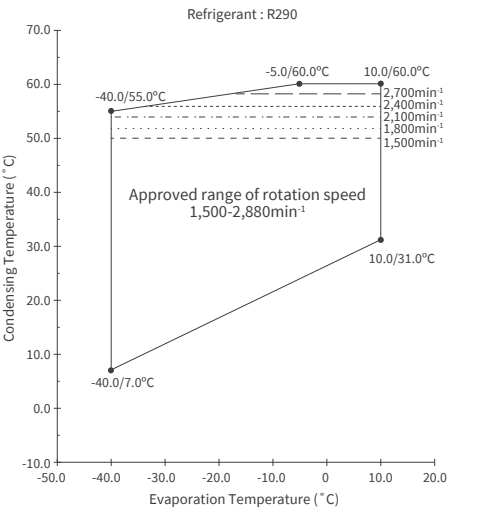
外形尺寸 Dimensions

	A	B		A	B
ZS4084S1	311	358	ZS7798D1	302	348
ZS4084P1			ZS098XJ1		
ZS6013S1			ZS098XL1		
ZS6013P1			ZS159XJ1		
ZS6013X1			ZS159XL1		
ZS6013X3	316	363	ZD125XC1	307	353
ZS7516S1			ZS1216D1		
ZS7516X1			ZS1520D1		
ZS7516S3			ZS201XJ1		
ZS7516X3			ZS201XL1		
ZS1120S3	321	368	ZD201XC1		
ZS1120X3					
ZS1120S1					
ZS1120X1					



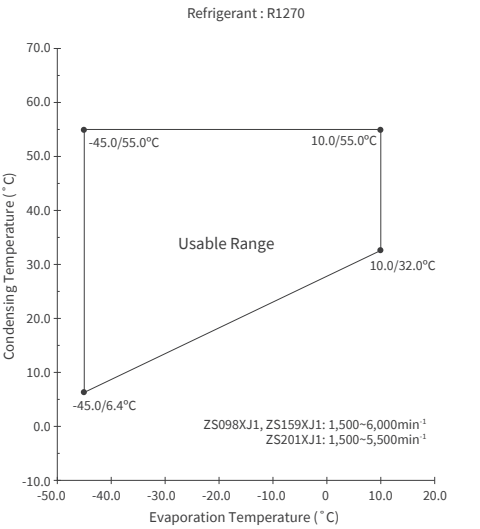
运行范围 Operating Envelop

R290
ZS098XL1/ZS159XL1/ZS201XL1

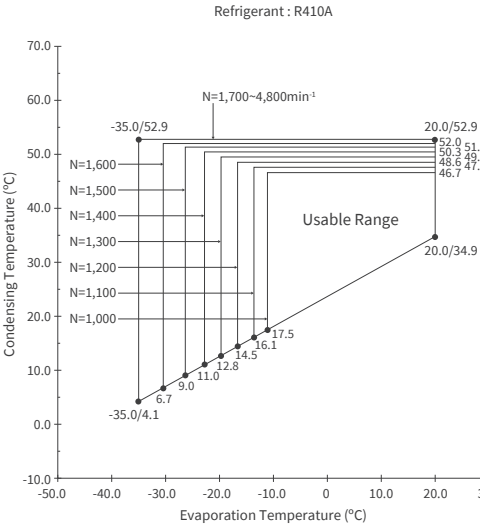


运行范围 Operating Envelop

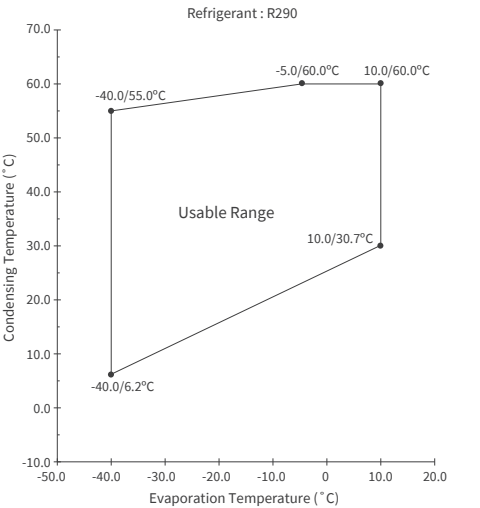
R1270
ZS098XJ1/ZS159XJ1/ZS201XJ1



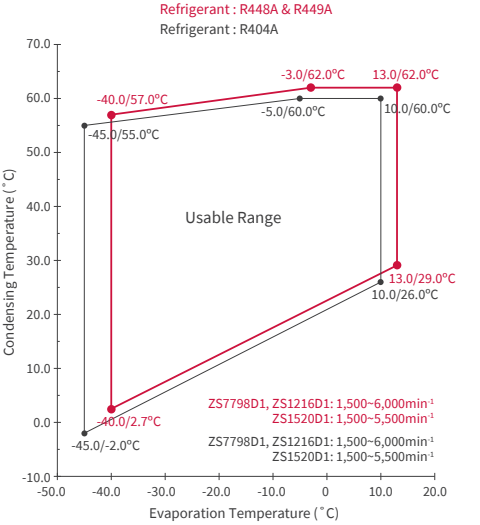
R410A
ZD125XC1



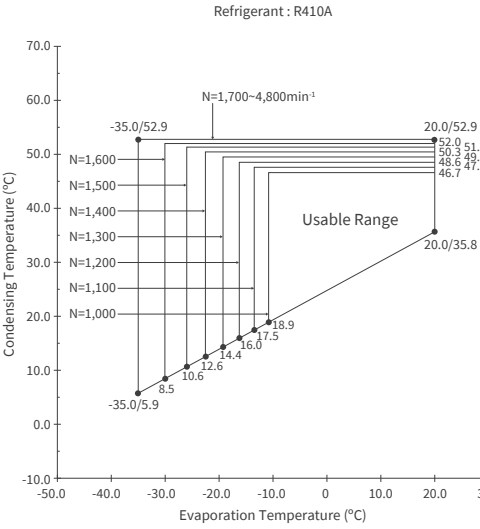
R290
ZS6013X3/ZS7516S3/ZS7516X3



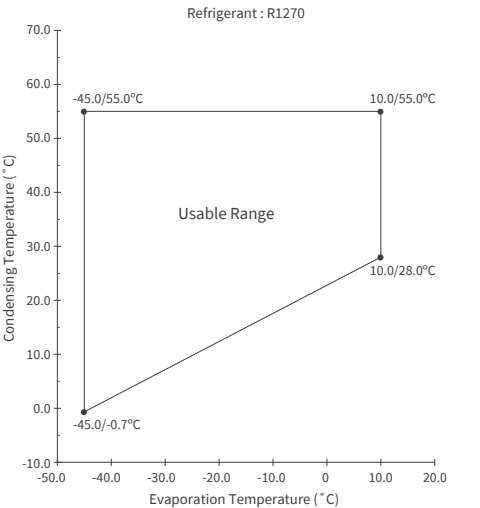
R448A, R449A
ZS7798D1/ZS1216D1/ZS1520D1
R404A
ZS7798D1/ZS1216D1/ZS1520D1



R410A
ZD201XC



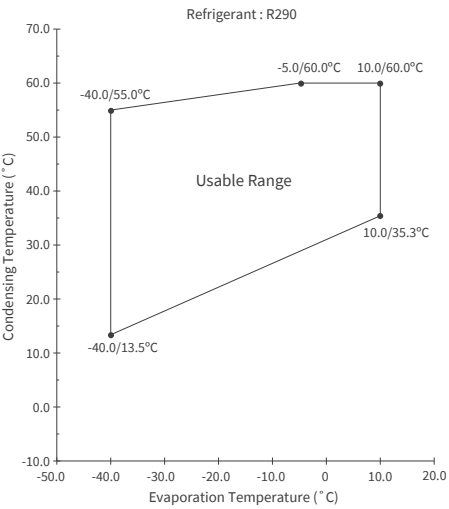
R1270
ZS7516S1



规格 Specification

运行范围 Operating Envelop

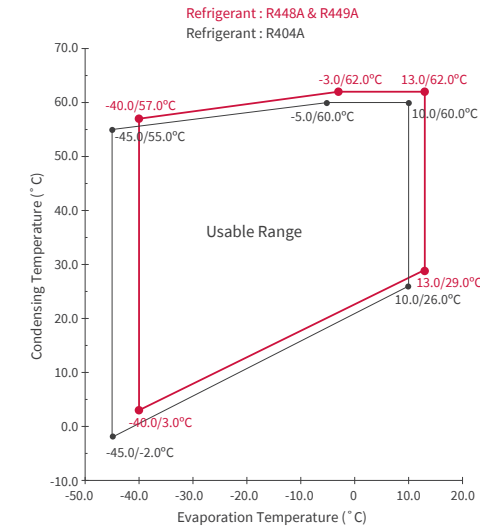
R290
ZS1120S3/ZS1120X3



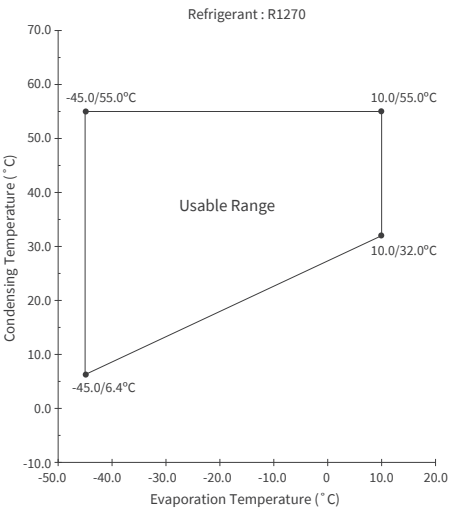
R448A
ZS6013X1/ZS7516X1

R449A
ZS4084S1/ZS6013S1/ZS6013X1/ZS7516S1/ZS7516X1

R404A
ZS4084S1/ZS4084P1/ZS6013S1/ZS6013P1/ZS6013X1/
ZS7516S1/ZS7516X1



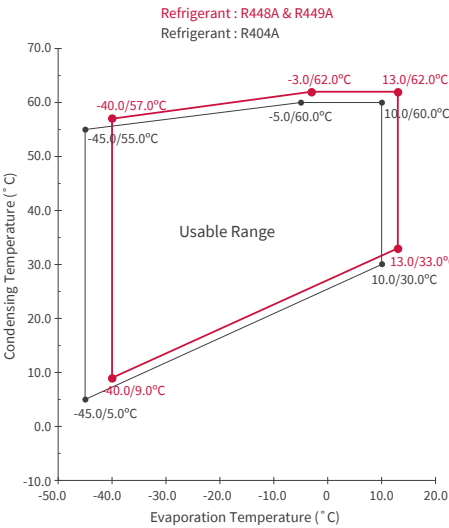
R1270
ZS1120S1



R448A
ZS1120X1

R449A
ZS1120S1/ZS1120X1

R404A
ZS1120S1/ZS1120S2/ZS1120X1

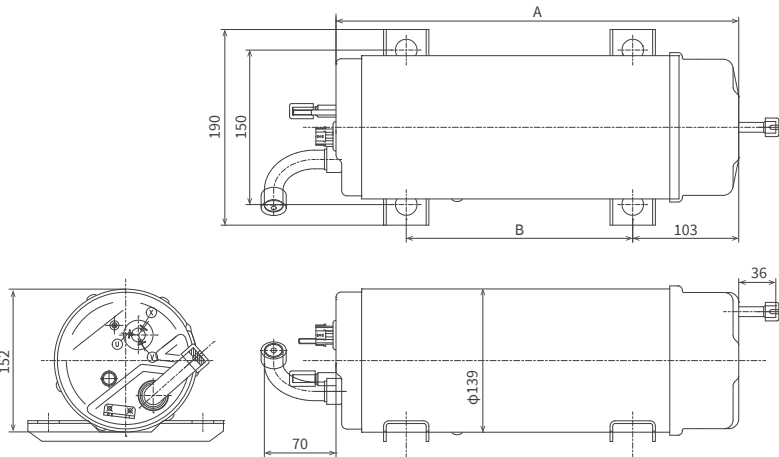


DS 系列 DS Series



外形尺寸 Dimensions

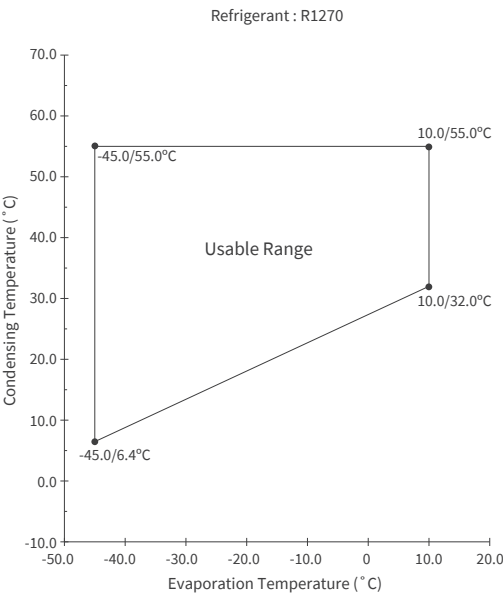
	A	B
DS1529S1		
DS1529X1		
DS1529V1	386	220
DS1834S1		
DS1834X1		
DS1834V1		
DS1836S1	391	220
DS2244V1	441	270



Unit:mm

运行范围 Operating Envelop

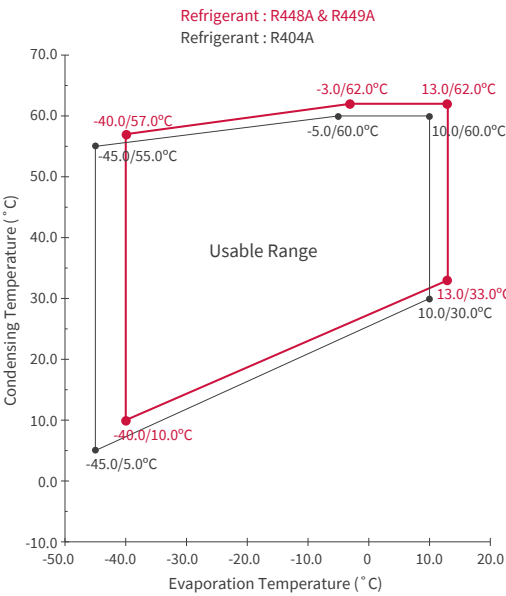
R1270
DS1836S1/DS1529S1



R448A
DS1529X1/DS1834X1

R449A
DS1836S1/DS1529S1/
DS1529X1/DS1834X1

R404A
DS1836S1/DS1529S1/DS1529X1/DS1529V1/DS1834X1/
DS1834V1/DS2244V1



规格 Specification

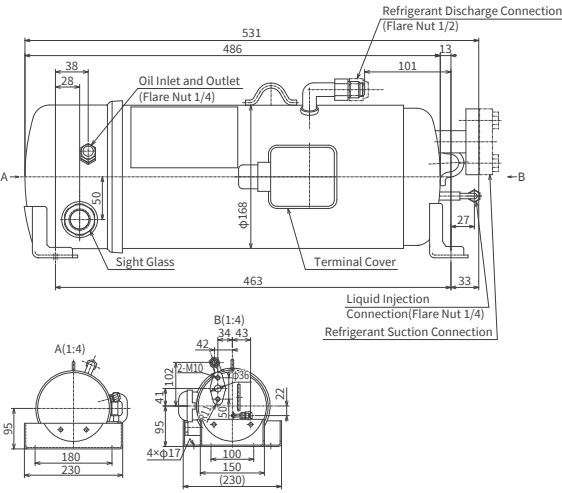
FL 系列 FL Series



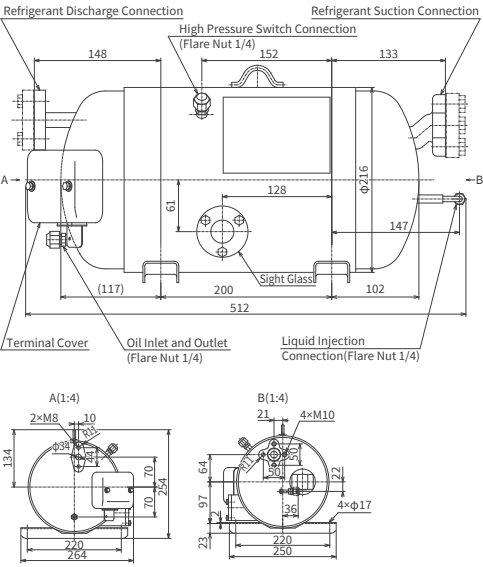
外形尺寸 Dimensions

Unit:mm

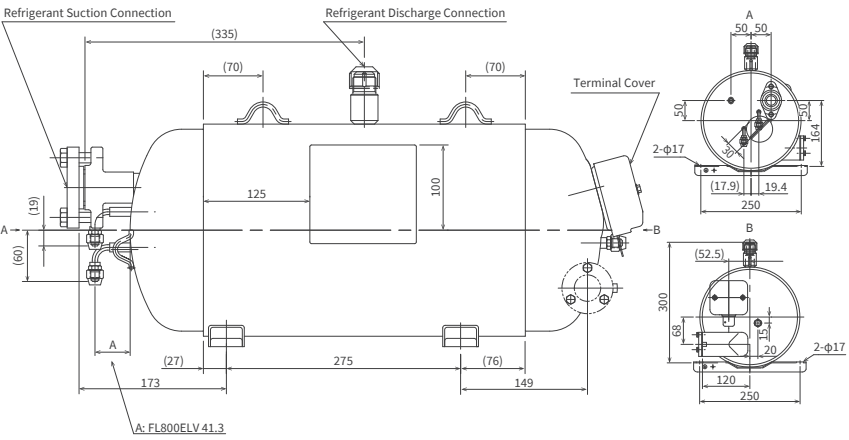
型号 MODEL:
FL300DLV-56A3
FL300DL-56C3



型号 MODEL:
FL600DLV-90A3
FL500DL-90C3

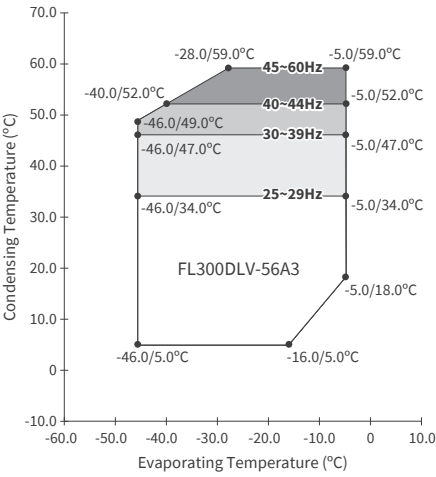


型号 MODEL:
FL800ELV-144A(D)3

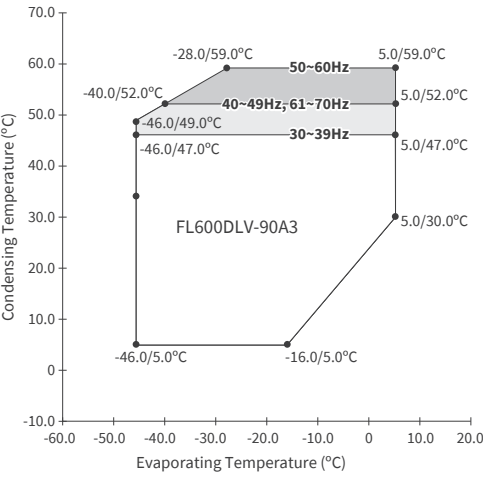


运行范围 Operating Envelop

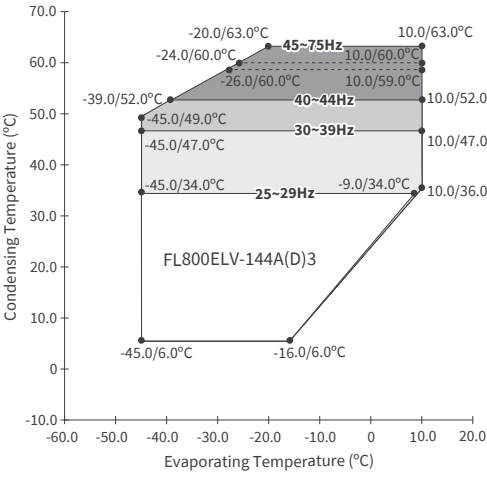
交流变频 AC inverter



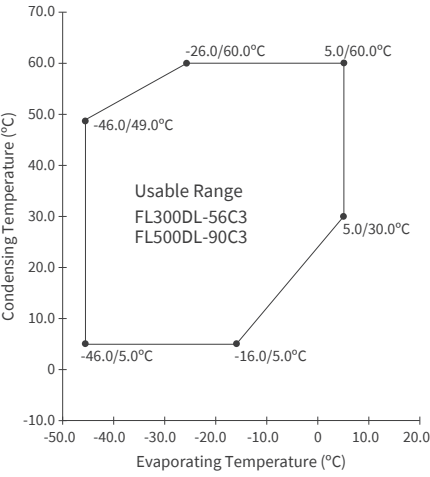
交流变频 AC inverter



交流变频 AC inverter



定速 Fixed Speed



规格 Specification

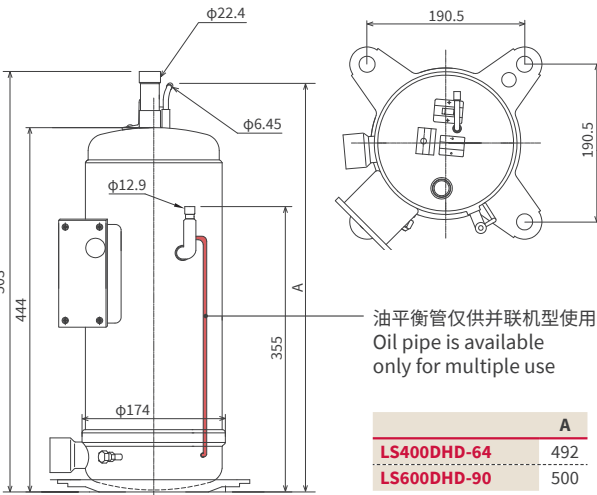
LS, NS, N 系列 LS, NS, N Series



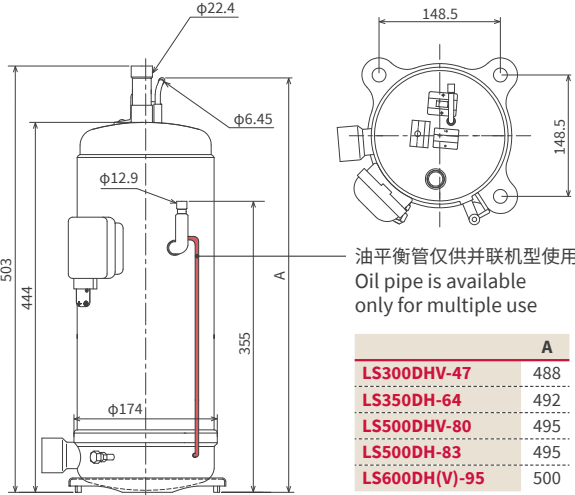
外形尺寸 Dimensions

Unit:mm

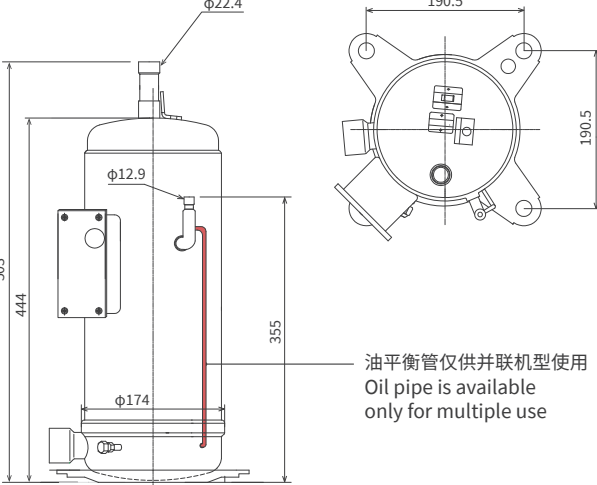
LS DC Inverter



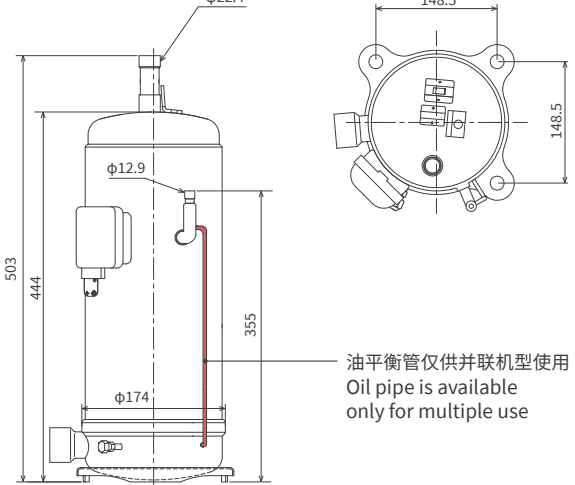
LS AC Inverter & Fixed speed



NS DC Inverter

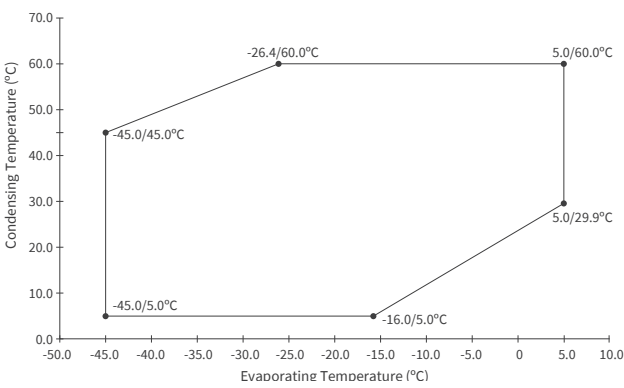


NS, N Fixed speed

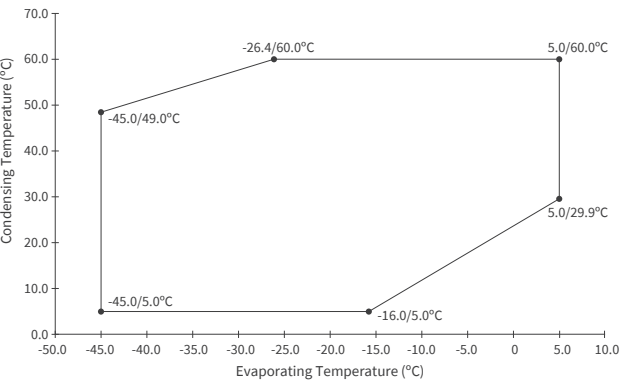


运行范围 Operating Envelop

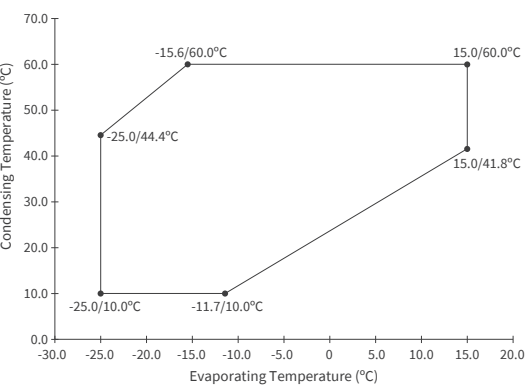
LS DC & AC Inverter Series (R404A)



LS Fixed Series (R404A)



NS DC Inverter & Fixed speed(R404A)



N Series (R22)

