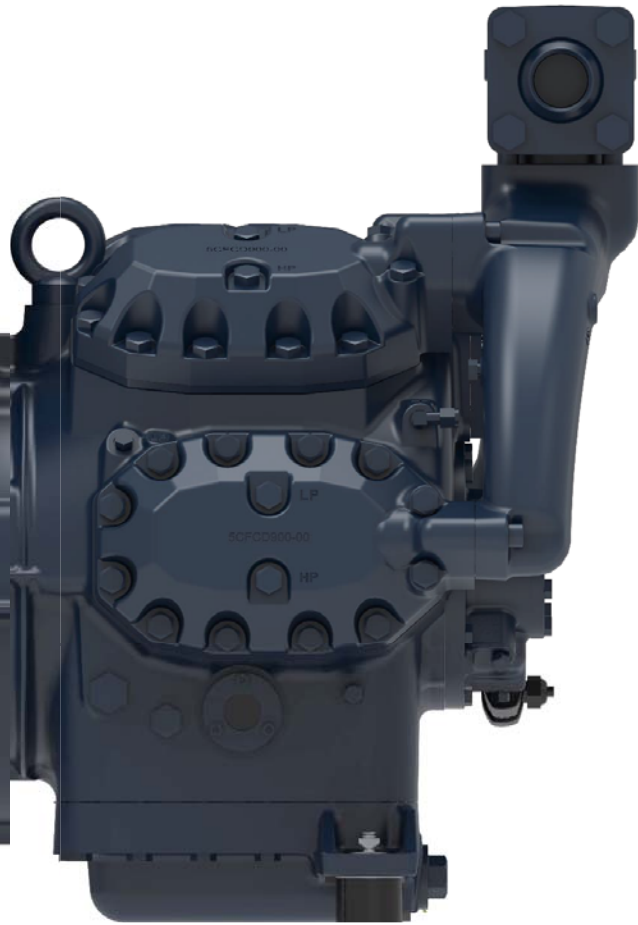




OFFICINE MARIO DORIN SINCE 1918

**DORIN**<sup>®</sup>  
INNOVATION



## HEX-EM 系列

SEMI-HERMETIC MOTOR COMPRESSORS ATEX CERTIFIED

HC APPLICATION - 50/60 Hz

ATEX认证半封闭防爆压缩机系列

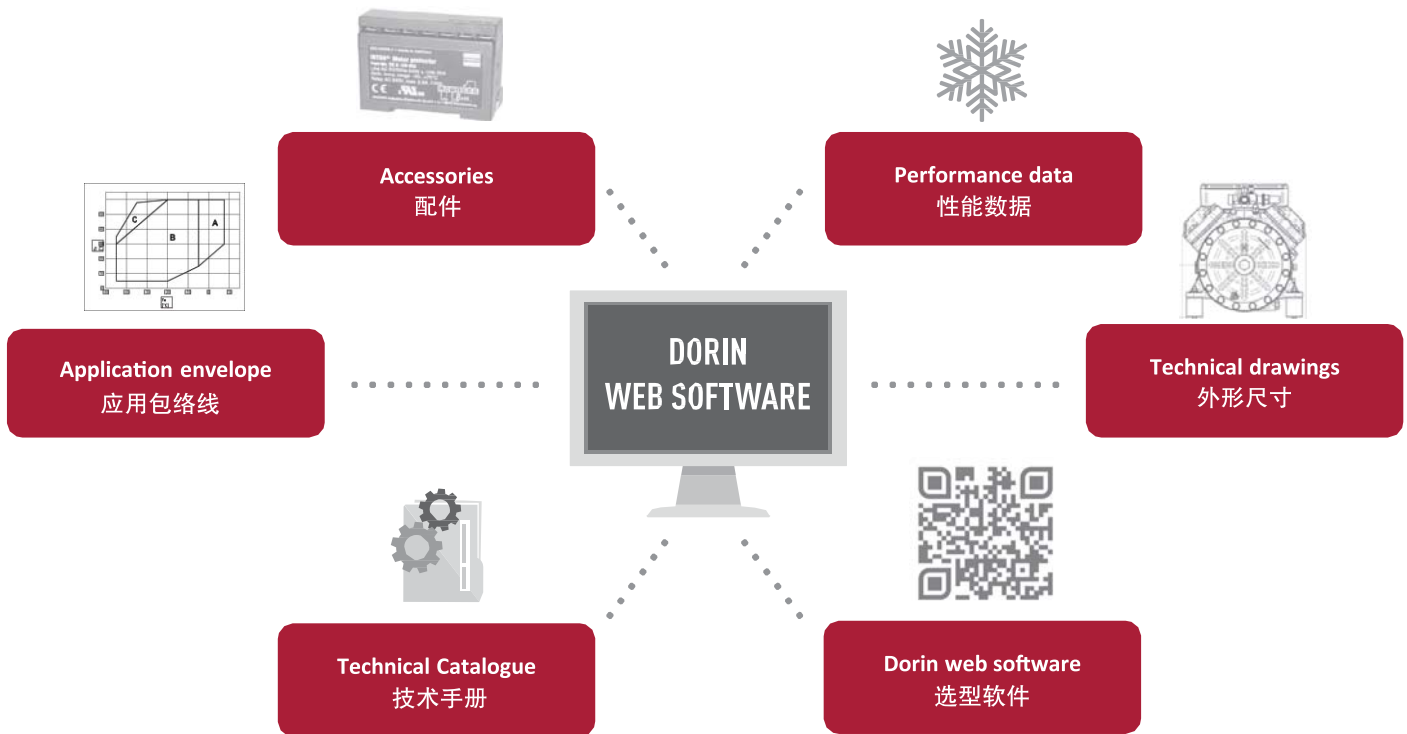
HC 应用- 50/60 Hz





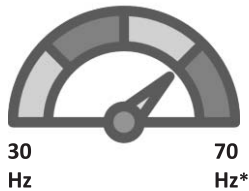
**DORIN Web Software**

都凌 (在线) 选型软件



**Frequency Range**

频率范围



\* Maximum operating frequency to be checked in the dedicated technical bulletin

\* 最大运行频率须参阅专门的技术手册

**Refrigerants in DORIN software (GWP - AR4)**

制冷剂参照选型软件

<b>SAFETY GROUP A3</b> 安全组别A3			
<b>HT</b>	<b>R290 (3)</b>	<b>R600 (4)</b>	<b>R600a (3)</b>

For all the refrigerants not available in the software please contact DORIN for the calculations

对于选型软件未涉及的制冷剂，请联系Dorin都凌技术人员获得相关性能数据。

**Factory certifications**

都凌工厂认证

ISO 45001:2018

ISO 9001:2015



**Compressor certifications**

都凌压缩机认证

## HEX-EM SERIES Features

### HEX-EM系列产品特点



#### Silent operations and low vibrations

运行安静流畅，振动水平低

#### Crankshafts balanced individually, excellent fluid dynamics studies are our strengths

曲轴能够独立平衡运转，这得益于我们出色的流体动力学研究



#### All models VFD compatible

所有型号可变频运行

#### Bore / Stroke values and motors with extra tolerance to high temperature allow wide frequency ranges

电机、缸径、行程的优化配比使之可以实现宽频运行



#### Highest levels of efficiency

优异的运行效率

#### Using latest coating technologies for reducing frictions and improving lubrication

采用最新的涂层技术来减少摩擦和改善润滑



#### Patented oil containment system for extra low oil carry-over for models with oil pump

专利认证的油气分离系统，可显著降低带油泵型号的带油率

#### Higher system efficiency, less oil injections from the oil-separator for higher oil viscosity in the compressor sump

更高的系统效率。油分离器中的润滑油量大幅减少，压缩机中油的粘度得以提高



#### 2 years standard warranty

两年标准质保



#### ATEX Certification II 3G Ex ec h IIB T3 Gc

获得 ATEX II 3G Ex ec h IIB T3 Gc认证



#### All compressors suitable for HC

所有HEX-EM型号均适用于HC ( R290-R600-R600a )



#### Salt spray resistance test, certified for 1000 hours (NSS test in accordance with UNI EN ISO 4628, parts 2,3,8- Assesment method : UNI EN ISO 9227

耐盐雾1000小时测试，认证 ( NSS测试符合UNI EN ISO 4628，第2、3、8部分-评估方法：UNI EN ISO 9227 )



#### Small foot print and reduced gross weight

轻量化和紧凑的设计

#### Optimized displacement values for crankcase size

根据曲轴箱大小对应的最优排量

## HEX-EM SERIES Technical Features Features

### HEX-EM系列产品特点

**1 Extra reliability and efficiency of optimised valve plate design**

最优化的阀板设计保证可靠性和效率

**2 IP65 junction box**

防护等级IP65的电气接线盒

**3 Forced lubrication up to the wrist pin for the models with oil pump**

带油泵的型号，强制润滑到活塞销

**4 Proven reliability of the electric motor thanks to the unique resistance to high temperatures**

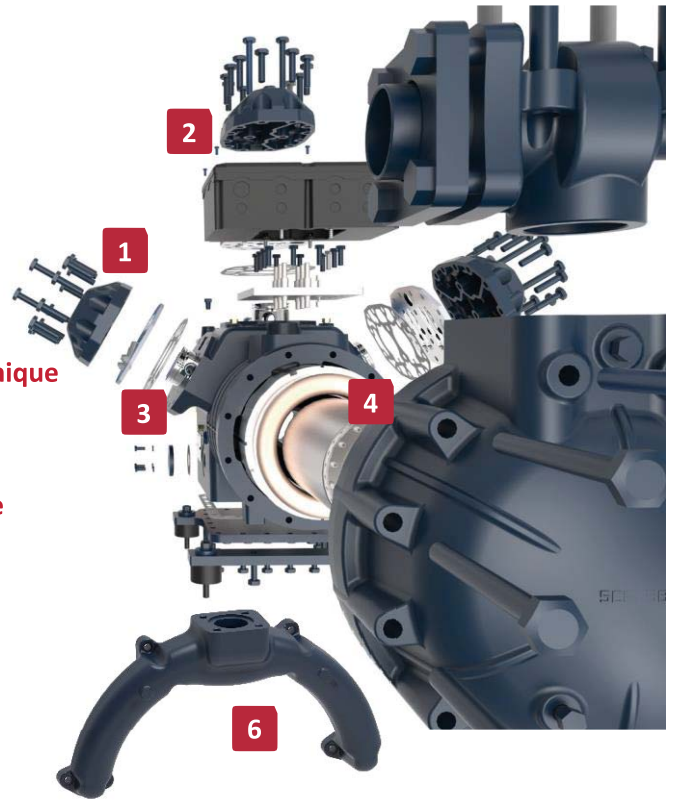
由于独特的耐高温设计，电机的可靠性得到了保障

**5 Crankcase heater and maximum discharge temperature standard accessories**

标配曲轴箱加热器和最高排气温度传感器

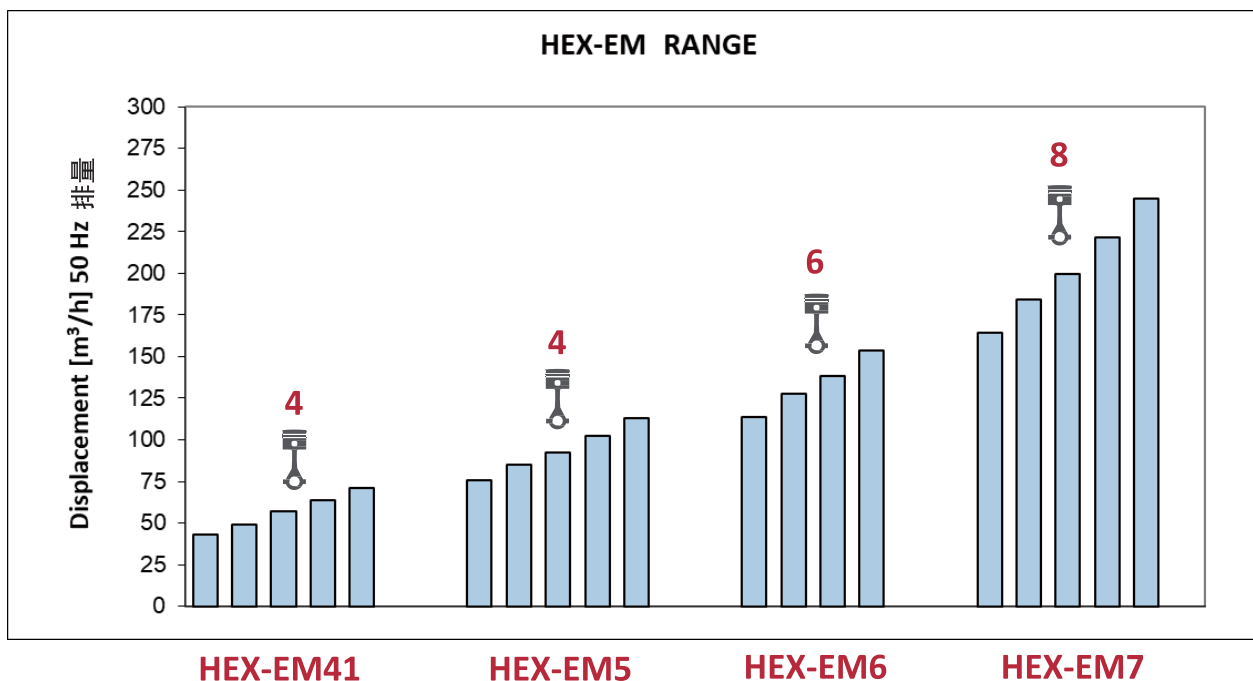
**6 External manifold to reduce the discharge temperature**

外排气腔，可降低排气温度



## HEX-EM range - Displacement

HEX-EM系列 - 排量



**THE WIDEST COMPRESSOR RANG IN THE MARKET**  
 FROM 42,81m<sup>3</sup>/h TO 244,78m<sup>3</sup>/h@50Hz  
 FROM 15 TO 90 HORSE POWER  
 市面上最广的压缩机排量 从42.81 m<sup>3</sup>/h到244.78 m<sup>3</sup>/h @ 50 Hz  
 从15到90 Hp

## Model name

### 型号命名

HEX	EM	150	43	H
SERIES 型号	EXTERNAL MANIFOLD 外排气腔	HP (@ 50 Hz) * 10	DISPLACEMENT VOLUME 排气量	H   HIGH-MEDIUM EVAPORATING TEMPERATURE H   低-中-高蒸发温度

## ATEX Certification

### ATEX认证



Compressors belonging to HEX - EM range are designed according to the safety requirements imposed for the use in flammable risky areas (zone 2, gas group IIB), as defined in ATEX 2014/34/EU. It is mandatory to carefully read instruction manual before compressor installation.

HEX - EM 系列压缩机是根据 ATEX 2014/34/EU 中定义的易燃危险区域（区域 2，气体组 IIB）的安全要求设计的。  
安装压缩机前必须仔细阅读使用说明书。

## Application HEX-EM SERIES

### HEX-EM系列应用领域



**Industrial Refrigeration**  
工业制冷



**Heat pump**  
热泵应用



**Commercial Refrigeration**  
商超制冷

## Standard and Optional Accessories

### 标配件和选配件

		MODEL 型号			
		HEX-EM 41	HEX-EM 5	HEX-EM 6	HEX-EM 7
<p>● STANDARD 标配   ○ OPTIONAL 选配</p>					
	<p><b>Motor Protection (MT)</b> 电机保护 (MT)</p> <p>Compressors are equipped with a PTC probe installed on every motor winding set at 120°C, combined with electronic protection module (REL) 压缩机的每个电机绕组都装有一个PTC探头，设定在120°C与电机保护模块合并。</p>	●	●	●	●
	<p><b>Electronic Protection Module (REL)</b> 电子保护模块 (REL)</p> <p>Keeping under constant control winding temperature and discharge temperature / 确保电机绕组温度和压缩机排气温度在允许温度内</p>	●	●	●	●
	<p><b>Crankcase Heater (CH)</b> 曲轴箱加热器 (CH)</p> <p>The heater is 100 W for HEX-EM 41 and 200W for HEX-EM 6/HEX-EM 7 series (BT001) HEX-EM 41及以下系列加热器的功率为100W，HEX-EM 6 / HEX-EM 7 系列加热器的功率为 200W。(参见技术手册BT001)</p>	●	●	●	●
	<p><b>Self-regulating crankcase heater (TCH)</b> 自适应曲轴箱加热器</p> <p>Increasing the energy efficiency and reducing the warm-up time. The thermal regulated crankcase heater reduces the output power once the set temperature is reached. Depending on the working conditions there is up to 30% energy saving compared to the standard heater (BT001) / 与传统加热器相比，自适应曲轴箱加热器可提高能效并减少预热时间。一旦达到设定温度，自适应曲轴箱加热器会降低输出功率。节能情况视不同工况而变，与传统的曲轴箱加热器相比，最多可节省 30% 的耗能。(参见技术手册 BT001)</p>	○	○	○	○
	<p><b>Maximum discharge temperature sensor (TMAX)</b> 最高排气温度PTC(TMAX)</p> <p>A thermistor probe is monitoring the discharge temperature to be kept be-low 160°C (BT007) / PTC监控压缩机排气温度，确保其保持在 160 ° C 以下。(参见技术手册BT007)</p>	●	●	●	●

## Standard and Optional Accessories

### 标配件与选配件

		MODEL			
● STANDARD 标配   ○ OPTIONAL 选配		HEX-EM 41	HEX-EM 5	HEX-EM 6	HEX-EM 7
	<p><b>Oil differential pressure switch (ODPS) ATEX certified</b> ATEX认证的油压差开关 (ODPS)</p> <p>Compressors with oil pump are equipped with an oil differential pressure switch set at 0,85 bar differential. The oil pressure switch must be connected in series to both thermistors module and all other protections foreseen in the system chain alarm (BT007) / 带油泵的压缩机机型皆标配一个电子油压差开关, 动作差压设置为 0.85 bar。该电子油压差开关必须与电子保护模块及其他所有预设的系统报警控制回路串联连接。(参见技术手册BT007)</p>		●	●	●
	<p><b>Oil charge</b> 润滑油充注</p> <p>All compressors are charged in the factory with PAG (for HC) before the mechanical and electrical running tests 在进行机械和电气测试前, 所有压缩机都已在工厂充注了PAG油 (用于HC)。</p>	●	●	●	●
	<p><b>Inverter</b> 变频器</p> <p>Any model in the HEX range can be equipped with inverter to work at variable speed from 30 Hz until 70 Hz. Each inverter is preset in the factory for an easy installation. Additional info on the compressors working with inverter can be found in the dedicated technical bulletin HEX系列所有型号均可配置变频器使用, 可在30Hz至70Hz之间变频工作。变频器参数在工厂预设置, 方便安装使用。有关压缩机变频操作的更多信息, 请参阅专门的技术手册。</p>	○	○	○	○
	<p><b>Unloaded start (US) ATEX certified</b> ATEX认证的卸载启动 (US)</p> <p>With a part-winding start system it is seldom used the unloaded start for by-passing the suction with the discharge, reducing significantly the absorbed inrush current (BT009) 在分线圈启动的系统中, 通常使用卸载启动 (通过旁通排气到吸气端), 来显著降低启动电流。(参见技术手册BT009)</p>	○	○	○	○
	<p><b>Suction and discharge service valves</b> 吸排气阀</p>	●	●	●	●

## Oil Charge / Service Valves / Net Weight

注油量/吸排气阀/净重

RANGE 系列	MODEL 型号	CYLINDERS 缸数	OIL CHARGE 注油量	SUCTION 吸气	DISCHARGE 排气	NET WEIGHT 净重
		[-]	[LITERS]	Socket welding [mm]	Socket welding [mm]	[kg]
<b>HEX-EM41</b>	HEX-EM 150-43H	4	2,5	35s	28s	130
	HEX-EM 200-49H	4	2,5	42s	28s	131
	HEX-EM 250-57H	4	2,5	42s	28s	131
	HEX-EM 250-64H	4	2,5	42s	28s	136
<b>HEX-EM5</b>	HEX-EM 300-76H	4	3,5	54s	28s	185
	HEX-EM 350-85H	4	3,5	54s	28s	199
	HEX-EM 350-92H	4	3,5	54s	35s	205
	HEX-EM 350-102H	4	3,5	54s	35s	205
<b>HEX-EM6</b>	HEX-EM 400-114H	6	3,5	54s	35s	246
	HEX-EM 500-128H	6	3,5	54s	35s	249
	HEX-EM 500-138H	6	3,5	54s	42s	252
	HEX-EM 500-154H	6	3,5	54s	42s	253
<b>HEX-EM7</b>	HEX-EM 700-164H	8	8,5	66s	42s	355
	HEX-EM 800-184H	8	8,5	80s	42s	355
	HEX-EM 800-200H	8	8,5	80s	42s	357
	HEX-EM 800-222H	8	8,5	80s	54s	357
	HEX-EM 900-245H	8	8,5	80s	54s	366

## Electric Motor FLA (Full Load Ampere)

### 电子最大运行电流 (满载电流)

RANGE 系列	MODEL 型号	DISPLACEMENT 排气量		MAX OPERATING CURRENT / 最大工作电流 V / ph / Hz [A]										MAX ABSORBED POWER 最大输入功率					
		50 Hz	60 Hz	220-240 / 3 / 50	265-290 / 3 / 60	380-420 / 3 / 50	440-480 / 3 / 60	208-230 / 3 / 60	360-400 / 3 / 60	200 / 3 / 50-60	380-420 / 3 / 50	440-480 / 3 / 60	200-240 / 3 / 50	208-230 / 3 / 60	360-400 / 3 / 60	475-525 / 3 / 50	570-630 / 3 / 60	50 Hz	60 Hz
		[m3/h]	[m3/h]	D	Y	D	Y	D	Y	D	PWS	PWS	PWS	PWS	PWS	PWS	[kW]	[kW]	
HEX-EM41	HEX-EM 150-43H	42,81	51,38	59	34	71	41	-	34	59	71	41	27	20	23				
	HEX-EM 200-49H	48,82	58,58	66	38	79	46	-	38	66	79	46	31	23	27				
	HEX-EM 250-57H	56,87	68,25	78	45	93	54	-	45	78	93	54	36	27	32				
	HEX-EM 250-64H	63,76	76,51	78	45	93	54	-	45	78	93	54	36	27	32				
HEX-EM5	HEX-EM 300-76H	75,83	91,00	97	56	116	67	-	56	97	116	67	45	33	40				
	HEX-EM 350-85H	85,01	102,02	104	60	125	72	-	60	104	125	72	48	35	42				
	HEX-EM 350-92H	92,25	110,69	104	60	125	72	-	60	104	125	72	48	35	42				
	HEX-EM 350-102H	102,35	122,82	104	60	125	72	-	60	104	125	72	48	35	42				
HEX-EM6	HEX-EM 400-114H	113,74	136,49	130	75	156	90	-	75	130	156	90	60	46	55				
	HEX-EM 500-128H	127,52	153,02	161	93	193	112	-	93	161	193	112	74	57	68				
	HEX-EM 500-138H	138,37	166,04	161	93	193	112	-	93	161	193	112	74	57	68				
	HEX-EM 500-154H	153,52	184,22	161	93	193	112	-	93	161	193	112	74	57	68				
HEX-EM7	HEX-EM 700-164H	164,30	197,16	208	120	249	144	-	120	208	249	144	96	69	83				
	HEX-EM 800-184H	184,19	221,03	256	148	308	178	-	148	256	308	178	118	86	103				
	HEX-EM 800-200H	199,86	239,83	256	148	308	178	-	148	256	308	178	118	86	103				
	HEX-EM 800-222H	221,75	266,10	256	148	308	178	-	148	256	308	178	118	86	103				
	HEX-EM 900-245H	244,78	293,74	294	170	353	204	-	170	294	353	204	136	99	119				

Standard version of the motor / contact our technical service for operating conditions not present in the catalog  
 标准版电机/联系我们的技术销售部门了解目录中未列出的运行条件

\* The current value refers to the direct connection.  
 电流值指的是直接启动的电流值

## Electric Motor FLA (Full Load Ampere)

### 电子最大运行电流 (满载电流)

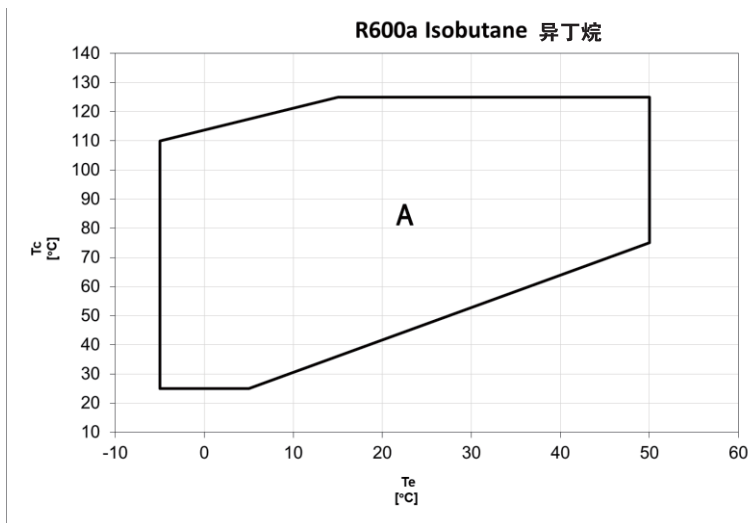
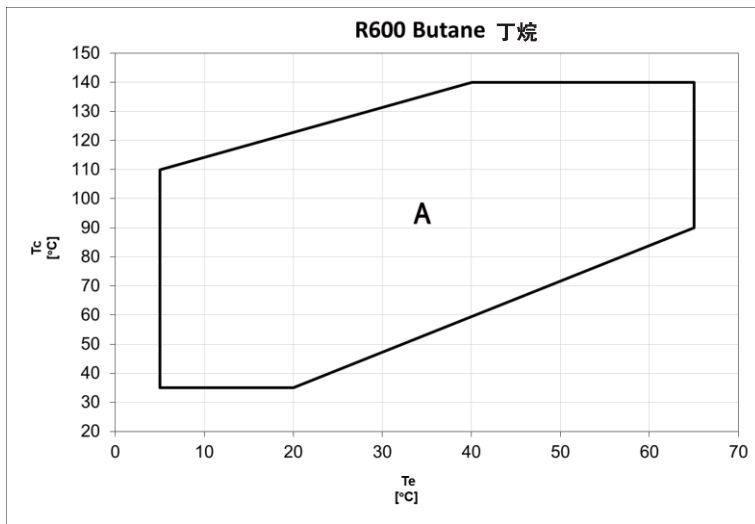
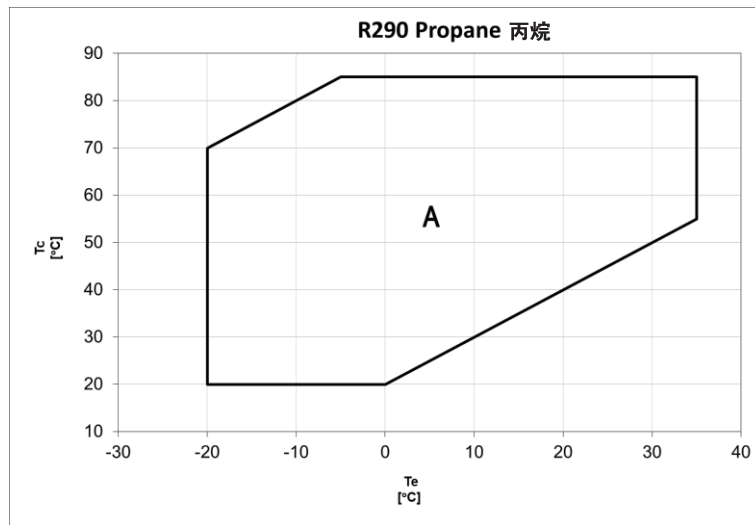
RANGE 系列	MODEL 型号	DISPLACEMENT 排气量		LOCKED ROTOR CURRENT / 锁定转子电流 V / ph / Hz [A]									
		50 Hz	60 Hz	220-240 / 3 / 50 265-290 / 3 / 60 D	380-420 / 3 / 50 440-480 / 3 / 60 Y	208-230 / 3 / 60 D	360-400 / 3 / 60 Y	200 / 3 / 50-60 D	380-420 / 3 / 50 440-480 / 3 / 60 PWS	200-240 / 3 / 50 PWS	208-230 / 3 / 60 PWS	360-400 / 3 / 60 PWS	475-525 / 3 / 50 570-630 / 3 / 60
		[m3/h]	[m3/h]										
HEX-EM41	HEX-EM 150-43H	42,81	51,38	295	171	354	205	-	171	295	354	205	136
	HEX-EM 200-49H	48,82	58,58	306	177	367	212	-	177	306	367	212	142
	HEX-EM 250-57H	56,87	68,25	351	203	421	244	-	203	351	421	244	162
	HEX-EM 250-64H	63,76	76,51	351	203	421	244	-	203	351	421	244	162
HEX-EM5	HEX-EM 300-76H	75,83	91,00	424	245	509	294	-	245	424	509	294	196
	HEX-EM 350-85H	85,01	102,02	450	260	540	312	-	260	450	540	312	208
	HEX-EM 350-92H	92,25	110,69	450	260	540	312	-	260	450	540	312	208
	HEX-EM 350-102H	102,35	122,82	450	260	540	312	-	260	450	540	312	208
HEX-EM6	HEX-EM 400-114H	113,74	136,49	502	290	602	348	-	290	502	602	348	232
	HEX-EM 500-128H	127,52	153,02	619	358	743	430	-	358	619	743	430	286
	HEX-EM 500-138H	138,37	166,04	619	358	743	430	-	358	619	743	430	286
	HEX-EM 500-154H	153,52	184,22	619	358	743	430	-	358	619	743	430	286
HEX-EM7	HEX-EM 700-164H	164,30	197,16	942	544	1131	653	-	544	942	1131	653	435
	HEX-EM 800-184H	184,19	221,03	1012	584	1214	701	-	584	1012	1214	701	467
	HEX-EM 800-200H	199,86	239,83	1012	584	1214	701	-	584	1012	1214	701	467
	HEX-EM 800-222H	221,75	266,10	1012	584	1214	701	-	584	1012	1214	701	467
	HEX-EM 900-245H	244,78	293,74	1143	660	1372	792	-	660	1143	1372	792	528

Standard version of the motor / contact our technical service for operating conditions not present in the catalog  
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\* The current value refers to the direct connection.  
 电流值指的是直接启动的电流值

## Application Envelope

### 应用包络线



The application envelope changes depending on the compressor model and is available for every model and for every refrigerant in the DORIN web software

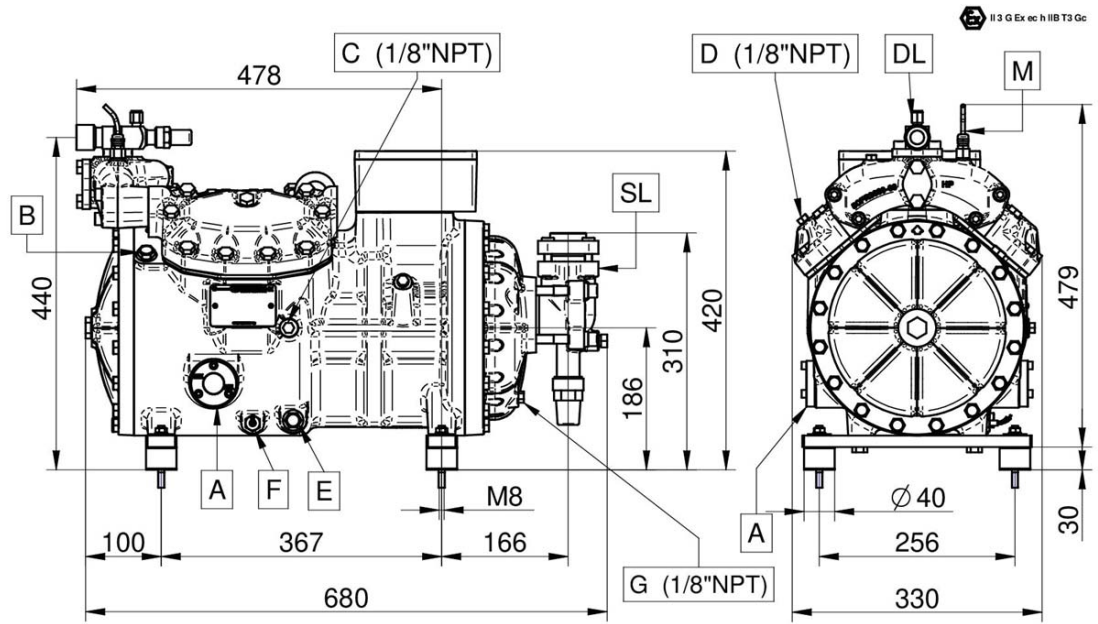
应用包络线随压缩机型号变化并且可以在都凌选型软件查到

**A Standard application** 标准应用程序

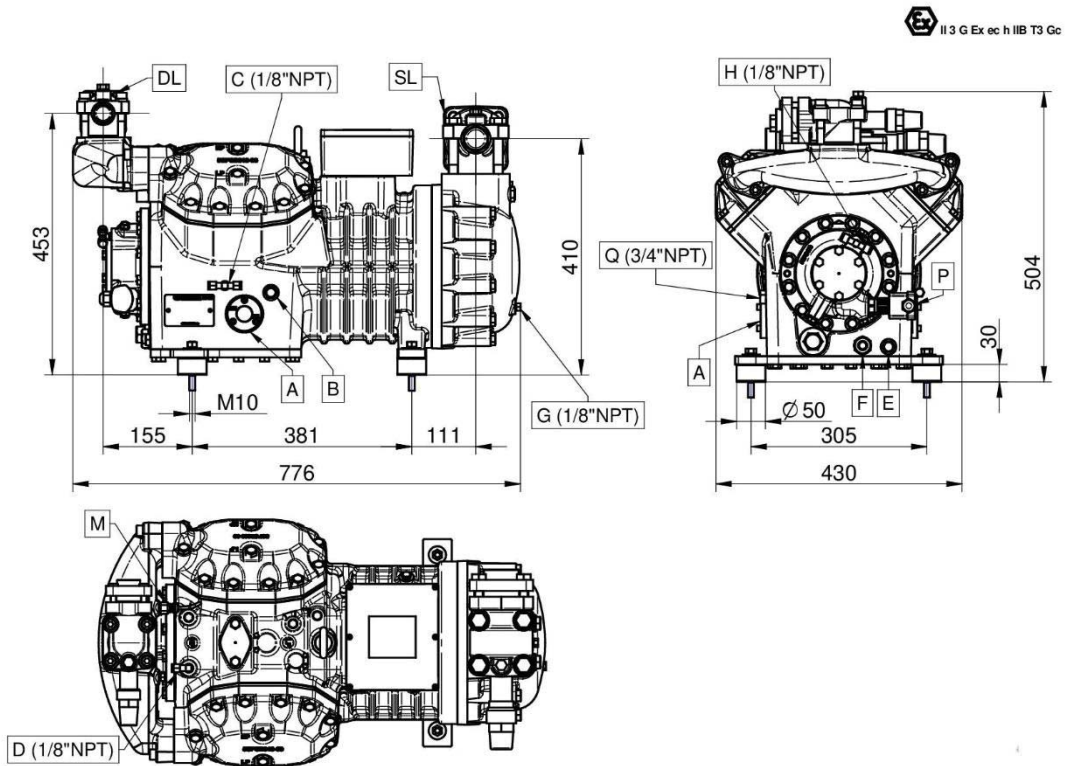
Technical Drawings

外形尺寸

HEX-EM41



HEX-EM5



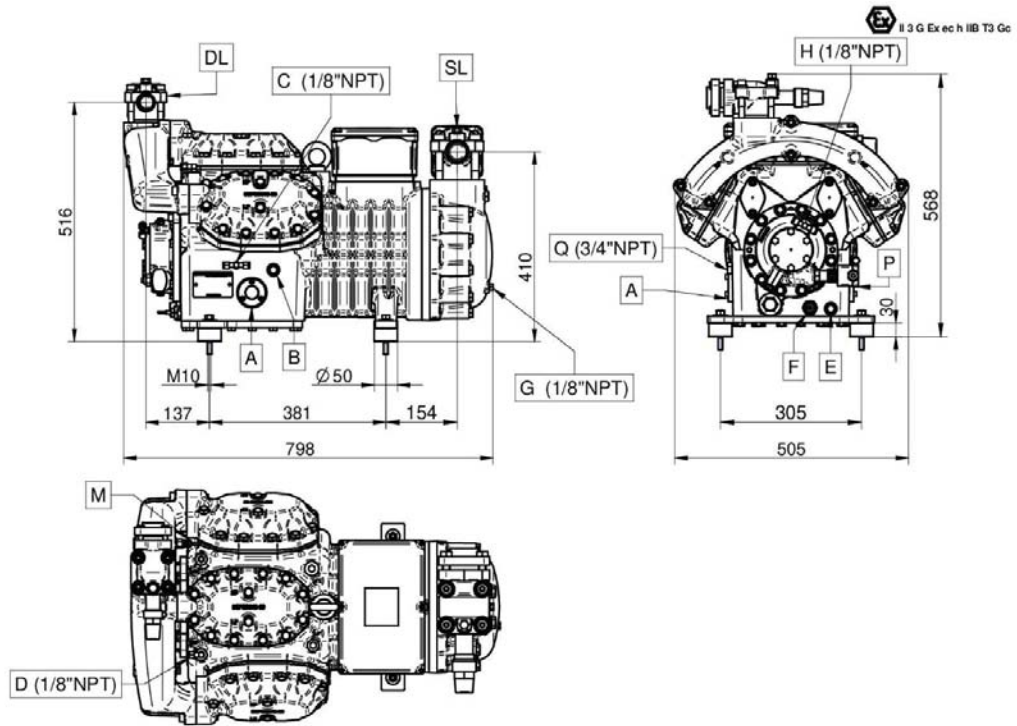
- A – Oil sight glass - 油视镜
- B – Oil charge plug - 注油塞
- C – Low pressure tap - 低压旋塞
- D – High pressure tap - 高压旋塞
- E – Oil drain plug - 排油塞
- F – Crankcase heater - 曲轴箱加热器

- G – Oil return - 回油
- H – Oil pressure tap - 油压旋塞
- M – Maximum discharge temperature sensor - 最高排气温度传感器
- P – Oil pressure switch - 油压差开关
- Q – Gas equalization - 气体平衡
- DL – Discharge service valve - 排气阀
- SL – Suction service valve - 吸气阀

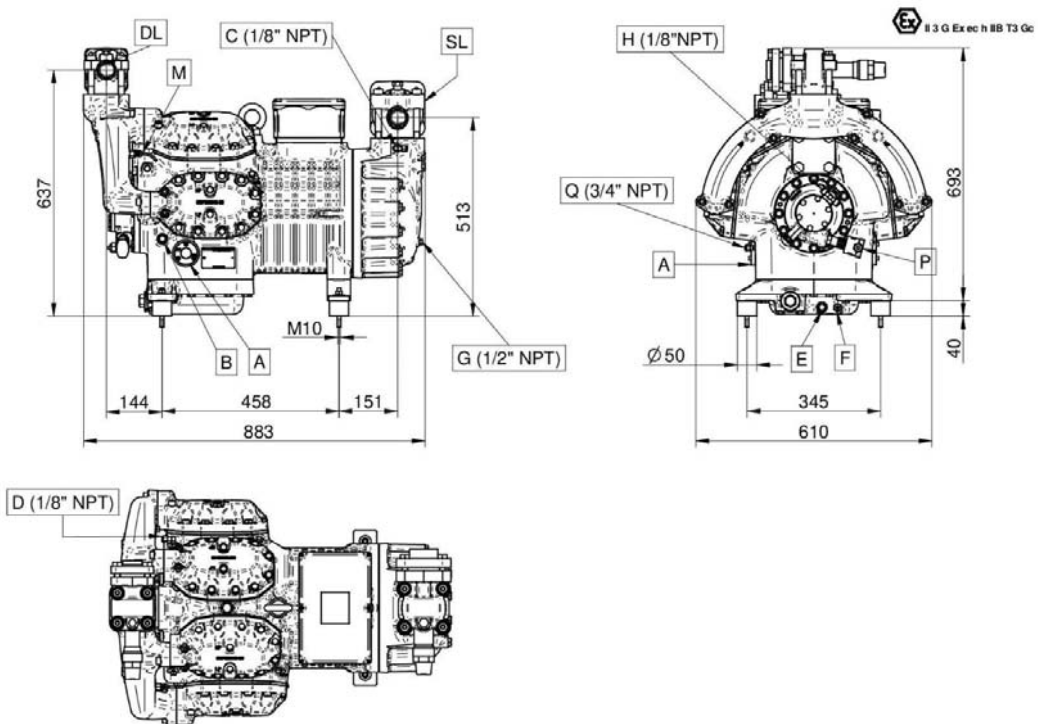
Technical Drawings

外形尺寸

HEX-EM6



HEX-EM7



- A – Oil sight glass - 油视镜
- B – Oil charge plug - 注油塞
- C – Low pressure tap - 低压旋塞
- D – High pressure tap - 高压旋塞
- E – Oil drain plug - 排油塞
- F – Crankcase heater - 曲轴箱加热器

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- DL – Discharge service valve - 排气阀
- SL – Suction service valve - 吸气阀





#### **DORIN WEB SOFTWARE**

Open the camera app on your device and point it at the QR code to scan it. Make sure that all the four corners of the QR code are in view. A pop-up notification will appear on your screen, tap the notifications to launch the code.

Dorin都凌在线选型软件  
扫描二维码，即可在线选型



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