



# FRIMEC®

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[frimec@frimecargentina.com.ar](mailto:frimec@frimecargentina.com.ar)

## Repuestos de Refrigeración para el Transporte

# Valeo

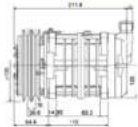


### DISTRIBUIDOR

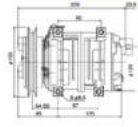
### Compresores Serie TM



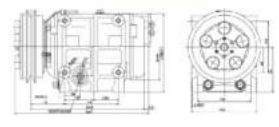
TM 16



TM 21



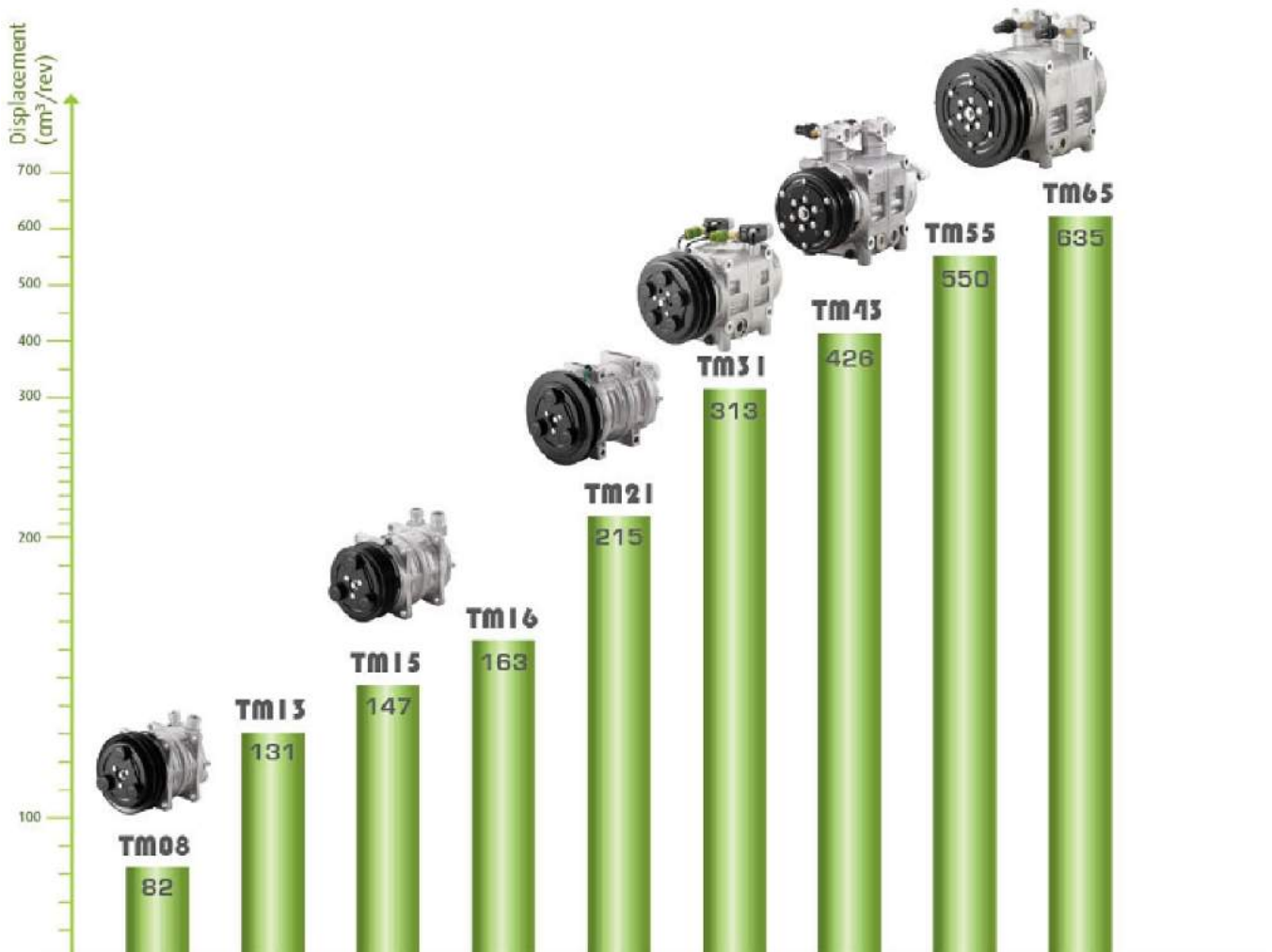
TM 31



- Compresores aptos para tareas de altas exigencias.
- Livianos y Compactos.
- Seguros y Confiables.
- Bajo nivel de ruido y vibración

**APTOS PARA LAS MAYORES EXIGENCIAS EN EL TRANSPORTE  
ESPECIALMENTE DISEÑADOS PARA GAS 404a**

**MADE  
IN  
JAPAN**

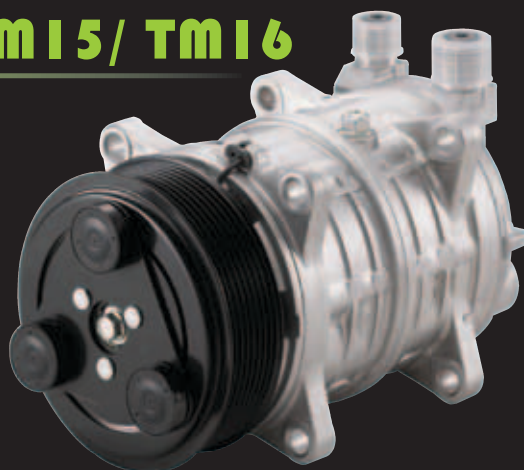


# Technical specifications: **TM13/ TM15/ TM16**



Adaptable Heavy Duty compressors

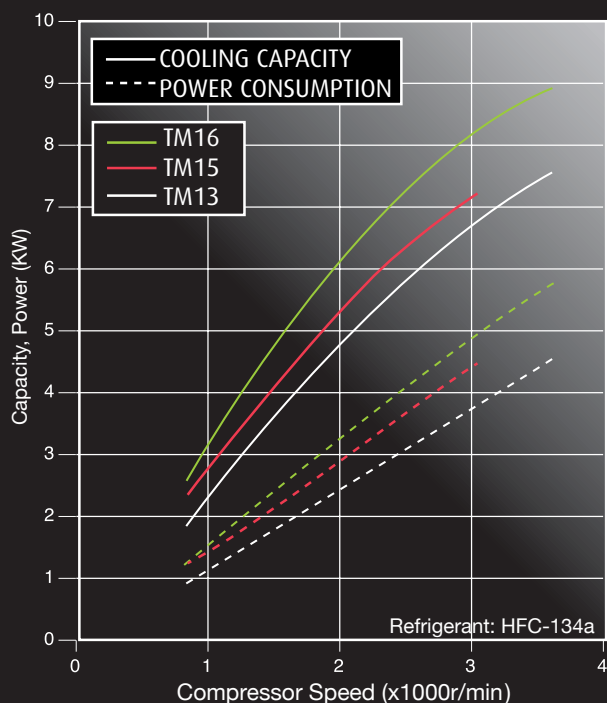
- High reliability
- Especially suitable for truck and refrigeration applications
- Very wide product range



www.valeocompressors.com

MODEL	TM13	TM15*	TM16
DISPLACEMENT	131cm <sup>3</sup> /rev.	147cm <sup>3</sup> /rev.	163cm <sup>3</sup> /rev.
NUMBER OF CYLINDERS	6	6	6
RANGE	700-6000	700-6000	700-6000
REFRIGERANT	HFC-134a	HFC-134a	HFC-134a
OIL	ZXL 100PG 150cm <sup>3</sup>	ZXL 100PG 150cm <sup>3</sup>	ZXL 100PG 180cm <sup>3</sup>
WEIGHT	6.3Kg (with clutch)	6.5Kg (with clutch)	7.1Kg (with clutch)
MOUNT	Ear or Direct	Ear or Direct	Ear or Direct

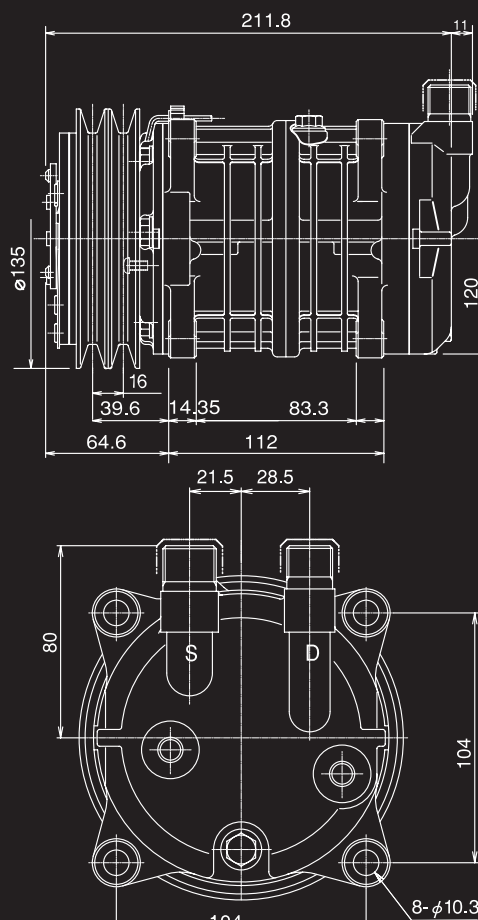
## PERFORMANCE CURVES: TM13, TM15, TM16



### TEST CONDITIONS

Discharge pressure: 1.52MPa (gage)  
 Suction pressure : 0.18MPa (gage)  
 Sub cool :5°C Super heat : 10°C

\*TM14 available on some markets is equivalent to TM15 (same fittings, size, options and performances)

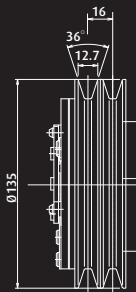


valeo added

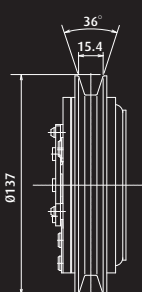
## MAGNETIC CLUTCH VARIATIONS



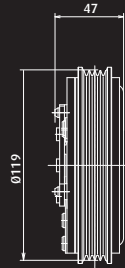
135-1AG



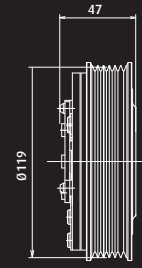
135-2AG



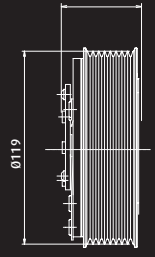
137-1BG



119-4PK



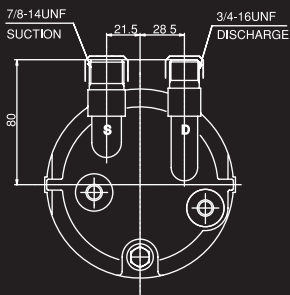
119-6PK



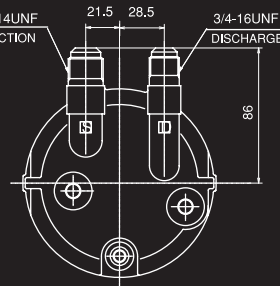
119-8PK

Also available : 10 and 12 groove magnetic clutches

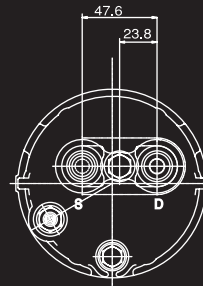
## CYLINDER HEAD VARIATIONS



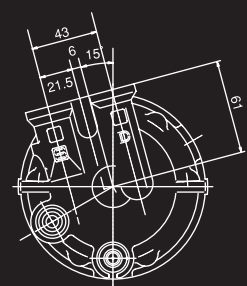
O-RING TYPE  
MOUNTING



FLARE TYPE

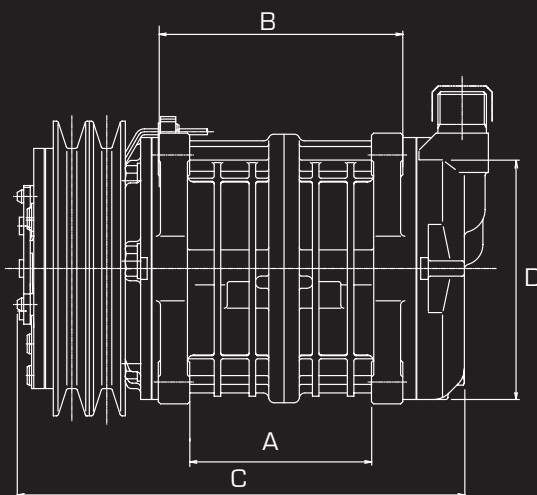


GM PAD TYPE



VERTICAL PAD TYPE

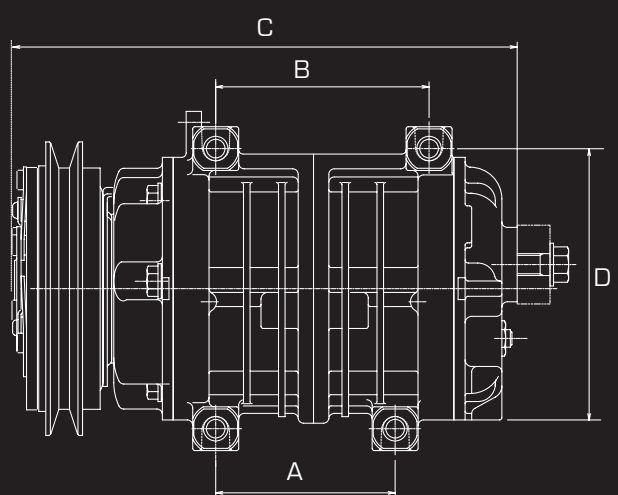
### EAR



	A	B**	C	D	Oil capacity
<b>TM-13A</b>	83.3mm	112mm	187mm	104mm	150cc
<b>TM-13Ashort</b>	73.3mm	98mm	196.7mm	104mm	150cc
<b>TM-15A</b>	83.3mm	112mm	204.8mm	104mm	150cc
<b>TM-16A</b>	83.3mm	112mm	211.8mm	104mm	180cc

\*\* may vary with options

### DIRECT



	A	B	C	D
<b>TM-13A (DM)</b>	82mm	82mm	203.7mm	138mm
<b>TM-15A (DM)</b>	78mm	90mm	204.8mm	128mm
<b>TM-16A (DM)S</b>	87mm	92mm	219mm	128mm

## Technical specifications: **TM21**

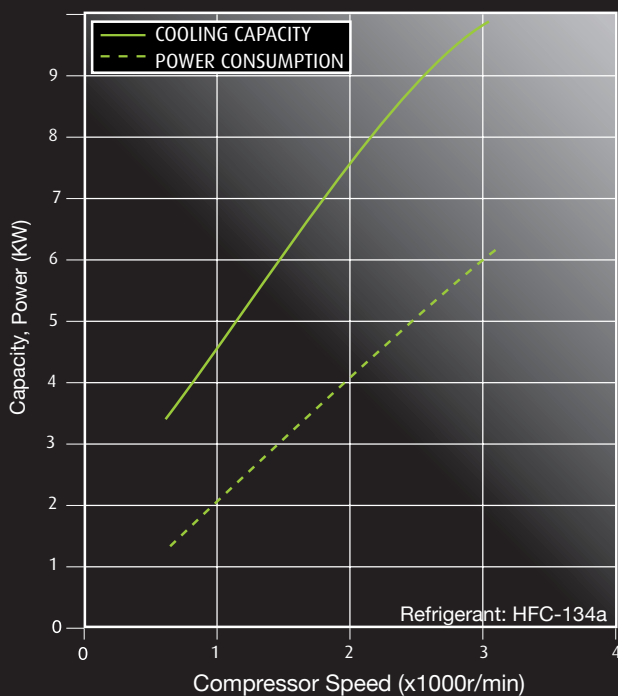


Heavy duty compressor

- High durability
- Smooth operation & high efficiency
- Compact packaging & light weight

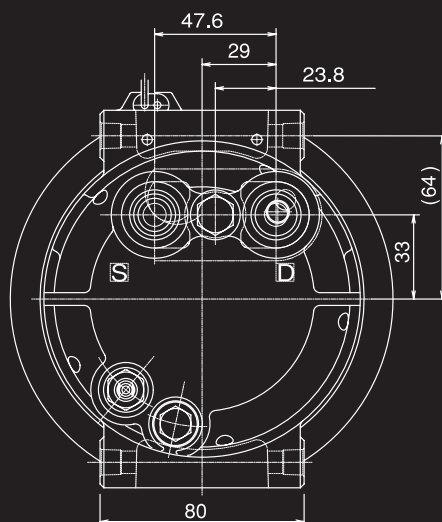
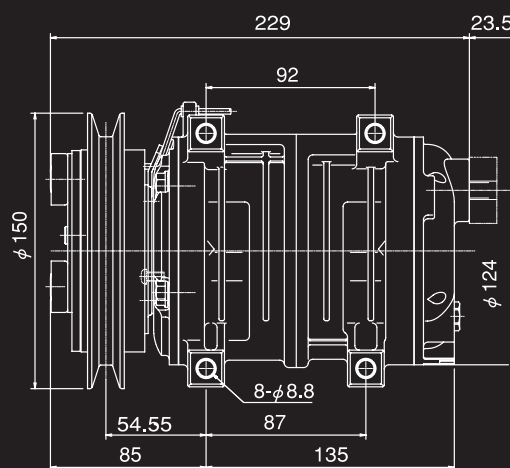
MODEL	TM21
DISPLACEMENT	215cm <sup>3</sup> /rev.
NUMBER OF CYLINDERS	10
RANGE	700-6000
REFRIGERANT	HFC-134a
OIL	ZXL 100PG 180cm <sup>3</sup>
WEIGHT	8.1Kg (with clutch)
MOUNT	Direct

### PERFORMANCE CURVES: TM21HD



#### TEST CONDITIONS

Discharge pressure: 1.52MPa (gage)  
 Suction pressure : 0.18MPa (gage)  
 Sub cool :5°C Super heat : 10°C



145-2AG

149-2BG

150-1BG

127-8PK

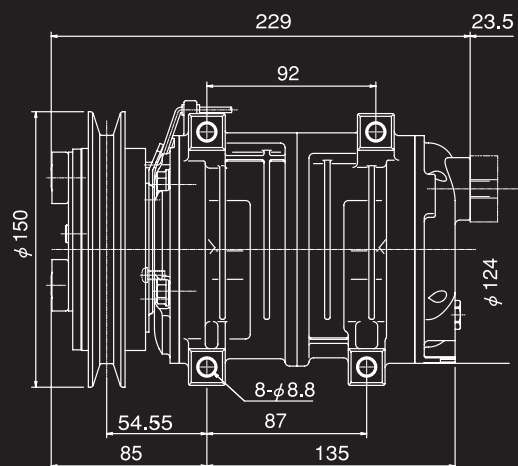
137-8PK

## CYLINDER HEAD VARIATIONS



## VERTICAL FLANGE TYPE CONNECTOR

## DIRECT



# Technical specifications: **TM31 (DKS32)**



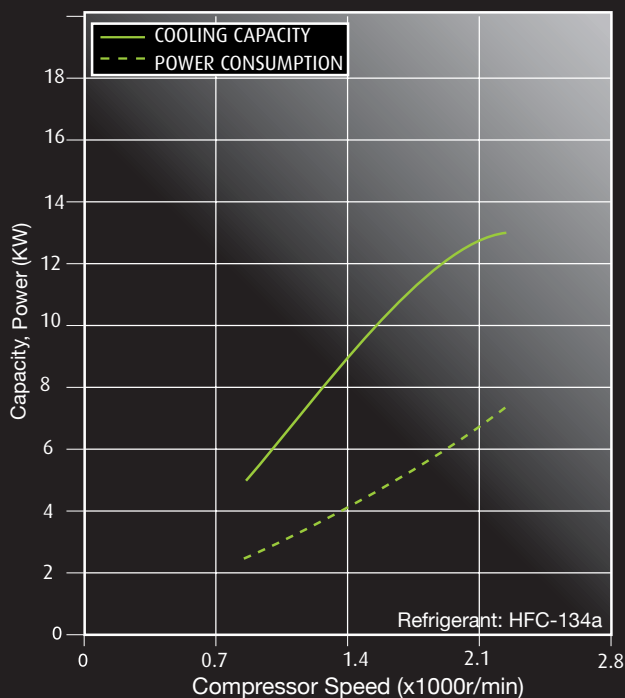
High capacity and heavy duty compressor  
 -Smooth operation  
 -High efficiency and durability  
 -Optimized lubrication system with oil pump and sight glass



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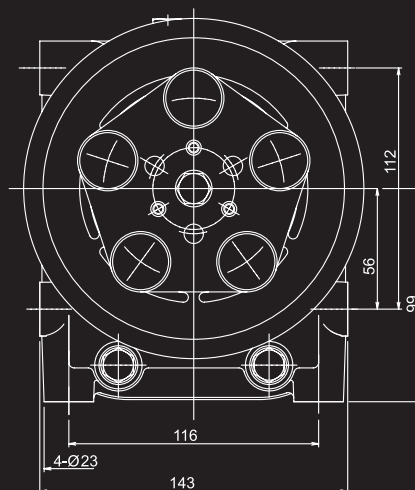
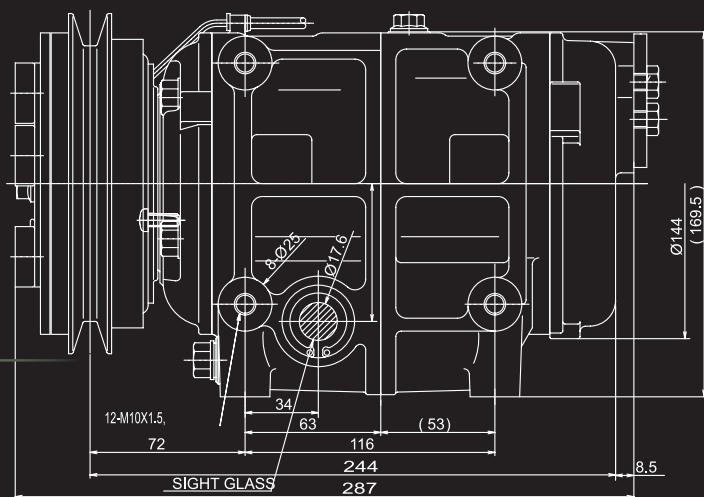
MODEL	TM31/ DKS32
DISPLACEMENT	313cm <sup>3</sup> /rev.
NUMBER OF CYLINDERS	10
RANGE	700-5000
REFRIGERANT	HFC-134a
OIL	ZXL 100PG 500cm <sup>3</sup>
WEIGHT	15.5Kg (with clutch)
MOUNT	Direct

## PERFORMANCE CURVES: TM31/ DKS 32

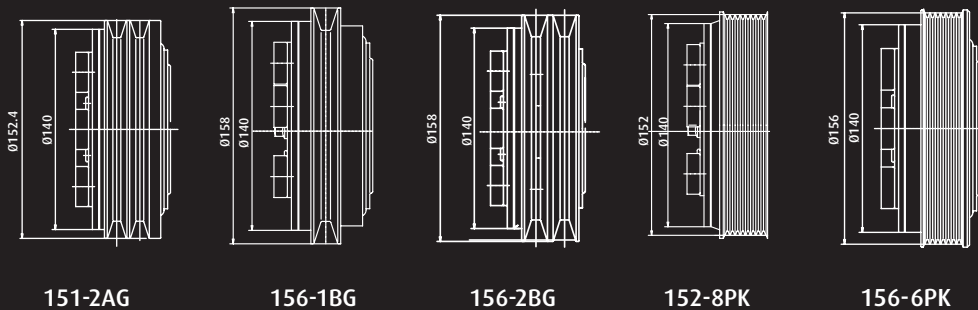


### TEST CONDITIONS

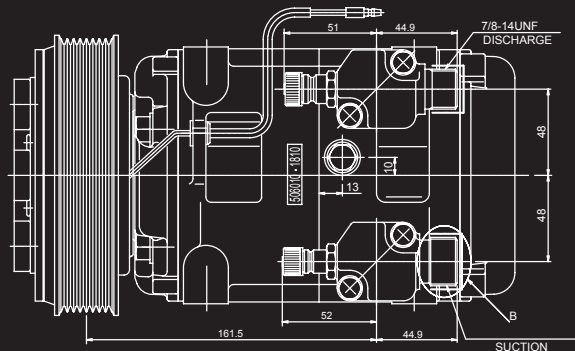
Discharge pressure: 1.52MPa (gage)  
 Suction pressure : 0.18MPa (gage)  
 Sub cool :5°C Super heat : 10°C



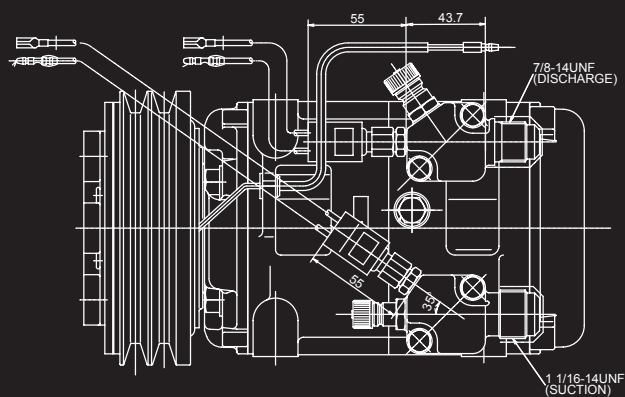
## MAGNETIC CLUTCH VARIATIONS



## SUCTION & DISCHARGE CONNECTORS



Connectors with Charge Nipple

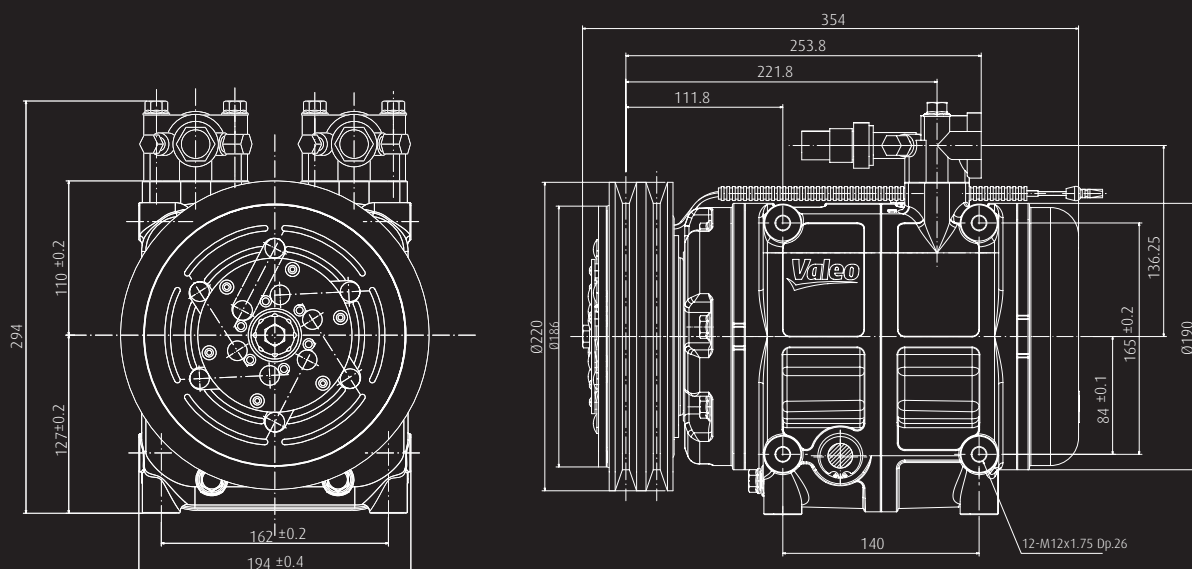


Connectors with Pressure Switch

# Heavy Duty Air Conditioning Compressors



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valeo added 

Enabling a better automotive world





## Valeo Compressors

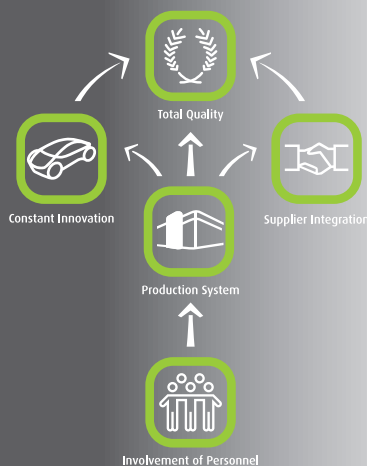


# Valeo Compressors: high performance, best reliability and service

## 5 axes for customer satisfaction

Valeo Compressors is dedicated to the Design, Production and Sales of air conditioning compressors.

Designing high performance and high efficiency compressors is a way for us to ensure our customers' business profitability and growth. Hundreds of engineers within our research and development department aim at delivering leading technologies and design solutions for your present and future needs.



Manufacturing excellence together with integration of the best suppliers is our way to guarantee that our compressors set the highest standard in quality and reliability. Total quality is achieved through the 5 axes methodology applied by all Valeo employees. Sales of compressors is for us an opportunity to bring value to our customers. Adding value implies that beyond ensuring on time delivery of quality products, we deliver a comprehensive service. Each of our sales engineers has worked several years in our Research and Development center, acquiring extensive knowledge of compressors and A/C loop. Our fully qualified sales engineers are always ready to support you in integrating our compressor into your unique system. We invite you to discover more about us and our products along this brochure. You may well discover along the following pages new solutions we can deliver and imagine how we can support your long term success.

## Valeo Compressors brands

Valeo Compressors has the strength of an international corporation and distributes a complete range of compressors thanks to the rich cultural and technological background of 3 well known brands:



Tama Compressors is well known as the creator of the TM series. The legendary reliability of the TM series remains a tribute to its still growing success, and still remains unmatched by any imitation. The Tama brand is notably strong in the Asian market. Seltec brand fame is the result of the strong effort we have delivered for years to adapt to new customers especially in North American and European market. Valeo brand is also actively developing globally thanks to the strength and well-known excellence delivered by Valeo for years in all markets worldwide. Our technology and products are also re-branded by some distributors in select markets. Notably, the Zexel brand belongs to one of our Japanese aftermarket distributors.

# Valeo group

## PROFILE:

Valeo, an independent industrial group, ranks among the world's leading automotive suppliers.

Valeo is organized into industrial products families. Being one of them Valeo Compressors propose innovative solutions that best fits to-day's OEM and Aftermarket needs.



Lighting  
Systems



Wiper  
Systems



Security  
Systems



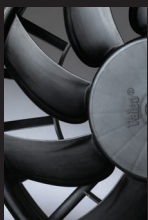
Engine Manage-  
ment Systems



Electrical  
Systems



Interior Controls



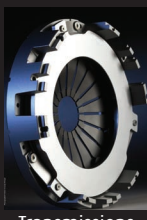
Engine  
Cooling



Compressors



Climate  
Control



Transmissions



## VALEO COMPRESSORS:

> Establishment: April, 2005  
> Annual Sales: 414 million Euro  
> Workforce: 3,086 employees  
> Headquarters: Tokyo - Japan

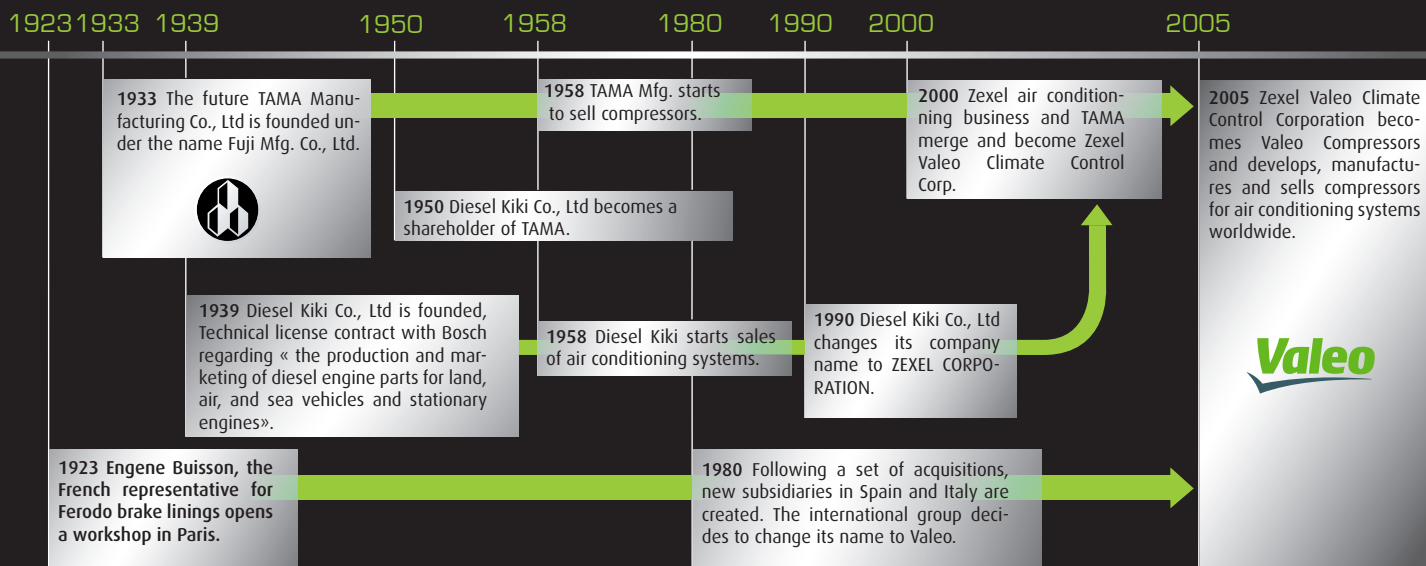
> Presence: 9 plants worldwide,  
8 R&D centers,  
8 sales offices



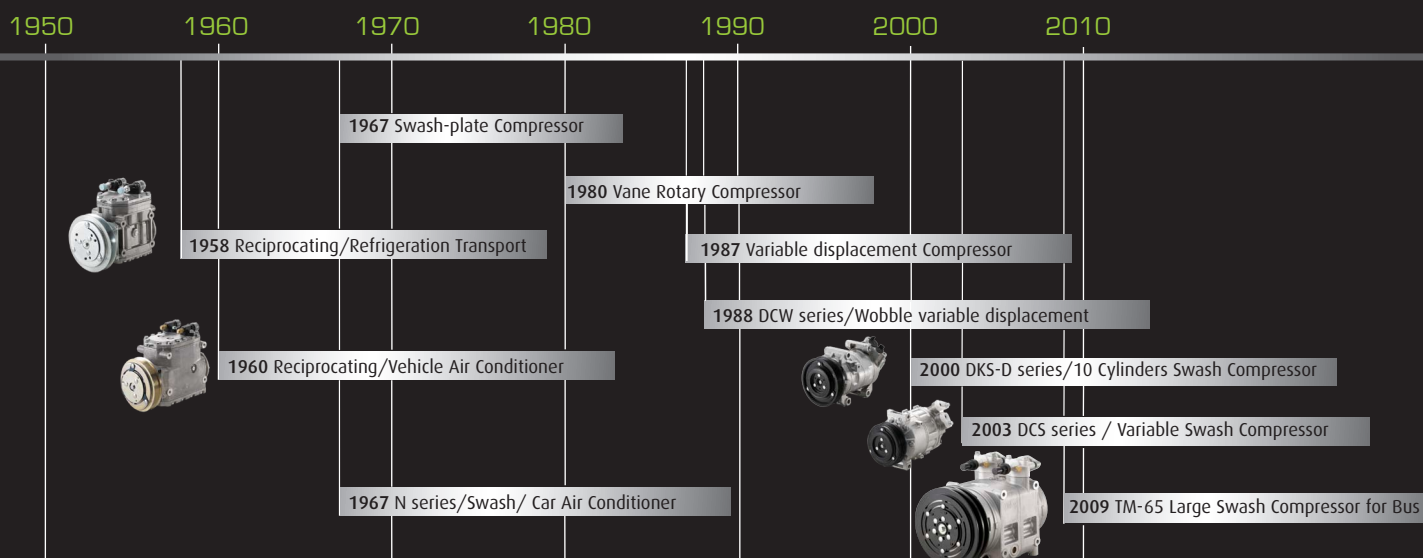
# Valeo Compressors history

The Valeo Compressors legacy goes back to 1958 in the Japanese prefecture of Gunma, when the company Tama manufacturing, founded in 1933, started to manufacture air-conditioning compressors. Tama manufacturing was renamed Zexel Valeo Climate Control Corporation in 2000 when it absorbed former Zexel group climate control business and welcomed Valeo group as one of its major shareholders. In 2005, Zexel Valeo Climate Control Corporation became a fully owned subsidiary of Valeo following a successful merger with Valeo Climate Control business. Since then, Valeo Compressors has been one of the fastest growing product families of Valeo Group, taking advantage of both eastern and western cultural backgrounds for superior quality and performance.

## COMPANY HISTORY



## COMPRESSORS



# Solutions meeting customers' expectations

Valeo Compressors is one of the world's leading manufacturers of automotive air-conditioning and refrigeration compressors. Our advanced technology enables us to deliver a highly qualitative and cost competitive range of products which has established us as an Original Equipment supplier to most of leading vehicle manufacturers around the world.

Through a strong and productive partnership with automotive customers producing millions of vehicles every year, we are committed to achieving the highest customer satisfaction level in wide range of applications. Dedicated technical and sales teams are devoted to maintaining and developing partnerships with Speciality vehicle manufacturers. Our Heavy Duty and Aftermarket dedicated business unit is currently covering all of the following specialities:

## Car and Light Truck: OE and Aftermarket

Our offer for Passenger Cars provides our customers with an access to Original equipment (OE), Remanufactured (eco-friendly) or matching quality compressors for most of today's running cars worldwide.



## Truck and Heavy Duty Vehicles:

Many truck and heavy duty vehicle makers around the world trust our product for long-run reliability. Heavy duty implies ultimate reliability under extreme conditions.



## Buses and Coaches\*:

This speciality requires large displacement compressors for A/C systems cooling bigger volumes. Every year, buses and coaches running our compressors remain cool for millions of miles.



## Industrial and Agriculture machines:

This speciality benefits from our experience in light truck and passenger cars, as well as in heavy duty applications, allowing us to offer the best possible adaptation to specific needs.



## Refrigeration (transport)\*:



















Refrigerated transport requires specific refrigerants and the highest reliability standards. Partnerships with leading market distributor allow us to ensure end user satisfaction in every country.



\*Product ranges distributed through specific channels.  
Please contact our sales team to get the most accurate answer to your enquiry.

## Range of compressors

Our commitment is to deliver a product range that addresses our customers' needs and fully meets end-users' expectations. The only answer to this challenge is a strong investment in research and development which allows us to offer a wide range of displacements and applications. This achievement is the result of 50 years of design improvements for all technologies used today in our compressors.

Compressors		Reciprocating Type		Piston Type			Vane Rotary Type	
		Crank Shaft	Iron Swash Plate	Aluminium Swash Plate			5 vanes	
Displacement cm <sup>3</sup> /rev.	Fixed Displacement			Variable Displacement			Fixed Displacement	
	DKP series	TM series	DKS series			DCS series	DKV series	
								
			DKS-CH	DKS-D	DKS-DS			
Small Vehicle	2 pistons	6 pistons	6 pistons	10 pistons	10 pistons	6 pistons	60	
		82					70	
	125	131	131	156	156	140	80	
		147	147	175	175		105	
Large Vehicle	3 pistons	163	168	215	215	7 pistons	110	
		189					140	
	226	10 pistons						
		215						
		313						
		14 pistons						
		550						
		635						
<div></div>								
valeo added 								

## Fixed displacement swash plate piston type

- TM Series: TM-08, TM-13, TM-15, TM-16, TM-21, TM-31, TM-55, TM-65
- DKS Series: DKS-13, DKS-15, DKS-17, DKS-32

- > Unlimited adaptations and field serviceable TM series
- > Comprehensive range coverage from small engines to heavy duty including bus applications with TM and DKS series
- > State of the art design for best efficiency and performance



## Fixed displacement reciprocating piston type

- DKP Series: DKP-12, DKP19, DKP-23

- > Proven robust solution and reknown refrigeration application standard
- > Heavy duty durability
- > Long lasting performance



## Fixed displacement vane rotary type

- DKV Series: DKV-06, DKV-07, DKV-08, DKV-10, DKV-11, DKV-14

- > Light and robust design for small engine applications
- > High volumetric efficiency optimized for passenger cars and light truck
- > Lower vibration and noise levels than scroll compressors



## Variable displacement swash plate piston type

- DCS Series: DCS-14, DCS-17

- > Variable displacement providing on demand cooling capacity to A/C systems
- > Reduce significantly passenger cars fuel consumption
- > Clutchless option reducing weight, noise and vibration level

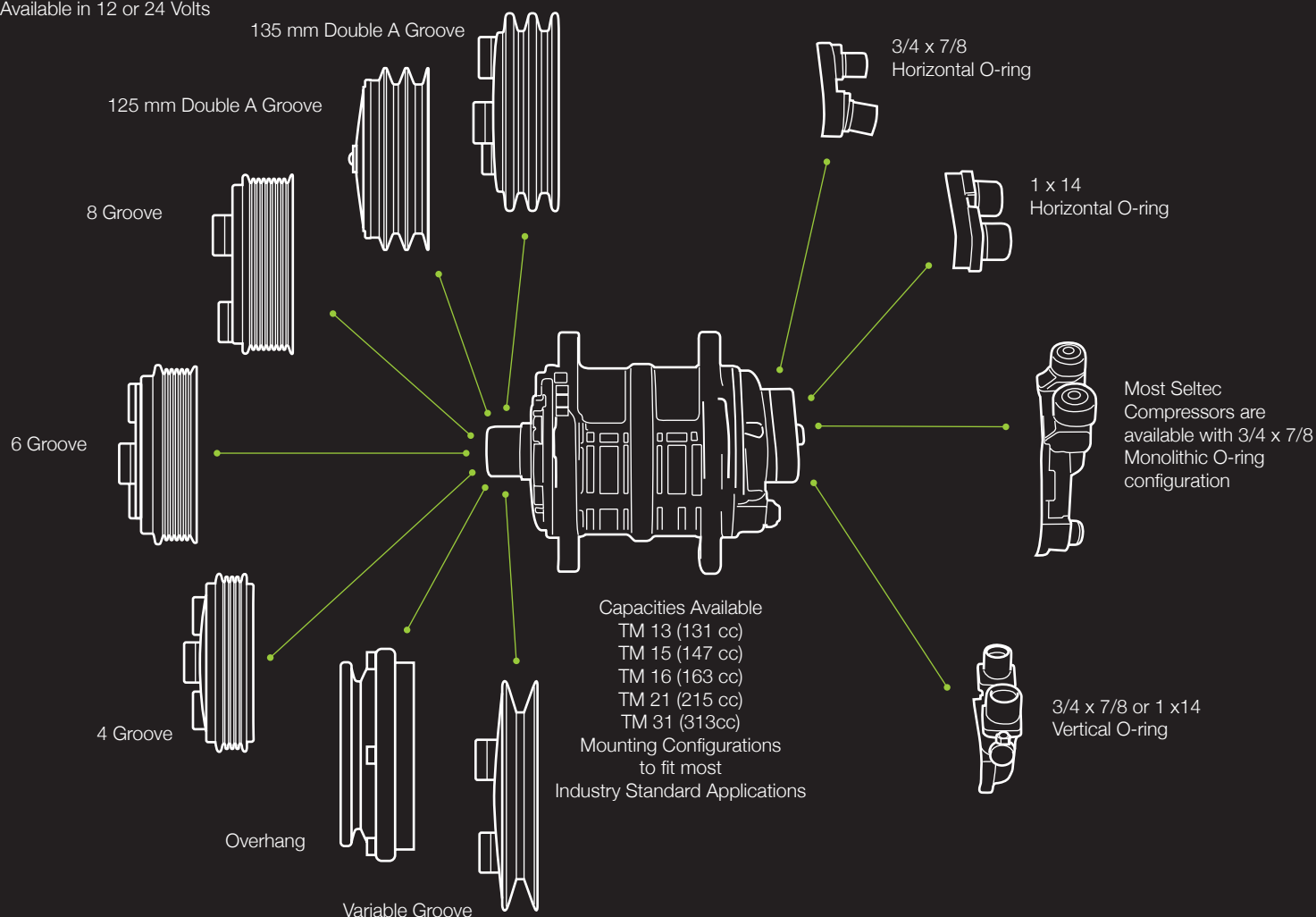


## Compressors adaptations

The TM series compressors were designed to cover a wide range of applications, providing the best fit to the needs of A/C systems makers and any customer requiring adaptation flexibility. TM compressors also incorporate the latest design improvements in order to better meet the needs of today's heavy duty systems. TM compressors are designed to be field serviceable with parts which are available from your distributor and can be replaced at your local service facilities.

### TM compressors' adaptations:

Available in 12 or 24 Volts



## Heavy Duty and Aftermarket Sales

### Asia

#### Japan Sales Office

1538 Oaza-shinozuka, Oura-Machi, Oura-Gun, Gunma-ken  
370-0615 Japan  
Phone: +81 (0) 276 881 232  
Fax: +81 (0) 276 881 944  
Email: vc-oura-sales@valeo.com

### Europe & Middle East Africa

#### France Sales Office

6 rue Francois Cevert  
BP71014 49015 Angers France  
Phone: +33 (0) 241 686 254  
Fax: +33 (0) 241 686 239  
Email: vc-angers-sales@valeo.com

### Americas

#### North America Sales Office

2520 Esters Blvd #100  
Dallas, TX 75261 United States  
Phone: +1 972 456 1077  
Fax: +1 972 456 1090  
Email: vc-dallas-sales@valeo.com



## Valeo Compressors Locations

### Headquarters

#### Valeo Compressors Headquarter

6F Minami-shinjuku, hoshino-Bldg 5-23-13  
Sendagaya Shibuya-ku  
151-0051 Tokyo Japan

### Production plants

Japan - Oura	Czech Republic - Humpolec
Japan - Kumagaya	Poland - Czechowice
China - Changchun	Korea - Cheonan
Thailand - Rayong	

### Technical Centers

Japan - Kumagaya  
U.S.A. - Auburnhills  
Germany - Hockenheim

# Valeo Compressors Quality for Heavy Duty



# Valeo

Compressors

valeo added 

[www.valeocompressors.com](http://www.valeocompressors.com)

## Asia

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Oura-Gun, Gunma-Ken 370-0615 Japan  
Phone: +81 (0) 276 881 232  
Fax: +81 (0) 276 881 944  
Email: [vc-oura-sales@valeo.com](mailto:vc-oura-sales@valeo.com)

## Europe Middle East Africa

6, rue Francois Cevert  
BP7101449015 Angers, France  
Phone: +33 (0) 241686 254  
Fax: +33 (0) 241 686 239  
Email: [vc-angers-sales@valeo.com](mailto:vc-angers-sales@valeo.com)

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Fax: +1 972 456 1090  
Email: [vc-dallas-sales@valeo.com](mailto:vc-dallas-sales@valeo.com)