



Termomeccanica Industrial Compressors  
Termomeccanica Group

# SCREW COMPRESSORS

for gas applications







Termomeccanica Industrial Compressors

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Termomeccanica Group



## ABOUT US



Termomeccanica was established in 1912 in La Spezia as "Cerpelli & C." and later became a stock company in the 1930s, taking the name of "**Termomeccanica Italiana S.p.A.**"

In January 1995, further to the dissolution of EFIM, the state-owned group it belonged to, the activities and shares of Termomeccanica Italiana S.p.A. were transferred to privately-owned and -managed Termomeccanica S.p.A. with the aim to continue the company's strong heritage in the manufacturing and turn-key plants sectors.

Today, Termomeccanica is an **Italian industrial group**, which is amongst the main players of both the **Environmental and Mechanical sectors**:

**TM.I.C. Srl Termomeccanica Industrial Compressors** is the **Italian leader** in developing, manufacturing and commercializing oil injected screw compressors for air and gas applications.

**TM.E. SpA Termomeccanica Ecologia** is a turn-key EPC contractor for **Environmental & Industrial plants** for the Production of Energy (Waste to Energy and Renewable Energy) and **Technological Water Treatments** (potabilization, desalination and waste water purification for civil and industrial uses).



**TM.I.C.** has become a globally recognized player thanks to the excellence that permeates throughout the company and guarantees unrivalled quality to customers.

Our company not only designs and manufactures oil injected bare shaft screw compressors for **Air & Gas applications** which are internationally acknowledged for their outstanding performance, long-life and innovation but also offers high-speed delivery and service to its worldwide customer base.

In particular, product design is optimized through the use of **CFD & FEA** and 100% of production is tested before leaving the factory.

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## TM.I.C. World

## GAS ENDS SERIES

### Fields of application

Well head gas  
Vapour recovery



Boil Off Gas  
Ammonia Vapour System



Turbine & Gas boosting  
Biogas upgrading



## NG SERIES

### Design

#### Mechanical Seal

Single balanced oil flooded mechanical seal is installed on the drive shaft in order to prevent any leakages. By periodically physiological leaks inspection is possible monitor the proper operation and schedule accordingly the maintenance.

#### Casing

All casing machining work is performed with modern computer numerical control machines, which allow continuous control and testing, thus guaranteeing our casings quality.

#### Painting

All TMIC screw compressors are painted with a modern and environmentally friendly protective paint. This surface finish effectively protects the castings against corrosion, even after many years of operation.



#### Rotors

The heart of every screw compressor is its air end, this is why TMIC pays particular care to its manufacturing process. The company uses the latest-generation CNC machines and top-grade materials so as to guarantee the best tolerances and highest reliability. Special attention is also given to the final grinding process. A multistep computer-aided rotor control system also contributes to giving 100% accuracy to each TMIC rotor profile.

#### Bearing

Given the rotational speeds and bearing loads they work at, TMIC compressors are equipped with top quality bearings that ensure the high-capacity and long-life request.

## NG SERIES

### Product features

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High volumetric efficiency

Low running cost

Low noise level

Single mechanical seal

Integrated gears

Discharge pressure range up to 20 barg (290 psig)

Suction pressure up to 1 barg (14.5 psig)

### Sizes

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**NG8**

**NG9**

**NG13**

**NG14**

**NG21**

**NG22**

**NG30**

**NG36** NEW



## NG SERIES

### Technical Data



		NG8		NG9		NG13		NG14		NG21		NG22		NG30		NG36	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Power Range	kW	7,5	22	15	30	30	75	37	110	75	200	90	250	132	400	400	900
	hp	10	30	20	40	40	100	50	150	100	270	120	330	180	550	550	1200
Inlet Flow Range	m3/min	0.7	2	1.5	3	3	8	4	13	7	20	9	22	17	50	45	90
	cfm	25	70	50	105	105	280	140	460	250	700	315	775	600	1760	1575	3200
Male rotor Speed Range (rpm)		2600	10300	1750	6150	1500	6600	1300	6500	1000	5000	900	3900	700	3400	1800	3200
Max allowable working pressure	barg	17		16		20		20		20		20		20		17	
	psig	245		230		290		290		290		290		290		245	

\*Recommended Range  
Referred to 10 barg

## NG36

**NEW**  
**PRODUCT**



### OPERATION RANGE

**Flow Range:** 45-90 m<sup>3</sup>/min [1575- 3200 cfm]

**Power Range:** 400- 900 kW [540- 1200 hp]

### FEATURES

**Drive:** Male

**Lobe combination:** 5/6

**Weight:** 2100 kg

## SCG SERIES

### Product features

- High volumetric efficiency
- Low running cost
- Low noise level
- Single mechanical seal
- Integrated gears
- Discharge pressure range up to 20 barg (290 psig)
- Suction pressure up to 3.5 barg (50 psig)
- (Vi) Variable System Integrated

		SCG10		SCG14	
		Min	Max	Min	Max
Power Range	kW	22	55	37	110
	hp	30	75	50	150
Inlet Flow Range	m <sup>3</sup> /min	2,5	7	5	13
	cfm	85	250	175	450
Male rotor Speed Range (rpm)		1800	8800	1300	6500
Max allowable working pressure	barg	24		24	
	psig	350		350	

## SCG SERIES

### Sizes

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#### SCG10



#### SCG14



## COMPACT

A unique partner for your **special gas applications**



# COMPACT

## Design

### Mechanical Seal

Single balanced oil flooded mechanical seal is installed on the drive shaft in order to prevent any leakages. By periodically physiological leaks inspection is possible monitor the proper operation and schedule accordingly the maintenance.

### Oil Separator

Compact series units are equipped with a separation filter which guarantees the correct separation between compressed air and oil during the second stage. Once separated, the oil is sent back to the compressor lubrication system.

The First phase of the separation needs to be carry out by an external oil/air tank separator.

### TMIC Valves

The performance of a compressor is influenced by the quality of its valves. Every TMIC's Compact Series units are fitted with valves specifically designed to ensure high reliability and low-cost operation.



		Compact10	
		Min	Max
Power Range	kW	22	37
	hp	30	50
Inlet Flow Range	m3/min	2,5	5
	cfm	90	175
Male rotor Speed Range (rpm)		1750	7000
Max allowable working pressure	barg	15	
	psig	220	



## ITA- HP SERIES



## ITA- HP SERIES

### Product features

High volumetric efficiency

Low running cost

Low noise level

Single mechanical seal

Integrated gears

Discharge pressure range up to 25 barg (360 psig)

Suction pressure up to 8 barg (115 psig)

3 Vi available

		ITA-HP13		ITA-HP 26	
		Min	Max	Min	Max
Power Range	kW	37	110	90	350
	hp	50	150	120	470
Inlet Flow Range	m3/min	1,9	9,2	7,8	36
	cfm	65	320	270	1260
Male rotor Speed Range (rpm)		2200	7400	1080	3600
Max allowable working pressure	barg	25		25	
	psig	360		360	

## ITA-HP

### Sizes

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**HP13**



**HP26**



## ITA-TS

### Product features

High volumetric efficiency

Low running cost

Low noise level

Single mechanical seal

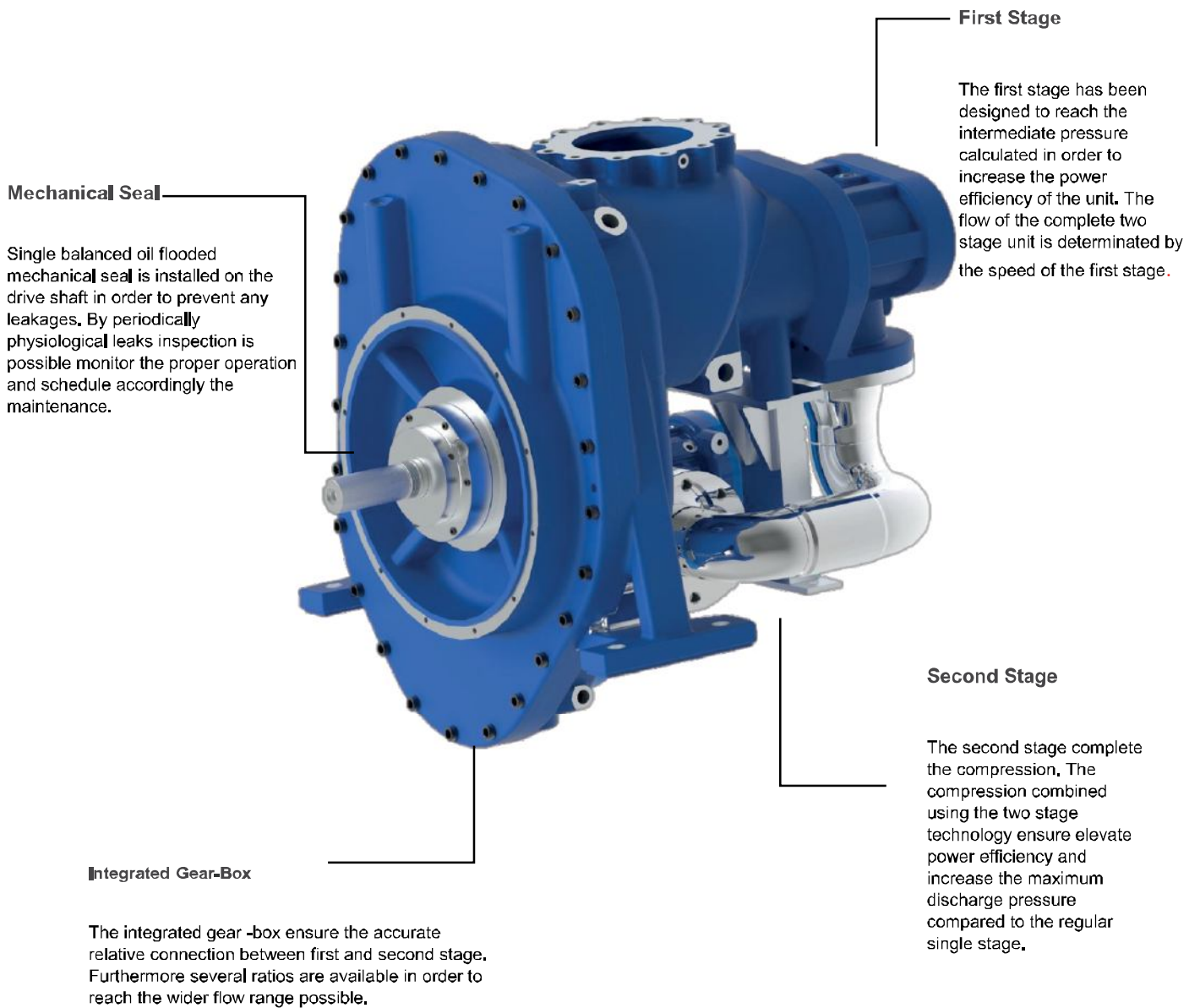
Integrated gears

Discharge pressure range up to 25 barg (360 psig)

		ITA-TS	
		Min	Max
Power Range	kW	110	270
	hp	147	360
Inlet Flow Range	m <sup>3</sup> /min	14.5	27
	cfm	500	950
Male rotor Speed Range (rpm)		1900	3700
Max allowable working pressure	barg	25	
	psig	360	

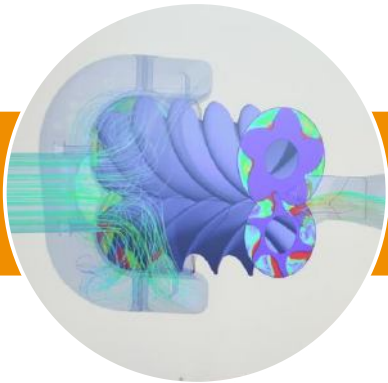
## ITA-TS

### Design



## TM.I.C. WORLD

### We Step-up the Product & Development Process



#### 1. State of the art Air-End design

TM.I.C products are designed by our experienced & skillful engineering team utilizing the ultimate up to date tools available. This includes: **CFD & FEA**

We have over 30 years of experience that ensures consistent quality, reliability, and outstanding performance.



#### 2. Advanced milling

Rotors and casings are machined at our TMIC facility in La Spezia, Italy. Precision and Perfection are guaranteed by our up to date cutting machines.

The outstanding performance of our automated rotor cutting machines aid in reducing our production time and, at the same time, guarantee of extreme accuracy.



#### 3. Careful measurements

Every single piece machined is measured before the assembly.

Several stations are installed in our workshops that guarantee quality and reliability of all TM.I.C. products.



## 4. Accurate assembly



Trained & experienced team members plus dedicated assembly lines secure excellence in all of our TM.I.C. products.

A side benefit of our high-technology assembly lines is added savings in our production cost resulting in a great value & competitive price for our customers.

## 5. Rigorous running test



100% of every Air-end, we manufacture, are tested in our TM.I.C. work-shop after assembly. This insures a quality trouble-free installation.

Further, our test bench is capable in monitoring and collecting all the parameters that characterize performance and reliability in each unit.

## 6. Services & Support



TM.I.C. supports & assists its customers with customized solutions and after-sales support.

We can provide Running Test Reports, Hydro Tests, Off-Shore, On-Shore Certifications, & more, as these are examples of some our more popular services.

At TM.I.C we are always available and here to support you. We warehouse all our genuine oem spare parts and our special TM.I.C compressor lubricant that has been developed to enhance performance and extend component & overall compressor life.



*We make your compression easier*



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