



GAS BOOST COMPRESSORS

English

# Gas Boost Compressors

ROTARY VANE GAS COMPRESSORS FROM 4 TO 55 kW

GC - integrated cooler range  
G - remote cooler range



# SERIES GC - G



## The pressure is on



In 1958, **Ing. Enea Mattei** leveraged his 39 years of reciprocating compressor manufacturing expertise to revolutionise how air was compressed.

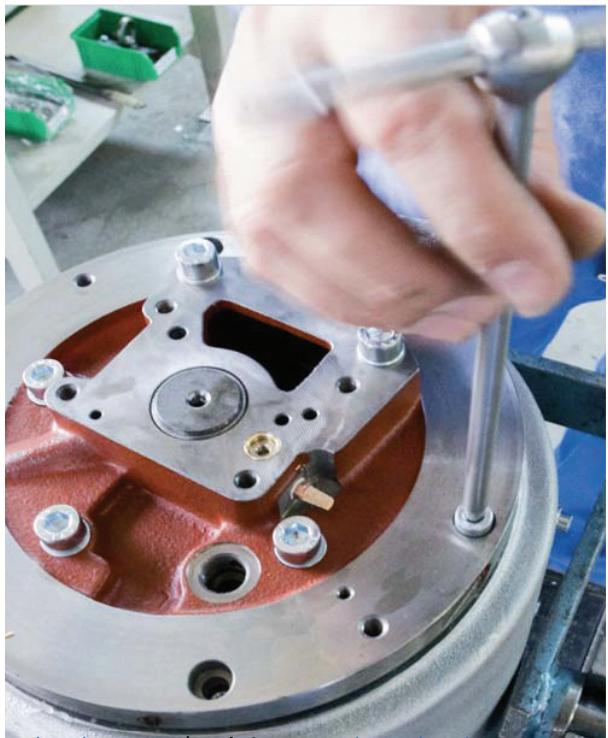
Over half-a-century later, **MATTEI** continues to turn the pressure on in gas boost applications around the globe.

From bare compressors to packaged systems we leverage the advantages found only in our proprietary rotary vane technology to boost your bottom line. Turn to **MATTEI** for superior reliability, durability, efficiency, and ease of maintenance, all in a compact design ideal for localised packaging and many gas boost applications.



## Certified quality

Quality as an integral part of all company functions and constant improvement to all production processes guarantees the maximum level of reliability and satisfaction. This, in brief, is the value and the meaning of **Mattei's** operational philosophy. A way of approaching the market and customers that makes **Mattei** an absolute point of reference in the compressed gas sector. Since 1994, **Mattei** has been operating with a Quality System certified by the DNV Institute under UNI EN ISO 9001 regulations.





## Simply different The compressor that makes a difference

### MATTEI'S COMPRESSORS

Mattei's rotary vane air compressors are the result of continuous innovation and advanced design capabilities. The low rotational speed only available in vane technology, the high volumetric efficiency and the complete absence of roller or thrust bearings, result in energy savings of **over 15%** compared to other rotary compressors.

### MATTEI EXCEPTIONAL PERFORMANCE IS THE SIMPLICITY OF THE ROTARY VANE PRINCIPLE:

- Quiet and vibration free
- Pure rotary motion delivers pulse free gas
- Continuous operation 24/7
- Three stage oil separation for high quality gas
- Only one rotating part ensures long reliable life
- Intake modulation (servo control) only compress to the gas demand
- Direct drive means NO BELTS AND PULLEYS

### LOW OPERATING COSTS: LOW MAINTENANCE

Mattei's rotary vane compressors are designed to reach 100,000 hours life without the need to replace any blades or other metal parts.

The long operating life of a Mattei compressor is assured by high quality machining which is the essence of rotary vane gas compressors.

### SAFETY / RELIABILITY

The integrated design, direct coupling, low rotational speed and the limited number of moving parts ensure Mattei's rotary vane gas compressors remain safer, more durable and therefore more reliable over time.

### SIMPLICITY

Mattei's rotary vane air compressors are quiet and can be located almost anywhere. They are quickly installed and take up a limited amount of space.

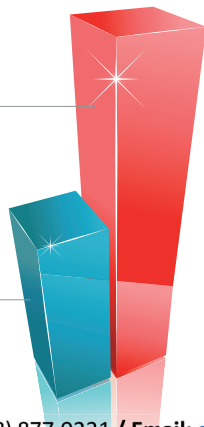
Their accessible design makes maintenance operations simple and straightforward.

### QUALITY OF THE GAS

All Mattei's compressors are fitted with a generously sized filtering system, which guarantees quality compressed gas suitable for any use. Mattei's very efficient, multi-stage oil separation system produces an exceptionally low lubricant carry-over.

OTHER COMPRESSORS  
MAINTENANCE

MATTEI'S COMPRESSORS  
MAINTENANCE



# SERIES GC – G

## Series GC – G Gas Boost Compressors

Mattei's rotary vane Gas Boost Compressors are designed to compress sweet, sour and bio gasses.

The range covers 4kW up to 55kW available as a stand-alone gas end for local packaging (GC and G).

All versions come complete with automatic flow control at a constant delivery pressure, integrated or remote cooler and threaded or flanged gas intake facility.

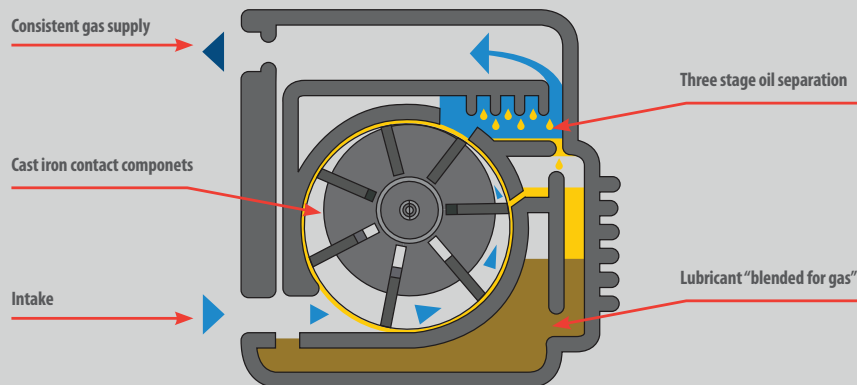
The compressors are compact and easy to install, offering reliable operation and constant performance throughout time.



## Technology

### OPERATING PRINCIPLE

The gas is drawn in through a prepared gas connection and the modulating proportional valve regulates the gas delivery to exact requirements. The gas enters the compression chamber where it becomes contained between the vanes and is compressed. Lubrication of the compressor and cooling of the gas is achieved by differential pressure internally pumping the oil through the system. A film of oil is maintained on all surfaces avoiding direct contact of the internal metal parts. The 3 stage separation system ensures a consistent supply of clean gas.



### CAST IRON CONTACT COMPONENTS

Rotor, blades, stator, end covers are manufactured from high quality cast iron. This means:

- » No replacement
- Totally reliable operation
- Long gas end life
- Improving efficiency





## Scope of supply



### COMPATIBLE GASES

- Sweet gas (Methane)
- Sour gas (Wellhead)
- Bio methan (Landfill/Digester)

### STANDARD BOOST COMPRESSOR ENDS

- GC Bare gas ends with integrated oil cooler
- G Bare gas ends

### CUSTOMER SPECIFICATION GAS BOOST COMPRESSOR PACKAGES

- EGC Fixed speed AC powered gas compressor packages
- EGi Variable speed inverter driven gas compressor packages.



## Benefits of Mattei Vane Technology

- Over 90 year compressor manufacturer
- Proven principle
- Wide range
- Bespoke designs to suit application
- Full Atex packages
- Fully integrated gas ends
- Sour gas compatible
- No yellow metals
- Smooth running
- Whisper quiet operation
- 100% duty 24/7
- Modulated control of output
- 3 stages of oil separation
- Clean gas delivery
- No fall off in gas quality
- Automatic stop / start
- Direct drive
- Temperature protected
- Pressure protected
- Purge points
- Oil site glass
- Simple and quick service
- Gas compatible lubricant
- External pressure adjustment
- Worldwide service network



Typical Land Fill Gas (LFG) installation

## Applications

### MICRO GENERATION AND COMBINED HEAT AND POWER (CHP)

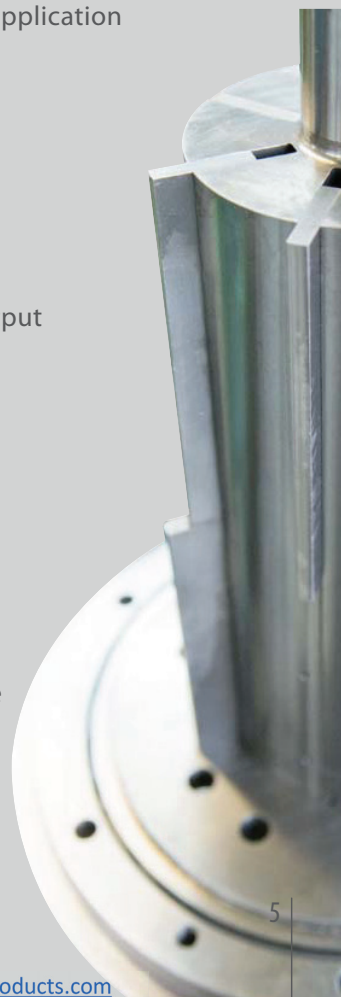
The compressing of methane to fuel a micro turbine from sweet, sour and coal bed fields.

### GAS BOOSTING

The raising of gas pressure from 0 up to 8 bar.

**Sour gas** from oil, gas and coal bed fields.

**Bio gas** from sewage and farm waste resources.



# SERIES GC - G

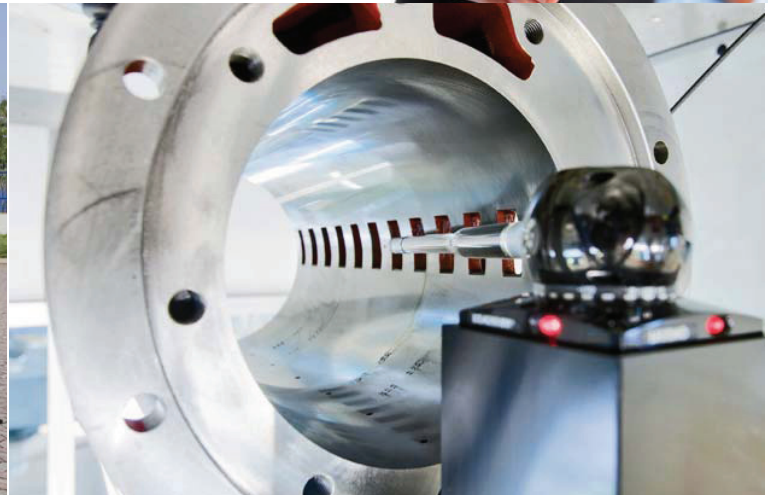


## Always caring about our customers' requirements

### WORLDWIDE CONSULTANCY AND ASSISTANCE

Mattei operates worldwide with its sales and assistance network, providing a wide service range.

By purchasing a Mattei compressor you can rely on a qualified after-sales service, able to answer any request for assistance in very short time scales.



## Mattei original spare parts and lubricants

Mattei Original Spare Parts and Mattei Rotoroil lubricants are made to very high design standards and conform to precise technical specifications. Only Mattei original spare parts allow you to be sure of maintaining over time the same levels of performance, reliability and safety of your Mattei product.

- Mattei Original Spare Parts are indispensable for the efficiency of your compressed gas equipment
- Parts are always available in stock
- Quality tested and conforming to manufacturer specifications
- Suitable for Mattei's recommended maintenance intervals



### 3D QUALITY CONTROL

The quality check of manufacturing tolerances occurs constantly via three dimensional measurement machines.

This ensures the compliance of our products with the highest quality standards.

### COMPREHENSIVE TESTS

Before leaving our factory any Mattei compressor has already undergone various extensive and in-depth testing procedures, during which it has been checked and tested in different operating conditions. All the electric, mechanical and performance information are recorded via a wireless data detection system.

### HIGH TECHNOLOGY MANUFACTURING MACHINERY

The manufacturing of compression units and blades is made through modern robotic machining centres. The parts assembly is carried out by specialised staff and in accordance with strictly controlled operating procedures, specified by Mattei's quality management.



# Technical data



	kW	hp	bar	psi	m <sup>3</sup> /min	cfm	l	gals		inch	l mm/ins	w mm/ins	
<b>1500 rpm</b>													
GC 80 C	4	5.5	7	102	0.65	23	4.5	1.19	0.5	508/20	317/12	427/17	55/121
GC 80 F	5,5	7.5	7	102	0.90	32	4.5	1.19	0.5	508/20	317/12	427/17	55/121
GC 86 C	7,5	10	7	102	1.16	41	6	1.59	0.75	652/26	390/15	513/20	67/148
GC 86 G	11	15	7	102	1.73	61	6	1.59	0.75	652/26	390/15	513/20	67/148
GC 111 B	15	20	7	102	2.25	80	11	1.59	1	796/31	515/20	711/28	160/352
GC 111 E	18,5	25	7	102	3.11	110	11	2.91	1	796/31	515/20	711/28	160/352
GC 111 H	22	30	7	102	3.75	133	11	2.91	1	796/31	515/20	711/28	160/352
G 135 C	30	40	7	102	5.00	177	20	5.3	1.5	639/25	435/17	818/32	190/419
G 135 F	37,5	50	7	102	6.47	229	20	5.3	1.5	639/25	435/17	818/32	190/419
G 135 H	45	60	7	102	7.56	267	20	5.3	1.5	639/25	435/17	818/32	190/419
G 135 K	55	75	7	102	9.31	329	20	5.3	1.5	639/25	435/17	818/32	190/419
<b>1800 rpm</b>													
GC 80 B	4	5.5	7	102	0.63	22	4.5	1.19	0.5	508/20	317/12	427/17	55/121
GC 80 E	5,5	7.5	7	102	0.90	32	4.5	1.19	0.5	508/20	317/12	427/17	55/121
GC 86 A	7,5	10	7	102	1.17	42	6	1.59	0.75	652/26	390/15	513/20	67/148
GC 86 E	11	15	7	102	1.64	58	6	1.59	0.75	652/26	390/15	513/20	67/148
GC 86 J	15	20	7	102	2.25	80	6	1.59	0.75	652/26	390/15	513/20	67/148
GC 111 C	18,5	25	7	102	2.91	103	11	2.91	1	796/31	515/20	711/28	160/352
GC 111 E	22	30	7	102	3.67	130	11	2.91	1	796/31	515/20	711/28	160/352
G 135 A	30	40	7	102	4.93	174	20	5.3	1.5	639/25	435/17	818/32	190/419
G 135 C	37,5	50	7	102	5.90	208	20	5.3	1.5	639/25	435/17	818/32	190/419
G 135 F	45	60	7	102	7.63	270	20	5.3	1.5	639/25	435/17	818/32	190/419
G 135 H	55	75	7	102	8.92	315	20	5.3	1.5	639/25	435/17	818/32	190/419

Output range	0% to 100% with inbuilt intake modulation
Temperature protection	Thermistor control at gas compression outlet
Pressure protection	Inbuilt safety valve
Operating temperature range	-5C to +40C
Integrated cooler	4kW to 22kW Remote cooler 30kW to 55kW
Inlet gas conditions	0 to 600 mbar with no free moisture maximum 300ppm H2S
Acceptable gases	Methane (Sweet, sour, bio)
Lubricant	Mattei gas compressor lubricant
Norms and conformity	2006/42/EC Machinery directive 92/27/CW PED – directive on pressure equipment 94/9/CE – ATEX – Equipment and protective systems intended For use in a potentially explosive atmosphere

- Model
- Power
- Max. Working Pressure
- Free Gas Delivery
- Oil Sump Capacity
- Outlet Connections
- Dimensions
- Weight