



GAS BOOST COMPRESSORS

English

Gas Compressors

ROTARY VANE COMPRESSORS FROM 4 TO 55 kW

- GC** integrated cooler range
- G** remote cooler range



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:

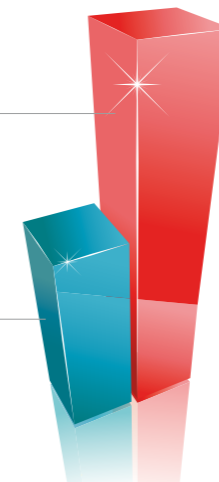
- Quiet and vibration free
- Pure rotary motion delivers pulse free gas
- Continuous operation 24/7
- Three stage oil separation for high quality gas
- Only one rotating part ensures long reliable life
- Intake modulation (servo control) only compress to the gas demand
- Direct drive means NO BELTS AND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

OTHER COMPRESSORS
MAINTENANCE

MATTEI'S COMPRESSORS
MAINTENANCE



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.

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.



Scope of supply



COMPATIBLE GASES

- Sweet gas (Methane)
- Sour gas (Wellhead)
- Bio methane (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

Technology

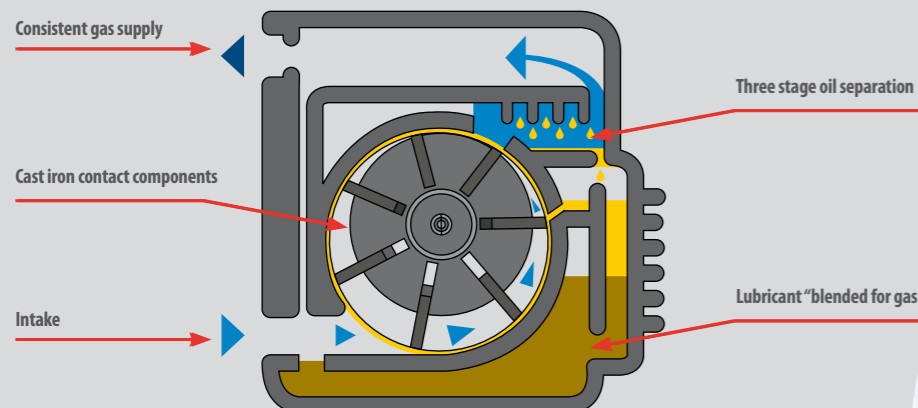
OPERATING PRINCIPLE

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



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.



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.

- Model
- Power
- Max. working pressure
- Gas delivery
- Receiver capacity
- Connections
- Dimensions
- Weight

Technical data



	4 60701	kW		hp		bar		psi		m³/min		cfm		l		gals		inch		l mm/ins		w mm/ins		h mm/ins		kg/Lbs	
1500 rpm																											
GC 80 C	GRS05GBA02	4	5,5	7	102	0,65	23	4,5	1,19	0,5	534/21	317/13	431/17	55/121													
GC 80 F	GRS06GBA02	5,5	7,5	7	102	0,9	32	4,5	1,19	0,5	564/22	350/14	431/17	55/121													
GC 86 C	GRSA1GBA02	7,5	10	7	102	1,16	41	6	1,59	0,75	669/26	393/16	511/20	67/148													
GC 86 G	GRSA3GBA02	11	15	7	102	1,81	64	6	1,59	0,75	691/27	450/18	511/20	67/148													
GC 111 B	GRSBJGBA01	15	20	7	102	2,25	80	11	2,91	1	800/32	515/20	711/28	160/352													
GC 111 E	GRSBBGBA01	18,5	25	7	102	3,11	110	11	2,91	1	800/32	515/20	711/28	160/352													
GC 111 H	GRS23GBA01	22	30	7	102	3,75	133	11	2,91	1	800/32	515/20	711/28	160/352													
G 135 C	GACCLGBA01	30	40	7	102	5	177	20	5,3	1,5	881/35	454/18	816/32	190/419													
G 135 F	GACCMGBA01	37,5	50	7	102	6,47	229	20	5,3	1,5	881/35	454/18	816/32	190/419													
G 135 H	GACCDGBA01	45	60	7	102	7,56	267	20	5,3	1,5	881/35	454/18	816/32	190/419													
G 135 K	GACC3GBA01	55	75	7	102	9,31	329	20	5,3	1,5	881/35	550/22	841/33	190/419													
GC 80 B	GRSAIGBA05	4	5,5	10	145	0,51	18	4,5	1,19	0,5	534/21	317/13	431/17	55/121													
GC 80 E	GRSARGBA05	5,5	7,5	10	145	0,75	26	4,5	1,19	0,5	564/22	350/14	431/17	55/121													
GC 86 B	GRSA8GBA01	7,5	10	10	145	1,10	38	6	1,59	0,75	669/26	393/16	511/20	67/148													
GC 86 F	GRSA6GBA01	11	15	10	145	1,54	54	6	1,59	0,75	691/27	450/18	511/20	67/148													
GC 111 B	GRSBJGBA02	15	20	10	145	2,18	76	11	2,91	1	800/32	515/20	711/28	160/352													
GC 111 D	GRSBKGBA01	18,5	25	10	145	2,58	91	11	2,91	1	800/32	515/20	711/28	160/352													
GC 111 F	GRSBLGBA01	22	30	10	145	3,13	110	11	2,91	1	800/32	515/20	711/28	160/352													
G 135 B	GACCRGBA01	30	40	10	145	4,52	159	20	5,3	1,5	881/35	454/18	816/32	190/419													
G 135 E	GACCRGBA01	37,5	50	10	145	5,65	199	20	5,3	1,5	881/35	454/18	816/32	190/419													
G 135 G	GACC1GBA01	45	60	10	145	6,55	231	20	5,3	1,5	881/35	454/18	816/32	190/419													
G 135 J	GACC4GBA01	55	75	10	145	8,2	289	20	5,3	1,5	881/35	550/22	841/33	190/419													
GC 80 A	GRSATGBA01	4	5,5	13	189	0,38	13	4,5	1,19	0,5	534/21	317/13	431/17	55/121													
GC 80 D	GRSEEGBA01	5,5	7,5	13	189	0,66	23	4,5	1,19	0,5	564/22	350/14	431/17	55/121													
GC 80 F	GRSEJGBA01	7,5	10	13	189	0,84	29	4,5	1,19	0,5	669/26	393/16	511/20	55/121													
GC 86 E	GRSEMGBA04	11	15	13	189	1,35	47	6	1,59	0,75	691/27	450/18	511/20	67/148													
GC 86 J	GRSEQGBA01	15	20	13	189	1,86	65	6	1,59	0,75	800/32	515/20	711/28	67/148													
GC 111 C	GRSEUGBA01	18,5	25	13	189	2,33	82	11	2,91	1	800/32	515/20	711/28	160/352													
GC 111 E	GRSEXGBA01	22	30	13	189	2,93	103	11	2,91	1	800/32	515/20	711/28	160/352													
GC 111 J	GRSFCGBA01	30	40	13	189	4,08	144	11	2,91	1	800/32	515/20	711/28	160/352													

	4 60701	kW		hp		bar		psi		m³/min		cfm		l		gals		inch		l mm/ins		w mm/ins		h mm/ins		kg/Lbs	
1800 rpm																											
GC 80 B	GRSAIGBA01	4	5,5	7	102	0,63	22	4,5	1,19	0,5	539/21	317/13	431/17	55/121													
GC 80 E	GRSARGBA01	5,5	7,5	7	102	0,9	32	4,5	1,19	0,5	539/21	317/13	431/17	55/121													
GC 86 A	GRSAKGBA01	7,5	10	7	102	1,17	42	6	1,59	0,75	670/26	393/13	511/20	67/148													
GC 86 E	GRSAMGBA01	11	15	7	102	1,7	60	6	1,59	0,75	670/26	393/16	511/20	67/148													
GC 86 J	GRSASGBA01	15	20	7	102	2,25	80	6	1,59	0,75	670/26	393/16	511/20	67/148													
GC 111 C	GRSBFGBA01	18,5	25	7	102	2,91	103	11	2,91	1	805/32	515/20	711/28	160/352													
GC 111 E	GRSBBGBA02	22	30	7	102	3,67	130	11	2,91	1	805/32	515/20	711/28	160/352													
G 135 A	GACCPGBA02	30	40	7	102	4,93	174	20	5,3	1,5	881/35	545/22	816/32	190/419													
G 135 C	GACCLGBA03	37,5	50	7	102	5,9	208	20	5,3	1,5	881/35	545/22	816/32	190/419													
G 135 F	GACCMGBA03	45	60	7	102	7,63	270	20	5,3	1,5	881/35	454/18	816/32	190/419													
G 135 H	GACCDGBA03	55	75	7	102	8,92	315	20	5,3	1,5	881/35	454/18	816/32	190/419													
GC 80 A	GRSADGBA01	4	5,5	10	145	0,46	16	4,5	1,19	0,5	539/21	317/13	431/17	55/121													
GC 80 C	GRS05GBA05	5,5	7,5	10	145	0,73	25	4,5	1,19	0,5	539/21	317/13	431/17	55/121													
GC 80 F	GRS06GBA05	7,5	10	10	145	1,02	36	4,5	1,19	0,5	670/26	393/13	511/20	55/121													
GC 86 D	GRSAQGBA03	11	15	10	145	1,57	55	6	1,59	0,75	670/26	393/16	511/20	67/148													
GC 86 G	GRSAJGBA01	15	20	10	145	2,06	72	6	1,59	0,75	670/26	393/16	511/20	67/148													
GC 111 B	GRSBJGBA04	18,5	25	10	145	2,56	90	11	2,91	1	805/32	515/20	711/28	160/352													
GC 111 D	GRSBKGBA03	22	30	10	145	3,05	107	11	2,91	1	805/32	515/20	711/28	160/352													
GC 111 H	GRS23GBA03	30	40	10	145	4,27	150	11	2,91	1	881/35	545/22	816/32	160/352													
G 135 B	GACCRGBA04	37,5	50	10	145	5,33	188	20	5,3	1,5	881/35	545/22	816/32	190/419													
G 135 E	GACCRGBA04	45	60	10	145	6,66	235	20	5,3	1,5	881/35	454/18	816/32	190/419													
G 135 G	GACC1GBA04	55	75	10	145	7,72	272	20	5,3	1,5	881/35	454/18	816/32	190/419													
GC 80 B	GRSEKGBA03	5,5	7,5	13	189	0,59	20	4,5	1,19	0,5	539/21	317/13	431/17	55/121													
GC 80 E	GRSEFGBA03	7,5	10	13	189	0,89	31	4,5	1,19	0,5	539/21	317/13	431/17	55/121													
GC 86 C	GRSEGGBA03	11	15	13	189	1,29	45	6	1,59	0,75	670/26	393/13	511/20	67/148													
GC 86 F	GRSEHGBA03	15	20	13	189	1,78	62	6	1,59	0,75	670/26	393/16	511/20	67/148													
GC 86 J	GRSEQGBA05	18,5	25	13	189	2,19	77	6	1,59	0,75	670/26	393/16	511/20	67/148													
GC 111 B	GRSEWGBA02	22	30	13	189	2,50	88	11	2,91	1	805/32	515/20	711/28	160/352													
GC 111 F	GRSEXGBA02	30	40	13	189	3,60	127	11	2,91	1	805/32	515/20	711/28	160/352													
GC 111 J	GRSFCGBA03	37,5	50	13	189	4,80	169	11	2,91	1	800/32	515/20	711/28	160/352													

Code	Description	Location	Approval	Series			
				G/GC 80	G/GC 86	G/GC 111	G 135
AG15EXA054	Solenoid valve	Oil/gas separator	ATEX 2 G	X	X	X	X
AS12XXX038	Low pressure-switch. Range -0.8 / 1.6 bar.	Customer suction line	ATEX 2 G	X	X	X	X
AS12XXX039	High pressure-switch. Range 1 / 10 bar.	Customer discharge line	ATEX 2 G	X	X	X	X
AC08AXX013	Low pressure transducer. Range -1 / 1.5 bar.	Customer suction line	ATEX 2 G	X	X	X	X
AC08AXX015	High pressure-switch. Range 0 / 16 bar.	Customer discharge line and oil/gas separator	ATEX 2 G	X	X	X	X
AS14XXX040	Level switch	Oil chamber	ATEX 2 G	-	-	X	X
AS04XXX016	Temperature transducer (PT100)	Oil chamber	ATEX 2 G	X	X	X	X
AS04XXX020	Temperature transducer (PT100)	Drive end cover	ATEX 2 G	X	X	X	X
AS04XXX021	Temperature transducer (PT100)	Not drive end cover	ATEX 2 G	X	X	X	X

Compression technology	Rotary Vane
Output	0% to 100%
Drive system	Direct coupled with elastic element
Cooling	Air
Integrated cooler	GC 80, GC 86 and GC111
Remote panel cooler	G135
Temperature protection	Thermistor
Pressure control	Servo with modulation
Pressure protection	Safety valve
Operating ambient range -	5C to + 45C (23F to + 113F)
Inlet pressure range	0 to 8.7psi (0 to 650mbar)
Acceptable gases	Sweet Methane Sour Methane Bio Methan
Maximum allowable free moisture	None
Maximum allowable H2S	300ppm
Lubricant	Mattei gas compressor oil
1500 rpm	Motor frame IEC B35
1800 rpm	Motor frame NEMA C-FACE
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



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