



QUOTATION

PORTABLE COMPRESSOR
DRW 748 -TC

Type

STANDARD
VERSION

Ing. Enea Mattei S.p.A.

Product code
GDKBBK1E0A

Page
1 di 6

Rev.
03/2006/GB

Mattei rotary compressors of the DRW series are the result of more than 80 years of investments in research and development to improve performance and lessen the impact on the environment. Designed for industrial continuous operation, they provide consistent performance, reliability, functionality and ease of maintenance.



PERFORMANCE

- Air end	single stage rotary vane compressor	
- Rotational speed	r.p.m.	2500
- Free air delivery at the working pressure according to ISO 1217:1996 annex "D"	m ³ /min	4,8 - 4,65
- Maximum working pressure	bar (r)	7,5 - 10,5
- Working pressure	bar (r)	7 - 10
- Oil cooling		by air
- Maximum oil carry-over	p.p.m.	≤ 5
- LWA sound power level at 1 metre (in compliance with Directive 2000/14/EC)	dB(A)	96

REFERENCE CONDITIONS according to ISO 1217 :1996 annex "E"

- Intake pressure	bar (a)	1
- Air inlet temperature	°C	+ 20
- Relative humidity	%	0

DIESEL ENGINE

- Type	KUBOTA	V 3300
- Displacement	cc	3318
- Cylinders	n.	4 in line
- Injection		indirect
- Cooling		by coolant
- Maximum power at the rotational speed	kW	36,4 – 42,8
- Specific fuel consumption	g/kW/h	247



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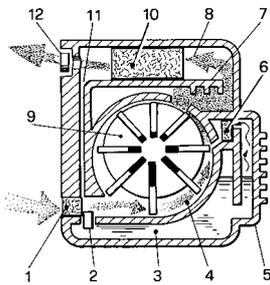
Product code
GDKBBK1E0A

Page
2 di 6

Rev.
03/2006/GB

OTHER FEATURES

- Fuel tank capacity	litres	70
- Electric system	V.	12
- Battery	Ah	100

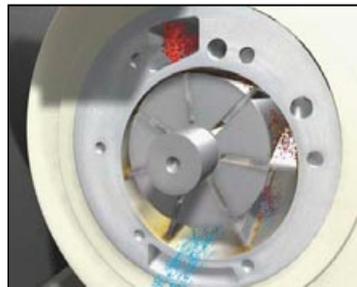
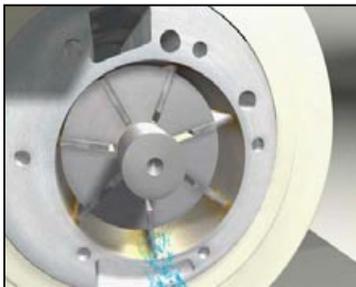


- | | |
|---------------------------|---------------------------------------|
| 1. Intake filter | 7. Air/oil separation labyrinth |
| 2. Automatic intake valve | 8. Compressed air |
| 3. Oil chamber | 9. Rotor |
| 4. Compression chamber | 10. Coalescing separator |
| 5. Oil cooler | 11. Oil return |
| 6. Oil filter | 12. Minimum pressure-non return valve |

OPERATING PRINCIPLE

The vane compressor is a volumetric rotary compressor. It consists of a cylinder (stator) in which a rotor, mounted eccentrically and tangential with it rotates, and two end covers. The rotor has longitudinal slots in which the vanes slide. The vanes are pushed against the stator by centrifugal force. Sealing of the moving parts, cooling and lubrication are provided by an efficient injection of oil through proper ports, due to the pressure difference between the compression chamber and the oil receiver. No pump for fluid circulation is needed. An oil film on the inner surface of the stator prevents direct contact of the moving parts and avoids any wear. In the vane compressor there are no axial thrusts pushing the

rotor against the end covers. Therefore there is no need for thrust bearings. The rotor is supported by white metal bearings having a practically unlimited lifetime. The air drawn in first passes through a filter and then through the modulating valve. The decrease in volume of the pockets formed by the stator, rotor and vanes produces a continuous, pulse-free, compression.





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Page
3 di 6

Rev.
03/2006/GB

OIL SEPARATION



Mechanic separation

The air/oil separation occurs in different stages and ensures exceptionally low oil consumptions. The main mechanical separation occurs in the oil chamber through a labyrinth path. Then it continues at the separator inlet, before the filter. This mechanical separation works via the continuous changes of direction of the air flow in the labyrinth path. The last separation occurs through coalescing filters,

removing the remaining oil vapours from the air. This particular oil separation system brings to a very reduced oil consumption. The large size of the filter and quality of materials ensure a long life of the filter itself.



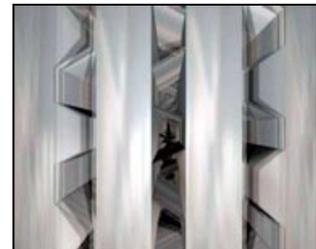
Coalescing separation

COOLING

The compressor is fitted with a combined cooler entirely made of aluminium and suitable to cool the compressor oil and the engine coolant.

An air flow produced by the axial fan moves towards the radiator and cools the same.

The compressed air outlet temperature is about 60 K over the ambient temperature.



Cooler structure

COUPLING

Coupling between the diesel engine and the compressor is direct by means of metallic coupling and flange. This ensures a perfect alignment, no power absorption, silent operation and no need for maintenance.





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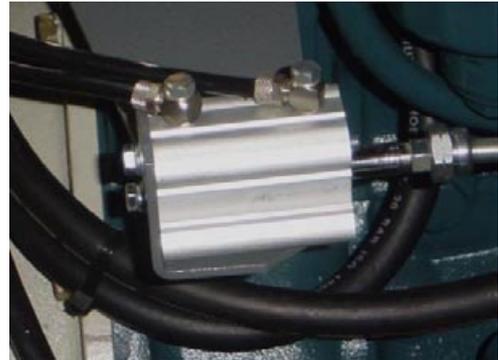
Product code
GDKBBK1E0A

Page
4 di 6

Rev.
03/2006/GB

SPEED REGULATION

To achieve maximum energy saving the compressor is fitted, as standard, with automatic regulation of the engine speed according to the air demand. During operation the compressor keeps the air delivery pressure within the maximum and minimum setting values of the pressure switch that determines the engine rotational speed. When reaching the maximum pressure the compressor runs off-load, the intake valve immediately closes and the internal pressure will exhaust to about 3 bar to reduce the energy absorption.



DRIVE AND CONTROL PANEL

located near the air delivery cocks, including:

- start key
- compressor off-load selector switch
- engine speed regulating pressure switch
- control panel with warning lights for : engine coolant high temperature, engine oil low pressure, low fuel level, alternator malfunction, compressor oil high temperature, clogged intake filter
- display showing : preheating glow plugs timer, engine coolant temperature, compressed air temperature, operating hours
- safety blocks for : engine coolant high temperature, compressor oil high temperature, engine oil low pressure, low fuel level, alternator malfunction, microdoor switch.





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Page
5 di 6

Rev.
03/2006/GB

STANDARD EQUIPMENT

The compressor is supplied complete with :
high efficiency air intake filter (a single filter for compressor and engine) – air pressure gauge – minimum pressure and non return valve in the air circuit – overpressure relief valve – thermostatic valve in the oil circuit – oil filter – compressor oil level visual indicator - compressor and engine first oil filling - engine coolant.



CANOPY

All the above mentioned components are enclosed in a soundproofing canopy in sheet steel, treated with cataphoresis and polyester painted, lined internally with sound abating, fire resisting material.

The large canopy is equipped with hydraulic lifts and can completely be opened to allow easy access for the routine maintenance.

The central position lifting eye allows easy lifting and handling.

CHASSIS

The soundproofing canopy is fitted on steel tubular chassis with flexible axle, complete with:

- adjustable towbar
- toric cavity eyebolt
- adjustable foot stand
- wheels with radial tyres 175/70 R14.

STANDARD PACKING

The compressor is supplied fixed on wooden pallet and protected with a polythene cover.

DOCUMENTATION

The compressor is supplied complete with:

- no. 1 Operating and maintenance instructions manual complying with EC Machines Directive 98/37
- no. 1 EC Declaration of Conformity
- no. 1 Commissioning report



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Page
6 di 6

Rev.
03/2006/GB

OVERALL DIMENSIONS



Weight	Kg	940
Air delivery connections	quick release	3/4" - DIN 3482
No. of connections	no.	2

INSTALLATION

The compressor is supplied ready-to-use.

Once placed in position, only the air connections have to be arranged.

The compressor must be placed in a well ventilated area away from any heat source and the air should not contain flammable gases or solvents that could be drawn in by the compressor. Please contact our technical department in case of doubts.

OPTIONAL EXTRA

The compressor can also be customised according to the customer's needs by purchasing specific accessories like:

- **Jockey wheel kit** code IS84A34624: pivoting wheel with adjustable height, fitted in replacement of the foot stand, for easier handling.

CERTIFICATIONS

Ing. Enea Mattei S.p.A. has been certified by DNV with the Quality System Certificate, conforming to UNI EN ISO 9001 standard.

COMPANY
WITH QUALITY MANAGEMENT
SYSTEM CERTIFIED BY DNV
=ISO 9001:2000=

The above compressor is not approved for high speed towing