Technical Data Sheet

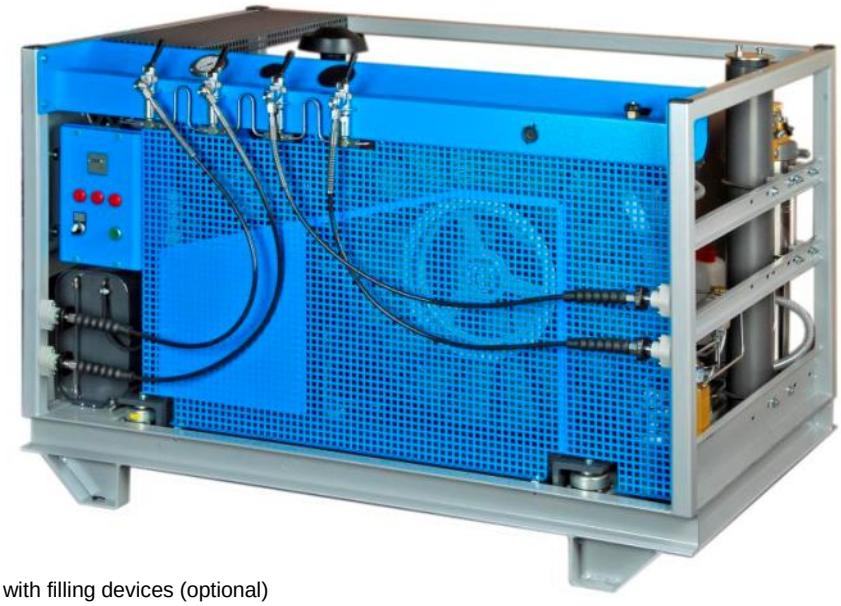
Series:

KAP-DAH

Stationary High Pressure Compressor for Air and Breathing Air Compression

Types:

KAP15.1-14-DAH | KAP150-16-DAH | KAP180-18-DAH



KAP-DAH with filling devices (optional)

General	
Medium	Air
Intake pressure	atmospheric
Filling pressure	PN200 / PN300
Pressure setting, final pressure SIV	225 bar / 330 bar / 350 bar
Pressure setting, pressure sensor	220 bar / 320 bar / 340 bar
Permissible ambient temperature range	+5...+45°C
Permissible altitude	0...1500 m AMSL
Max. permissible tilt	10°
System type	Open
Compressor oil, standard	Synthetic
Oil change interval	Synthetic : every 2 years / 2,000 h Mineral: 1x annually / 1,000 h
Finish	CYAN (front) / RAL 9006 (frame)

Status: 30/01/2015

Compressor system	KAP15.1-14-DAH	KAP150-16-DAH	KAP180-18-DAH
Charging rate [1]	450 l/min	540 l/min	680 l/min
Purification system	P 61	P 61	P 81
Cooling air flow, min.	5,040 m³/h	5,760 m³/h	6,480 m³/h
Weight [2]	500 kg	500 kg	560 kg
Dimensions (LxWxH) [2]	1465 x 860 x 970 mm		

1 Measured during cylinder filling from 0-200 bar tolerance +/- 5% at + 20°C ambient temperature.

2 Standard model. Weight and dimensions may vary depending on accessories.

Drive system: e-motor	KAP15.1-14-DAH	KAP150-16-DAH	KAP180-18-DAH
Motor	Diesel	Diesel	Diesel
Brand	Lombardini	Lombardini	Lombardini
Power	14 kW	16 kW	18 kW
Type of construction	LDW1003	LDW1003	LDW14004
Type	3 cylinder	3 cylinder	4 cylinder
Speed	2.300 U/min	2.760 U/min	2.760 U/min
Fuel tank	22 l	22 l	22 l

Status: 30/01/2015

STANDARD SCOPE OF SUPPLY:

Compressor block with following features

- Oil pump for forced-feed lubrication
- Micronic intake filter: 10 µm
- Intermediate coolers, air cooled, stainless steel
- Aftercooler, air cooled, outlet temperature approx. 10-15 °C above cooling air temperature
- Intermediate separators after 2nd stage
- Final separator for oil and water condensate after last stage
- Sealed safety valves after each stage
- TÜV approved final pressure safety valve
- Pressure maintaining and check valve after the final stage

Compressor block	**IK15.1**	**IK150**	**IK180**
Type	KAP 15.1-14-DAH	KAP 150-16-DAH	KAP 180-18-DAH
Charging rate [1]	450 l/min	540 l/min	680 l/min
Speed	1,320 1/min	1,230 1/min	1,400 1/min
Number of stages	4	4	4
Number of cylinders	4	4	4
Cylinder bore 1st stage	110 mm	120 mm	130 mm
Cylinder bore 2nd stage	60 mm	60 mm	60 mm
Cylinder bore 3rd stage	32 mm	32 mm	32 mm
Cylinder bore 4th stage	14 mm	14 mm	14 mm
Stroke	50 mm	50 mm	50 mm
Direction of rotation from flywheel side	Left	Left	Left
Drive type	V-belt	V-belt	V-belt
Intermediate pressure 1st stage	2,9 - 3,5 bar	2 - 3 bar	2,5 - 4 bar
Intermediate pressure 2nd stage	14 - 16 bar	14 - 16 bar	16 - 18 bar
Intermediate pressure 3rd stage	50 - 69 bar	65 - 70 bar	70 - 80 bar
Compressor block oil volume	5 l	5 l	5 l
Oil pressure	4,5 bar ± 1,5 bar	4,5 bar ± 1,5 bar	4,5 bar ± 1,5 bar
Intake pressure / Inlet pressure	1,0 bar_a	1,0 bar_a	1,0 bar_a

1 Measured during cylinder filling from 0-200 bar tolerance +/- 5 % at + 20°C ambient temperature.

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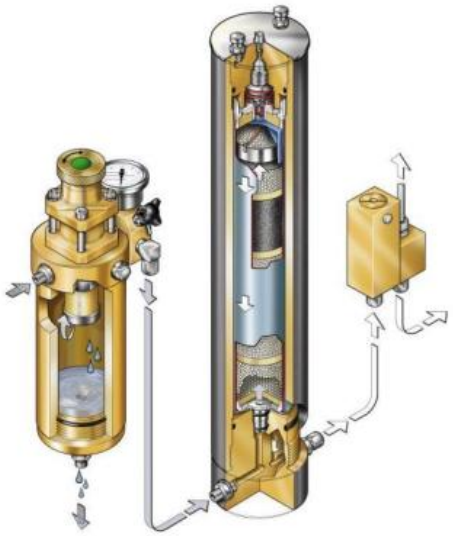
P 61 Purification System - Filter with separate oil and water separator for KAP 150-14-DAH and KAP 150-16-DAH

SCOPE OF DELIVERY:

- 1x filter housing with long-life filter cartridge
- Separator unit with final pressure safety valve
- Check valve between separator and micro filter
- Micro filter
- Air bleeder valve with manometer
- Pressurizer / check valve
- Filter key for cartridge renewal



P 61 purification system (picture similar)

Air quality as per DIN/EN 12021:

Contamination with	Maximum content as per DIN EN 12021	Air quality by BAUER
H_2O	25 mg/m³	≤ 10 mg/m³
CO	5 ppm(v)	Depends on cartridge [1]
CO_2	500 ppm(v)	Depends on intake air [2]
Oil	0.5 mg/m³	≤ 0.5 mg/m³

1 Only with BAUER special filter cartridge with hopcalite up to a maximum concentration of 25 ppm CO in intake air. The compressed clean breathing air then contains a maximum of 5 ppm CO.

2 Where the intake air exceeds the maximum permissible level of CO_2 as per DIN EN 12021, use of a BAUER AERO-GUARD system is **urgently recommended!**

Purification system	P 61
Operating pressure (Standard)	PN200 / PN300
Operating pressure max (PS)	350 bar
Pressure dew point	< -20 °C, equivalent to 3 mg/m³ at 300 bar
Piping connections	G 3/8“ (condensate drain G ¼“)
Filter housing volume	2.85 l
DGRL 97/23/EG	Vessel category II
Processable air capacity (at ambient temperature 20°C and 300 bar)[1]	2,475 m³

1 When using a BAUER P 21 filter cartridge without hopcalite. When using a cartridge with CO-removal, the air purification capacity is reduced to ca. 2235 m³. For units with combustion engine, a filter cartridge with CO removal is strongly recommended!

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P 81 Purification System - Filter with separate oil and water separator

for KAP180-18-DAH

P 81 purification system
(picture similar)

SCOPE OF DELIVERY:

- Separator with final pressure safety valve
- Check valve between separator and micro filters
- Two micro filters
- Air bleeder valve with manometer
- Pressuriser / check valve

Air quality as per DIN/EN 12021: see purification system in standard scope of delivery

Purification system	P 81
Operating pressure (standard)	PN200 / PN300
Operating pressure max (PS)	350 bar
Pressure dew point	< -20 °C, equivalent to 3 mg/m³ at 300 bar
Piping connections	G 3/8“ (condensate drain G ¼“)
Filter housing volume	2 x 2.85 l
DGRL 97/23/EG	Vessel category II
Processable air capacity (with ref. 20°C and 300 bar) [1]	5,325 m³

1 When using a BAUER P 21 filter cartridge without hopcalite. When using a cartridge with CO-removal, the air purification capacity is reduced to ca. 5265 m³. For units with combustion engine, a filter cartridge with CO removal is strongly recommended!

Compressor control (KAP-DAH)

The electronic control with additional monitoring electronics switches the compressor off automatically when the final pressure is reached in the system, measures operating hours and oil pressure, and displays the current operating status. The battery charge status can also be read off from the control box.

Including idle relief.

Semi automatic
compressor control

Status: 30/01/2015

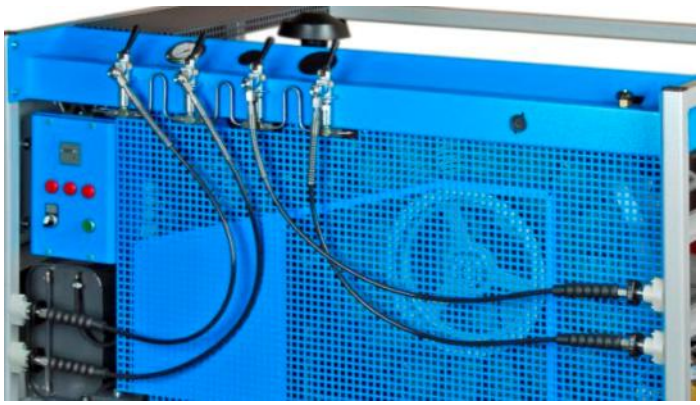
OPTIONS:

PN200 filling device

Filling device	Direct filling connection	Hose filling connection
Nominal pressure (PN)	200 bar	200 bar
Valve type	4 lever filling valves with integrated air bleeder, with German cylinder connector G 5/8" DIN 477 and manometer, PN200	4 lever filling valves with integrated air bleeder, with German cylinder connector G 5/8" DIN 477 and manometer, PN200
Filling hose	4 Unimam high pressure filling hoses, length 1 m	4 Unimam high pressure filling hoses, length 1 m
International cylinder connector	1 international cylinder connectors	1 international cylinder connectors

PN300 filling device

Filling device	Direct filling connection	Hose filling connection
Nominal pressure (PN)	300 bar	300 bar
Valve type	4 lever filling valves with integrated air bleeder, with German cylinder connector G 5/8" DIN 477 and manometer, PN200	4 lever filling valves with integrated air bleeder, with German cylinder connector G 5/8" DIN 477 and manometer, PN200
Filling hose	4 Unimam high pressure filling hoses, length 1 m	4 Unimam high pressure filling hoses, length 1 m



KAP-DAH with filling connections

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Additional interstage separator after 1st stage

In operation in regions with high humidity, e.g. tropical regions, we recommend installing an interstage separator after the first compression stage. This can lengthen the service life of the system and reduce maintenance costs.

Interstage separator

External filling panels

These external filling panels can be wall-mounted as separate panels and are suitable for remote operation for installation in a separate room.

External filling panel

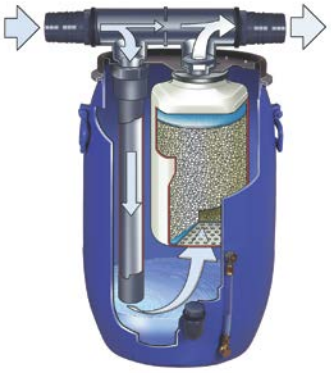
SCOPE OF DELIVERY:

- Direct filling connection or hose connection
- One or two pressure ranges PN200 and/or PN300 (second pressure range can be selected with a switching tap or permanently connected with a pressure reducer)
- 4, 6 or 10 filling connections
- High-pressure check of all components
- Flushing valve prevents excessive CO_2 content in compressed breathing air
- CE Mark

Filling connections	Dimensions (L × W × H) mm	Weight
	mm	kg
4 filling connections	1140 × 138 × 183	Depends on model
6 filling connections	1200 × 138 × 183	Depends on model
10 filling connections	1120 × 352 × 370	Approx. 33 kg

Status: 30/01/2015

AERO-GUARD CO_2 Absorber



AERO-GUARD

Efficient removal of CO_2 from breathing air: A sophisticated bypass system feeds the compressor intake air through the AERO-GUARD. Only around two-thirds of the air passes through the filter cartridge that absorbs the CO_2 from the air. This process reduces the CO_2 content to one-third of that of the intake air.

SCOPE OF DELIVERY, AERO-GUARD:

- Intake pipe (order connections separately)
- Water barrel, 60 l (for AERO-GUARD DUO – 2 × water barrels each 60 l)
- Filter cartridge; filling: 9 kg special carbon dioxide absorber

MODELS:

Type / Size	Suitable for charging rate [1]	Dimensions (W x D x H)	Operating weight [2]
	l/min	cm	
Aero-Guard-S	100 – 150	50 x 46 x 72	26 kg
Aero-Guard-M	160 – 230		
Aero-Guard-L	240 – 320		
Aero-Guard-XL	330 – 450		
Aero-Guard-XXL	460 – 700		
Aero-Guard Duo 1000	650 – 1000	85 x 62,5 x 87	54 kg

1 Charging rate of the connected compressor measured with cylinder filling from 0 – 200 bar ± 5%.

2 Includes filter cartridge and 10-litre water ballast.

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TECHNICAL OPERATING DATA:

Model	AERO-GUARD S-XXL	AERO-GUARD DUO 1000
Medium	Pressurised air	
Ambient temperature	+5 to +45°C	
Intake air temperature	+5 to +45 °C	
Rel. humidity of intake air	10 to 100 %	
CO_2 intake air concentration	max. 1000 ppm_v CO_2	
CO_2 output air concentration	1/3 of intake concentration = max. 330 ppm_v CO_2 at 1,000 ppm_v intake concentration CO_2	
Designed for compressor charging rate	100 – 700 l/min	650 – 1,000 l/min
Service life	Min. 44 operating hours (at 700 l/min output and intake concentration of 1000 ppm CO_2). Cartridge must be changed after max. one year even if the maximum service life is not reached.	Min. 60 operating hours (at 1,000 l/min output and intake concentration of 1000 ppm CO_2). Cartridge must be changed after max. one year even if the maximum service life is not reached.
Maximum daily operating time:	5 h	
Cartridge filling:	Approx. 9 kg special carbon dioxide absorber per cartridge	
Pressure loss	Approx.20 mbar	
Max. permissible tilt	15°	
Permissible altitude	0 - 2000 m AMSL	
Finish	Container blue, cover black/silver, PVC pipes grey RAL7011	

Status: 30/01/2015

Relevant EC Directives (where applicable)

- EC Machinery Directive (2006/42/EC)
- EC Pressure Equipment Directive (97/23/EC)
- EC Low Voltage Directive 2006/95/EC
- EC Electromagnetic Compatibility (EMC) 2004/108/EC

Applied national standards and technical specifications, in particular

- Betriebssicherheitsverordnung (German Industrial Safety Regulation) of 27 September 2002
- AD 2000
- Technische Regeln Druckgase (TRG; **Technical Regulations for Compressed Gases**):TRG 400, 401, 402 (w/o permanent premises) and TRG 790
- Unfallverhütungsvorschrift (BGR; German Accident Prevention Regulations) BGR 500
- All BAUER filter housings are designed, manufactured and tested in line with Accident Prevention Regulations and regulations under AD-2000 provisions and DGRL97/23EG.

Documentation:	1x operating manual and parts list with exploded view drawing on DVD
Design:	In line with the state of the art according to DIN, VDE, TÜV and Accident Prevention regulations
Testing:	In line with Bauer Standard as per DIN EN 10204 - 3.1

Otherwise the **General Terms and Conditions of** BAUER KOMPRESSOREN (AGB) in the version valid at the time of contract conclusion apply. These Terms & Conditions can be viewed and downloaded at the website www.bauer-kompressoren.com, or sent by BAUER on request.

All information is given without assumption of liability and subject to technical changes.

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