



Product Catalogue 2022/2023

Stationary warm air heaters, mobile warm air heaters, heating/cooling combination, heat pumps, air cleaners, dehumidifiers, multi-fuel oil burners

Energy competence in a class of its own

www.kroll.de





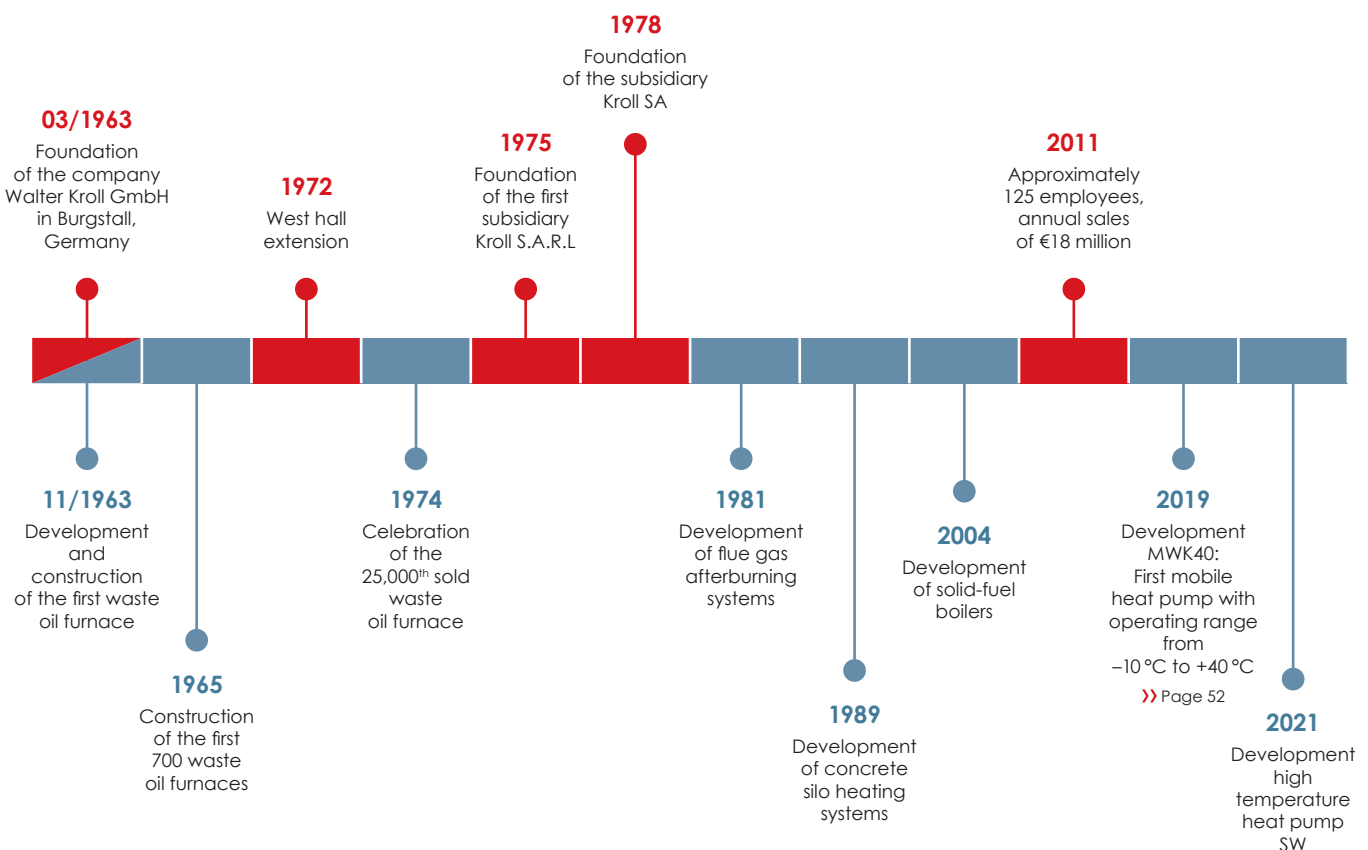
About us

Kroll Energy GmbH combines first-class engineering expertise with high-performance production power to create a convincing overall package that leaves nothing to be desired. Whether heating, cooling, air purification/dehumidification, warm air generation or full condensing boiler technology:

We have a professional solution for every requirement. What has made our continuous success possible – in addition to our technical know-how – are our typical Swabian virtues, which are popular all over the world: Quality, diligence and ingenuity

are at home in our company and the basis for forward-looking developments with international recognition. The Kroll company was founded in 1963 and has continued to develop ever since.

What has remained the same over all these years **is our high quality standard:** We guarantee the quality of our products. We are the first manufacturer in the heating and ventilation sector to offer our customers **a full 3-year manufacturer's warranty.** With the conclusion of a maintenance contract, we even extend this to **up to 6 years.**



Content

Stationary heaters / warm air heaters

Stationary warm air generators S/SC	6
Technical data	8
Standard units	
Technical data	
Special version for duct connection without air outlet hood	11
Accessories	14
Exploded view	17
Overview of burners: Oil	18
Overview of burners: Natural gas	20
Overview of burners: LPG	22
Checklist	24

Modulating gas condensing heaters NBX	26
Technical data and accessories	27
Possible exhaust gas ducts	29

Air heaters LH	30
Technical data	31
Accessories	32

Ceiling fan DV	34
Technical data and accessories	35

Mobile heaters / warm air heaters

Mobile heating units HM	37
Technical data	38
Accessories	39
Mobile warm air heaters M	40
Technical data	42
Accessories	44
Possible ways to connect warm air hoses	45

Mobile oil heaters MA	46
Technical data and accessories	47

Mobile gas heaters P/PX	48
Technical data and accessories	49

Mobile electric heaters E	50
Technical data and accessories	51

Heating/cooling combination

MWK40	54
Technical data and accessories	56
Options for the MWK40	57

Mobile low-temperature heat pump

MW	54
Technical data and accessories	56
Options for the MWK40	57

Air cleaners

LR5300	59
Technical data and accessories	60
Dust class overview	61

Dehumidifiers

TK/TE	63
Technical data	64
Accessories	65

Multi-fuel oil burners

KG/UB	67
Technical data	68
Accessories	69

General

Notes	71
Terms of sale and delivery	72

Separate price list!

You will find the prices in the accompanying price list.





Kroll Energy –

Intelligent air conditioning solutions for industry

Climate change and increasing environmental awareness are particularly noticeable in the heating and air-conditioning sector; sustainable products and solutions are increasingly coming into focus. In the future, air conditioning and building technology should also ensure the smallest possible ecological footprint. We, Kroll Energy GmbH, specialized in air conditioning and ventilation solutions in the industrial sector more than 60 years ago and are one of the leading companies today. Whether heating, cooling, air purification/dehumidification, warm air generation, fully condensing or particularly environmentally friendly heat pump technology: We develop an individually tailored solution for every requirement in every commercial property and manufacture it in our factory



in Backnang. We specialize primarily in industrial and commercial real estate. It does not matter whether it is a new or an existing building. Even when building a property, mobile solutions can be used for air conditioning or acceleration of the drying process and can save both energy and resources. During the development of a product, we can not only build on many years of manufacturing experience, but also practical experience through customer feedback. Frequently, customers wish for optimizations for our products or even completely new products for individual requirement profiles. The quality feature "Made in Germany" plays a decisive role: The development, production, delivery and subsequent service remain in our hands, so that we can be able to react at short notice to current requirements.

>>
Scan here
for our
corporate
film



The focus for a sustainable future is on fossil-free air conditioning solutions and the use of environmentally friendly refrigerants and components. There is potential in heat pump technology, which is also being developed in variants with high flow temperatures. This will even enable older existing buildings or district heating and neighbourhood networks to be equipped with a sustainable heat supply.





Integrated
full-touch control
(type SC)



Fast
heat supply



Free choice
of fuel



Economical



Long
lifetime



Suitable for
any room

Stationary warm air generators S/ SC

Warmly recommended!



Need an upgrade?

An already installed
unit type S can be
upgraded to type SC
by means of
an upgrade kit.

See page 16

Warm air generators heat up the air without preheating periods and are characterized by a consistent heat transmission. Our warm air generators type S have been developed according to current requests to heating systems, and they fulfill the EU regulations of ErP guideline to the full extent. They combine Kroll quality known for years with modern, energy-saving technology – for a trouble-free permanent operation.

After a short start up period, these units are ready for operation and emit the generated heat directly to the air, without any further transmitting medium. **You stay flexible:** No matter if operated with a fuel burner, an LPG or natural gas burner, two- or single-stage burner, as duct unit or freely blowing, as horizontal or vertical unit, with full-touch control or classic control: Our S series can easily meet your individual demands **in new and already existing buildings.**

Important note!



For a 2-stage operation with fuel, an **additional nozzle is mandatory besides the burner.** This nozzle is **not optional** and **not included in the scope of delivery.** You will find details on page 18.

With the gas version and the 1-stage fuel version, the nozzle is already included.



Thanks to a large power range between 25 kW and 652 kW, the suitable variant is available for any field of operation. The S series can be equipped with an individually designed duct system to distribute the warm air into several rooms. We can offer the units with pressures of up to 1600 Pa.

According to your individual needs, our warm air generators can utilize fresh air, secondary air and re-circulated air, which is particularly environment-friendly. **The units help to reduce energy costs during winter and create comfortable temperature during the summer.**

Fields of application

As effective and powerful warm air generators, they recommend themselves for being used in nearly all commercial and industrial sectors, for example:

- Production halls and factories
- Exhibition halls
- Furniture warehouses
- Salesrooms
- Workshops and garages
- Sports facilities
- Greenhouses and garden centres
- Stables and animal-rearing facilities
- Painting shops and drying chambers

Our S-series consists of two product types

Type S

The classical one

Proven for years, used thousands of times and available in more than 20 different variants.

Degree of efficiency up to 93 percent (Hi)

Large power range between 25 kW and 652 kW available

Pressures between 50 and 1.600 Pa

Individual special solutions possible

Convertible to SC version via service kit (page 16)

Type SC

The comfortable one

Comfortable control via touch screen, automatic maintenance indicator and integrated day/night control

Degree of efficiency up to 93 percent (Hi)

Frost protection function

RJ-45-interface: Integration into a building services management system possible

Ready for operation via app

Control of ceiling fans possible

You cannot decide?

We assist you in choosing the right products: From the planning to the commissioning and the competent service for all cases.

Technical data

Power range 28 to 110 kW

Standard units

		25S	40S	55S	70S	95S	110S
No.		027700	027701	027702	027703	030821	027704
Comfort		25SC	40SC	55SC	70SC	95SC	110 SC
(including full-touch control)	No.	106525	106526	106527	106528	106529	106530
Nominal heat input	kW	26	40	51	73	95	108
Nominal heat output	kW	24,1	37,3	47,8	68,3	88,1	98,5
Air volume flow	m³/h	2.120	2.890	3.660	5.310	8.090	9.290
External pressure*	Pa	50	70	80	70	80	80
Temperature increase	K	35	36	37	35	31	31
Fuel consumption**	kg/h	2,2	3,4	4,3	6,1	8,0	9,1
Gas consumption (Natural gas)	m³/h	2,8	4,2	5,4	7,7	10,1	11,4
Gas consumption (LPG)	kg/h	2,0	3,1	4,0	5,7	7,5	8,5
Electrical connection	V/Hz	230/50	230/50	230/50	400/50	400/50	400/50
Electrical power consumption***	kW	0,64	1,12	1,59	1,11	1,74	1,89
Stainless steel heat exchanger		✓	✓	✓	✓	✓	✓
Air outlet hood 3-way with grill ZG2/circulating air		✓	✓	✓	✓	✓	✓
Air intake grill		✓	✓	✓	✓	✓	✓
Exhaust pipe	Ø mm	130	130	130	180	180	180
Length	mm	715	865	975	1.085	1.150	1.150
Width	mm	455	505	585	665	765	765
Height	mm	1.275	1.500	1.645	1.835	1.895	1.995
Weight (without burner)	kg	93	124	157	191	245	265
Sound pressure level	dB(A)	68	71	71	68	69	69

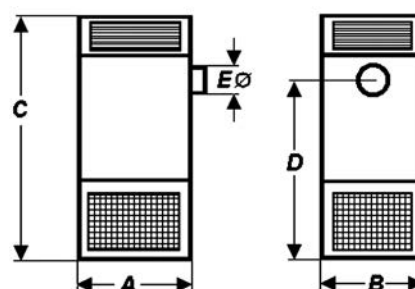
* Higher pressure up to 1600 Pa and horizontal models and special versions available on request.

** Fuel oil consumption: 1 kg/h = 1,17 l/h (at 15 °C)

*** Electrical power consumption depends on the chosen pressure!

✓ Included in delivery

Dimensions in mm	A	B	C	D	E
25S	715	455	1275	910	130
40S	865	505	1500	1110	130
55S	975	585	1645	1195	130
70S	1085	665	1835	1425	180
95S	1150	765	1895	1545	180
110S	1150	765	1985	1545	180



Technical data

Power range 129 to 280 kW

Standard units

	No.	140S 021657	170S 021658	195S 021659	260S 021618	290S 021660
Nominal heat input	kW	129	163	194	250	280
Nominal heat output	kW	120	150	180	230	260
Air volume flow	m³/h	9.200	11.800	13.800	18.400	20.600
External pressure*	Pa	50	60	70	100	100
Temperature increase	K	44	43	44	42	42
Fuel consumption**	kg/h	10,8	13,7	16,3	21,0	23,5
Gas consumption (Natural gas)	m³/h	13,7	17,2	20,5	26,5	29,6
Gas consumption (LPG)	kg/h	10,2	12,8	15,3	19,7	22,0
Electrical connection	V/Hz	400/50	400/50	400/50	400/50	400/50
Electrical power consumption***	kW	1,1	2,2	1,5	3,0	4,0
Stainless steel heat exchanger ****		–	–	–	–	–
Air outlet hood 3-way with grill ZG2/circulating air		✓	✓	✓	✓	✓
Air intake grill		✓	✓	✓	✓	✓
Exhaust pipe	Ø mm	250	250	250	250	250
Length	mm	1.250	1.250	1.750	1.750	2.200
Width	mm	1.025	1.025	1.025	1.025	1.025
Height	mm	2.180	2.180	2.180	2.180	2.180
Weight (without burner)	kg	399	405	495	503	662
Sound pressure level	dB(A)	73	73	75	75	74

* Higher pressure up to 1600 Pa and horizontal models and special versions available on request.

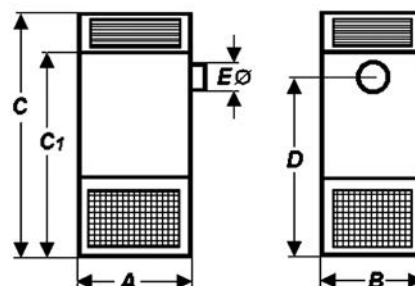
** Fuel oil consumption: 1 kg/h = 1,17 l/h (at 15 °C)

*** Electrical power consumption depends on the chosen pressure!

**** Optionally available at extra charge

✓ Included in delivery

Dimensions in mm	A	B	C	C1	D	E
140S	1250	1025	2180	1780	1600	250
170S	1250	1025	2180	1780	1600	250
195S	1750	1025	2180	1780	1600	250
260S	1750	1025	2180	1780	1600	250
290S	2200	1025	2180	1780	1600	250



Technical data

Power range 326 to 652 kW

Standard units

		360S	430S	490S	580S	650S	730S
	No.	021661	021662	021663	021664	021665	021666
Nominal heat input	kW	326	423	489	544	598	652
Nominal heat output	kW	300	390	450	500	550	600
Air volume flow	m³/h	23.400	29.500	35.000	37.500	42.600	48.300
External pressure*	Pa	100	180	250	160	180	260
Temperature increase	K	43	45	44	45	44	42
Fuel consumption**	kg/h	27,4	35,5	41,1	45,7	50,3	54,8
Gas consumption (Natural gas)	m³/h	34,5	44,8	51,7	57,6	63,3	69,0
Gas consumption (LPG)	kg/h	25,7	33,3	38,5	42,8	47,1	51,3
Electrical connection	V/Hz	400/50	400/50	400/50	400/50	400/50	400/50
Electrical power consumption***	kW	5,5	5,5	11,0	7,5	11,0	15,0
Stainless steel heat exchanger ****		–	–	–	–	–	–
Air outlet hood 3-way with grill ZG2/circulating air		✓	✓	✓	✓	✓	✓
Air intake grill		✓	✓	✓	✓	✓	–
Exhaust pipe	Ø mm	250	300	300	300	300	300
Length	mm	2.200	2.200	2.200	2.700	2.700	2.700
Width	mm	1.025	1.220	1.220	1.220	1.220	1.220
Height	mm	2.180	2.645	2.645	2.745	2.745	2.745
Weight (without burner)	kg	689	1.004	1.015	1.185	1.196	1.248
Sound pressure level	dB(A)	74	74	77	78	78	78

* Higher pressure up to 1600 Pa and horizontal models and special versions available on request.

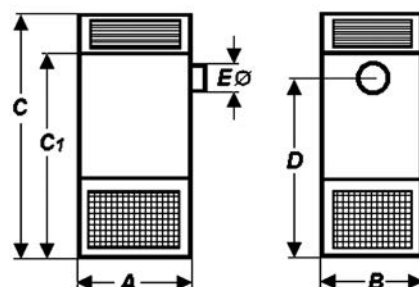
** Fuel oil consumption: 1 kg/h = 1,17 l/h (at 15 °C)

*** Electrical power consumption depends on the chosen pressure!

**** Optionally available at extra charge

✓ Included in delivery

Dimensions in mm	A	B	C	C1	D	E
360S	2200	1025	2180	1780	1600	250
430S	2200	1220	2645	2245	2020	300
490S	2200	1220	2645	2245	2020	300
580S	2700	1220	2745	2245	2020	300
650S	2700	1220	2745	2245	2020	300
730S	2700	1220	2745	2245	2020	300



Technical data

Power range 28 to 110 kW

Special version for duct connection without air outlet hood

		25S	40S	55S	70S	95S	110S
No.		101040	101041	101042	101043	101044	101045
Comfort		25SC	40SC	55SC	70SC	95SC	110 SC
(including full-touch control)	No.	107210	107211	107212	107213	107214	107215
Nominal heat input	kW	26	40	51	73	95	108
Nominal heat output	kW	24,1	37,3	47,8	68,3	88,1	98,5
Air volume flow	m³/h	2.120	2.890	3.660	5.310	8.090	9.290
External pressure max.*	Pa	350	350	350	350	350	350
Temperature increase	K	35	36	37	35	31	31
Fuel consumption**	kg/h	2,2	3,4	4,3	6,1	8,0	9,1
Gas consumption (Natural gas)	m³/h	2,8	4,2	5,4	7,7	10,1	11,4
Gas consumption (LPG)	kg/h	2,0	3,1	4,0	5,7	7,5	8,5
Electrical connection	V/Hz	230/50 400/50	230/50 400/50	230/50 400/50	400/50	400/50	400/50
Electrical power consumption***	kW	0,64	1,12	1,59	1,11	1,74	1,89
Stainless steel heat exchanger		✓	✓	✓	✓	✓	✓
Air intake grill		✓	✓	✓	✓	✓	✓
Exhaust pipe	Ø mm	130	130	130	180	180	180
Length	mm	715	865	975	1.085	1.150	1.150
Width	mm	455	505	585	665	765	765
Height	mm	1.275	1.500	1.645	1.835	1.895	1.995
Weight (without burner)	kg	93	124	157	191	245	265
Sound pressure level	dB(A)	68	71	71	68	69	69

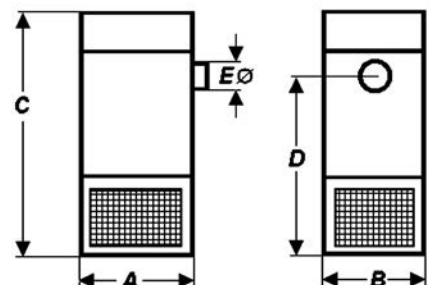
* Higher pressure and special versions available on request.

** Fuel oil consumption: 1 kg/h = 1,17 l/h (at 15 °C)

*** Electrical power consumption at 350 Pa

✓ Included in delivery

Dimensions in mm	A	B	C	D	E
25S	715	455	1275	910	130
40S	865	505	1500	1110	130
55S	975	585	1645	1195	130
70S	1085	665	1835	1425	180
95S	1150	765	1895	1545	180
110S	1150	765	1985	1545	180



Technical data

Power range 129 to 280 kW

Special version for duct connection without air outlet hood

		140S	170S	195S	260S	290S
	No.	021699	021711	021716	021720	021725
Nominal heat input	kW	129	163	194	250	280
Nominal heat output	kW	120	150	180	230	260
Air volume flow	m³/h	9.200	11.800	13.800	18.400	20.600
External pressure max.*	Pa	350	350	350	350	350
Temperature increase	K	44	43	44	42	42
Fuel consumption**	kg/h	10,8	13,7	16,3	21,0	23,5
Gas consumption (Natural gas)	m³/h	13,7	17,2	20,5	26,5	29,6
Gas consumption (LPG)	kg/h	10,2	12,8	15,3	19,7	22,0
Electrical connection	V/Hz	400/50	400/50	400/50	400/50	400/50
Electrical power consumption***	kW	1,1	2,2	1,5	3,0	4,0
Stainless steel heat exchanger ****		–	–	–	–	–
Air intake grill		✓	✓	✓	✓	✓
Exhaust pipe	Ø mm	250	250	250	250	250
Length	mm	1.250	1.250	1.750	1.750	2.200
Width	mm	1.025	1.025	1.025	1.025	1.025
Height	mm	2.180	2.180	2.180	2.180	2.180
Weight (without burner)	kg	399	405	495	503	662
Sound pressure level	dB(A)	73	73	75	75	74

* Higher pressure and special versions available on request.

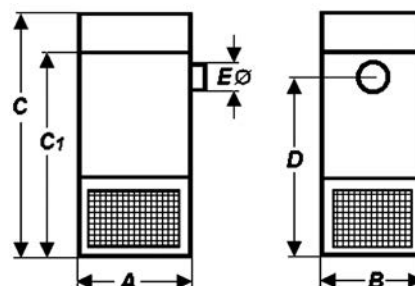
** Fuel oil consumption: 1 kg/h = 1,17 l/h (at 15 °C)

*** Electrical power consumption at 350 Pa

**** Optionally available at extra charge

✓ Included in delivery

Dimensions in mm	A	B	C	C1	D	E
140S	1250	1025	2180	1780	1600	250
170S	1250	1025	2180	1780	1600	250
195S	1750	1025	2180	1780	1600	250
260S	1750	1025	2180	1780	1600	250
290S	2200	1025	2180	1780	1600	250



Technical data

Power range 326 to 652 kW

Special version for duct connection without air outlet hood

		360S	430S	490S	580S	650S	730S
	No.	021730	021735	021740	021745	021750	021755
Nominal heat input	kW	326	423	489	544	598	652
Nominal heat output	kW	300	390	450	500	550	600
Air volume flow	m³/h	23.400	29.500	35.000	37.500	42.600	48.300
External pressure max.*	Pa	350	350	350	350	350	350
Temperature increase	K	43	45	44	45	44	42
Fuel consumption**	kg/h	27,4	35,5	41,1	45,7	50,3	54,8
Gas consumption (Natural gas)	m³/h	34,5	44,8	51,7	57,6	63,3	69,0
Gas consumption (LPG)	kg/h	25,7	33,3	38,5	42,8	47,1	51,3
Electrical connection	V/Hz	400/50	400/50	400/50	400/50	400/50	400/50
Electrical power consumption***	kW	5,5	5,5	11,0	7,5	11,0	15,0
Stainless steel heat exchanger ****		–	–	–	–	–	–
Air intake grill		✓	✓	✓	✓	✓	–
Exhaust pipe	Ø mm	250	300	300	300	300	300
Length	mm	2.200	2.200	2.200	2.700	2.700	2.700
Width	mm	1.025	1.220	1.220	1.220	1.220	1.220
Height	mm	2.180	2.645	2.645	2.745	2.745	2.745
Weight (without burner)	kg	689	1.004	1.015	1.185	1.196	1.248
Sound pressure level	dB(A)	74	74	77	78	78	78

* Higher pressure and special versions available on request.

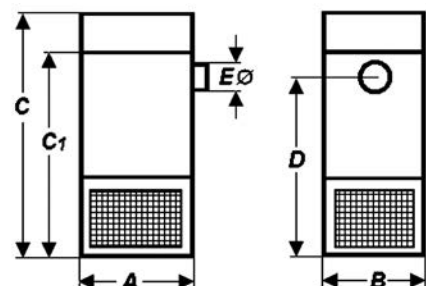
** Fuel oil consumption: 1 kg/h = 1,17 l/h (at 15 °C)

*** Electrical power consumption at 350 Pa


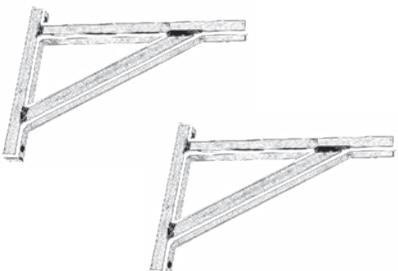



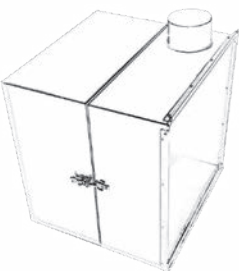
**** Optionally available at extra charge

✓ Included in delivery

Dimensions in mm	A	B	C	C1	D	E
360S	2200	1025	2180	1780	1600	250
430S	2200	1220	2645	2245	2020	300
490S	2200	1220	2645	2245	2020	300
580S	2700	1220	2745	2245	2020	300
650S	2700	1220	2745	2245	2020	300
730S	2700	1220	2745	2245	2020	300

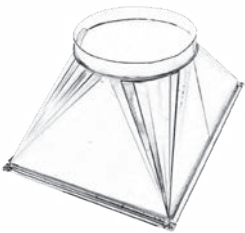
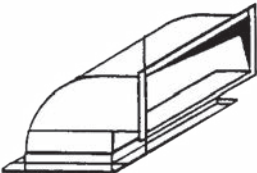
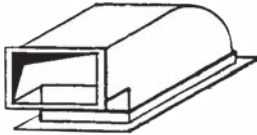


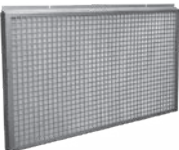


Accessories

	Products	Product classification	Article no.
Fixation elements			
	Floor standing frame Height 500 mm	25S/SC	030501
		40S/SC	030502
		55S/SC	030503
		70S/SC	030504
		95S/SC, 110S/SC	034587
		140S, 170S	021833
		195S, 260S	021834
		290S, 360S	021835
		430S, 490S	022100
		580S, 650S, 730S	021836
	Wall brackets for standing unit	25S/SC	030505
		40S/SC	030506
		55S/SC	030507
		70S/SC	030508
		95S/SC, 110S/SC	034651
		140S, 170S	021842
		195S, 260S	011903
		290S, 360S	021843
		430S, 490S	022102
		580S, 650S, 730S	021844
	Wall brackets for horizontal unit	25S/SC	030509
		40S/SC	030510
		55S/SC	030511
		70S/SC	030512
		95S/SC, 110S/SC	034713
		140S, 170S	021840
		195S, 260S	021841
	Base frame for horizontal unit	25S/SC	030513
		40S/SC	030514
		55S/SC	030515
		70S/SC	030516
		95S/SC, 110S/SC	034714
		140S, 170S	011906
		195S, 260S	021846
		290S, 360S	021847
		430S, 490S	022105
		580S, 650S	021848
	Base frame for ceiling suspension	25S/SC	030517
		40S/SC	030518
		55S/SC	030519
		70S/SC	030520
		95S/SC, 110S/SC	034715
		140S, 170S	011907
		195S, 260S	021850
		290S, 360S	021851
		430S, 490S	022107
		580S	021852
Burners			
	Burner cover	25S/SC–55S/SC	030469
		70S/SC–110S/SC	030473
		140S, 170S	011910
		195S, 260S	011911
		290S – 730S	011912




More accessories available on request. Delivered accessories may differ from the picture.

Accessories

	Products	Product classification	Article no.
Combustion air intake			
	Air intake bend 90°	25S – 110S/SC	021853
	Air intake bend 45°	25S – 110S/SC	011915
	Intake pipe 1 m length	25S – 110S/SC	021856
	Air intake pipe end cap with grill	25S – 110S/SC	021859
Duct outlet accessories			
	Duct hood, drawn round	25S/SC	030537
		40S/SC	030538
		55S/SC	030539
		70S/SC	030540
		95S/SC, 110S/SC	034719
		140S, 170S	011888
		195S, 260S	021897
		290S, 360S	021898
		430S, 490S	022113
		580S, 650S, 730S	021899
	Duct cover, lengthwise	25S/SC	030525
		40S/SC	030526
		55S/SC	030527
		70S/SC	030528
		95S/SC, 110S/SC	021886
		140S, 170S	021887
		195S, 260S	011880
		290S, 360S	021888
		430S, 490S	022111
		580S, 650S, 730S	021889
	Duct cover, frontal	25S/SC	030529
		40S/SC	030530
		55S/SC	038495
		70S/SC	030532
		95S/SC, 110S/SC	301166
		140S, 170S	021887
		195S, 260S	011880
		290S, 360S	021888
		430S, 490S	022111
		580S, 650S, 730S	021889
	Transition piece to pocket air filter	25S/SC	030553
		40S/SC	021938
		55S/SC	021939
		70S/SC	021940
		95S/SC, 110S/SC	034723
	Pocket air filter (from 140S on, transition piece included)	25S/SC	030556
		40S/SC	030561
		55S/SC	021966
		70S/SC	021967
		95S/SC, 110S/SC	034726
		140S, 170S	021969
		195S, 260S	021970
		290S, 360S	021971
		430S, 490S	022127
		580S, 650S, 730S	021972
	Flat filter kit	25S/SC	034182
		40S/SC	034187
		55S/SC	034192
		70S/SC	034197
		95S/SC, 110S/SC	034202
		140S, 170S	021977
		195S, 260S	021978

More accessories available on request. Delivered accessories may differ from the picture.

Accessories

	Products	Product classification	Article no.
Electric accessories and oil filters for 25S to 730S			
	Room thermostat RT, IP30	S	006859
	Room thermostat RTI, industrial version IP54	S	005434
	Day/night automatic control in plastic casing, for night setback, with digital clock, power reserve, day and week programme, 1 room sensor included	S	006708
	Day/night control for night setback, with digital clock, power reserve, day and week programme, including 1 room sensor, in plastic box, for 2 units with additional control box	S	006847
	Operating hours meter	S/SC	030705
	Oil filter with return admixing	S/SC	005330
	Automatic heating oil deventilation device with filter	S/SC	006903

Upgrade kit from standard (S) to comfort (SC) version

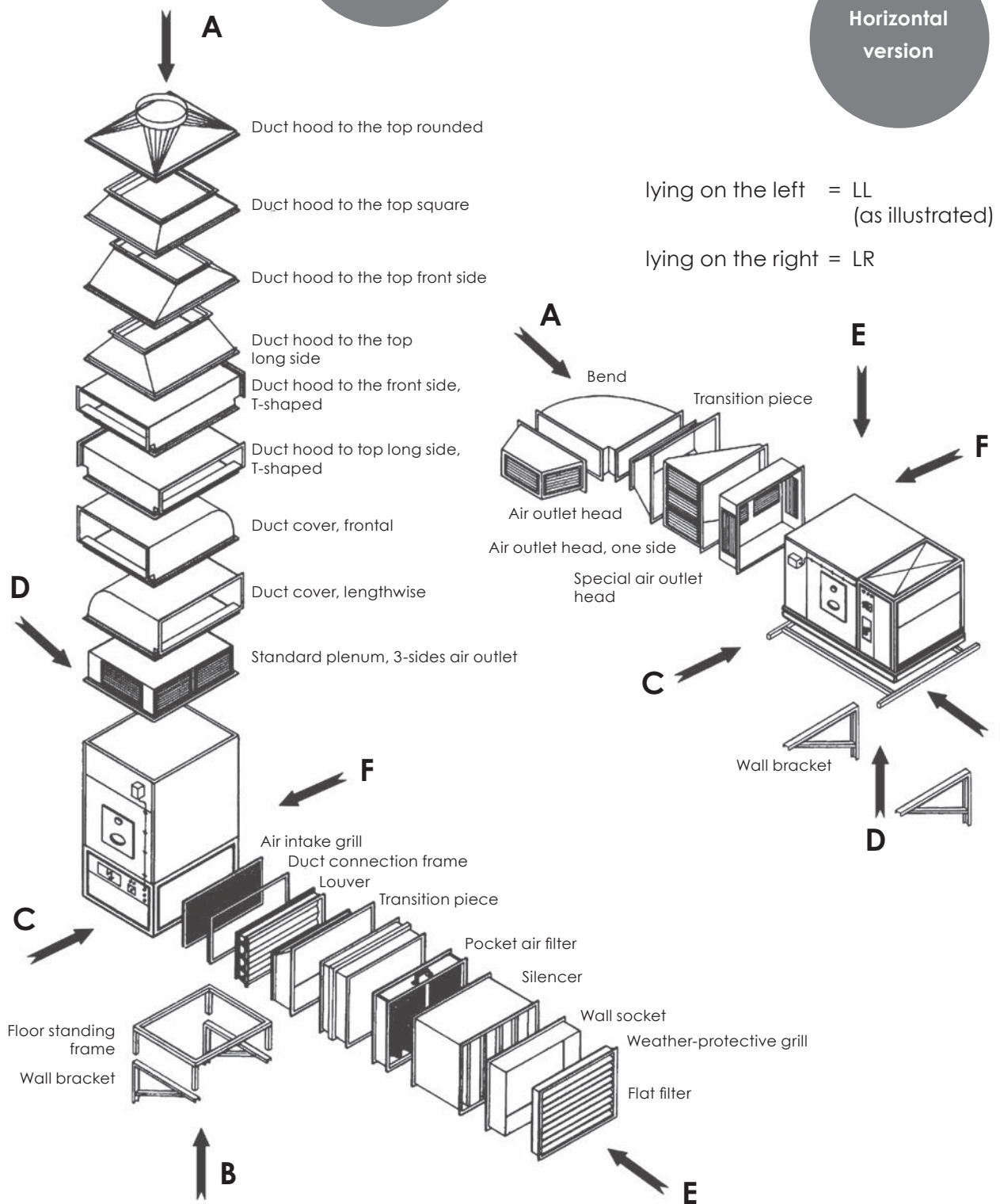
Control 230 V	25S-110S	106636
Control 400 V	110S	106637
Ceiling fan control DVS	25S-110S	107041
Room sensor, plastic housing (necessary for differential control of the ceiling fans)	25S-110S	107045

More accessories available on request. Delivered accessories may differ from the picture.

Exploded view

Vertical version

Horizontal version



Overview of burners: Oil

Model	Suitable burner	Nozzle	Article no.
25S/SC	Oil burner Riello, 2-stage CAUTION: Nozzle is necessary and must be ordered!	Nozzle 0,60 gph/60° S	300631
			005585
	Oil burner Giersch, 1-stage		027485
	Multi-fuel oil burner KG/UB20		027142
40S/SC	Oil burner Riello, 2-stage CAUTION: Nozzle is necessary and must be ordered!	Nozzle 0,75 gph/60° S	300631
			005853
	Oil burner Giersch, 1-stage		027486
	Multi-fuel oil burner KG/UB20		027142
55S/SC	Oil burner Giersch, 2-stage CAUTION: Nozzle is necessary and must be ordered!	Nozzle 0,85/60° S	300575
			029692
	Oil burner Weishaupt, 2-stage CAUTION: Nozzle is necessary and must be ordered!	Nozzle 0,75/60° S	300710
			005853
	Oil burner Giersch, 1-stage		027487
70S/SC	Multi-fuel oil burner KG/UB55		027143
	Oil burner Giersch, 2-stage CAUTION: Nozzle is necessary and must be ordered!	Nozzle 1,10/60° S	300575
			005543
	Oil burner Weishaupt, 2-stage CAUTION: Nozzle is necessary and must be ordered!	Nozzle 1,00/60° S	300710
			005538
	Oil burner Giersch, 1-stage		005785
95S/SC	Multi-fuel oil burner KG/UB70		027144
	Oil burner Giersch, 2-stage CAUTION: Nozzle is necessary and must be ordered!	Nozzle 1,50/60° S	300575
			029473
	Oil burner Weishaupt, 2-stage CAUTION: Nozzle is necessary and must be ordered!	Nozzle 1,35/60° S	300711
			005855
	Oil burner Giersch, 1-stage		006224
110S/SC	Multi-fuel oil burner KG/UB100		027145
	Oil burner Giersch, 2-stage CAUTION: Nozzle is necessary and must be ordered!	Nozzle 1,75/60° S	300575
			030562
	Oil burner Weishaupt, 2-stage CAUTION: Nozzle is necessary and must be ordered!	Nozzle 1,65/60° H	300712
			042061
	Oil burner Giersch, 1-stage		006224
140S	Multi-fuel oil burner KG/UB100		027145
	Oil burner Giersch, 2-stage CAUTION: Nozzle is necessary and must be ordered!	Nozzle 2,00/60° S	300575
			006098
	Oil burner Giersch, 1-stage		006224
170S	Multi-fuel oil burner KG/UB150		027146
	Oil burner Giersch, 2-stage CAUTION: Nozzle is necessary and must be ordered!	Nozzle 2,50/60° S	300643
			005944
	Oil burner Giersch, 1-stage		005811
	Multi-fuel oil burner KG/UB200		027147

Overview of burners: Oil

Model	Suitable burner	Nozzle	Article no.
195S	Oil burner Giersch, 2-stage CAUTION: Nozzle is necessary and must be ordered!	Nozzle 3,00/60° S	300643 028179
	Oil burner Giersch, 1-stage		005811
	Multi-fuel oil burner KG/UB200		027147
260S	Oil burner Giersch, 2-stage CAUTION: Nozzle is necessary and must be ordered!	Nozzle 4,00/60° S	300643 035235
	Oil burner Giersch, 1-stage		005811
290S	Oil burner Giersch, 2-stage CAUTION: Nozzle is necessary and must be ordered!	Nozzle 4,50/60° S	300695 056166
360S	Oil burner Giersch, 2-stage CAUTION: Nozzle is necessary and must be ordered!	Nozzle 5,5/60° S	300695 046746
430S	Oil burner Giersch, 2-stage CAUTION: Nozzle is necessary and must be ordered!	Nozzle 7,00/60° S	300695 300708
490S	Oil burner Giersch, 2-stage CAUTION: Nozzle is necessary and must be ordered!	Nozzle 7,50/60° SS	300696 006320
580S	Oil burner Giersch, 2-stage CAUTION: Nozzle is necessary and must be ordered!	Nozzle 9,00/60° SS	300697 032617
650S	Oil burner Giersch, 2-stage CAUTION: Nozzle is necessary and must be ordered!	Nozzle 9,00/60° SS	300697 032617
730S	Oil burner Giersch, 2-stage CAUTION: Nozzle is necessary and must be ordered!	Nozzle 10,00/60° SS	300697 300709



You are unsure which burner to choose?

On the following pages, you will find an overview of available burners and assignments in different versions.

We want to point out once again that you, respectively your customer, are **only conform to ErP by using a 2-stage burner** and that complying with national standards is mandatory.

If in doubt, we will be happy to help you choose the right burner at any time.

Overview of burners: Natural gas

Model	Suitable burner	Article no.
25S/SC	Natural gas burner Riello, 2-stage	300633
	Natural gas burner Weishaupt, 2-stage	300680
	Natural gas burner Giersch, 1-stage	005813
40S/SC	Natural gas burner Riello, 2-stage	300633
	Natural gas burner Weishaupt, 2-stage	300680
	Natural gas burner Giersch, 1-stage	005814
55S/SC	Natural gas burner Riello, 2-stage	300634
	Natural gas burner Weishaupt, 2-stage	300680
	Natural gas burner Weishaupt, 2-stage	300681
	Natural gas burner Giersch, 1-stage	005815
70S/SC	Natural gas burner Giersch, 2-stage	300576
	Natural gas burner Riello, 2-stage	300634
	Natural gas burner Weishaupt, 2-stage	300681
	Natural gas burner Giersch, 1-stage	005816
95S/SC	Natural gas burner Giersch, 2-stage	300576
	Natural gas burner Weishaupt, 2-stage	300681
	Natural gas burner Giersch, 1-stage	005816
110S/SC	Natural gas burner Giersch, 2-stage	300576
	Natural gas burner Weishaupt, 2-stage	300681
	Natural gas burner Weishaupt, 2-stage	300682
	Natural gas burner Giersch, 1-stage	005816
140S	Natural gas burner Giersch, 2-stage	300576
	Natural gas burner Giersch, 1-stage	006006
170S	Natural gas burner Giersch, 2-stage	300648
	Natural gas burner Giersch, 1-stage	006006
195S	Natural gas burner Giersch, 2-stage	300644
	Natural gas burner Giersch, 1-stage	006006
260S	Natural gas burner Giersch, 2-stage	300646
	Natural gas burner Giersch, 1-stage	021669

Overview of burners: Natural gas

Model	Suitable burner	Article no.
290S	Natural gas burner Giersch, 2-stage	021793
360S	Natural gas burner Giersch, 2-stage	021793
430S	Natural gas burner Giersch, 2-stage	029199
490S	Natural gas burner Giersch, 2-stage	029201
580S	Natural gas burner Giersch, 2-stage	021798
650S	Natural gas burner Giersch, 2-stage	021798
730S	Natural gas burner Giersch, 2-stage	021798

Overview of burners: LPG

Model	Suitable burner	Article no.
25S/SC	Gas burner Riello, 2-stage CAUTION: upgrade kit for LPG must be ordered!	300633 300635
	LPG burner Weishaupt, 2-stage	300690
	LPG burner Giersch, 1-stage	005821
40S/SC	Gas burner Riello, 2-stage CAUTION: upgrade kit for LPG must be ordered!	300633 300635
	LPG burner Weishaupt, 2-stage	300690
	LPG burner Giersch, 1-stage	005822
55S/SC	Gas burner Riello, 2-stage CAUTION: upgrade kit for LPG must be ordered!	300634 300636
	LPG burner Weishaupt, 2-stage	300690
	LPG burner Weishaupt, 2-stage	300691
	LPG burner Giersch, 1-stage	005822
70S/SC	LPG burner Giersch, 2-stage	300577
	Gas burner Riello, 2-stage CAUTION: upgrade kit for LPG must be ordered!	300634 300636
	LPG burner Weishaupt, 2-stage	300691
	LPG burner Giersch, 1-stage	005824
95S/SC	LPG burner Giersch, 2-stage	300577
	LPG burner Weishaupt, 2-stage	300691
	LPG burner Giersch, 1-stage	005824
110S/SC	LPG burner Giersch, 2-stage	300577
	LPG burner Weishaupt, 2-stage	300691
	LPG burner Weishaupt, 2-stage	300692
	LPG burner Giersch, 1-stage	005824
140S	LPG burner Giersch, 2-stage	300577
	LPG burner Giersch, 1-stage	006009
170S	LPG burner Giersch, 2-stage	300577
	LPG burner Giersch, 1-stage	006009
195S	LPG burner Giersch, 2-stage	300645
	LPG burner Giersch, 1-stage	006009
260S	LPG burner Giersch, 2-stage	300647
	LPG burner Giersch, 1-stage	006009

Overview of burners: LPG

Model	Suitable burner	Article no.
290S	LPG burner Giersch, 2-stage	021806
360S	LPG burner Giersch, 2-stage	021806
430S	LPG burner Giersch, 2-stage	029326
490S	LPG burner Giersch, 2-stage	029326
580S	LPG burner Giersch, 2-stage	021810
650S	LPG burner Giersch, 2-stage	021810
730S	LPG burner Giersch, 2-stage	021810

You cannot decide?

Help us to recommend you the suitable product by filling in our checklist.

We will contact you right away!



Adobe Stock/116781

Checklist Stationary warm air generators

1 Your contact details

Company:

Contact person:

Address:

Phone: E-Mail:

2 Your object

☐ Production hall ☐ Storage hall ☐ Showroom ☐ Tent ☐

Year of construction

What is produced/stored in the hall?

Exhaust air system available ☐ yes ☐ no

Cubic Capacity

Room size (room volume in m³)

Length (m) Width (m) Eave (m) Ridge (m)

Gates: Piece(s) often used: ☐ yes ☐ no

Insulation of the building: ☐ good ☐ bad ☐ none or k-value W/m²K

Temperatures

Outside temperature: °C

Desired room temperature: °C

3 Our product

Do you wish to receive a performance recommendation by Kroll? ☐ yes ☐ no

Alternatively, you can specify your desired heating power kW

Device version

Place of installation: ☐ in the room to be heated ☐ in another room/heating room

Mounting: ☐ standing on the floor ☐ wall mounting ☐ suspended

Version: ☐ standing ☐ lying

Air intake: ☐ Recirculating air ☐ Mixed air ☐ Fresh air

Air outlet: ☐ freely blowing ☐ Duct system

Accessories: ☐ Floor standing frame ☐ Wall brackets

Other:

4 Energy source/combustible

☐ Oil ☐ Natural gas ☐ LPG

☐ Other:

5 Combustion air

☐ from inside

☐ from outside ☐ Wall ☐ Roof

6 Control

☐ Room thermostat ☐ Day-Night-Control ☐ Control cabinet on site

7 Ceiling fans

☐ yes ☐ no

Control: ☐ direct ☐ in combination with S/SC

8 Flue gas chimney

☐ inside, through roof ☐ outside, laterally via roof

9 Other – please add information regarding object or situation on site by sketches, drawings, photos etc.!

Use of equipment

☐ new ☐ as replacement (in this case, please give us the technical data of the old unit)



We for you

Our experienced team of qualified consultants guarantees you competent advice and reliable service.

In addition to specialist knowledge and experience, good advice needs one thing above all: Professionalism.

With our high quality standards and many years of experience, we have successfully implemented numerous projects since 1963, also on an international basis.



From product recommendation and planning to installation and subsequent maintenance, we are always at your side as a reliable partner.

The satisfaction of our customers is the benchmark for the quality of our products and services.

We are only satisfied when you are.



NBX30/
NBX40



NBX50/
NBX60



Economical



Additional air
recirculation mode



Immediately ready
for operation



Permanent
condensing operation



Avoidance
of draughts

Modulating gas condensing heaters NBX

Direct heat without lead time – even in selected sub-areas.

For the heating or ventilation of industrial spaces our modulating gas condensing heaters of the NBX series are the ideal solution. Even targeted heating of partial areas, for example in industrial production, is possible. Due to the absence of preheating periods/time, as is the case with central heating, they provide fast and comfortable heat during spontaneous cold spells and on particularly cold days. In summer our NBX units can also be used for the ventilation of spaces.

Fields of application

- Workshops
- Production halls
- Large garages
- Car workshops
- Exhibition and trade fair halls
- Furniture and storage halls
- Sports facilities

Wall
mounting

The heart of all systems is the patented stainless steel heat exchanger:

This ensures a particularly high air flow rate. The high-performance burner, on the other hand, has newly developed burner tubes, electronic ignition and ionisation monitoring. A comprehensive thermal isolation avoids heat emission and thus transmission loss. In the immediate area of the burner

there are no weld seams, this makes the burner extremely long-lasting and low-maintenance. The units are designed for wall mounting and ceiling mounting. They can be installed flue-connected or with a flue gas ducting system via the roof or through the the wall. Through condensing operation, we realise a significant increase in efficiency and thus reduce your operating costs.



NBX90/
NBX120






Performance characteristics

- Maintenance free motor
- Low-noise crescent fans
- Adjustable air flow direction
- Electronic ignition
- Modulating axial fan
- Galvanised sheet steel case
- Efficiency up to 106 percent (Hi)
- Natural or liquid gas (pre-equipped for natural gas G20)













Model		NBX30	NBX40	NBX50	NBX60	NBX90	NBX120
	No.	300131	300132	300133	300134	300135	300136
Nominal heat input max.	kW	29,1	38,5	49,8	59,0	90,8	116,0
Nominal heat output max.	kW	28,0	37,0	48,0	57,0	89,0	115,0
Nominal heat input min.	kW	10,0	14,0	19,0	21,0	35,0	43,0
Nominal heat output min.	kW	9,4	13,3	18,4	20,0	33,3	40,6
Air volume flow	m³/h	3.200	4.400	5.500	6.500	10.000	13.000
Electrical connection	V/Hz	230/50	230/50	230/50	230/50	230/50	400/50
Electrical power consumption	kW	0,17	0,31	0,34	0,40	0,66	0,74
Heat exchanger made of stainless steel		✓	✓	✓	✓	✓	✓
Natural gas membrane G20 mounted as delivered							
Natural gas		✓	✓	✓	✓	✓	✓
Natural gas membrane G25 must be ordered separately							
LPG		✓	✓	✓	✓	✓	✓
LPG membrane G31 must be ordered separately							
Electronic ignition		✓	✓	✓	✓	✓	✓
Throwing distance *	m	20	28	32	35	39	42
Condensation quantity **	l/h	0,2–1,1	0,3–1,3	0,3–1,5	0,3–1,9	1,6–3,3	2,7–4,3
Depth including slats	mm	830	830	896	896	1.081	1.081
Depth exclusive slats	mm	560	560	610	610	710	710
Width	mm	885	885	1.225	1.225	1.775	1.775
Height	mm	580	580	650	650	800	800
Weight	kg	65	75	90	95	205	215
Flue gas connection		DN80	DN80	DN80	DN80	DN100	DN100
Intake air connection		DN80	DN80	DN80	DN80	DN100	DN100
Max. flue gas pipe length (via roof)	m	10	10	10	10	10	10
Sound pressure level	dB(A)	53	55	56	57	56	60

* At an air temperature of +20° C, residual speed 0,2 m/s ** Indicative, variable value, depending from environmental conditions.

✓ Included in delivery

Accessories	Products	Product classification	Article no.
Natural gas membrane G25	For natural gas	NBX30 NBX40 NBX50 NBX60 NBX90 NBX120	300214 300215 300216 300216 300217 300213
LPG membrane G31	For liquid gas	NBX30 NBX40 NBX50 NBX60 NBX90 NBX120	300218 300219 300220 300220 300221 300222
	Remote control with serial communication to control up to 10 heaters This is mandatory for operation.	NBX30, NBX40, NBX50, NBX60, NBX90, NBX120	300139
	External room temperature sensor	NBX30, NBX40, NBX50, NBX60, NBX90, NBX120	053293
	Wall mounting brackets	NBX30, NBX40 NBX50, NBX60, NBX90, NBX120	053288 300138

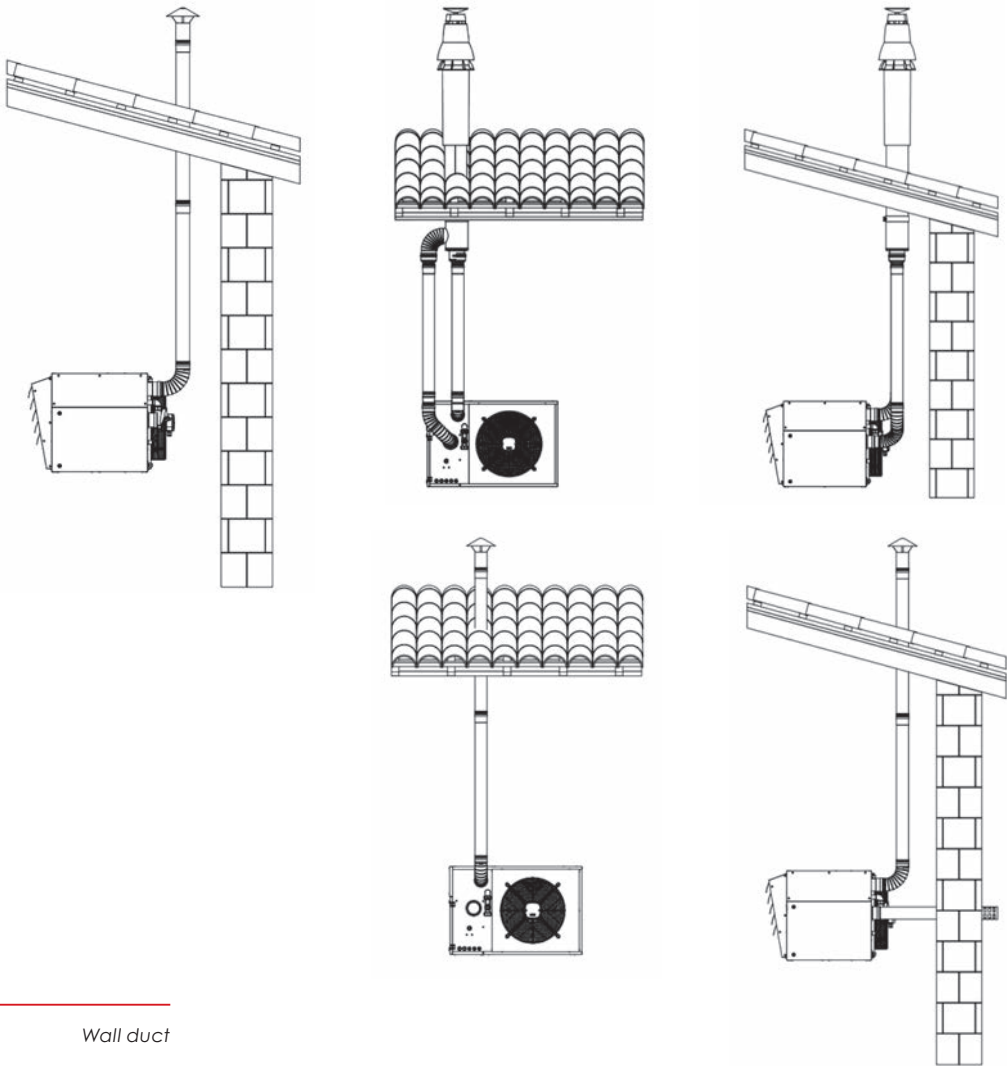
Accessories

	Products	Product classification	Article no.
	Ceiling mounting kit	NBX30, NBX40, NBX50, NBX60, NBX90, NBX120	300140
	Double pipe wall lead-through For NBX30, NBX40, NBX50, NBX60 the connector 300144 is additionally required!	NBX30, NBX40, NBX50, NBX60, NBX90, NBX120	053294
	Double pipe roof lead-through For NBX30, NBX40, NBX50, NBX60 the connector 300144 is additionally required!	NBX30, NBX40, NBX50, NBX60, NBX90, NBX120	053296
	Extension pipe 0,5 m DN80	NBX30, NBX40, NBX50, NBX60	300141
	End piece (flue gas pipe) DN80	NBX30, NBX40, NBX50, NBX60	300142
	Extension pipe 0,5 m DN100	NBX90, NBX120	034619
	End piece (flue gas pipe) DN100	NBX90, NBX120	300143
	Adaptor 80 mm to 100 mm	NBX30, NBX40, NBX50, NBX60	300144
	Bend piece 90° DN80 m/f	NBX30, NBX40, NBX50, NBX60	300145
	Extension pipe 1,0 m DN80	NBX30, NBX40, NBX50, NBX60	300146
	Bend piece 90° DN100 m/f	NBX90, NBX120	034630
	Extension pipe 1,0 m DN100	NBX90, NBX120	034617
	Bend piece 45° DN80 m/f	NBX30, NBX40, NBX50, NBX60	300147
	Bend piece 45° DN100	NBX90, NBX120	034626
	Rain cover DN80	NBX30, NBX40, NBX50, NBX60	300148
	Rain cover DN100	NBX90, NBX120	034621

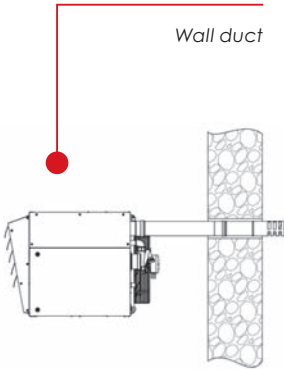
More accessories available on request. Delivered accessories may differ from the picture.

Possible exhaust gas ducts

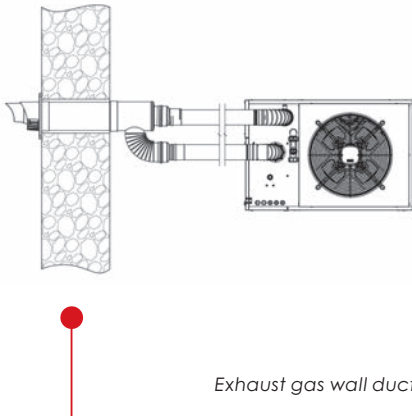
Roof duct



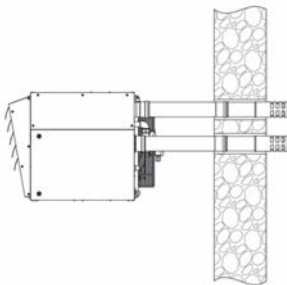
Wall duct



Exhaust gas wall duct



Separate exhaust
gas wall duct





Economical



Additional air
recirculation mode



Space-saving



Multistage
adjustable



Avoidance
of draughts

Air heaters LH

Precise and comfortable heat distribution.

Kroll's air heaters of the LH series are real multi-talents in heat and air distribution – whether heating or ventilating, outside, mixed air or recirculated air operation, multi-stage adaptation to your requirements for wall or ceiling mounting. The LH is suitable for every room, as well as for every requirement.

Operation takes place with the piping system of a central heating system, the integrated heat exchanger is made of copper/aluminium for hot water as the heating medium. The units are splash-proof according to IP54. A large selection of models with multi-stage fan enables an ideal solution to your requirements. The air heater LH ensures draught-free, area-wide and comfortable heat and air distribution. The low noise level prevents unpleasant noise pollution.

Fields of application

- Workshops
- Production halls
- Large garages
- Car workshops
- Exhibition and trade fair halls
- Furniture and storage halls
- Sports facilities

Wall and
ceiling
mounting

Flexible fields of application

The LH air heaters are compact built and easy to install anywhere, as well as being suitable for any room. With the right accessories, a pleasant room climate becomes a matter of course.



Performance characteristics

- Suitable for wall and ceiling mounting
- Outside air, mixed air and recirculated air operation possible
- For heating and ventilation
- Air outlet flaps included
- Heat exchanger made of Cu/Alu
- Fans with sickle blade wheel

Technical data

Power range 11 to 37 kW

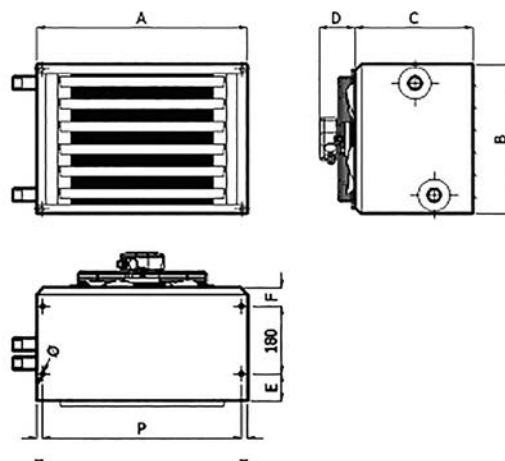
Model		LH130	LH230	LH330
Air heater				
Casing powder-coated	No.	038973	038975	038977
Heating performance range				
Heating medium water, 90/70 °C, air 15 °C	kW	13,0–17,8	20,5–24,5	23,3–37,4
Air volume flow	m³/h	850–1.550	1.550–2.300	1.350–3.400
Electrical connection	V/Hz	230/50	230/50	230/50
Power consumption	A	0.34	0.38	0.58
Length	mm	555	605	705
Depth	mm	280	280	280
Height	mm	390	440	540
Weight	kg	18	21	25
Sound pressure level	dB(A)	50	51	53

Power range 30 to 64 kW

Model		LH430	LH530	LH630
Air heater				
Casing powder-coated	No.	038979	038981	038983
Heating performance range				
Heating medium water, 90/70 °C, air 15 °C	kW	30,3–44,0	36,0–54,0	54,4–64,7
Air volume flow	m³/h	1.850–3.900	2.200–4.900	4.250–6.200
Electrical connection	V/Hz	230/50	230/50	400/50
Power consumption	A	0.9	0.95	1,04
Length	mm	755	805	855
Depth	mm	280	280	280
Height	mm	590	640	690
Weight	kg	27	32	36
Sound pressure level	dB(A)	53	53	52

Dimensions in mm	A	B	C	D	E	F	E	P	Ø
LH130	550	400	331	95	79	72	79	489	M6*
LH230	600	450	331	115	79	72	79	539	M6*
LH330	700	550	331	110	79	72	79	639	M6*
LH430	750	600	331	120	79	72	79	689	M6*
LH530	800	650	331	150	79	72	79	739	M6*
LH630	850	700	331	170	79	72	79	789	M6*

* M6: With fine thread



Accessories

	Products	Product classification	Article no.
	5-Step switch for max. 1,5 ampere	LH130 – LH530	058499
	5-Step switch for max. 7 ampere	LH130 – LH530	040121
	1-Step switch DST1	LH630	022071
	2-Step switch DST2	LH630	022072
	5-Step switch DST5-2	LH630	022074
	5-Step switch DST5-4	LH630	022075
	5-Step switch DST5-7	LH630	022076
	5-Step switch DST5-10	LH630	022077
	Connector IP65 for 2 to 5 heaters	LH630	024361
	Room thermostat RT	LH130 – LH630	006859
	Room thermostat RTI, industrial version IP54 (splash water-protected)	LH130 – LH630	005434
	Day/night automatic control in plastic casing, for night setback, with digital clock, power reserve, day and week programme, 1 room sensor included	LH130 – LH630	006708

Delivered accessories may differ from the pictures.

Accessories

	Products	Product classification	Article no.
	Brackets for wall mounting	LH130 – LH630	039024
	4 Brackets for ceiling mounting	LH130 – LH630	042870
	Vertical air outlet galvanized	LH130 LH230 LH330 LH430 LH530 LH630	042871 042873 042874 042875 042876 042877
	4-sides outlet	LH130 LH230 LH330 LH430 LH530 LH630	042881 042882 042890 042891 042892 042893
	Air outlet cone	LH130 LH230 LH330 LH430 LH530 LH630	042896 042897 042898 042899 042900 042901

Delivered accessories may differ from the pictures.



Economical



Low noise



Immediately ready
for operation



Protected



Avoidance
of draughts

Ceiling fan DV

Saving energy in the simplest way.



Due to the natural convection, warm air rises upwards, where it is not needed and is lost. The Kroll ceiling fan DV return warm air downwards and thus ensuring considerable savings on your heating costs. Especially in large, high rooms such as production halls and warehouses, workshops, sales rooms, industrial marquees, greenhouses and animal breeding facilities, the use of ceiling fans for heat recirculation makes much sense. The typical problem here is: Warm room air accumulates under the ceiling, the floor remains cold. In most cases the setpoint temperature is increased until a pleasant room temperature is perceived. However, this leads to an unnecessarily increased fuel consumption. With an equal air distribution and the associated temperature equalisation you can quickly reduce your heating costs by up to 30 percent.

With an air circulation rate of 15,000 m³/h and 300 rotations per minute, our ceiling fans ensure that areas are heated quickly and evenly without long preheating times.

Fields of application

- Industrial and commercial halls
- Greenhouses
- Production halls
- Sports facilities
- Warehouses
- Sales and exhibition rooms
- In summer for cooling (recirculation)

Special blades ensure a narrow air cone, which prevents draughts. Our ceiling fans are also suitable for continuous operation, even at full work capacity 24 hours a day.

Practical accessories make operation very

simple: Stepless control for up to 12 ceiling fans, optionally equipped with room sensors or speed controllers, ensure that the warm air reaches the desired area in an energy-saving way – for perfect temperature equalisation.



Performance characteristics

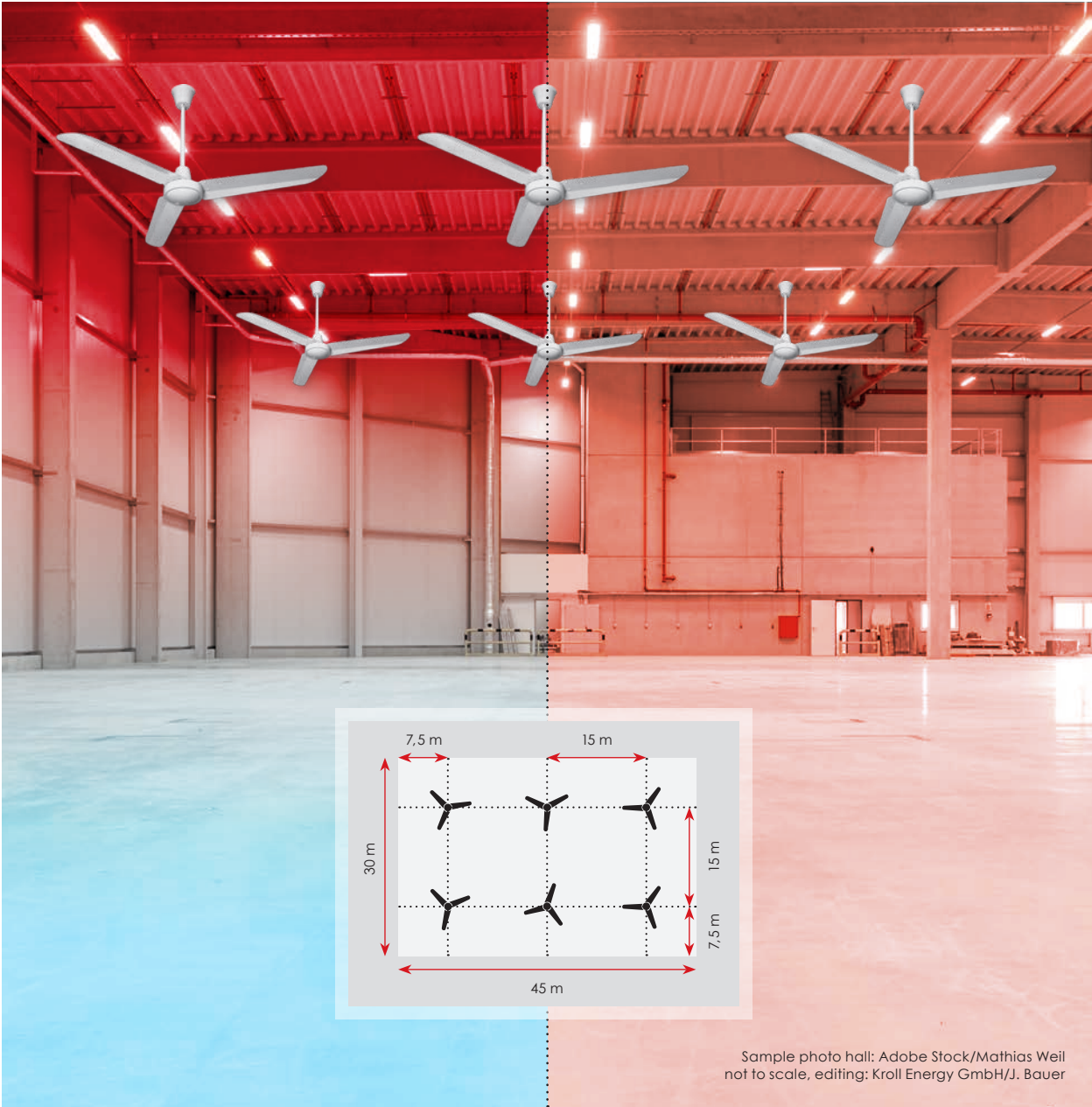
- High air circulation rate
- Low noise operation
- Energy-saving powerful motor
- Full metal version
- Long lifetime
- High operational safety
- Robust control by means of phase angle

Model		DV
Colour		weiß
Electrical connection	V/Hz	230/50
Electrical power consumption	W	65
Max. current	A	0,35
Rotations	U/min	300
Air change	m³/h	15,000
Sound pressure level	dB(A)	52
Weight	kg	9,5
Rotor diameter	cm	142
Construction height	cm	69
Packing dimensions L x W x H	mm	235 x 255 x 690

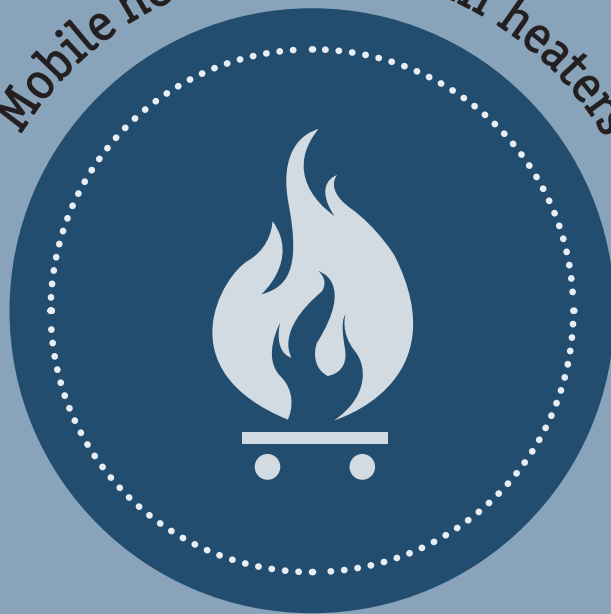
Ceiling fans, also for air heaters and for all warm air generators		
Ceiling fan	No.	006245
Speed control, continuous for up to 5 ceiling fans	No.	006735
Control for 1 to 12 ceiling fans, including speed control and 1 room sensor	No.	006900
Control for 1 to 12 ceiling fans, including 2 room sensors, speed control and digital clock, with day/night control	No.	006901
Differential temperature control for 1 to 12 ceiling fans, including 2 room sensors	No.	006902

Without heat recovery: High transmission losses

With heat recovery through DV: Balanced temperatures



Mobile heaters/warm air heaters





Room thermostat
connection



Maintenance-
friendly



Free choice
of fuel



Safely
stackable



Intuitive
handling

Mobile heating units HM

Instant heat – anytime, anywhere.

Our HM mobile heating units support your heating project quickly and efficiently. The units are used wherever heat is required and existing systems fail, are replaced or do not yet exist. They are particularly suitable for heating buildings and the associated drying process; this means that new buildings, renovations or modernisations can be carried out without delay, even during the winter months. In addition to supporting your process heat, trade fairs, events, warehouses or factory halls can also be heated flexibly and comfortably.

A high-quality stainless steel heat exchanger in our mobile central heating units ensures efficient use of the energy converted by the burner. Our mobile central heating units are also optionally available with a 2-stage burner (except HM100). The choice of fuel is up to you – our units are available in natural gas, liquid gas or oil versions. Variable recirculation, fresh air or mixed air operation is integrated ex works and adjustable by means of a selector switch. The heat can be distributed via one or more air ducts or air hoses, thanks to a high pressure of 350 to 400 Pa and high-performance radial fans, even long supply

Fields of application

- Heating of halls, tents and construction sites
- Keeping horticultural businesses or warehouses of all kinds frost-free
- Fast drying of new buildings
- Supplementary heating in the cold season
- Emergency or transitional heating

distances are no problem. The robust housing is made of powder-coated sheet steel with resistance class RC2, all components are located there under lock and key. Our central heating unit is thus securely protected against sabotage or manipulation.

Our heating units are compactly built – there are no protruding components, the flue outlets are recessed in the housing, and the intake and exhaust outlets can also be recessed if required. Pick-up openings on the long and short sides ensure practical loading with a forklift truck, and additional crane eyes provide even more flexibility. The unit can be stacked safely and makes optimum use of the loading space during transport, as it can be placed crosswise on the loading area of a truck.



Performance characteristics

- Flexible fuel selection
- Compact design
- Economical
- Variable use
- Maintenance-friendly
- Approximately 93percent efficiency (Hi)
- Intuitive handling by switch and optional room thermostat

Technical data

Power range 100 to 188 kW

Mobile heaters/
warm air heaters

Model		HM100	HM200	HM200/2 2-stage
Oil	No.	055666	000080	049333
		Oil	Oil	Oil
Nominal heat input	kW	100	188	133/188
Nominal heat output	kW	92	173	122/173
Air volume flow	m³/h	6.400	10.500	7.600–10.500
External pressure	Pa	350	350	175/350
Temperature increase	K	60	60	66/60
Fuel consumption*	kg/h	8,3	15,8	11,1/15,7
Electrical connection	V/Hz/A	400/50/5,5	400/50/13,5	400/50/13,5
Electrical power consumption	kW	0,88	3,25	1,45/4,65
Drum fitting		✓	✓	✓
Heated oil filter		✓	✓	✓
Exhaust pipe	Ø mm	180	180	180
Air outlet socket	Ø mm	500	550	550
Air inlet socket	Ø mm	500	550	550
Width	mm	760	820	820
Length	mm	1.900	2.400	2.400
Height (without lifting eye)	mm	1.370	1.520	1.520
Height (with crane eye)	mm	1.460	1.610	1.610
Weight	kg	410	615	655
Sound pressure level	dB(A)	73	75	75

* Fuel oil consumption: 1 kg/h = 1.17 l/h (at 15 °C). ✓ Included in delivery

Model		HM100F	HM200F	HM200/2F 2-stage	HM100N	HM200N	HM200/2N 2-stage
Gas	No.	106927	042039	050613	106928	042040	050612
		LPG	LPG	LPG	natural gas	natural gas	natural gas
Nominal heat input	kW	100	188	133/188	100	188	133/188
Nominal heat output	kW	92	173	122/173	92	173	122/173
Air volume flow	m³/h	6.400	10.500	7.600–10.500	6.400	10.500	7.600–10.500
External pressure	Pa	350	350	175/350	350	350	175/350
Temperature increase	K	60	60	66/60	60	60	66/60
Gas consumption (Natural gas)	m³/h	9,6	18,1	12,8/18,1	9,6	18,1	12,8/18,1
Gas consumption (LPG)	kg/h	7,7	14,6	10,3/14,6	7,7	14,6	10,3/14,6
Electrical connection	V/Hz/A	400/50/5,5	400/50/13,5	400/50/13,5	400/50/5,5	400/50/13,5	400/50/13,5
Electrical power consumption	kW	0,88	3,25	1,45/4,65	0,88	3,25	1,45/4,65
Exhaust pipe	Ø mm	180	180	180	180	180	180
Air outlet socket	Ø mm	500	550	550	500	550	550
Air inlet socket	Ø mm	500	550	550	500	550	550
Width	mm	760	820	820	760	820	820
Length	mm	1.900	2.400	2.400	1.900	2.400	2.400
Height (without lifting eye)	mm	1.370	1.520	1.520	1.370	1.520	1.520
Height (with crane eye)	mm	1.460	1.610	1.610	1.460	1.610	1.610
Weight	kg	410	615	655	410	615	655
Sound pressure level	dB(A)	73	75	75	73	75	75

Accessories

Products				HM100	HM200/ HM200 2-stage/N/F
Room thermostat IP54 10 m cable, including plug	adjustable from 0°C to 50°C	No.		000729	000729
Room thermostat IP54 22 m cable, including plug	adjustable from 0°C to 50°C	No.		049585	049585
RT fastening strap		No.		052494	052494
Clock thermostat		No.		056714	056714
Flue pipe made of sheet steel, hot-dip aluminised	1 m	Ø 180 mm	No.	012477	012477
Rain cover for sheet steel smoke pipe, hot-dip aluminised		Ø 180 mm	No.	012507	012507
Warm air hose with fixing strap and transport bag	7,6 m	Ø 525 mm	No.	005597	005597
Connector for warm air hose extension	with	Ø 525 mm	No.	002800	002800
Warm air hose with fixing strap and transport bag	7,6 m	Ø 560 mm	No.	–	026991
Connector for warm air hose extension	with	Ø 560 mm	No.	–	026985
Blow-out adapter	1 way	Ø 525 mm	No.	–	012527
Blow-out adapter	2 ways	Ø 525 mm	No.	–	065076
Blow-out adapter	3 ways	Ø 425 mm	No.	–	065077
Blow-out adapter	4 ways	Ø 305 mm	No.	–	012530
Air outlet box for hoses	with	Ø 560 mm	No.	–	052623



Economical


Heated
oil filter

Free choice
of fuel

Long
lifetime

Fast
heat supply

Mobile warm air heaters M

Economical, reliable and usable everywhere.

Our mobile warm air heaters M supply areas quickly and efficiently with target-oriented heat. They are especially well suited for tent heating at events, for additional hall heating, as well as for construction heating and the associated drying and frost-free maintenance. Even in the winter months new buildings, renovations or modernisations can be carried out without any delays. Thanks to their compact design and high mobility, the units can be quickly implemented wherever temporary heat is required, even as emergency or temporary heating.

Due to the integrated oil tank and the heating cartridge, the smaller models M25, M50 and M70T are space-saving and ready for immediate use when stocked with fuel. Also the larger models M70, M100, M150, M200 are characterised by an barrel fitting and a

Fields of application

- Heating of halls, tents and construction sites
- Frost-free maintenance in greenhouses or storage halls of all kinds
- Fast drying of new buildings
- Additional heating in the cold season

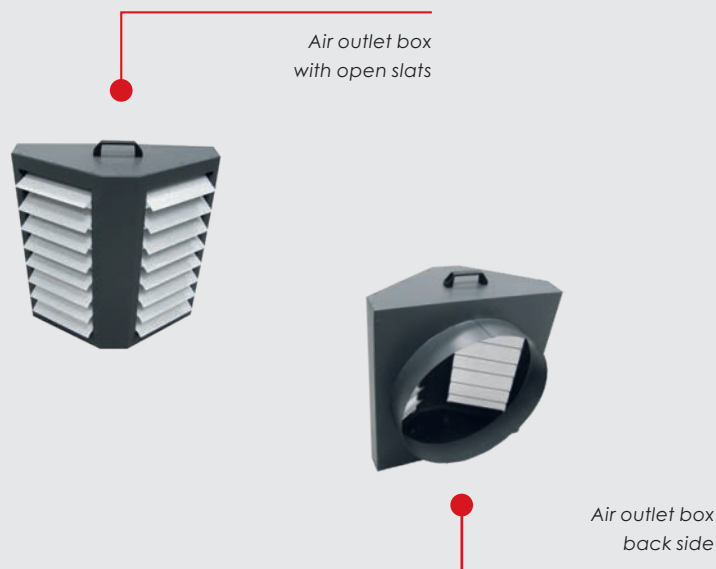
heating oil filter and are quickly ready for operation. Thanks to additional swivel castors, crane lugs and forklift pockets, the highest level of mobility is guaranteed. The choice of fuel is up to you. The units are approved for oil and gas burners.

The efficiency is 93 percent (Hi), which is an excellent value for mobile warm air heaters.



Performance characteristics

- | | | |
|---|--|--|
| <ul style="list-style-type: none"> • Oil and gas burner approval • Radial fan with pressing power up to 180 Pa • Heated oil filter | <ul style="list-style-type: none"> • Room thermostat connection • Combustion chamber and heat exchanger made of stainless steel 1.4512 | <p>Other features:</p> <ul style="list-style-type: none"> • Crane lugs and forklift pockets (starting from M70) • Swivel castors (starting from M70) |
|---|--|--|



Maximum power

The integrated high-performance radial fans have a pressure of up to 180 Pa and are specifically aimed at connecting hot-air hose systems. This means that even long supply distances or heating from outside is not a problem. Even when the unit is installed outdoors, effective heating is guaranteed. Furthermore, the economical and efficient operation is

assured with the optional recirculation module (factory-integrated in the M150/M200).

High-quality components, such as the stainless steel combustion chamber and the stainless steel heat exchanger with approximately 15 percent chrome content, guarantee a long service life. All fittings and control elements are designed to be service-friendly, so that maintenance can be carried out easily.



Technical data

Power range 25 to 71 kW

With oil burner		M25	M50	M70	M70T
	No.	040720	000296	000301	101912
With natural gas burner		M25N	M50N	M70N	–
	No.	050600	050602	050604	
With LPG burner		M25F	M50F	M70F	–
	No.	050601	050603	050605	
With multi-fuel oil burner KG/UB		–	M50U	M70U	–
	No.		056382	056383	
Nominal heat input	kW	25	51	71	71
Nominal heat output	kW	22	46	64	64
Air volume flow	m³/h	1,690	3,460	4,800	4,800
External pressure	Pa	150	170	180	180
Temperature increase	K	78	54	56	56
Fuel consumption*	kg/h	2,1	4,3	6,0	6,0
Gas consumption (Natural gas)	m³/h	2,1	4,9	6,8	–
Gas consumption (LPG)	kg/h	1,9	3,9	5,5	–
Electrical connection	V/Hz/A	230/50/1,75	230/50/3,0	230/50/6,4	230/50/6,4
Electrical power consumption	kW	0,4	0,69	1,47	1,7
Tank capacity	l	27	46	–	74
Exhaust pipe	Ø mm	100	130	180	180
Air outlet socket	Ø mm	295	385	445	445
Air inlet socket	Ø mm	295	385	445	445
Width	mm	560	630	780	780
Length	mm	1.140	1.210	1.490	1.490
Height	mm	1.080	1.050	1.120	1.300
Weight (without burner)	kg	62	108	134	175
Sound pressure level	dB(A)	68	72	78	78

* Fuel oil consumption: 1 kg/h = 1,17 l/h (at 15 °C).

Recirculating air module for M25 to M100 on request!

Possible ways to connect warm air hoses: Page 45.

Technical data

Power range 100 to 188 kW

With oil burner		M100	M150	M200
No.		000282	000284	000287
With natural gas burner		M100N	M150N	M200N
No.		050606	050608	050610
With LPG burner		M100F	M150F	M200F
No.		050607	050609	050611
With multi-fuel oil burner KG/UB		M100U	M150U	M200U**
No.		056384	056385	056386
Nominal heat input	kW	100	140	188
Nominal heat output	kW	90	125	173
Air volume flow	m³/h	6.750	9.580	12.210
External pressure	Pa	150	150	150
Temperature increase	K	70	50	60
Fuel consumption*	kg/h	8,4	11,8	15,8
Gas consumption (Natural gas)	m³/h	9,6	13,5	18,1
Gas consumption (LPG)	kg/h	7,7	10,8	14,6
Electrical connection	V/Hz/A	400/50/2,0	400/50/2,0	400/50/4,2
Electrical power consumption	kW	1,38	1,38	2,9
Exhaust pipe	Ø mm	180	180	180
Air outlet socket	Ø mm	550	550	550
Air inlet socket	Ø mm	550	2 x 520	2 x 520
Width	mm	940	940	940
Length	mm	1.880	2.330	2.450
Height	mm	1.280	1.410	1.640
Weight (without burner)	kg	190	270	330
Sound pressure level	dB(A)	77	75	75

* Fuel oil consumption: 1 kg/h = 1,17 l/h (at 15 °C).

** Attention: Supply line with line protection 16 A (C16) required!

Possible ways to connect warm air hoses: Page 45.

Accessories

Products			Product classification	Article no.
Room thermostat IP54, 10 m cable, including plug		adjustable from 0°C to 50°C	M25 – M200	000729
Room thermostat IP54, 22 m cable, including plug		adjustable from 0°C to 50°C	M25 – M200	049585
Blow-out adapter	1 way	Ø 425 mm	M50	002419
Blow-out adapter	1 way	Ø 425 mm	M70	012575
Blow-out adapter	1 way	Ø 525 mm	M100, M150, M200	012527
Blow-out adapter	2 ways	Ø 254 mm	M25	037789
Blow-out adapter	2 ways	Ø 305 mm	M50	012566
Blow-out adapter	2 ways	Ø 305 mm	M70	012576
Blow-out adapter	2 ways	Ø 305 mm	M100	012528
Blow-out adapter	2 ways	Ø 525 mm	M150, M200	065076
Blow-out adapter	3 ways	Ø 305 mm	M100, M150	012529
Blow-out adapter	3 ways	Ø 425 mm	M200	065077
Blow-out adapter	4 ways	Ø 305 mm	M150, M200	012530
Connector for warm air hose extension	with	Ø 305 mm	M50 – M200	002873
Connector for warm air hose extension	with	Ø 425 mm	M50, M70	002909
Connector for warm air hose extension	with	Ø 525 mm	M100, M150, M200	002800
Connector for warm air hose extension	with	Ø 560 mm	M150, M200	026985
Air outlet box for hoses	with	Ø 560 mm	M100, M150, M200	052623
Connection adapter from Ø 305 mm to air outlet box			M50–M200	300105
Connection adapter from Ø 425 mm to air outlet box			M50, M70	300106
Connection adapter from Ø 525 mm to air outlet box			M100, M150, M200	300107
Flue pipe stainless steel, flexible	3,0 m	Ø 100 mm	M25	006305
		Ø 130 mm	M50	006306
		Ø 180 mm	M70, M100, M150, M200	006307
Flue pipe made of sheet steel, fire aluminised	1,0 m	Ø 100 mm	M25	012473
		Ø 130 mm	M50	012474
		Ø 180 mm	M70, M100, M150, M200	012477
Flue pipe bend made of sheet steel, fire aluminised	90°	Ø 100 mm	M25	012488
		Ø 130 mm	M50	012489
		Ø 180 mm	M70, M100, M150, M200	012492
Rain cover for flue pipe made of sheet steel, aluminised		Ø 100 mm	M25	012503
		Ø 130 mm	M50	012504
		Ø 180 mm	M70, M100, M150, M200	012507

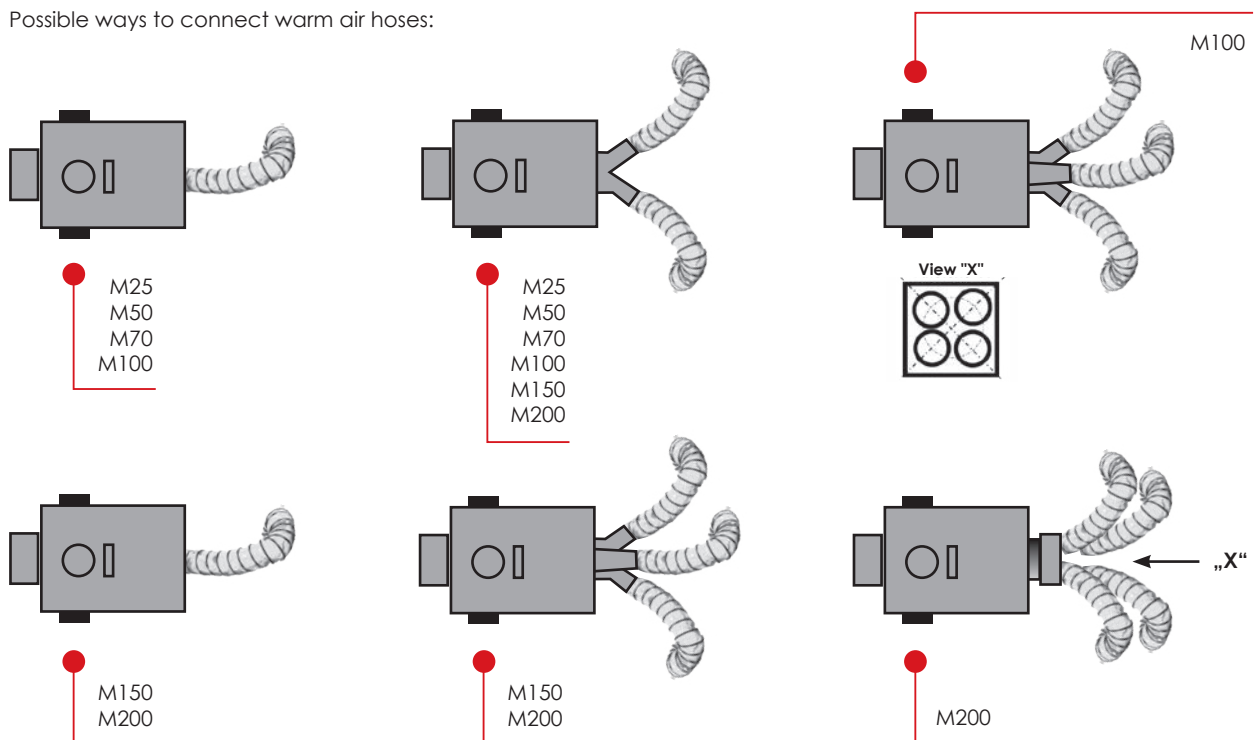
Accessories

Products			Product classification	Article no.
Warm air hose with fixing strap and transport bag	7,6 m	Ø 254 mm	M25 (For connection to distributor 037789)	059881
Warm air hose with fixing strap and transport bag	7,6 m	Ø 305 mm	M25 (Direct connection)	005417
Warm air hose with fixing strap and transport bag	7,6 m	Ø 305 mm	M50 – M200 (For connection to distributors)	005417
Warm air hose with fixing strap and transport bag	7,6 m	Ø 425 mm	M50 (Transition piece 002419 necessary)	005418
Warm air hose with fixing strap and transport bag	7,6 m	Ø 425 mm	M70 (Transition piece 012575 necessary)	005418
Warm air hose with fixing strap and transport bag	7,6 m	Ø 525 mm	M100, M150, M200 (Transition piece 012527 necessary)	005597
Warm air hose with fixing strap and transport bag	7,6 m	Ø 560 mm	M150, M200 (Direct connection)	026991

Perforated textile warm air hoses on request!

Mobile heaters/
warm air heaters

Possible ways to connect warm air hoses:





Economical



Heated
oil filter



Easily
transportable



Intuitive
handling



Fast heat
supply

Oil heaters MA

Direct and fast heat with our mobile heating cannon.

The MA oil heaters from Kroll convince with their versatility. Whether for construction and agriculture, workshops, halls, tents, greenhouses, animal breeding facilities or other large rooms. The MA series provides cost-effective and fast heat and is ready for operation quickly. Operation is by means of diesel or heating oil and a 230V/50Hz connection. An integrated high-pressure pump ensures an optimal oil supply from the attached tank.

A room thermostat connection is fitted to all units in the MA series, and a heated oil filter is also integrated ex works (except MA22). For optimal heat distribution, the devices in the MA series (except MA22) can be operated

Fields of application

Heating of well-ventilated rooms such as:

- Large garages and car workshops
- Storage and production halls
- Tents of all kinds
- Or the drying of new buildings or water damage

with a hot air hose. The compact devices with a practical handle are easy to transport and are therefore particularly suitable for frequently changing locations.



Performance characteristics

- Stainless steel combustion chamber
- Compact design
- Practical handle
- Easy to use
- Economical
- Can be used variably
- Integrated high-pressure pump
- Approximately 90 percent efficiency

Technical data und accessories

Power range 23 to 90 kW

Model		MA22	MA32	MA59	MA91
	No.	046325	046439	046440	046441
Nominal heat input	kW	23,4	34,1	58,6	90,6
Air volume flow	m³/h	550	1.150	2.500	4.300
Temperature increase	K	95	70	66	77
Fuel consumption*	kg/h	1,85	2,70	4,64	7,17
Electrical connection	V/Hz	230/50	230/50	230/50	230/50
Electrical power consumption	kW	0,3	0,37	0,85	1,14
Tank capacity	l	46	46	65	105
Exhaust pipe connection	Ø mm	120	150	150	150
Room thermostat connection		✓	✓	✓	✓
Heated oil filter		–	✓	✓	✓
Width	mm	482	482	555	690
Length	mm	1.098	1.209	1.435	1.740
Height	mm	664	738	940	1.025
Weight	kg	43	55	81	110
Sound pressure level at 1 m	dB(A)	69	72	72	75
Sound pressure level at 2 m	dB(A)	65	69	70	71

* Fuel oil consumption: 1 kg/h = 1.17 l/h (at 15 °C). ✓ Included in delivery

Accessories

Products				Product classification	Article no.
Room thermostat IP54 10 m cable, including plug	adjustable from 0°C to 50°C			MA22–MA91	000729
Room thermostat IP54 22 m cable, including plug	adjustable from 0°C to 50°C			MA22–MA91	049585
Smoke pipe	stainless steel	1,0 m	Ø 120 mm	MA22	046415
Fue elbow pipe	stainless steel	90°	Ø 120 mm	MA22	046417
Rain cover for smoke pipe	stainless steel		Ø 120 mm	MA22	046419
Smoke pipe	stainless steel, flexible	3,0 m	Ø 150 mm	MA32–MA91	031267
Smoke pipe	made of sheet steel, hot-dip aluminised	1,0 m	Ø 150 mm	MA32–MA91	012476
Fue elbow pipe	made of sheet steel, hot-dip aluminised	90°	Ø 150 mm	MA32–MA91	012491
Smoke tube	made of sheet steel, hot-dip aluminised	90°	Ø 150 mm	MA32–MA91	012501
Rain cover for smoke pipe	made of sheet steel, hot-dip aluminised		Ø 150 mm	MA32–MA91	012506
Blow-out adapter	1 way		Ø 300 mm	MA32	046410
Blow-out adapter	1 way		Ø 350 mm	MA59	046411
Blow-out adapter	1 way		Ø 400 mm	MA91	046412
Warm air hose with fixing strap and transport bag		7,6 m	Ø 305 mm	MA32	005417
Warm air hose with fixing strap and transport bag		7,6 m	Ø 425 mm	MA59	005418
Warm air hose with fixing strap and transport bag		7,6 m	Ø 457 mm	MA91	031902



PX105


P/PX32 –
P/PX85

Easily
transportable

Immediately ready
for operation

Extensive
accessories

Permanent gas
flame monitoring

Electrically
operated

Gas heaters P/PX

Eco-friendly and efficient instant heat.

The gas heaters from Kroll are both environmentally friendly as well as economical. Gas is an environmentally friendly fuel by nature, in fact, among fossil fuels, gas is one of the most environmentally friendly. Our gas heaters burn almost residue-free and have a high degree of efficiency. For even better energy savings, a room thermostat can be supplied.

After connection to a gas cylinder and a 230V mains supply, the units are immediately ready for operation and do not require any lead time. The power range extends from 15 to 100 kW. Whether for construction, agriculture, nurseries or well-ventilated production and factory halls – we have the right unit for every approved location.

All devices have a pressure regulator, the connection fitting is included in the scope of delivery. They all comply with the regulations according to DIN 30697 and thus the European standard CE.

Additional safety is provided by the permanent monitoring of the gas flame by thermocouples. The gas supply stops immediately if the gas flame goes out. The built-in thermostat prevents the appliance from overheating. Robust technology and the highest quality of workmanship ensure trouble-free operation.

Our gas heaters are compactly built and therefore easy to transport. For more flexibility, an optional conversion kit for mobile and stacking capability can be attached.



Version with
upgrade kit
for driving and
stackability
(for P/PX32
to P/ PX85).

Not Included
in delivery.



Performance characteristics

- Powder-coated steel housing
- P series: Piezo ignition
- PX series: Automatic ignition
- PX series: Room thermostat connection
- Quiet and powerful blower
- Compact design
- Pressure regulator with hose and hose rupture protection

Technical data and accessories

Power range 15 to 84 kW

Model		P32	P45	P65	P85
	No.	057498	057501	057499	057502
Nominal heat input	kW	15,08–31,40	22,76–46,73	32,22–66,25	40,95–84,91
Air volume flow	m³/h	1.100	1.250	1.950	2.550
Gas consumption	kg/h	1,03–2,13	1,54–3,15	2,19–4,47	2,78–5,76
Electrical connection	V/Hz	230/50-60	230/50-60	230/50-60	230/50-60
Electrical power consumption	kW	0,09	0,11	0,14	0,24
LPG		✓	✓	✓	✓
Piezo ignition		✓	✓	✓	✓
Connection fitting with hose		✓	✓	✓	✓
Length	mm	511	511	538	538
Width	mm	277	277	317	317
Height	mm	505	575	580	700
Weight	kg	10	12	14	16

✓ Included in delivery

Mobile heaters/
warm air heaters

Power range 15 to 108 kW

Model		PX32	PX45	PX65	PX85	PX105
	No.	057494	057492	057495	057493	057496
Nominal heat input	kW	15,08–31,40	22,76–46,73	32,22–66,25	40,95–84,81	48,81–108,71
Air volume flow	m³/h	1.100	1.250	1.950	2.550	3.700
Gas consumption	kg/h	1,03–2,13	1,54–3,15	2,19–4,47	2,78–5,76	3,3–7,37
Electrical connection	V/Hz	230/50	230/50	230/50	230/50	230/50
Electrical power consumption	kW	0,09	0,112	0,14	0,24	0,4
LPG		✓	✓	✓	✓	✓
Electronic ignition		✓	✓	✓	✓	✓
Connection fitting with hose		✓	✓	✓	✓	✓
Length	mm	511	511	538	538	606
Width	mm	277	277	317	317	438
Height	mm	505	575	580	700	835
Weight	kg	10	12	14	16	26

✓ Included in delivery

Accessories

		P32–P85	PX32–PX105
Room thermostat IP54 adjustable from 0°C to 50°C	No.	–	000729
Room thermostat IP54 adjustable from 0°C to 50°C	No.	–	049585
Multi-bottle unit	No.	005346	005346

Accessories

		P32–P65/PX32–PX65	P85/PX85
Upgrade kit for driveability and stackability	No.	057508	057509



Room thermostat
(built-in)



Intuitive
handling



Additional
air recirculation mode



Frost protection



Electrically
operated

Electric Heaters E

Fast heat from the socket.

The portable Kroll electric heaters are the ideal solution for heating small to medium-sized rooms, as well as for frost protection. The smaller models are also perfect supplementary heaters in large rooms. They are ideal for use in workshops, greenhouses, sales and showrooms, warehouses, building sites and construction containers.

There, they provide comfortable and quick warmth during cold snaps or in transitional periods.

Fields of application

- Warehouses and production halls
- Garages and workshops
- All kinds of tents
- Gardening and greenhouses
- Agriculture
- Frost protection
- Drying of new buildings or water damage

Due to the electrical operation, the electric heaters do not require oxygen and are therefore also ideal for poorly ventilated rooms or rooms with no ventilation at all. No further installations are necessary, the units are ready for operation immediately and everywhere. The warm air is distributed electrically directly via resistance heaters and is supplied to the room by an axial fan. The warm air temperature is adjustable and controlled by a thermostat. In summer, our electric heaters can also be used in recirculation mode for the ventilation of rooms.

Illustration with
accessories:
Hose and
room thermostat



E18SH



Performance characteristics

- Temperature increase up to 60 Kelvin
- Room thermostat (built-in)
- Compact and stable
- Absolutely odourless
- Two-stage heating capacity from E8 model onwards
- Warm air hose connection (E18SH)
- External room thermostat connection (E18SH)

Technical data and accessories

Power range 3 to 18 kW

Model		E3	E8	E12	E18	E18SH
	No.	000138	000143	000147	000153	053432
Nominal heat input	kW	3	4/8	6/12	12/18	12/18
Air volume flow	m³/h	185	420	735	960	960
Pressure	Pa					100
Ambient temperature maximum	°C	40	40	40	40	60
Temperature increase	K	44	28/56	24/48	36,5/55	60
Connection type		Schuko-Plug	CEE 16 A	CEE 32 A	CEE 32 A	CEE 32 A
Electrical connection	V/Hz	230/50	400/3N~	400/3N~	400/3N~	400/3N~
Power consumption	A	13,5	3x12	3x16,5	3x24,5	3x24,5
Room thermostat (built-in)		✓	✓	✓	✓	✓
Heating performance 2-stage		–	✓	✓	✓	✓
Width	mm	195	282	322	322	320
Length	mm	333	532	667	667	990
Height	mm	280	461	501	501	435
Weight	kg	7,1	16,9	22,8	24,8	32,0
Sound pressure level	dB(A)	52	56	56	56	64
Protection class	IP	20	20	20	20	20

✓ Included in delivery

Mobile heaters/
warm air heaters

Accessories				E18SH
Warm air hose sleeves on both sides	3,0 m	Ø 305 mm	No.	045720
Connector for warm air hose extension	with	Ø 305 mm	No.	002873
Room thermostat IP54 10 m cable, including plug	adjustable from 0 °C to 70 °C		No.	056355

Mobile heat pumps





MWK40

MW40

Mobile air-to-air heat pumps

for heating and cooling

Air-to-air heat pumps predestinated for the application and the flexibility as mobile and temporary temperature control.

The transformation of heat supply from fossil fuels to **regenerative concepts** faces particular challenges, especially under temporary operating conditions, as the often more complex solutions cannot be paired with the necessary flexibility.

The unstable price development of fossil fuels and the increasing CO₂ taxation make heat pumps attractive as an alternative heating solution. Our **air-to-air heat pumps** enable heating and cooling, some of it even at extreme temperatures down to -20°C, completely without fossil fuels. Heating oil and gas are no longer required; an electricity connection is all that is needed.

Our MWK40 allows year-round temperature control with just one unit – mobile heating down to -10°C and cooling up to +40°C. Our MW40 and MW80 are designed for extreme tempe-

rate ranges down to -20°C – but without cooling function. Thanks to the air-to-air functionality, costly room installation is usually completely unnecessary. Furthermore, the installation of boilers or cooling units, radiators, their pipe distributions with pumps, fittings and control technology is unnecessary.

Outside-installed heat pumps temper the room air directly to the desired target temperature via a circulating airflow. Mobile air-to-air heat pumps have been designed for quick installation and activation. The temperature control solution is ready for operation within a very short time.

Air-to-air heat pumps can also be used for stationary applications with a permanently installed air duct system.

With the help of a web application and a mobile internet connection, all devices can conveniently be managed, monitored and billed.

FOSSIL-FREE
CO₂-NEUTRAL
REGENERATIVE

100%

ECONOMICAL
ELECTRIC
AUTOMATIC



Environmentally
friendly



Economical



Fossil-free



Mobile



Compact

Use in the construction industry

The units are designed robustly for quick transport and lifting by crane and forklift, making them very flexible in use. The quick activation after the installation enables rapid construction sequences. Under special precautions, the machines are also suitable for highly polluted applications and room dehumidification.

The operation of the heat pumps is realized purely from the construction power supply without the need for additional media and supplies.

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Use in the manufacturing industry

Industrial halls and their types of use are often subject to change, where the room air conditioning must be adapted without costly installations and at short notice.

The mobile heat pumps with their direct air temperature control (heating and cooling) are excellently suited for this purpose. In addition, it is possible with the heat pumps to implement a completely regenerative supply of room temperature control.

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Heating/cooling combination
Mobile low-temperature heat pump

Use in temporary room systems

In the event sector as well as in the sector of room system providers, room temperature control requires special conditions. The supply system must get along without complex installations. It should be able to be activated quickly and with the simplest of requirements. In addition, compact and easily transportable modules that can be packed in truck dimensions and moved by forklift or truck-mounted cranes are a basic requirement. All these conditions are met by our air-to-air heat pumps. In addition, seasonal flexibility for heating but also cooling can be realized from the same machine. Even operations at outdoor temperatures down to -20°C (MW type) can be implemented.

>>



Use in agriculture

Agricultural buildings are often characterized by a very cost-efficient design, which often precludes the need for complex installations for room air conditioning. With the direct air conditioning of our air-to-air heat pumps, heating or cooling concepts as well as dehumidification for greenhouses, storage rooms and stables can be created very quickly and easily.

Combined with photovoltaic systems, which are widespread at agricultural sites, the heat pumps can be designed into a cost-effective and sustainable supply system.

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Technical data and accessories

Model		MWK40	MW40	MW80
	No.	300686	301531	301532
Function		Heating and cooling	Heating	Heating
Application ambient temperature	°C	-10 to +40	-20 to +25	-20 to +25
Heat capacity (A7/L35)	kW	42,9	42,4	100,4
Cooling capacity (A30/L12)	kW	33,5	–	–
COP _h (A7/L35) without utilizable medium		2,24	2,30	2,34
COP _h (A2/L35) without utilizable medium		2,88	2,76	2,77
COP _h (A7/L35) without utilizable medium		3,31	3,07	3,06
SCOP _h without utilizable medium		2,88	2,72	2,73
COP _h (A7/L35) with utilizable medium		1,95	1,96	2,04
COP _h (A2/L35) with utilizable medium		2,50	2,42	2,46
COP _h (A7/L35) with utilizable medium		2,88	2,69	2,71
SCOP _h with utilizable medium		2,45	2,34	2,38
Volume	m³/h	8.000	8.000	16.000
External pressure	Pa	200	200	250
Electrical connection	V/Ph/Hz	400/3/50	400/3/50	400/3/50
Connector plug		32A CEE	32A CEE	63A CEE
Max. nominal current	A	31	31	62
Connection Ø air current	mm	525	525	525
Length	mm	2.400	2.400	3.000
Width	mm	1.200	1.200	2.300
Height	mm	2.200	2.200	2.350
Weight	kg	1.000	1.100	2.700
Sound pressure level	dB(A)	66	66	68
Refrigerant		R410A	R454C	R454C
Compressor		Scroll	Hubkolben	Hubkolben
Condensate quantity max.	liter/h	10	10	20
Nozzle condensate drain (external)	Inch	1 1/4	1 1/4	1 1/4

A – ambient temperature (°C) | L – room air temperature (°C) | COP – coefficient of performance (h – heating/c – cooling) | SCOP – annual performance

✓ Included

Accessories MWK, MW	Article No.
Hot air hose with fastening belt and carrying bag	
7,6 m Ø 525 mm	005597



MW80

Remote control via web browser.
Special colors available on request.

Options for the MWK40, MW40 und MW80

Remote query (extra charge)



Our heat pumps are equipped with a router by default. This provides you with a WLAN connection and control on site with a range of approximately 5 meters.

As an option, remote access to operating parameters can be booked throughout Europe. In addition to remote queries of the devices, operating data and the device status can also be viewed.

On request, we can provide access with additional options such as live locations or retrieval of historical data.

Remote maintenance (extra charge)



Upon request, we can provide remote maintenance of your devices. We not only take care of the maintenance of your heat pumps, but also provide you with regular diagnostic reports of the operating status. In addition, we take care of necessary software updates.

Our availability on working days between 8:00 and 16:00 is guaranteed.

Heating and Cooling with just one Unit



Our **MWK40** allows **year-round temperature** control with just one unit – mobile heating down to -10°C and cooling up to $+40^{\circ}\text{C}$.

Our **MW40** and **MW80** are designed for **extreme temperature** ranges down to -20°C – **but without cooling function**.

Flexible and fast use

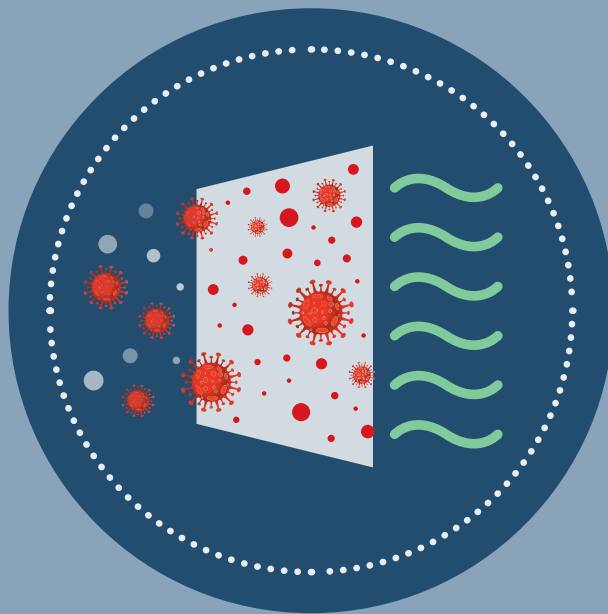


Whether on a construction site, for an event tent or in agriculture: our units defy all circumstances and temper any room without fossil fuels. Simply connect to the power supply, attach the warm air hoses and the machines are ready for use.

**Do you have any other requirements which are not listed here?
Please do not hesitate to contact us!**

We have both the engineering know-how and the mechanical equipment to implement your individual requirements with our usual Kroll Energy quality. Together, we can master any air-conditioning challenge and reach your desired temperatures environmentally- and budget-friendlly.

Air cleaners





Tool-free filter
change



Immediately ready
for operation



Operating
hours meter



Intuitive
handling



Mobile

Air cleaners LR5300

Clean air thanks to compact performance giant.

Nominated
to



Proven technology for years in building and renovation and now also your partner in times of covid. Our air purifier series is versatile!

Clean air is absolutely necessary for a healthy life – yet this is still too often underestimated in everyday life. We spend most of our time indoors and breathe in up to 10,000 litres of air every day. Therefore the purity of indoor air is indispensable for physical and mental health. The versatile Kroll air purifier range has the right solution for any requirement!

Despite the robust construction, the Kroll air cleaners are easy to transport and can be used flexibly. With only one control element, the handling is self-explanatory. In addition, our units have an integrated operating hours meter and a signalised filter change.

The filter change is intuitive and takes place in only few steps – safely and without danger!

Kroll air cleaners reliably capture escaping pollutants and absorb them completely – a hazard to humans and the environment is thus avoided.

As the first manufacturer in the heating and ventilation sector, we offer our customers **a 3-year full manufacturer's warranty.**

Our LR-series consists of three product types:

- » LR5300 Our construction helper
- » LR5300-P Our all-rounder
- » LR5300-P/S Our virus hunter



Performance characteristics

- Available with H14-Hepafilter
- Stepless rotary potentiometer and silencer optional
- Immediately ready for use
- Flexible handling
- Intuitive handling
- Operating hours meter
- Filter change signalised
- Tool-free filter change












Technical data and accessories



Model		LR5300	LR5300-P	LR5300-P/S
including pre-filter (without main filter)	No.	064460	300604	300699
Type of energy		Electricity	Electricity	Electricity
Air volume flow	m³/h	3.000	0 to 3.000	0 to 1.340
Electrical connection	V/Hz	230/50	230/50	230/50
Electrical power	kW	0,48	0,48	0,48
Power consumption	A	2,1	2,1	2,1
Power socket fuse	A	6,3	6,3	6,3
Cable length	m	3	3	3
Weight	kg	55	55	46
Height (with handle retracted)/Width/Depth	mm	900/564/770	900/564/770	904/564/720

Potentiometer setting		1	2	3	4	5	6	7	8	9	10
corresponds to	m³/h	130	270	400	530	670	800	940	1.070	1.200	1.340
Sound pressure level	dBA	26	29	32	38	44	50	56	59	63	65

Sound pressure level at 1 metre distance: (LR5300-P/S)

Accessories	Products	Article no.
	Pre-filter G4 Coarse dust, according to EN779	064504
	Main filter F9 Fine dust, dust class M Separation efficiency according to EN779 0,4µm ≥ 95%	064503
	Main filter H13 Suspended matter, dust class H Separation efficiency according to EN1822 ≥ 99,95%	065183
	Main filter H14 HEPA, dust class H, collection efficiency according to EN1822: ≥ 99,995%	300580
	Air outlet connector Ø 305 mm	064475
	Air intake box Ø 305 mm	064474
	Warm air hose with fixing strap and transport bag 7,6 m, Ø 305 mm	005417
	Dust protection door divisible 1.850 x 650 mm	064946
	Intake manifold Ø 305 mm	064477
	Silencer outlet side	116897
	Silencer inlet side	116896

Dust class overview

Comparable presentation of the classifications of dust removing machines					
Suitable for dry, harmful, not flammable dusts Before 01/01/2005	Until 1998 (transition period until 2003) according to ZH 1/487		Suitable for dry, harmful, not flammable dusts Since 01/01/2005	Applied dust classes according to DIN EN 60335-2-69, appendix A	
	Application category	Maximum transmittance		Dust class	Maximum transmittance
with MAK values > 1 mg/m ³	Minimum U (S, G, C, K1, K2)	≥ 5%	with AGW > 1 mg/m ³	Minimum L (M, H)	< 1%
with MAK values > 0,1 mg/m ³	Minimum S (G, C, K1, K2)	≥ 1%	with AGW ≥ 0,1 mg/m ³	Minimum M (H)	< 0,1%
with MAK values	Minimum G (C, K1, K2)	≥ 0,5%			
with MAK values and from cancer-causing substances (§35 GefStoffV)	Minimum C (K1, K2)	≥ 0,1%	– with AGW < 0,1 mg/m ³	H	< 0,005%
with MAK values and from cancer-causing substances (§35 and §15a GefStoffV)	K1, K2	≥ 0,05%	– cancer-causing Hazardous substances according to GefStoffV §11, TRGS 905 or TRGS 906	H	< 0,005%
with MAK values and from cancer-causing substances (§35 and §15a GefStoffV) Asbestos included	K1, K2 + Suitability for Use according to TRGS 519	≥ 0,005%	Asbestos according to TRGS 519	H + Suitability for Use according to TRGS 519	< 0,005%
Additional suitability for flammable dust of all dust explosion classes (except of dust with an extremely low minimum ignition energy ME < 1 mJ)	Minimum S with B1 (additionally)		Additional suitability for flammable dust of all dust explosion classes (except of dust with an extremely low minimum ignition energy ME < 1 mJ)	Minimum L with additional examination according to DIN EN 60335-2-69, appendix CC Devices of the type Zone 22	

Dust class chart: Source IFA.

The standard version of the LR5300 is not suitable for usage according to TRGS 519 and not for explosive dust. Special version on request.
Special version on request.

Dust classes according to IEC/EN 60335-2-69, Annex AA (extract)		
Dust classes	Transmittance (maximum)	Endangerment/suitable for
L	1%	Restrains 99 % of: Dust with AWG values > 1 mg/m ³ Slightly endangering dust
M	0,1%	Restrains 99,9 % of: Dust with AWG values ≥ 0,1 mg/m ³ Medium-endangering dust, e.g. wood dust (beech, oak) Mineral dust of class M
H	0,005%	Restrains 99,995 % of: Dust with AWG values > 0,1 mg/m ³ Cancer-causing dust, dust with pathogens
Additional requirement asbestos	H with asbestos approval ~ TRGS 519, for Germany	Asbestos dust

Dehumidifiers





TE120



TK30/
TK60



Maintenance-
friendly



Space-saving



Easily
transportable



Operating
hours meter



Suitable for
any room

Dehumidifiers TK/TE

Reduction of drying time by up to 80 percent!

Most structural damage is caused by the presence of humidity in the building. The Kroll T-series dehumidifiers are your strong partner from the very first second – whether in new buildings, renovation work, water damage, acceleration of the drying process or keeping rooms dry. Kroll offers an extensive range of dehumidifiers from 20 to 120 litres/24h dehumidification capacity, so that we have the right device for every application.

The units are simply to be set up, ease to put into operation electrically and operate quietly in a wide working range between 5°C and 32°C, at 50 to 90 percent relative humidity. Automatic hot gas defrosting ensures undisturbed operation, even in continuous use or at colder temperatures.

Fields of application

- New construction
- Renovation/refurbishment work
- Water damage
- Speeding up the drying process
- Screed drying

Easy-to-clean intake filters increase the service life of the units on the one hand and reduce the particle load in the room on the other.

Our TE models are equipped with a patented, washable long-term filter. Overflowing of the condensed water in the tank is impossible thanks to a magnetic contact overflow protection (TK models and TE40). The operating status can also be read at any time from the LED display. Our dehumidifiers are practical and easy to transport thanks to their compact design, integrated wheels and grips.



TE40



Performance characteristics

- Low noise
- Stackable
- Operating hours meter
- Automatic hot gas defrosting
- Steel housing, powder-coated
- Environmentally friendly, CFC-free refrigerant
- TE models with additional heating
- TE models with hygrostat connection
- TK models with integrated hygrostat

Technical data

Power range 30 to 60 l/24h

Model		TK30	TK60
	No.	050653	050654
Maximum dehumidifying capacity*	l/24h	30	60
Air volume flow	m³/h	580	1.000
Operating range humidity	% RF	50–90	50–90
Operating range temperature	°C	5–32	5–32
Refrigerant		R290	R454C
Electrical connection	V/Hz	230/50	230/50
Electrical power consumption	kW	0,57	1,31
Width	mm	430	520
Length	mm	500	560
Height	mm	800	980
Weight	kg	34	40
Drip pan	l	6	6
Operating hours meter		✓	✓
Connection for condensate pump		✓	✓
Stackable		✓	✓
Inbuilt power socket		✓	✓
Hot gas defrosting		✓	✓
Sound pressure level	dB(A)	52	56

* 32 °C/90% relative air humidity

✓ Included in delivery

Technical data and accessories

Power range 40 to 120 l/24h

Model		TE40	TE80	TE100	TE120
with electric auxiliary heating	No.	000114	038856	039239	039368
Maximum dehumidifying capacity*	l/24h	40	80	100	120
Air volume flow	m³/h	580	1.000	1.100	1.160
Operating range humidity	% RF	50–90	50–90	50–90	50–90
Operating range temperature	°C	5–32	5–32	5–32	5–32
Refrigerant		R290	R454C	R454C	R454C
Electrical connection	V/Hz	230/50	230/50	230/50	230/50
Electrical power consumption	kW	0,57/2,57	1,15/3,15	1,88/3,48	1,93/3,53
Width	mm	495	620	620	620
Length	mm	830	615	615	580
Height	mm	610	860	860	1.070
Weight	kg	37	52	53	58
Drip pan	l	14	–	–	–
Operating hours meter		✓	✓	✓	✓
Connection for condensate pump		✓	✓	✓	✓
Stackable		✓	✓	✓	✓
Hot gas defrosting		✓	✓	✓	✓
Additional heating		✓	✓	✓	✓
Sound pressure level	dB(A)	50	57	57	59

* 32 °C/90% relative air humidity

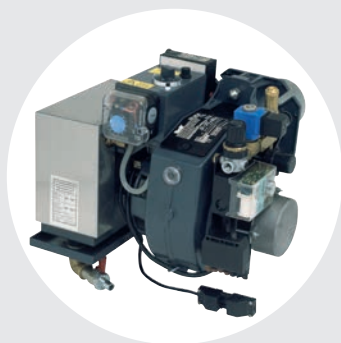
✓ Included in delivery

Accessories		TK30	TK60	TE40
Hygostat	No.	integrated	integrated	integrated
Condensate pump	No.	049946	049946	021779
Max. delivery height	m	4,3	4,3	5,4

Accessories		TE80	TE100	TE120
Hygostat	No.	046075	046075	046075
Condensate pump	No.	021779	021779	021779
Max. delivery height	m	5,4	5,4	5,4
Overflow protection for external drip pan	No.	021780	021780	021780

Multi-fuel oil burners





Also suitable
for warm air heaters
of the M series



Efficient



Maintenance-
friendly



Free choice
of fuel



Flexible/
variable



Suitable for
any room

Multi-fuel oil burners KG/UB

Multi-talent with proven technology.

With our universal oil burner type KG/UB you get a true all-rounder among oil burners; in compliance with national standards you can easily switch between different fuels without special tools. Thanks to smart design, you only need a few hand movements, to set the right preheating temperature and the ratio of combustion air to fuel. In combination with a warm air heater, you can heat your large commercial or industrial spaces such as workshops, production halls or storage areas in the most economical and comfortable way.

The fuel is atomised by means of compressed air through relatively large nozzle diameters. This is particularly helpful in avoiding blockage with dirty or viscous oils.

Fields of application

in combination with warm air heater:

- Production halls and workshops
- Furniture and warehouses
- Exhibition and trade fair halls
- Sales and other large spaces

A separate delivery system draws your desired fuel from the storage tank, filters it and preheats it if required. The tank located on the burner ensures that a constant volume flow of fuel to the ignition electrode prevails, thus ensuring constant and perfect combustion.

Regardless of whether you have a cast iron or steel combustion chamber in your boiler – the additional use of our patented ZVP pipe and a ceramic fibre plate ensures a so-called "hot combustion chamber". The patented ZVP pipe contributes to lowering the flue gas temperature, improving the CO₂ values, reducing the soot number and prolonging the life of your burner.



Performance characteristics

- TÜV-tested® according to DIN 51605
- Free choice of fuel
(follow national standards)
- Intuitive handling
- Maintenance-friendly
- Optionally with patented ZVP tube



Technical data

Power range 14 to 81 kW

Model		KG/UB20	KG/UB55	KG/UB70
	No.	027142	027143	027144
Heating power with rapeseed oil	kW	26–38	37–54	56–81
Fuel consumption	kg/h	2,5–3,7	3,6–5,2	5,4–7,8
Electrical connection	V/Hz	230/50	230/50	230/50
Electrical power consumption	kW	1,21	1,21	1,21
Weight	kg	15	15	16
Drilling in the burner plate	mm	150–170	150–170	150–170
Burner tube	Ø mm	90	90	101

Power range 81 to 190 kW

Model		KG/UB100	KG/UB150	KG/UB200
	No.	027145	027146	027147
Heating power with rapeseed oil	kW	81–100	93–147	131–190
Fuel consumption	kg/h	7,8–9,6	8,9–14,1	12,7–18,0
Electrical connection	V/Hz	230/50	230/50	230/50
Electrical power consumption	kW	1,21	1,35	1,35
Weight	kg	16	26	26
Drilling in the burner plate	mm	150–170	160–200	160–200
Burner tube	Ø mm	101	114	114

Accessories

Products		Product classification	Article no.
Spacer flange with sealing necessary if used with certain types of boilers		KG/UB20 – KG/UB100 KG/UB150 – KG/UB200	034129 034131
Patented ZVP tube for KG/UB20 only if used with heaters 25S and 40S		KG/UB20	038768
Patented ZVP tube with ceramic fibre mat		KG/UB20 – KG/UB55 KG/UB70 – KG/UB100 KG/UB150 – KG/UB200	038672 038770 038771
Ceramic fibre mat 6 mm, price per metre width 610 mm	lfd.m	KG/UB70 – KG/UB200	034241
Ceramic fibre plate approx. 25x500x500 mm		KG/UB70 – KG/UB200	039363
Conveyor system for external oil tank, fuel supply aggregate with preheated filter and float suction		KG/UB20 – KG/UB200	000901
Conveyor system for external oil tank, fuel supply aggregate with not preheated filter and float suction		KG/UB20 – KG/UB200	047550
Conveyor system with storage tank, fuel supply aggregate, preheated filter and float suction, Tank capacity 59 Liter KG/UB20 to KG/UB70 Tank capacity 109 Liter KG/UB100 to KG/UB200		KG/UB20 – KG/UB70 KG/UB100 – KG/UB200	000900 000891



Does the burner fit onto my boiler?

Please check the dimensions. Especially the dimensions of the drilling of the burner plate and the dimension of the burner tube. If these dimensions correspond to the dimensions of the burner's flame tube, the burner flange can be connected.

In case of doubt, we will be glad to assist you in choosing the right burner.

	To be used for:	Installation length [mm]	Outer diameter [mm]
ZVP125	Multi-fuel oil burner KG/UB20 with warm air generators	220	127
ZVP140	Multi-fuel oil burner KG/UB20, KG/UB55 with hot water boilers	220	142
ZVP160	Multi-fuel oil burner KG/UB70, KG/UB100 with hot water boilers	220	162
ZVP180	Multi-fuel oil burner KG/UB150, KG/UB200 with hot water boilers	220	182

General



Notes

§ 1 General

1. Our terms and conditions of sale and delivery shall apply exclusively. Any general terms and conditions of business of the Purchaser that conflict with or deviate from our supplement terms and conditions shall not be recognized, even if they have not been expressly objected to and/or the delivery has been carried out without reservation despite knowledge thereof.
2. These terms and conditions of sale and delivery shall apply to all present and future business relations. Earlier, different terms and conditions of our company hereby lose their validity.

§ 2 Conclusion of contract

1. Our offers are subject to change.
2. Technical and constructive changes, as well as changes in form, color and/or weight remain reserved within the scope of reasonableness.
3. Orders, additions and changes to an order shall only be deemed to have been accepted when they have been confirmed by us in writing or the goods have been delivered to the purchaser.
4. We reserve the property rights and copyrights to cost estimates, drawings and similar documents.

§ 3 Delivery

1. Agreed periods shall commence upon conclusion of the contract, but not before the customer has provided any documents to be procured, including complete technical specifications, approvals, releases, provisions or other prerequisites essential for the performance of the contract, and also not before receipt of any agreed payment.
2. We are entitled to make partial deliveries if this is operationally necessary and reasonable.
3. Events of force majeure and other circumstances unforeseeable by us, in particular procurement, manufacturing, delivery disruptions, strikes, lockouts and the like. At our premises or those of our suppliers shall release us from our delivery obligations for the duration of the disruption as well as a reasonable start-up period - also during an already existing delay - unless the disruption was caused by us, our legal representatives, agents or vicarious agents intentionally or by gross negligence. If the delivery becomes impossible or economically unreasonable due to the aforementioned circumstances, we shall be released from our contractual obligations. Claims for damages on the part of the customer are excluded.
4. Our obligation to deliver shall be suspended as long as the customer is not only insignificantly in arrears with an obligation.

§ 4 Prices/Payment

1. The prices confirmed by us shall apply ex works, excluding packaging, plus the respective statutory value added tax.
2. If the net value of the goods is less than 50.00 €, a minimum quantity surcharge of 25.00 € shall be levied.
3. If there is no individual contractual agreement, we reserve the right to charge for additional packaging costs exceeding the usual amount.
4. We calculate shipping and delivery costs as follows:

For shipment by parcel service, max. 31.5 kg (within the specified dimensions of the parcel service)

per package 12,00 € net

For deliveries by forwarding agent, we charge a flat-rate freight charge, which is staggered according to the net order value:

a. up to 2.000,00 €	4 % of the net order value; at least however 45,00 €/delivery
b. from 2.001,00 to 3.000.00 €	3 % of the net order value
c. from 3.001,00 to 10.000.00 €	2 % of the net order value
d. from 10.001,00 €	1 % of the net order value

Project business, heat pumps and plant construction ex works.

Excluded from this regulation are German islands and port surcharges, these will be calculated separately and on a daily basis.

Additional costs incurred for deliveries abroad will be charged on a time and material basis. Additional costs directly related to shipping will be charged as follows:

a. Notification by telephone	13,00 €
b. Technical notification (e-mail)	7,00 €
c. Agreement of a time window	20,00 €
d. Acknowledged delivery bill	10,00 €
e. Exchange of pallet cages	10,00 €.

In the context of express deliveries (so-called "Next Day") the following surcharges apply:

a. Next Day, arrival time not influenceable	30,00 €
b. Delivery by 10:00 a.m. on the following day	70,00 €
c. Delivery by 12:00 noon the following day	55,00 €

Valid working days Monday to Friday, Sundays and holidays excluded, individual inquiry required in any case, as not all zip code areas are covered.

5. Expenses incurred due to changes, type or scope of delivery at the request of the purchaser after our order confirmation and / or which arise due to the fulfillment of subsequent or unforeseeable official conditions and requirements will also be invoiced separately at the quoted purchase price.
6. If, after conclusion of the contract, there is a significant change in the price factors for materials, vendor parts, wages, social benefits, energy costs, sales and transfer taxes or customs duties, we shall be entitled to increase the prices stated in the order confirmation for the goods to be delivered more than 6 weeks after conclusion of the contract accordingly. If the price increase would be more than 5% of the price stated in the order confirmation, the customer shall be entitled to withdraw from the contract within one month from notification of the price change.
7. Assembly costs will be charged separately.
8. The deduction of a discount requires a special written agreement.
9. The customer shall only be entitled to a right of set-off if his counterclaims have been legally established, are undisputed or have been acknowledged by us. The customer may only exercise rights of retention insofar as his counterclaim is based on the same contractual relationship.
10. If we become aware of circumstances that give rise to justified doubts about the creditworthiness of the customer and if the customer is not prepared to pay in advance or to provide appropriate securities despite a corresponding request, we shall be entitled to withdraw from the contract.

Terms of sale and delivery

§ 5 Transfer of risk

1. Delivery shall always be ex works.
2. The risk of accidental loss and accidental deterioration of the goods shall pass to the customer upon handover in the case of sale by delivery to a place other than the place of performance upon delivery to the transport company. If the customer is in default of acceptance, the risk of accidental loss and accidental deterioration of the goods shall pass to him from the day of readiness for dispatch. Any storage costs incurred shall be borne by the customer.

§ 6 Retention of title

1. We reserve title to our goods until full payment of all claims arising from the entire business relationship.
2. In the event of breach of contract by the customer, in particular in the event of default in payment, we shall be entitled to withdraw from the contract after setting a reasonable deadline and to demand the return of our goods. After taking back the goods, we shall be entitled to utilize them. The proceeds of the realization shall be credited against the customer's liabilities less reasonable costs of realization. If the right of withdrawal cannot be realized, we shall be entitled to a corresponding claim for damages.
3. The purchaser is permitted to resell our goods within the scope of his ordinary business operations. The purchaser hereby assigns to us all claims against his customers arising from the resale. We hereby accept the assignment. The customer shall remain authorized to collect the claims assigned to us. This authorization shall expire upon cessation of payments by the customer.
4. In the event of seizure, other interventions by third parties or any damage to or destruction of the goods, the customer shall notify us immediately. Likewise, a change of ownership of the purchased goods as well as a possible change of domicile of the purchaser must be notified immediately.

§ 7 Claims for defects

1. The Purchaser shall only be entitled to make claims for defects if it has duly fulfilled its obligations to inspect the goods and give notice of defects in accordance with § 377 of the German Commercial Code (HGB).
2. If the goods have a defect for which we are responsible, we shall, at our discretion, either remedy the defect at our expense or deliver goods free of defects (subsequent performance). The purchaser is obliged to allow us to inspect the goods upon request, also by third parties.
3. Only our product description shall apply as the quality of the purchased item. Public statements, recommendations or advertising do not constitute a contractual description of the quality of the goods.
4. We shall be liable in accordance with the statutory provisions if the customer asserts claims for damages based on intent or gross negligence. Insofar as we cannot be accused of intentional or grossly negligent breach of duty, the liability for damages shall be limited to the foreseeable, typically occurring damage. This shall not apply to liability for culpable injury to life, limb or health, nor to mandatory liability under the Product Liability Act.
5. The period of limitation for claims for defects of the purchaser is one year from delivery of the goods.
6. The customer does not receive guarantees in the legal sense from us. Manufacturer's guarantees shall remain unaffected by this.

§ 8 Liability

1. In the case of other claims for damages, we shall be liable in the event of a slightly negligent breach of duty at most only for the damage typically occurring in accordance with the type of purchased item. This shall also apply to slightly negligent breaches of duty by our legal representatives or vicarious agents.
2. Our liability for slightly negligent breaches of non-essential contractual obligations is excluded.
3. Liability for culpable injury to life, body or health remains unaffected. Likewise, the mandatory liability under the Product Liability Act.

§ 9 Place of performance

The place of performance for the delivery is the respective shipping point, for payments and all other obligations arising from this contractual relationship the registered office of our company.

§ 10 Final Provisions

1. The law of the Federal Republic of Germany shall apply. The provisions of the UN Convention on Contracts for the International Sale of Goods shall not apply and are expressly excluded.
2. The exclusive place of jurisdiction for all disputes arising from this contract shall be the local or regional court of Stuttgart, depending on the amount in dispute.
3. The data of the order necessary in the context of the contract winding up are stored and processed for own purposes. A notification according to § 33 BDSG is hereby made. Our detailed privacy policy is available at any time at www.kroll.de/datenschutz.
4. If individual provisions of the contract, including these terms and conditions of sale and delivery, are or become invalid in whole or in part, this shall not affect the validity of the remaining provisions. The wholly or partially invalid provision shall be replaced by a provision whose economic success comes as close as possible to that of the invalid provision. This also applies in the event of a loophole.

All shipments are checked by us at the outgoing goods and packed with the utmost care. Nevertheless, in rare cases items may arrive damaged at the recipient. Therefore, please check your shipment immediately upon delivery carefully for external defects and completeness. In case of visible damage (e.g. foil or packaging damaged, showing cracks, holes, dents or dented edges) we recommend to unpack and check the shipment in the presence of the carrier and to note the exact damage with date, time and signature on the proof of delivery and have it certified. The note "acceptance of goods with reservation" is not sufficient. Photographs to preserve evidence are also helpful. If complaints regarding quantity or damage are not made, not made sufficiently or not made in good time, the goods shall be deemed to have been delivered complete and undamaged in accordance with § 438 HGB. Claims for damages arising from transport damage or missing goods cannot be asserted at a later date either with us or with the transport insurance company.

Die Kroll Energy GmbH

Kroll Energy GmbH combines first-class engineering knowledge with high-performance production power to create a convincing overall package that leaves nothing to be desired. Whether heating, cooling, air purification/dehumidification, warm air generation, full condensing boiler or particularly environmentally friendly heat pump technology: We develop an individually tailored solution for every requirement. State-of-the-art manufacturing facilities and constant uncompromising quality assurance give you the assurance that Kroll-Energy products are of impeccable workmanship and long service life.

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