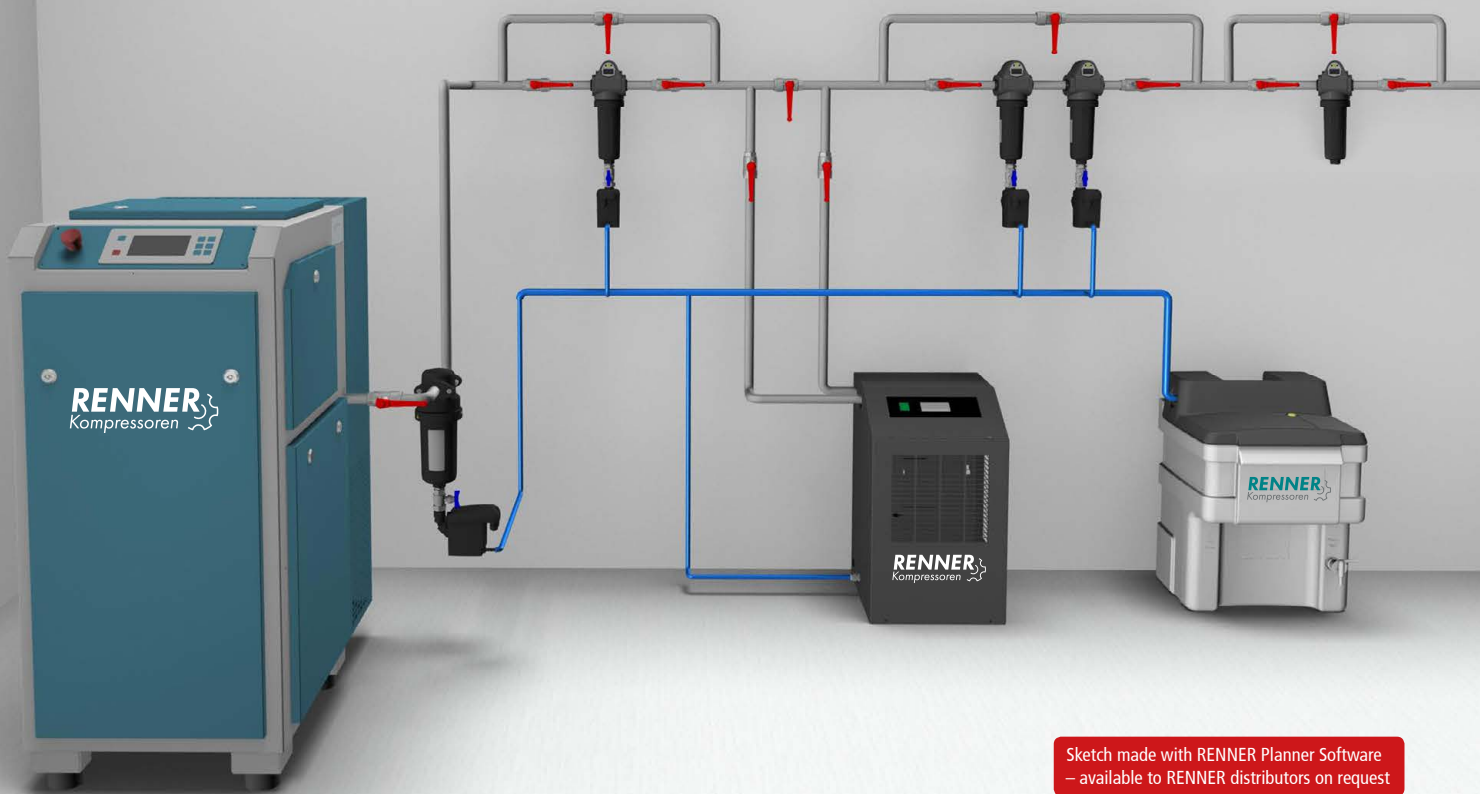


## RENNER compressed air treatment



Cyclone separator / Air filter / Refrigeration dryer / Condensate drain / Oil-water-separator



## Cyclone separator RF-C

for separating larger amounts of condensate and coarse dirt particles with level controlled condensate drain

Through centrifugal separation of liquids from compressed air of up to 99%, Cyclone separators extract water and coarse dirt particles from compressed air by means of the centrifugal effect and are installed directly behind the screw compressor. The incorporated deflector plate creates a spinning movement resulting in a cyclone-like, upward stream of compressed air inside the enclosure. The special design of the lower section of the filter enclosure, and the use of a mushroom-like shield over the condensate collecting chamber, ensures that separated aerosols cannot be carried away. This optimal design ensures low differential pressures at high flow rates. Efficiency is at 99%. Temperature limits at the installation site of a maximum of 80°C and a minimum of 2°C must be observed. The design, manufacture and conformity assessment is in accordance with Pressure Equipment Directive 97/23 EC for Group 2 fluids.

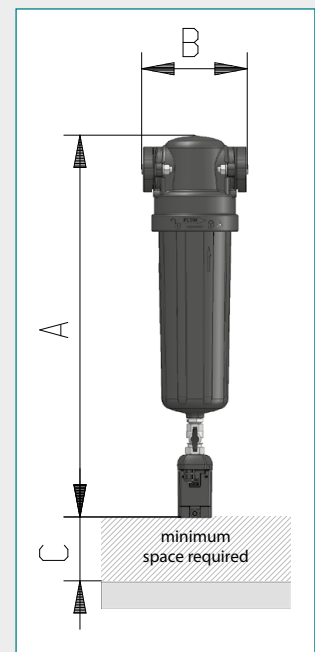


Cyclone separator RF-C									
Model	Connection	Capacity at 7 bar ü			Dimensions in mm			Weight	Part no.
		inch	m³/min / cfm	max. pressure	A	B	C		
RF-C 0050 <sup>(1)</sup>	G <sup>3</sup> / <sub>8</sub>	0.83	29	16	244	76	50	1.2	14616
RF-C 0120 <sup>(1)</sup>	G <sup>1</sup> / <sub>2</sub>	2.00	71	16	286	103	50	1.6	14617
RF-C 0210 <sup>(1)</sup>	G <sup>3</sup> / <sub>4</sub>	3.50	124	16	372	139	60	2.7	14618
RF-C 0320 <sup>(1)</sup>	G1	5.33	188	16	372	139	60	2.7	14619
RF-C 0450 <sup>(2)</sup>	G1 <sup>1</sup> / <sub>2</sub>	7.50	265	16	576	190	70	2.9	14620
RF-C 0750 <sup>(2)</sup>	G2	12.50	441	16	576	190	70	2.9	14621
RF-C 1100 <sup>(2)</sup>	G2	18.33	647	16	576	190	70	2.9	14622

<sup>(1)</sup> incl. UFM-D 05    <sup>(2)</sup> incl. UFM-D 10

Options
Electronic condensate drain

**Advantages:** Very low maintenance cost/easy to install/high-performance automatic deflector/robust aluminium enclosure. Optional: Electronic steam trap



Conversion factor f at different working pressures																
Working overpressure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Factor	0.25	0.38	0.50	0.63	0.75	0.88	1.00	1.13	1.25	1.38	1.50	1.63	1.75	1.88	2.00	2.13

**Sizing example**

V<sub>norm</sub> = 5.83 m³/min, operating pressure 9 bar (ü)

**Calculated size: 5.33 m³/min -> Type RF-C 0320**

$$V_{korr} = \frac{V_{norm}}{f} = \frac{5.83}{1.25} = 4.66 \text{ m}^3/\text{min}$$



## Three-stages-filter creating oil-free compressed air

Composed of a sub-micro coalescent filter stage, an active carbon filter stage and a high efficient particle filter (air quality class 1 according to ISO8573-1:2010)

With thread, economizer and automatic condensate drain KA 1/2", max. operating pressure 16 bar

### The Economizer (differential pressure indicator)

If you replace a used filter element at the right time, you save money!

The economizer determines the most economical time to do this as it continuously measures the differential pressure. The integrated micro-processor interprets the data by comparing higher energy costs, resulting from increased pressure loss with the cost of a new filter element. The most cost effective replacement time for the filter element is calculated and LEDs indicate the recommendation to replace the filter.

Three-stage-filter RF-T / DF-T, 3-in1, with thread						
Type	Connection inch	Capacity at 7 bar ü		max. operating pressure bar	Part no. filter element	Part no. filter complete
		m <sup>3</sup> /min	cfm			
RF-T 0050	G1/2	0.83	29	16	14740	14652
RF-T 0080	G3/4	1.33	47	16	14742	14653
RF-T 0110	G1	1.83	65	16	14743	14654
DF-T 0050*	G1/2	0.83	29	16	13679	13676
DF-T 0080*	G3/4	1.33	47	16	13680	13677
DF-T 0110*	G1	1.83	65	16	13681	13678

\* filter elements and housings free from both silicone and release agents

Filter performance data at nominal flow rate, defined by the following operation conditions				Cross-sectional filter element
Inlet	Operating overpressure	7 bar		
	Operating temperature <sup>(1)</sup>	20°C		
	Content of oil aerosol at inlet	3 mg/m <sup>3</sup>		
Outlet	Moisture content	50% relative humidity, corresponds to a pressure dew-point of approx. +10°C at 20°C operating temperature		
	Compressed air quality class acc. to ISO 8573-1:2010 for oil	< 0.003 mg/m <sup>3</sup> , Class 1		
	Compressed air quality class acc. to ISO 8573-1:2010 for solid particles	Class 1		
	Differential pressure in new condition, dry	330 mbar		
	Service lifetime of activated carbon stage	2000 operating hours		

<sup>(1)</sup> The recommended maximum operating temperature is 30°C, because with rising temperature the service lifetime of the filter will be reduced (at 30°C the service lifetime for a mineral oil ISO 46 amounts to approx. 1000 operation hours).

Conversion factor f at different working pressures																	
Working overpressure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Conversion factor	0.25	0.38	0.50	0.63	0.75	0.88	1.00	1.13	1.25	1.38	1.50	1.63	1.75	1.88	2.00	2.13	

<p><b>Sizing example</b></p> <p>V<sub>norm</sub> = 1.66 m<sup>3</sup>/min, operating pressure 9 bar (ü)</p> $V_{korr} = \frac{V_{norm}}{f} = \frac{1.66 \text{ m}^3/\text{min}}{1.25} = 1.33 \text{ m}^3/\text{min}$ <p><b>Calculated size: 1.33 m<sup>3</sup>/min -&gt; Type RF-T 0080</b></p>	<p>Type RF-T 0080</p>
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## RENNER air filters

Product range RF = with thread  
with automatic condensate drain  
max. operating pressure 16 bar



RENNER compressed air filters are suitable for separating oil and water aerosols as well for the removal of solid contaminants from compressed air. Even dust is securely kept on the surface and in the filter material. A filtration efficiency of almost 100 percent is reached through the use of various filtration mechanisms, such as separation by direct trapping, inertial impact and Brownian motion.

The standard filter is fitted with a mechanically controlled steam trap. The robust aluminium enclosure is coated with a polyester resin and is therefore particularly resistant to aggressive condensates.

The turbulence-free area in the lower section of the filter enclosure ensures that the already separated condensate is not carried away out of the wet area with the clean air stream. Pleated compressed air filter elements consume extremely little energy due to the very low differential pressures. The initial low differential pressure therefore remains at a low level for its entire service life. Temperature limits at the installation site of a maximum of 60°C and a minimum of 2°C must be observed. The high quality requirements of DIN ISO 8573 are fulfilled with ease. These filters are LLOYD'S-certified under KLR0403771 with the CE symbol and the CE declaration of conformity. The design, manufacture and conformity assessment is in accordance with Pressure Equipment Directive 97/23 EC for Group 2 fluids.

Air filters RF 0035 – RF 1100						
Type	Connection inch	Capacity at 7 bar ü		max. operating pressure bar	Weight Standard filter kg	Weight Superplus filter kg
		m³/min	/ cfm			
RF 0035	G¼	0.58	20	16	0.60	1.30
RF 0070	G¾	1.16	41	16	1.05	1.75
RF 0120	G½	2.00	71	16	1.25	1.95
RF 0210	G¾	3.50	124	16	2.35	3.05
RF 0320	G1	5.33	188	16	2.60	3.30
RF 0450	G1¼	7.50	265	16	5.95	3.65
RF 0600	G1½	10.00	353	16	5.95	3.85
RF 0750	G2	12.50	441	16	6.00	3.90
RF 1100	G2	18.33	647	16	8.30	7.60

(1) Superplus: incl. economizer and level controlled condensate drain UFM-D

Conversion factor f at different working pressures														
Working overpressure	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Factor	0.25	0.38	0.50	0.63	0.75	0.88	1.00	1.13	1.25	1.38	1.50	1.63	1.75	1.88






### Sizing example

V<sub>norm</sub> = 5.83 m³/min, operating pressure 9 bar (ü)

$$V_{\text{korr}} = \frac{V_{\text{norm}}}{f} = \frac{5.83}{1.25} = 4.66 \text{ m}^3/\text{min}$$

Calculated size: 5.33 m³/min -> Type RF 0320

## Filter classifications and part numbers

Available filter classifications					
Product range	Filter type	Description	max. residual dust content	max. oil content	
 RF-P	Pre filter	The pre-filter removes solid contaminants in gases.	up to 25 µm	up to 0,3mg/m <sup>3</sup>	
 RF-V	Fine filter	The depth filter removes water and oil aerosols as well as solid particles from compressed air and gases, with validated separating rate according to ISO 12500-1 and ISO separation 12500-3.	up to 1 µm	up to 0,1 mg/m <sup>3</sup>	
 RF-M	Micro filter	The depth filter removes water and oil aerosols as well as solid particles from compressed air and gases, with validated separating rate according to ISO 12500-1 and ISO separation 12500-3.	up to 0,1 µm	up to 0,01 mg/m <sup>3</sup>	
 RF-S	Submicro filter	The depth filter removes water and oil aerosols as well as solid particles from compressed air and gases, with validated separating rate according to ISO 12500-1 and ISO separation 12500-3.	up to 0,01 µm	up to 0,01 mg/m <sup>3</sup>	
 RF-A	Activated carbon filter	Adsorption filter removes oil vapors and hydrocarbons as well as odours.	–	up to 0,003 mg/m <sup>3</sup>	

Air filter product range RF, with thread / max. operating pressure 16 bar														
Type	Serie RF-P			Serie RF-V			Serie RF-M			Serie RF-S			Serie RF-A	
	Filter complete standard	Filter complete superplus	Filter element	Filter complete standard	Filter complete superplus	Filter element	Filter complete standard	Filter complete superplus	Filter element	Filter complete standard	Filter complete superplus	Filter element	Filter complete standard	Filter element
RF 0035	14664	14655	14674	14738	14745	14707	14630	14746	14714	14739	14747	14721	14741	14728
RF 0070	14666	14656	14675	14624	14680	14708	14631	14687	14715	14638	14694	14722	14645	14729
RF 0120	14667	14657	14676	14625	14681	14709	14632	14688	14716	14639	14695	14723	14646	14730
RF 0210	14668	14659	14677	14626	14682	14710	14633	14689	14717	14640	14696	14724	14647	14731
RF 0320	14669	14660	14678	14686	14672	14644	14701	14693	14651	14704	14702	14658	14706	14665
RF 0450	14670	14661	14700	14627	14683	14711	14634	14690	14718	14641	14697	14725	14648	14732
RF 0600	14671	14662	14703	14628	14684	14712	14635	14691	14719	14642	14698	14726	14649	14733
RF 0750	14673	14663	14705	14629	14685	14713	14636	14692	14720	14643	14699	14727	14650	14734
RF 1100	14300	14304	14755	14744	14301	14751	14756	14302	14752	14737	14303	14753	14299	14754

Wall mount for air filter		
Filter	Size	Part no.
RF	0035	02060
RF	0070-0120	14889
RF	0210-0320	06133
RF	0450-0750	00985
RF	1100	00985

Wall mount for three-stages-filter		
Filter	Size	Part no.
DF-T / RF-T	0050	14889
DF-T / RF-T	0080	06133
DF-T / RF-T	0110	06133

## RENNER compressed air refrigeration dryer

The dryer has a cooling system that cools down the compressed air. In this process, the water vapour saturation limit is lowered resulting in condensate that is removed by the condensate drain. The greater the cooling temperature differential of the compressed air, the higher the condensed water volume. The lower the cooling temperature of the compressed air, the lower the moisture content.

The lower limit of the compressed air cooling arises from the working principle of the dryer, i.e. that moisture separation in liquid form can only occur at temperatures above the freezing point of water. The RENNER refrigeration dryer can be mounted on the console or the wall by means of flexible suspension.



### The electronic control of the refrigeration dryer

The electronic DDS3 control is a micro-control specially developed for compressed air dryers with the following functions:

- Pressure dew point indicator
- Control of condensate solenoid valve
- Automatic fan control



## Refrigeration dryer RKT 0035 – RKT 0450

for mounting on RENNER compressors, with electronic control and time controlled or level controlled condensate drain

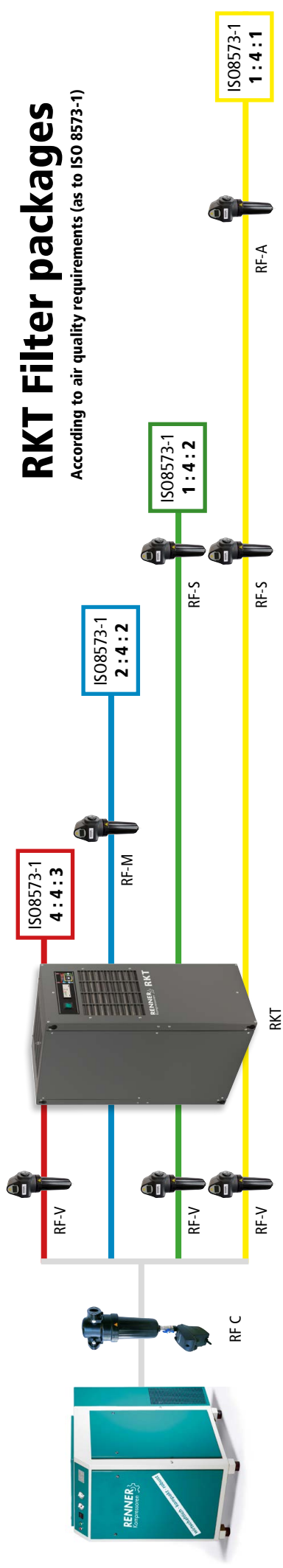
RKT 0035 – RKT 0450										
Model	Capacity		Electrical consumption		Pressure loss bar	Compressed air outlet inch	Dimensions L x B x H mm	Weight kg	Part no. (time controlled)	Part no. (level controlled)
	m <sup>3</sup> /min	cfm	kW	HP						
RKT 0035	0.58	20	0.18	0.24	0.06	G½	255 x 455 x 626	29	02557	07723
RKT 0050	0.83	29	0.19	0.25	0.09	G½	255 x 455 x 626	30	02558	07724
RKT 0065	1.08	38	0.22	0.30	0.11	G½	255 x 455 x 626	31	02559	07725
RKT 0085	1.42	50	0.29	0.39	0.15	G½	255 x 455 x 626	33	02560	07726
RKT 0105	1.75	62	0.31	0.42	0.40	G½	255 x 455 x 626	42	11541	07727
RKT 0125	2.08	74	0.39	0.52	0.22	G1	345 x 525 x 851	46	02562	07728
RKT 0150	2.50	88	0.40	0.54	0.28	G1	345 x 525 x 851	46	02551	07729
RKT 0180	3.00	106	0.53	0.71	0.22	G1¼	345 x 525 x 851	47	02563	07730
RKT 0225	3.75	132	0.73	0.98	0.23	G1¼	349 x 668 x 1061	68	02564	07731
RKT 0300	5.00	177	0.80	1.07	0.42	G1¼	349 x 668 x 1061	69	02566	07732
RKT 0360	6.00	212	0.81	1.09	0.26	G1½	349 x 668 x 1061	73	02568	07733
RKT 0450	7.50	265	0.76	1.02	0.35	G1½	349 x 668 x 1061	80	02625	07734
Options for RKT and RKT-CQ										
Bypass RKT-CQ 0020 AB									02888	
Bypass RKT 0035 - RKT 0105 / RKT-CQ 0035 - 0105 AB									02889	
Bypass RKT 0125 - RKT 0150 / RKT-CQ 0125 - 0150 AB									02890	
Bypass RKT 0180 - RKT 0300 / RKT-CQ 0180 - 0300 AB									02891	
Bypass RKT 0360 - RKT 0450 / RKT-CQ 0360 - 0450 AB									02892	
Bypass RKT-CQ 0550 - 0750 AB									02893	
Bypass RKT-CQ 0850 AB									02894	
Electric supply: RKT 0035 – RKT 0150: 220-230V/50-60Hz/single phase; RKT 0180 – RKT 0450: 220-230V/50Hz/single phase according to DIN ISO 7183: with 1 bar absolute and 20°C, dew point 5°C at inlet temperature of 35°C, 25°C ambient temperature and 7 bar. In refrigeration dryers with level controlled condensate drain, a potentialfree contact for dryer failures is integrated. RKT only up to 14 bar										

### Conversion table for the corrected dryer performance

Operating pressure/bar (g)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Factor $f_p$	0.60	0.70	0.80	0.88	0.94	1.00	1.04	1.06	1.09	1.10	1.12	1.14	1.15	1.16	1.17	
Dew point/°C	3	5	7	10	Ambient temperature/°C							25	30	35	40	45
Factor $f_{tpd}$	0.90	1.00	1.11	1.25	Factor $f_{ta}$							1.00	0.97	0.94	0.87	0.78
Inlet temperature/°C	30	35	40	45	50	55	Corrected dryer performance:				Volume flow at entry					
Factor $f_{ti}$	1.17	1.00	0.88	0.75	0.58	0.48					$(f_p \times f_{ti} \times f_{ta} \times f_{tpd})$					

# RKT Filter packages

According to air quality requirements (as to ISO 8573-1)



Compressor	Cyclone Separator	+ Pre filter	+ Refrigeration dryer	+ Micro filter	+ Submikrofilter	+ Activated carbon filter
Compressor	Cyclone Separator	—	+ Refrigeration dryer	+ Micro filter	+ Submikrofilter	+ Activated carbon filter
Compressor	Cyclone Separator	+ Pre filter	+ Refrigeration dryer	—	+ Submikrofilter	+ Activated carbon filter
Compressor	Cyclone Separator	+ Pre filter	+ Refrigeration dryer	—	+ Submikrofilter	+ Activated carbon filter

Separation of particles	<1 Micron	<0,1 Micron	<0,01 Micron
Separation of oil	<0,1 mg/m <sup>3</sup>	<0,01 mg/m <sup>3</sup>	<0,003 mg/m <sup>3</sup>

Refrigeration dryer Type	Capacity		Cyclone Separator	1x Filter incl. Filter Element	Package Part no.	1x Filter incl. Filter Element	Package Part no.	2x Filter incl. Filter Element	Package Part no.	3x Filter incl. Filter Element	Package Part no.
	m <sup>3</sup> /min	cfm									
RKT 0035 AB UFM-T*	0,58	20	RF-C 0120	RF-V 0070	14126	RF-M 0070	14155	RF-V 0070 + RF-S 0070	14184	RF-V 0070 + RF-S 0070 + RF-A 0070	14213
RKT 0050 AB UFM-T*	0,83	29	RF-C 0120	RF-V 0070	14127	RF-M 0120	14156	RF-V 0070 + RF-S 0070	14185	RF-V 0070 + RF-S 0070 + RF-A 0070	14214
RKT 0065 AB UFM-T*	1,08	38	RF-C 0120	RF-V 0070	14128	RF-M 0120	14157	RF-V 0070 + RF-S 0070	14186	RF-V 0070 + RF-S 0070 + RF-A 0070	14215
RKT 0085 AB UFM-T*	1,42	50	RF-C 0120	RF-V 0120	14129	RF-M 0120	14158	RF-V 0120 + RF-S 0120	14187	RF-V 0120 + RF-S 0120 + RF-A 0120	14216
RKT 0105 AB UFM-T*	1,75	62	RF-C 0120	RF-V 0120	14130	RF-M 0120	14159	RF-V 0120 + RF-S 0120	14188	RF-V 0120 + RF-S 0120 + RF-A 0120	14217
RKT 0125 AB UFM-T*	2,08	73	RF-C 0320	RF-V 0210	14131	RF-M 0210	14160	RF-V 0210 + RF-S 0210	14189	RF-V 0210 + RF-S 0210 + RF-A 0210	14218
RKT 0150 AB UFM-T*	2,50	88	RF-C 0320	RF-V 0210	14132	RF-M 0210	14161	RF-V 0210 + RF-S 0210	14190	RF-V 0210 + RF-S 0210 + RF-A 0210	14219
RKT 0180 AB UFM-T*	3,00	106	RF-C 0320	RF-V 0450	14133	RF-M 0450	14162	RF-V 0450 + RF-S 0450	14191	RF-V 0450 + RF-S 0450 + RF-A 0450	14220
RKT 0225 AB UFM-T*	3,75	132	RF-C 0320	RF-V 0450	14134	RF-M 0450	14163	RF-V 0450 + RF-S 0450	14192	RF-V 0450 + RF-S 0450 + RF-A 0450	14221
RKT 0300 AB UFM-T*	5,00	177	RF-C 0450	RF-V 0600	14135	RF-M 0600	14164	RF-V 0600 + RF-S 0600	14193	RF-V 0600 + RF-S 0600 + RF-A 0600	14222
RKT 0360 AB UFM-T*	6,00	212	RF-C 0450	RF-V 0600	14136	RF-M 0600	14165	RF-V 0600 + RF-S 0600	14194	RF-V 0600 + RF-S 0600 + RF-A 0600	14223
RKT 0450 AB UFM-T*	7,50	265	RF-C 0450	RF-V 0600	14137	RF-M 0600	14166	RF-V 0600 + RF-S 0600	14195	RF-V 0600 + RF-S 0600 + RF-A 0600	14224

\* UFM-T: Automatic level controlled drain

## Refrigeration dryer RKT-CQ 0020 AB – RKT-CQ 0850 AB

Stand-alone unit, can not be mounted on RENNER compressors,  
with electronic control and time controlled or level controlled condensate drain



### The electronic control of the refrigeration dryer

The electronic DDS3 control is a micro-control specially developed for compressed air dryers with the following functions:

- Pressure dew point indicator
- Control of condensate solenoid valve
- Automatic fan control



RKT-CQ 0020 AB – RKT-CQ 0850 AB										
Model	Capacity		Power consumption		Pressure loss bar	Compressed air outlet inch	Dimensions L x B x H mm	Weight kg	Part no. (time controlled)	Part no. (level controlled)
	m <sup>3</sup> /min / cfm		kW / HP							
RKT-CQ 0020 AB	0.33	12	0.16	0.21	0.15	G <sup>3</sup> / <sub>8</sub>	360 x 410 x 645	24	07269	07442
RKT-CQ 0035 AB	0.58	20	0.18	0.24	0.06	G <sup>1</sup> / <sub>2</sub>	360 x 410 x 645	26	07270	07444
RKT-CQ 0050 AB	0.83	29	0.19	0.25	0.09	G <sup>1</sup> / <sub>2</sub>	360 x 410 x 645	27	07273	07448
RKT-CQ 0065 AB	1.08	38	0.22	0.30	0.11	G <sup>1</sup> / <sub>2</sub>	360 x 410 x 645	29	07274	07452
RKT-CQ 0085 AB	1.42	50	0.29	0.39	0.15	G <sup>1</sup> / <sub>2</sub>	360 x 410 x 645	31	07278	07454
RKT-CQ 0105 AB	1.75	62	0.31	0.42	0.40	G <sup>1</sup> / <sub>2</sub>	360 x 410 x 645	31	07279	07456
RKT-CQ 0125 AB	2.08	74	0.39	0.52	0.22	G1	360 x 410 x 645	32	07282	07458
RKT-CQ 0150 AB	2.50	88	0.40	0.54	0.28	G1	360 x 410 x 645	33	07283	07470
RKT-CQ 0180 AB	3.00	106	0.53	0.71	0.22	G1 <sup>1</sup> / <sub>4</sub>	480 x 660 x 870	55	07286	07472
RKT-CQ 0225 AB	3.75	132	0.71	0.98	0.23	G1 <sup>1</sup> / <sub>4</sub>	480 x 660 x 870	56	07287	07474
RKT-CQ 0300 AB	5.00	177	0.80	1.07	0.42	G1 <sup>1</sup> / <sub>4</sub>	480 x 660 x 870	57	07290	07476
RKT-CQ 0360 AB	6.00	212	0.81	1.09	0.26	G1 <sup>1</sup> / <sub>2</sub>	480 x 660 x 870	61	07291	07477
RKT-CQ 0450 AB	7.50	265	0.76	1.02	0.35	G1 <sup>1</sup> / <sub>2</sub>	480 x 660 x 870	68	07294	07478
RKT-CQ 0550 AB	9.17	324	0.79	1.06	0.16	G2	645 x 920 x 1055	116	07295	07480
RKT-CQ 0650 AB	10.83	382	0.88	1.18	0.23	G2	645 x 920 x 1055	118	07298	07481
RKT-CQ 0750 AB	12.50	441	1.35	1.81	0.26	G2	645 x 920 x 1055	121	07299	07482
RKT-CQ 0850 AB	14.17	500	1.38	1.85	0.14	G2	645 x 920 x 1055	155	07386	07484

Electric supply: RKT-CQ 0020 AB – RKT-CQ 0150AB: 220-230V/50-60Hz/single phase; RKT-CQ 0180 AB – RKT-CQ 0850 AB: 220-230V/50Hz/single phase according to DIN ISO 7183: with 1 bar absolute and 20°C. dew point 5°C at inlet temperature of 35°C. 25°C ambient temperature and 7 bar. In refrigeration dryers with level controlled condensate drain, a potential free contact for dryer failures is integrated. RKT-CQ only up to 14 bar operating pressure.

**Options RKT-CQ see page 06**

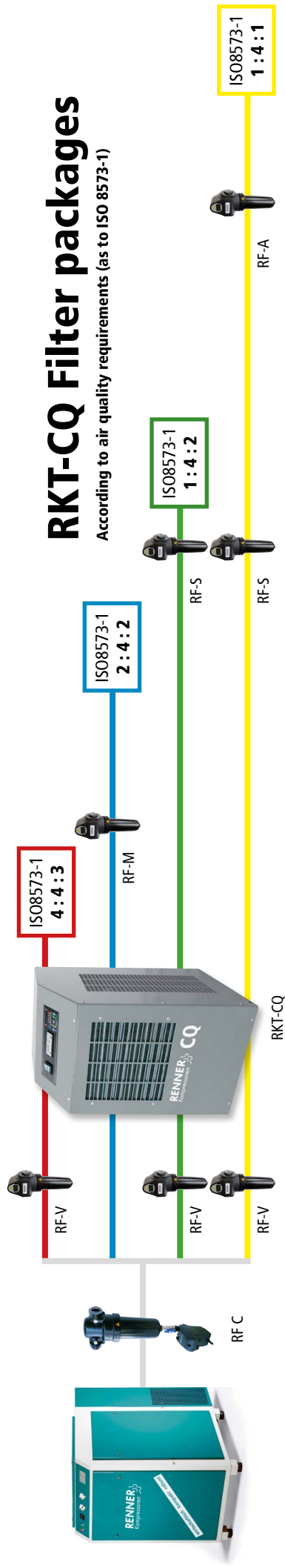
### Conversion table for the corrected dryer performance

Operating pressure/bar (g)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Factor $f_p$	0.60	0.70	0.80	0.88	0.94	1.00	1.04	1.06	1.09	1.10	1.12	1.14	1.15	1.16	1.17
Dew point/°C	3	5	7	10	Ambient temperature/°C						25	30	35	40	45
Factor $f_{tpd}$	0.90	1.00	1.11	1.25	Factor $f_{ta}$						1.00	0.97	0.94	0.87	0.78
Inlet temperature/°C	30	35	40	45	50	55	Corrected dryer performance:				Volume flow at entry				
Factor $f_{ti}$	1.17	1.00	0.88	0.75	0.58	0.48					$(f_p \times f_{ti} \times f_{ta} \times f_{tpd})$				



# RKT-CQ Filter packages

According to air quality requirements (as to ISO 8573-1)



Compressor	Cyclone Separator	Refrigeration dryer	1x Filter incl. Filter Element	Package Part no.	1x Filter incl. Filter Element	Package Part no.	2x Filter incl. Filter Element	Package Part no.	3x Filter incl. Filter Element	Package Part no.
Compressor	+ Pre filter	+ Refrigeration dryer	RF-M 0035	14138	RF-M 0035	14167	RF-V 0035 + RF-S 0035	14196	RF-V 0035 + RF-S 0035 + RF-A 0035	14225
Compressor	—	+ Refrigeration dryer	RF-M 0070	14139	RF-M 0070	14168	RF-V 0070 + RF-S 0070	14197	RF-V 0070 + RF-S 0070 + RF-A 0070	14226
Compressor	+ Pre filter	+ Refrigeration dryer	RF-V 0070	14140	RF-M 0070	14169	RF-V 0070 + RF-S 0070	14198	RF-V 0070 + RF-S 0070 + RF-A 0070	14227
Compressor	+ Pre filter	+ Refrigeration dryer	RF-V 0070	14141	RF-M 0070	14170	RF-V 0070 + RF-S 0070	14199	RF-V 0070 + RF-S 0070 + RF-A 0070	14228
			RF-V 0120	14142	RF-M 0120	14171	RF-V 0120 + RF-S 0120	14200	RF-V 0120 + RF-S 0120 + RF-A 0120	14229
			RF-V 0120	14143	RF-M 0120	14172	RF-V 0120 + RF-S 0120	14201	RF-V 0120 + RF-S 0120 + RF-A 0120	14230
			RF-V 0210	14144	RF-M 0210	14173	RF-V 0210 + RF-S 0210	14202	RF-V 0210 + RF-S 0210 + RF-A 0210	14231
			RF-V 0210	14145	RF-M 0210	14174	RF-V 0210 + RF-S 0210	14203	RF-V 0210 + RF-S 0210 + RF-A 0210	14232
			RF-V 0450	14146	RF-M 0450	14175	RF-V 0450 + RF-S 0450	14204	RF-V 0450 + RF-S 0450 + RF-A 0450	14233
			RF-V 0450	14147	RF-M 0450	14176	RF-V 0450 + RF-S 0450	14205	RF-V 0450 + RF-S 0450 + RF-A 0450	14234
			RF-V 0450	14148	RF-M 0450	14177	RF-V 0450 + RF-S 0450	14206	RF-V 0450 + RF-S 0450 + RF-A 0450	14235
			RF-V 0600	14149	RF-M 0600	14178	RF-V 0600 + RF-S 0600	14207	RF-V 0600 + RF-S 0600 + RF-A 0600	14236
			RF-V 0600	14150	RF-M 0600	14179	RF-V 0600 + RF-S 0600	14208	RF-V 0600 + RF-S 0600 + RF-A 0600	14237
			RF-V 0750	14151	RF-M 0750	14180	RF-V 0750 + RF-S 0750	14209	RF-V 0750 + RF-S 0750 + RF-A 0750	14238
			RF-V 0750	14152	RF-M 0750	14181	RF-V 0750 + RF-S 0750	14210	RF-V 0750 + RF-S 0750 + RF-A 0750	14239
			RF-V 0750	14153	RF-M 0750	14182	RF-V 0750 + RF-S 0750	14211	RF-V 0750 + RF-S 0750 + RF-A 0750	14240
			RF-V 1100	14154	RF-M 1100	14183	RF-V 1100 + RF-S 1100	14212	RF-V 1100 + RF-S 1100 + RF-A 1100	14241

Refrigeration dryer Type	Cyclone Separator	Capacity m³/min	cfm	1x Filter incl. Filter Element	Package Part no.	1x Filter incl. Filter Element	Package Part no.	2x Filter incl. Filter Element	Package Part no.	3x Filter incl. Filter Element	Package Part no.
RKT-CQ 0020 AB UFM-T*	RF-C 0050	0,33	12	RF-M 0035	14138	RF-M 0035	14167	RF-V 0035 + RF-S 0035	14196	RF-V 0035 + RF-S 0035 + RF-A 0035	14225
RKT-CQ 0035 AB UFM-T*	RF-C 0120	0,58	20	RF-M 0070	14139	RF-M 0070	14168	RF-V 0070 + RF-S 0070	14197	RF-V 0070 + RF-S 0070 + RF-A 0070	14226
RKT-CQ 0050 AB UFM-T*	RF-C 0120	0,83	29	RF-M 0070	14140	RF-M 0070	14169	RF-V 0070 + RF-S 0070	14198	RF-V 0070 + RF-S 0070 + RF-A 0070	14227
RKT-CQ 0065 AB UFM-T*	RF-C 0120	1,08	38	RF-M 0070	14141	RF-M 0070	14170	RF-V 0070 + RF-S 0070	14199	RF-V 0070 + RF-S 0070 + RF-A 0070	14228
RKT-CQ 0085 AB UFM-T*	RF-C 0120	1,42	50	RF-M 0120	14142	RF-M 0120	14171	RF-V 0120 + RF-S 0120	14200	RF-V 0120 + RF-S 0120 + RF-A 0120	14229
RKT-CQ 0105 AB UFM-T*	RF-C 0120	1,75	62	RF-M 0120	14143	RF-M 0120	14172	RF-V 0120 + RF-S 0120	14201	RF-V 0120 + RF-S 0120 + RF-A 0120	14230
RKT-CQ 0125 AB UFM-T*	RF-C 0320	2,08	73	RF-M 0210	14144	RF-M 0210	14173	RF-V 0210 + RF-S 0210	14202	RF-V 0210 + RF-S 0210 + RF-A 0210	14231
RKT-CQ 0150 AB UFM-T*	RF-C 0320	2,50	88	RF-M 0210	14145	RF-M 0210	14174	RF-V 0210 + RF-S 0210	14203	RF-V 0210 + RF-S 0210 + RF-A 0210	14232
RKT-CQ 0180 AB UFM-T*	RF-C 0320	3,00	106	RF-M 0450	14146	RF-M 0450	14175	RF-V 0450 + RF-S 0450	14204	RF-V 0450 + RF-S 0450 + RF-A 0450	14233
RKT-CQ 0225 AB UFM-T*	RF-C 0320	3,75	132	RF-M 0450	14147	RF-M 0450	14176	RF-V 0450 + RF-S 0450	14205	RF-V 0450 + RF-S 0450 + RF-A 0450	14234
RKT-CQ 0300 AB UFM-T*	RF-C 0320	5,00	177	RF-M 0450	14148	RF-M 0450	14177	RF-V 0450 + RF-S 0450	14206	RF-V 0450 + RF-S 0450 + RF-A 0450	14235
RKT-CQ 0360 AB UFM-T*	RF-C 0450	6,00	212	RF-M 0600	14149	RF-M 0600	14178	RF-V 0600 + RF-S 0600	14207	RF-V 0600 + RF-S 0600 + RF-A 0600	14236
RKT-CQ 0450 AB UFM-T*	RF-C 0450	7,50	265	RF-M 0600	14150	RF-M 0600	14179	RF-V 0600 + RF-S 0600	14208	RF-V 0600 + RF-S 0600 + RF-A 0600	14237
RKT-CQ 0550 AB UFM-T*	RF-C 0750	9,17	324	RF-M 0750	14151	RF-M 0750	14180	RF-V 0750 + RF-S 0750	14209	RF-V 0750 + RF-S 0750 + RF-A 0750	14238
RKT-CQ 0650 AB UFM-T*	RF-C 0750	10,83	382	RF-M 0750	14152	RF-M 0750	14181	RF-V 0750 + RF-S 0750	14210	RF-V 0750 + RF-S 0750 + RF-A 0750	14239
RKT-CQ 0750 AB UFM-T*	RF-C 0750	12,50	441	RF-M 0750	14153	RF-M 0750	14182	RF-V 0750 + RF-S 0750	14211	RF-V 0750 + RF-S 0750 + RF-A 0750	14240
RKT-CQ 0850 AB UFM-T*	RF-C 1100	14,17	500	RF-M 1100	14154	RF-M 1100	14183	RF-V 1100 + RF-S 1100	14212	RF-V 1100 + RF-S 1100 + RF-A 1100	14241

\* UFM-T: Automatic level controlled drain

## Refrigeration dryer DC 1000 AX – DC 1650 AX

Stand-alone unit, can not be mounted on RENNER compressors,  
with micro processor control, control for energy saving and level controlled condensate drain



The all-in system for compressed air treatment comes with a dew point indicator, metal housing and power plug. The aluminium heat exchanger has three functions: it serves as air-to-air heat exchanger, as air-to-refrigerant heat exchanger and condensate drain.

DC 1000 AX – DC 1650 AX									
Model	Capacity		Power consumption		Pressure loss bar	Compressed air outlet inch	Dimensions L x B x H mm	Weight kg	Part no. (level controlled)
	m <sup>3</sup> /min	cfm	kW	HP					
DC 1000 AX	16.67	589	2.40	3.20	0.27	G2½	805 x 904 x 1230	177	01678
DC 1175 AX	19.58	691	2.56	3.43	0.29	G2½	805 x 904 x 1230	180	01679
DC 1350 AX	22.50	795	2.80	3.80	0.21	G2½	805 x 904 x 1230	185	01680
DC 1500 AX	25.00	883	2.95	3.96	0.25	G2½	805 x 904 x 1230	190	01681
DC 1650 AX	27.50	971	3.10	4.16	0.26	G2½	805 x 904 x 1230	196	01682

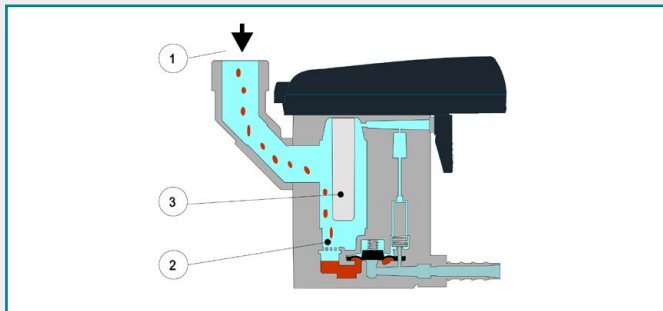
Electric supply: 400V/50Hz/3phases; according to DIN ISO 7183: with 1 bar absolute and 20°C, dew point 3°C at inlet pressure of 35°C, 25°C ambient temperature and 7 bar.  
In refrigeration dryers with level controlled condensate drain, a potential-free contact for dryer failures is integrated.

Options	Part no.
Bypass DC 1000 – 1650	13650

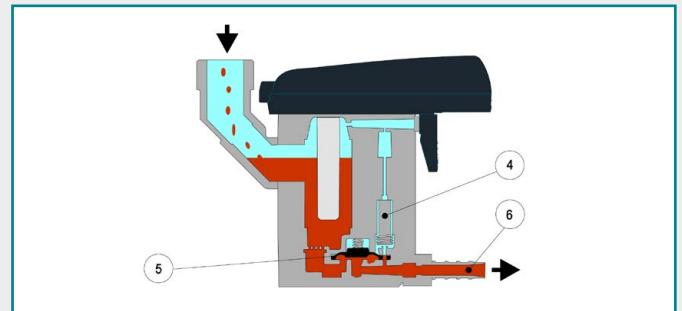
### Conversion table for the corrected dryer performance

Operating pressure/bar (g)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
Factor/f <sub>p</sub>	0.60	0.70	0.80	0.88	0.94	1.00	1.04	1.06	1.09	1.10	1.12	1.14	1.15	1.16	1.17		
Dew point/°C	3	5	7	10	15	Ambient temperature/°C						25	30	35	40	45	50
Factor/f <sub>tpd</sub>	1.0	1.12	1.24	1.36	1.45	Factor/f <sub>ta</sub>						1.00	0.97	0.94	0.87	0.75	0.62
Inlet temperature/°C	30	35	40	45	50	55	60	65	70	Corrected dryer performance: $\frac{\text{Volume flow at entry}}{(f_p \times f_{ti} \times f_{ta} \times f_{tpd})}$							
Factor/f <sub>ti</sub>	1.28	1.00	0.88	0.75	0.58	0.48	0.44	0.42	0.40								

## RENNER condensate drain



The condensate flows into the steam trap via the intake line (1) and collects in the enclosure (2). A capacitive sensor (3) continuously records the fill level and signals the electronic controller as soon as the tank is full.



The pilot valve (4) is activated and the membrane (5) opens the discharge line (6) to discharge the condensate. When the steam trap has been emptied, the discharge line is closed again quickly in order to avoid loss of compressed air.

Level controlled condensate drain							
Model	Part no.	Air flow of compressor		Connection	Pressure range		Weight
		m <sup>3</sup> /min	/ cfm		min bar	max bar	
UFM-D03 <sup>(1)</sup>	14880	2.5	88	1 x G $\frac{1}{2}$	0.8	16	1.5
UFM-D05	14881	5.0	177	2 x G $\frac{1}{2}$	0.8	16	1.0
UFM-D10	14882	10.0	353	3 x G $\frac{1}{2}$	0.8	16	1.65
UFM-D30	14268	30.0	1059	G $\frac{1}{2}$	0.8	16	2.0
UFM-D130	14883	130.0	4591	G $\frac{3}{4}$	0.8	16	2.9
UFM-P (pneumatisch)	01021	450.0	15891	G1	0.8	16	1.6

Housing made of aluminium and fiber glass enforced plastic. <sup>(1)</sup>with cable and plug for 230 V / 50 Hz / 1 Phase  
 UFM-D 05 – 130 mit with potential-free contact



## Oil-water-separator "Ultrasep"

The oil-bearing condensate flows into the settling chamber under pressure. This relieves the overpressure without causing turbulences in the next separation tank. Any coarse dirt particles present are retained in a removable collection container. In the separation tank, the oil is deposited on the surface by means of gravity separation and guided to the oil collection container. This pre-cleaned condensate flows to the filter stage. The pre-filter binds the residual oil drops in its material and the last oil residues are safely and reliably retained in the main filter cartridge. The treated condensate exits the oil/water separator via the water outlet.

Ultrasep								
Model	Part no.	Air flow of compressor		Connection	Volume	Pre-absorber	Active carbon	Weight
		m <sup>3</sup> /min	/ cfm					
UltraSep 5	14893	2.0	71	$\frac{1}{2}$	25	0.9	3	8
UltraSep 10N	14894	4.1	145	1	50	3.2	8	20
UltraSep 15N	14895	7.5	265	1	75	3.8	12	23
UltraSep 30N	14896	15.0	530	1	100	4.9	22	35
UltraSep 60N	14897	30.0	1059	1	300	5.7	30	67
UltraSep 120N	17453	60.0	2120	1	600	11.4	60	150
UltraSep 240N	17454	120.0	4235	1	1200	22.8	120	250

## RENNER – THE SPECIALIST IN COMPRESSORS




Established in 1994, this family owned business employs a highly motivated and successful team specialising in the development and production of economic compressor systems. The structure and size of the company guarantees flexible decision-making and quick realisation, thus ensuring that new developments meet the needs of the market.

### THE RENNER MANUFACTURING AND SUPPLY PROGRAMME:

We can supply you with the right compressor for any application – guaranteed.

#### SCREW COMPRESSORS:

- from 2.2 – 355.0 kW, also for oil-free compressed air of breathable quality
- water-injected screw compressors from 18.5 – 120.0 kW 
- up to 40 bar, e.g. for manufacturing of PET bottles
- compact units with air receiver, refrigerant dryer and frequency control
- compressors with heat exchanger – saves energy and money!
- customised models, mobile/portable, built-in units, designed to customer specifications
- for special applications: gas compression, operation of drilling apparatus, rail and special-purpose vehicles

#### SCROLL COMPRESSORS:

- for oil-free compressed air from 1.5 to 30.0 kW



#### PISTON COMPRESSORS:

- from 1.5 – 11.0 kW
- stationary or mobile, with or without sound insulation

#### COMPRESSED AIR ACCESSORIES:

- compressed air filters, air receivers, refrigeration dryers, adsorption dryers, condensate drains and oil/water separation systems

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