

Liquid ring compressors 液环式压缩机

Two stage 二级设计

KPH 65212, KPH 65218

Compression pressures:

出口压力范围: 2 to 7 bar

Suction volume flow:

入口流量: 375 to 660 m³/h



CONSTRUCTION TYPE

结构形式

ABs liquid ring compressors are displacement compressors of simple and robust construction having following special characteristics:

ABs液环式压缩机是结构简单使用可靠的容积变化式压缩机，具有如下特点：

Pumping of nearly all gases and vapours

可处理几乎所有的气体和蒸汽

non polluting due to a nearly isothermal compression

oil-free, as no lubrication in the working chamber

几乎等温压缩，而且工作腔内无需润滑，因此无污染

additional liquid can be handled with the gas flow

可处理少量的夹带液体

easy maintenance and reliable operation

易维护，高可靠性

low noise and nearly free from vibration

低噪音，几乎无振动

wide choice of material, therefore applicable nearly anywhere

广泛的材质选择，基本上可用于任何场合

incorporated central drain

一体式排水管

no metallic contact of the rotating parts

旋转部件没有金属接触

The ABs liquid ring compressors KPH 65212 and KPH 65218 are two stage compressors, with double acting second stage.

ABs液环压缩机KPH 65212和KPH 65218是两级压缩机。

APPLICATION

应用

Handling and compressing of dry and humid gases; entrained liquid can be handled during normal duty. The compressors are applied in all fields where a compression over pressure of up to 6,5 bar has to be created by robust compressors and only a small increase in temperature is admissible during compression.

干气和湿气的处理和抽除；正常条件下可处理夹带的液体。此压缩机可用于所有需要达到6.5bar压力的场合，在压缩过程中只会产生微小的温度升高。

Fields of application are e.g.

应用领域包括：

the plastics industry, for recovery of process gases as vinyl chloride

塑料工业，用于回收工艺气体，如氯乙烯

the petrochemical industry, for the compression of combustible gases as

gasoline vapours or hydrogen

石化工业，用于压缩可燃气体，如汽油蒸气或氢气

transport of gases in general e.g. to a reactor

应用于一般情况气体的输送

NOTE

注意事项

During the operation the compressor must continuously be supplied with service liquid, normally water, in order to eliminate the heat resulting from the gas compression and to replenish the liquid ring, because part of the liquid is leaving the pump together with the gas. This liquid can be separated from the gas in a pressure liquid separator (see catalogue part accessories).

压缩机运转期间需连续不断地补充工作液（通常为水），以带走气体压缩而产生的热量和补充部分随气体排出的工作液。此部分工作液可在气液分离器中与气体分开（请见附件部分）。

It is possible to reuse the service liquid.

可以重复使用循环液体。

The direction of rotation is clockwise when looking from the drive on the pump.

从泵的驱动端看，泵的旋转方向为顺时针。

GENERAL TECHNICAL DATA 常规技术数据

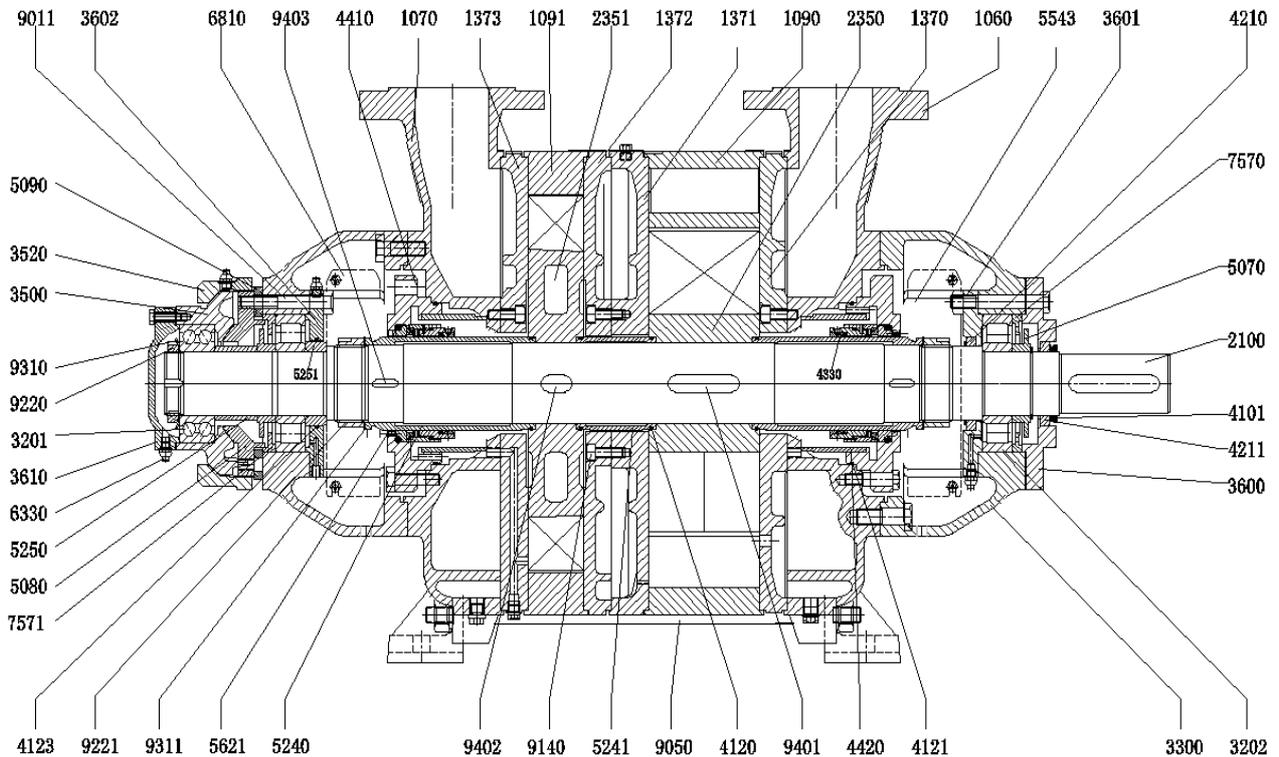
Pump type 泵型号	Unit 单位	KPH 65212	KPH 65218
Speed 转速	50HZ	1450	1450
	60HZ	1775	1775
Max. compression over pressure 最大背压	bar	7	
Hydraulic test (over pressure) 水压试验 (表压)	bar	10.5	
Moment of inertial of the rotating pump parts and of the water filling 满水时转动部件的惯性力矩	Kg m ²	0.68	0.95
Sound pressure level of measuring area 噪音	dB(A)	82	82
		84	84
Min. pulley diameter permissible in case of V-belt drive V型皮带驱动时的最小皮带轮直径	mm	355	450
Max. gas temperature 最大进气温度	°C	100	
Service liquid 工作液			
max. admissible temperature 允许的最大温度	°C	80	
max. viscosity 最大粘度	mm ² /s	90	
max. density 最大密度	Kg/m ³	1200	
volume up to shaft level 到轴中心线的容积	liter	22	27

The combination of several limiting values is not admissible. 不允许将几个极限值的情况同时选择。

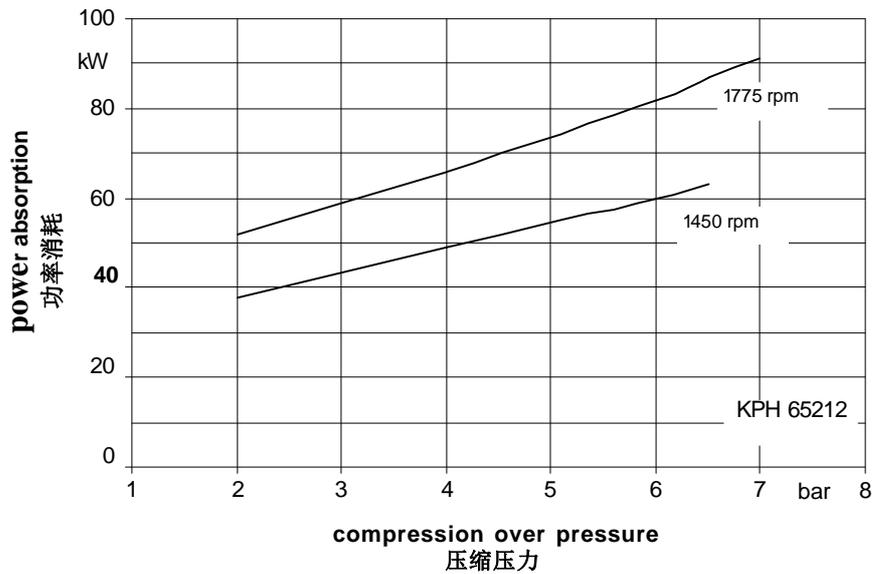
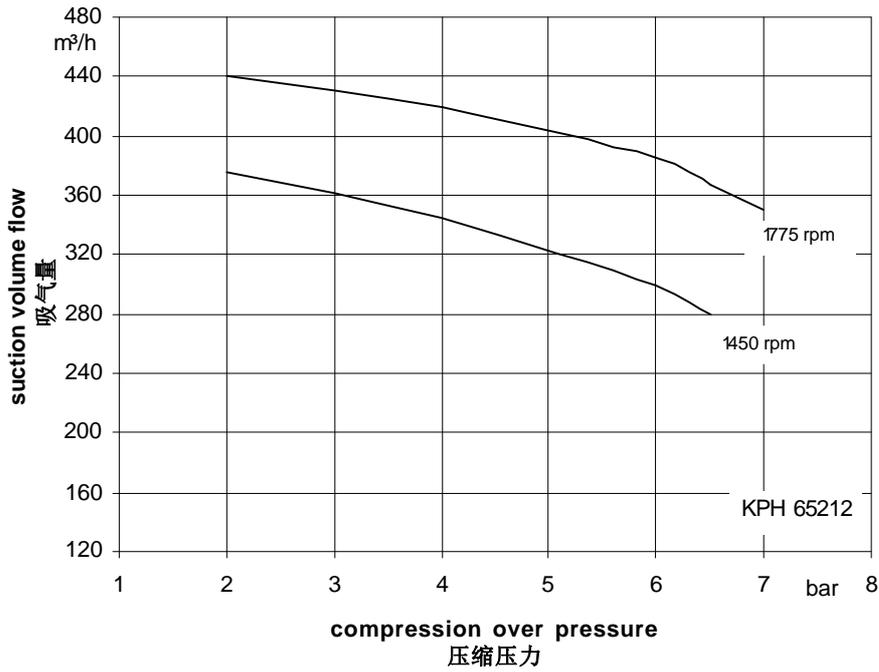
Material design 材料设计

Item 位号	COMPONENTS 零件	MATERIAL DESING 材料设计	
		1B	4B
10.60 / 10.70	Casing 泵盖	1.4308	1.4408
10.90 / 10.91	Central body 中间体	1.4308	1.4408
13.70 / 1371 13.72 / 13.73	Guide disk 导流盘	1.4308	1.4408
23.50 / 23.51	Vane wheel impeller 叶轮	1.4308	1.4408
21.00	Shaft 轴	45# / 2cr13	45# / 2cr13
52.40/52.41	Shaft sleeve 轴套	304	316
43.30	sealing 密封	Q2Q2VGG Q1Q1KGG BQ2K23MG-BQ2VMG	Q2Q2VGG Q1Q1KGG BQ2K23MG-BQ2VMG

Sectional drawing 剖视图



Suction volume flow and power absorption 吸气量和功率消耗
KPH 65212



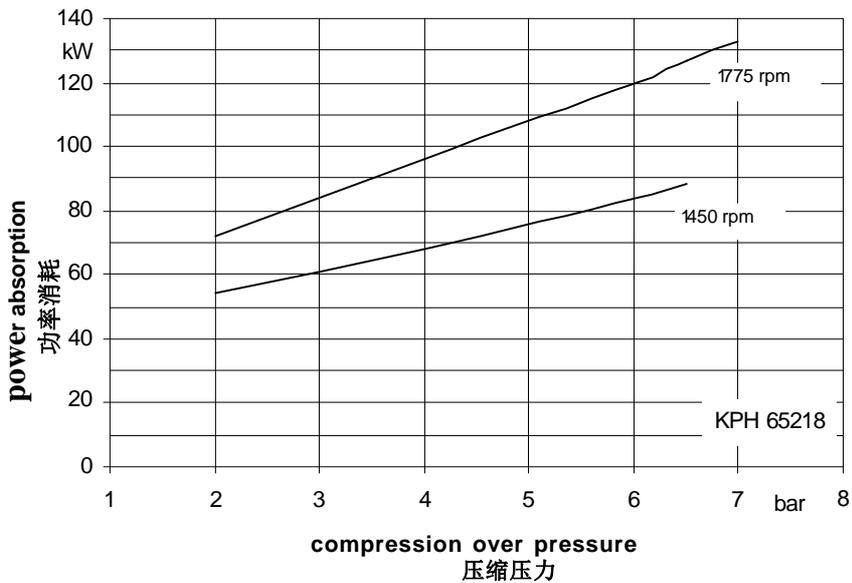
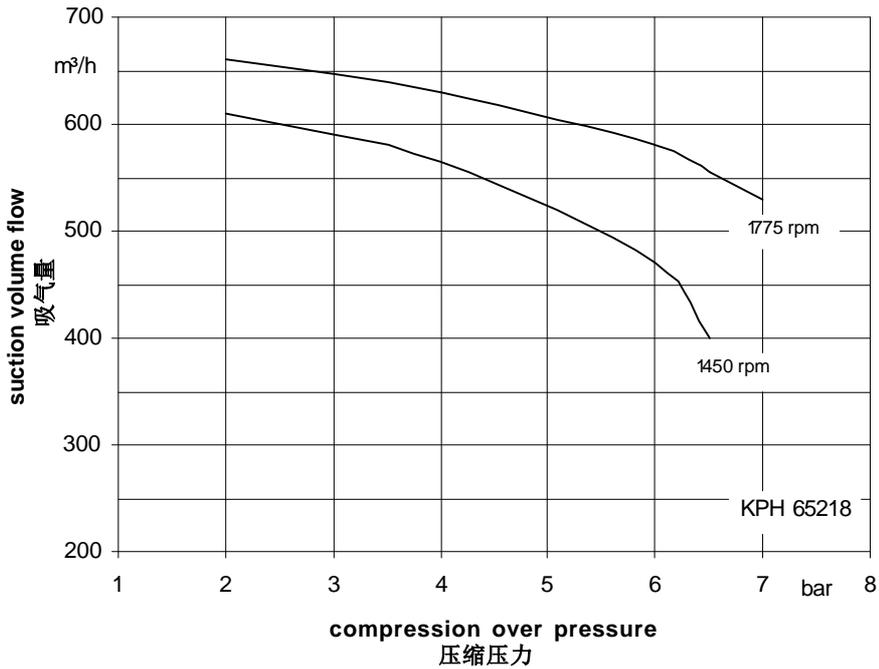
The values indicated for volume and power absorption are valid for compression of dry air at 20°C from atmospheric pressure (1013 mbar) of the respective compression pressure with water at 20°C as service liquid. Tolerance of the curve values is 10%. The compression pressure in bar is indicated as pressure above the atmospheric pressure.

吸气量和功率消耗适用于 20 °C 的干空气，大气压力（1013 mbar），以 20 °C 的水作为服务液体。性能曲线值的允许公差为 10%。表中的压缩压力表示为大于大气压压力的压力（表压）。

The data indicated change with deviating service conditions, such as deviating physical data of the gas to be handled or of the service liquid (vapour pressure, temperature, density, viscosity) when handling entrained liquid, at a suction pressure deviating from atmospheric pressure handling gas- vapours mixtures.

数据曲线随着使用条件的偏离而变化，例如在处理夹带液体时，在偏离大气压的吸入压力下处理气体-蒸汽混合物时，待处理气体或工作液体的物理数据（蒸汽压力、温度、密度、粘度）的偏离，都将是数据曲线发生变化。

Suction volume flow and power absorption 吸气量和功率消耗
KPH 65218



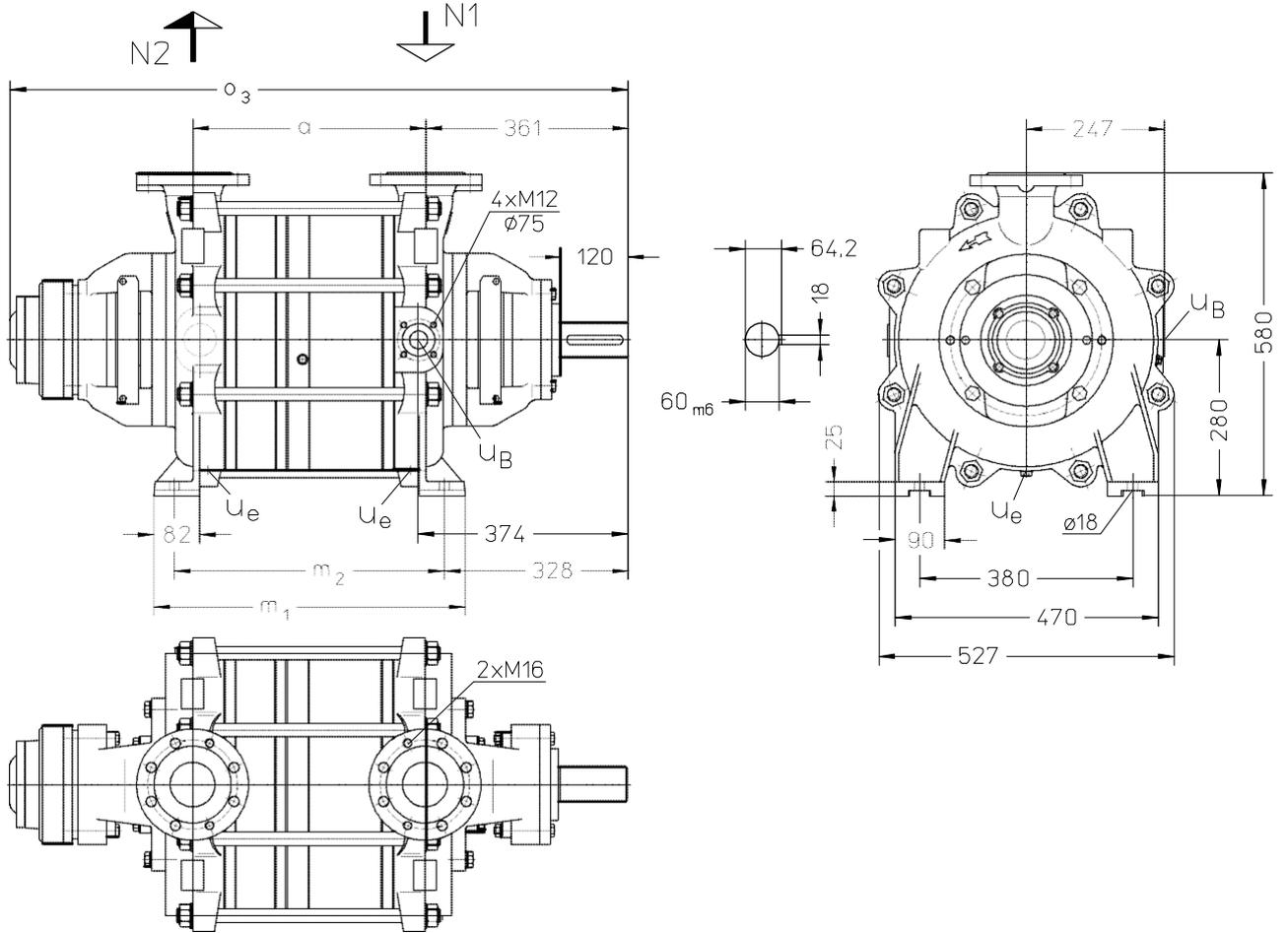
The values indicated for volume and power absorption are valid for compression of dry air at 20°C from atmospheric pressure (1013 mbar) of the respective compression pressure with water at 20°C as service liquid. Tolerance of the curve values is 10%. The compression pressure in bar is indicated as pressure above the atmospheric pressure.

吸气量和功率吸收适用于 20 °C 的干空气，大气压力（1013 mbar），以 20 °C 的水作为服务液体。性能曲线值的允许公差为 10%。表中的压缩压力表示为大于大气压压力的压力（表压）。

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Dimension table 尺寸表 KPH 65212, KPH 65218

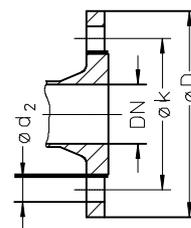


- N1 = gas-inlet DN 80
吸气口 DN 80
- N2 = gas-outlet DN 80
排气口 DN 80

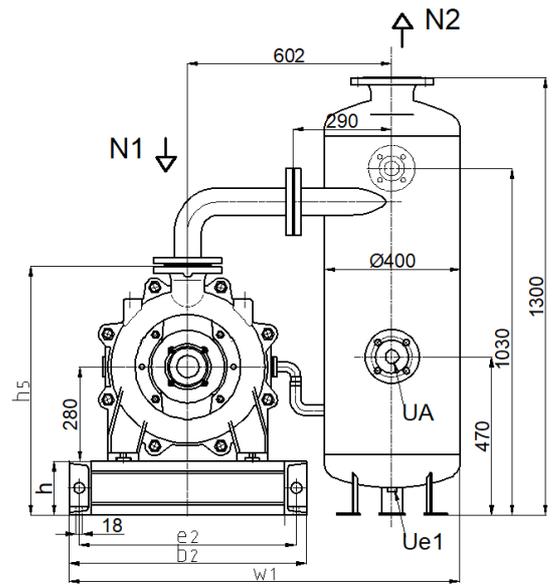
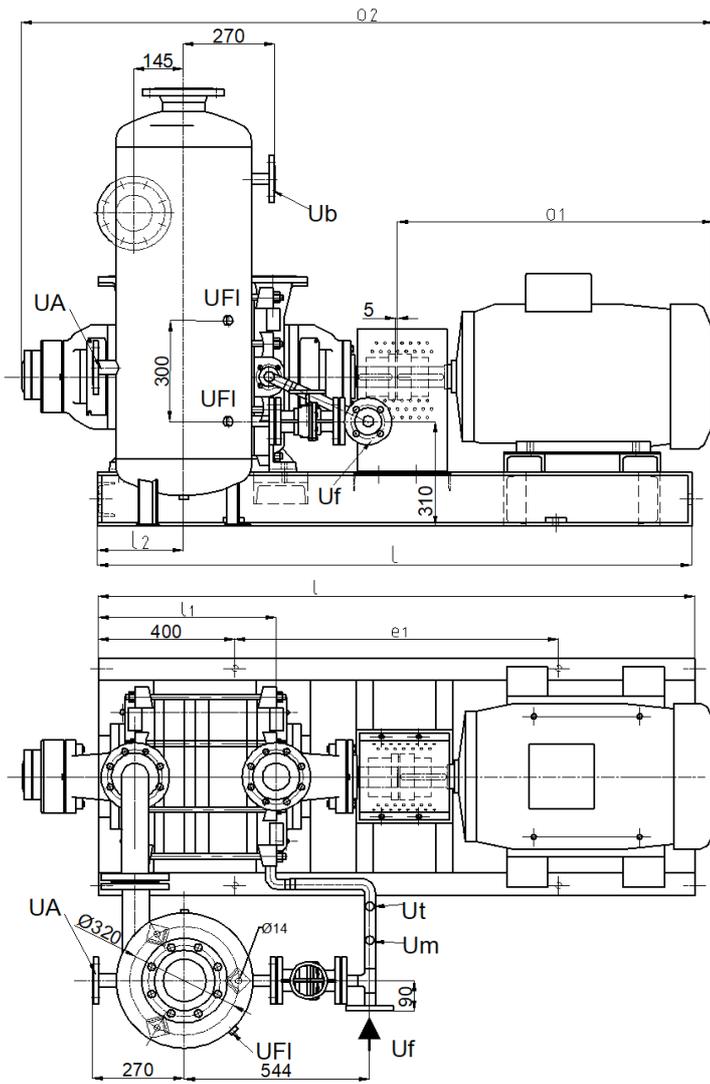
- UB = connection for service liquid DN 20
工作液连接口 DN 20
- ue = drain connection (screwed plug) G^{3/8}
排液接口 (螺纹插头) G^{3/8}

	a	m ₁	m ₂	o ₃	weight 重量 abt. kg
KPH 65212	415	554	481	1103	445
KPH 65218	505	644	571	1193	510
KPH 65212-X3F	415	554	481	1253	465
KPH 65218-X3F	505	644	571	1343	530

flange connections to DIN 2501 PN 10 / PN 16 与DIN 2501 PN 10 / PN 16的法兰连接		
DN	20	80
k	75	160
D	105	200
number x d ₂	4 x M12	8 x 18



Arrangement drawing KPH 65212 with pressure liquid separator
带附件外形图KPH 65212, 带侧置式气液分离器

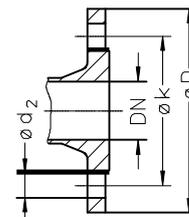


- N 1 = Gas-inlet DN 80 吸气口DN 80
- N 2 = gas-outlet DN125 排气口DN125
- uA = connection for liquid drain DN 40
工作液排出口DN 40
- U_b = connection for safety valve DN 25
安全阀接头DN 25
- ue1 = drain connection G ¾ 排液接口G ¾
- uF = connection for fresh liquid DN 32
补充工作液接口DN 32
- U_m = connection for pressure gauge G ½
压力表接口G ½
- uFI = connection for liquid level indicator G ½
液位控制器接口G ½
- U_t = connection for thermometer G ½
温度计接口G ½

	electric motor 电机50Hz			b ₂	e ₁	e ₂	h	h ₅	l	l ₁	l ₂	m	o ₁ *	o ₂ *	w ₁	weight 重量 abt. kg
	Size 尺寸	kW IP 55	kW Ex DII BT4													
KPH 65212	250 M	55	-	700	950	640	160	740	1750	578	308	130	930	2345	1154	1300
	280 S	75	-										1005	2420		1470
	280 S	-	58										1044	2459		1430
	280 M	-	70										1095	2510		1500
	315 S	-	84	800	1218	740	200	780	2018	618	348	170	1220	2635	1202	1850

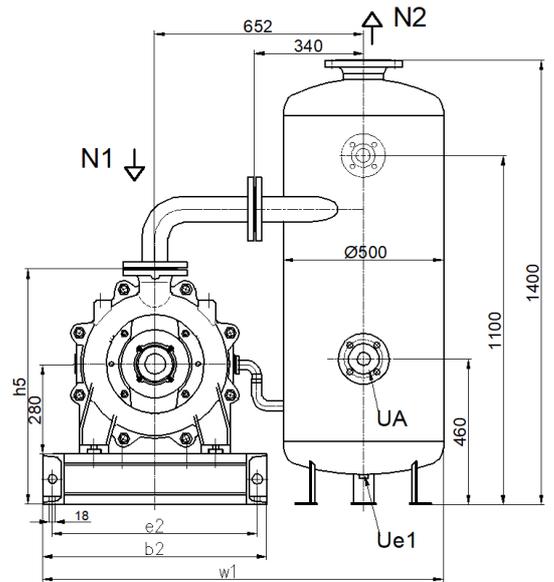
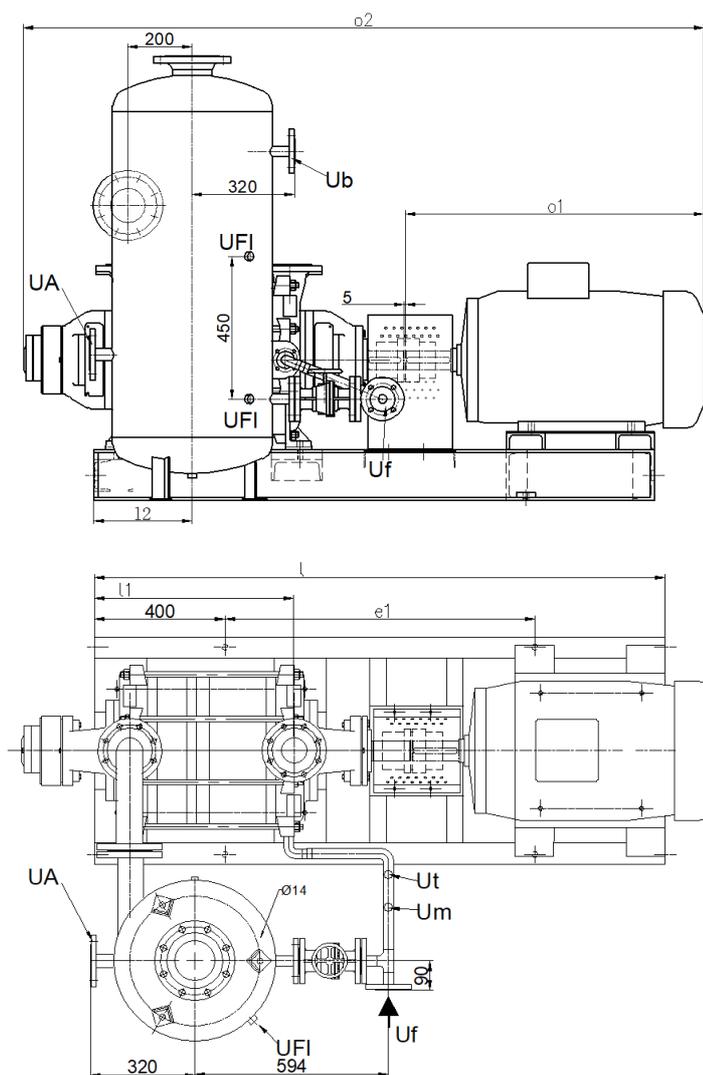
flange connections to DIN 2501 PN 10 / PN 16					
DN	25	32	40	80	125
k	85	100	110	160	210
D	115	140	150	200	250
number x d ₂	4 x 14	4 x 18	4 x 18	8 x 18	8 x 18

* Dimensions depend on the motor make 尺寸取决于电机的制造



Arrangement drawing KPH 65218 with pressure liquid separator

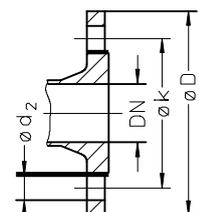
带附件外形图KPH 65218，带侧置式气液分离器



- N 1 = gas-inlet DN 80 吸气口DN 80
- N 2 = gas-outlet DN125 排气口DN125
- u_A = connection for liquid drain DN 40
工作液排出接口DN 40
- u_{A1} = connection for liquid drain DN 32
工作液排出接口DN 32
- U_b = connection for safety valve DN 25
安全阀接头DN 25
- u_{e1} = drain connection G ¾ 排液接口G ¾
- u_F = connection for fresh liquid DN 32
补充工作液接口DN 32
- U_m = connection for pressure gauge G ½
压力表接口G ½
- u_{FI} = connection for liquid level indicator G ½
液位控制器接口G ½
- U_t = connection for thermometer G ½
温度计接口G ½

	electric motor电机50 Hz			b ₂	e ₁	e ₂	h	h ₅	l	l ₁	l ₂	m	o ₁ *	o ₂ *	t ₁	w ₁	weight 重量 abt. kg
	Size 尺寸	IP 55	Ex DII BT4														
KPH 65218	280 M	90	-	700	950	640	160	740	1750	578	273	40	1005	2612	-26	1254	1650
	280 M	-	70										1095	2702			1620
	315 S	110	-										1140	2747			1900
	315 S	-	84	800	1218	740	200	780	2018	638	333	100	1220	2827	14	1304	1970
	315 M	-	100										2010				
	315 M	-	115														

flange connections to DIN 2501 PN 10 / PN 16						
DN	25	32	40	50	80	150
k	85	100	110	125	160	240
D	115	140	150	165	200	285
number x d ₂	4 x 14	4 x 18	4 x 18	4 x 18	8 x 18	8 x 22



* Dimensions depend on the motor make 尺寸取决于电机的制造厂家。

Fresh water requirements in [m³/h] dependent on compression pressure, speed, mode of operation and temperature difference

水流量需求[m³/h] (根据压缩压力、转速、运行方式和温差)

Compressor 型号	Speed 转速	*	FB not depending on the pressure 不依靠压力 [m³/h]	KB															
				compression over pressure 压缩压力															
				2 bar				4 bar				6 bar				6,5 resp. 7 bar			
				difference in temperature [°C]				difference in temperature [°C]				difference in temperature [°C]				difference in temperature [°C]			
温差				温差				温差				温差							
30 20 10 5				30 20 10 5				30 20 10 5				30 20 10 5							
KPH65212	1450	1,4	3	0,80	1,06	1,56	2,06	0,96	1,24	1,75	2,21	1,09	1,39	1,90	2,32	1,13	1,42	1,93	2,35
	1775	2,0	3,6	1,05	1,38	1,99	2,57	1,24	1,59	2,20	2,73	1,42	1,78	2,38	2,87	1,51	1,87	2,47	2,93
KPH65218	1450	2,0	4,2	1,13	1,49	2,20	2,89	1,33	1,72	2,44	3,09	1,53	1,94	2,65	3,25	1,58	1,99	2,70	3,29
	1775	2,8	5	1,46	1,91	2,77	3,56	1,77	2,26	3,11	3,84	2,04	2,54	3,37	4,02	2,16	2,67	3,48	4,10

FB = make-up liquid service 全部采用新鲜工作液

* = In order to secure the service liquid flow the service liquid pressure shall be higher than the suction pressure by the following values

* =为了确保使用液体流动，服务液体压力应高于吸入压力的以下值

KB= combined liquid service with service liquid 30°C, 20°C, 10°C, 5°C warmer than the make up-water

组合液比补水温度高30°C, 20°C, 10°C, 5°C

Data regarding the pump size - order hints

关于泵规格的据—订单代码

Series+size 系列+规格	hydraulic + bearings 液压+轴承	shaft sealing 轴封	material design 材料设计	Case sealing 泵密封
	B. two antifriction bearings 两个润滑脂的滚动轴承 .N one shaft end clockwise rotating 从轴端看顺时针旋转	041 double gland packing 双层填料 QV mechanical seal 机械密封 Viton Oring QK mechanical seal 机械密封 K23 O ring X2V special mechanical seal 机械密封 Viton Oring X2K special mechanical seal 机械密封 K23 O ring X3F Double mechanical seal 集装式双端机封	0K main parts cast iron 主要零部件为铸铁 4B main parts SS316 steel 主要零部件为316不锈钢 1B main parts SS304 steel 主要零部件为304不锈钢 SZ main parts cast iron, impeller /guide disc ss304. 主要零部件为铸铁,叶轮圆盘 不锈钢ss304	0 liquid seal 液体密封
KPH 65212 65218	BN	041,QV,QK.X2K,X3F	0K, 1B,4B,SZ	0



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