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Water jet pumps/Water jet pumps



1 Water jet pump, PP		
This pump will work on pressures up to 10 kg/cm ² . With built-in, non-return valve to eliminate back flow. Useful for vacuum removal of spilt chemicals, as well as for filter work. Easily dismantled for cleaning.		<i>Kartell</i>
Description	PK	Cat. No.
Water jet vacuum pump	1	9.303 031
Tubing connectors	1	9.303 032



2 Water jet pumps, PP		
With constant ultimate vacuum, high suction flow rate and very low water consumption. Can be connected to mains water system in a number of different ways using the adapter supplied and reducing adapters that are available as accessories. For continuous use at temperatures up to 80°C max. High chemical resistance as the media being pumped only comes into contact with PP, FKM and PTFE. Integral non-return valve increases safety.		<i>BRAND</i>
Comprises:		
Water jet pump, including:		
Mains water connections: R 3/8" sleeve nut, R 1/2" reducing adapter and flexible tubing connection (nozzle) with external diameter from 10mm to 12mm.		
Vacuum connection: Detachable nozzle with external diameter from 6mm to 9mm and GL 14 screw cap.		
Performance characteristics at 3.5 bar water supply pressure at 12°C		
Water consumption:	190L/hr.	
Ultimate vacuum:	16 mbar	
Flow rate at atmospheric pressure:	400L/hr. free air	
Type	PK	Cat. No.
Reducing adapter R 3/8" for water jet filter pump	1	7.020 037
Reducing adapter M 22x1 for water jet filter pump (thread for screen tap)	1	7.020 038
Water jet pump	1	9.303 125



3 Water jet pump, Nickel-plated		
Nickel-plated brass, non-return valve, adapter for rapid action hose.		
Description	PK	Cat. No.
Water jet pump	1	9.303 000
Rapid action hose for water jet pump	1	9.303 001



1 Pumps, vacuum/pressure, diaphragm

For general vacuum and pumping applications.

KNF

These diaphragm pumps are single- and double-head, dry-running devices used in a wide range of laboratory applications. They transfer and pump down without contamination. The pumps are offered in various materials. Supply requirements: 230V 50Hz.

Pump head/Material in contact with the pumped media

KN = PP/EPDM

KT = PP/PTFE-coated

AN = Aluminium/CR

FT = PTFE/PTFE-coated



Type	Flow rate	Ultimate vacuum	Max. pressure	Accessory codes type (see table)	PK	Cat. No.
	l / min.	mbar (abs).	bar			
N 86 KN.18*	6	100	2.4	1+2+6+13	1	9.880 510
N 86 KT.18*	5.5	160	2.4	1+2+6+13	1	9.880 680
N 811 KN.18*	11.5	240	2	1+2+6+13	1	9.880 685
N 022 AN.18*	15	100	4	2+4+14+10	1	9.880 530
N 816.3KN.18*	16	15	0.5	1	1	9.880 543
N 820 FT.18**	20	100	1		1	9.880 670
N 820 AN.18**	22	100	1		1	9.880 687
N 820.3 AN.18**	22	8	1		1	9.880 688
N 026.3 AN.18*	22	20	-	9	1	9.880 538
N 816.1.2KN.18*	30	100	0.5		1	9.880 544
N 026.1.2 AN.18*	39	100	2	3+5+8+9	1	9.880 537
N 035 AN.18*	30	100	4		1	9.880 539
N 035.1.2 AN.18*	55	100	4		1	9.880 547
N 035.3 AN.18*	30	13	-		1	9.880 554
N 035 AN.18**	30	100	4	3+12+7+11	1	9.880 540
N 035.1.2 AN.18**	55	100	4	3+12+7+11	1	9.880 541
N 035.3 AN.18**	30	13	-		1	9.880 553

* IP20 protection system.

** IP44 protection system.

Accessories for standard diaphragm pumps

KNF

Type	Description	PK	Cat. No.
1	silencer	1	9.880 515
2	vacuum filter	1	9.880 519
3	vacuum filter / silencer	1	9.880 548
4	pressure relief valve, 4 bar	1	9.880 641
5	pressure relief valve, 2 bar	1	9.880 664
6	fine adjustment heads with pressure gauge	1	9.880 532
7	fine adjustment heads with pressure gauge	1	9.880 545
8	fine adjustment heads with pressure gauge	1	9.880 533
9	fine adjustment heads with pressure gauge	1	9.880 534
10	fine adjustment heads with pressure gauge	1	9.880 536
11	fine adjustment heads with pressure gauge	1	9.880 546
12	Overpressure valve 1/4", 4 bar	1	9.880 642
13	fine adjustment heads with pressure gauge	1	9.880 531
14	fine adjustment heads with pressure gauge	1	9.880 535

2 Diaphragm vacuum pumps LABOPORT®

PTFE diaphragm pumps for evacuating and pumping corrosive gases and vapours.

Maintenance and oil free. Pumpheads and valves are made of chemically resistant materials.

Freely moving, stress resistance-optimised, structured diaphragm achieves maximum vacuum performance from even the smallest dimensions. A sealed PTFE coating on the diaphragm and a special sealing zone on the outer rim of the diaphragm make these pumps exceptionally gas-tight. High vapour and condensate compatibility is afforded by a new valve system. Compact, space-saving design. Built-in foldaway handle.

Supply requirements: 230V, 50Hz.

KNF



Type	Flow rate	Ultimate vacuum	Width	Length	Height	PK	Cat. No.
	L / min.	mbar (abs).	mm	mm	mm		
N 810.3 FT.18	10	8	140	281	187	1	9.880 612
N 820.3 FT.18	20	8	177	312	220	1	9.880 613
N 840.3 FT.18	34	8	189	341	239	1	9.880 614
N 842.3 FT.18	34	2	167	341	223	1	9.880 675
N 840.1.2 FT.18	60	90	160	341	226	1	9.880 660



1 Diaphragm vacuum pumps LABOPORT®-SD, chemically-resistant

With self-drying system for vacuum drying. Oil-free, positive displacement pumps for neutral, highly aggressive or corrosive gases and vapours. Unadulterated, pumped gas/vapour output. Constant vacuum. More environment-friendly and cost-effective than water jet pumps.

KNF

The new self-drying system enables condensate to be blown out of the pumphead at high speed during the evacuation process. The vacuum in the vessel being pumped remains constant. The drying cycle can be synchronised in three different ways according to individual process requirements. With drying the pump achieves a better vacuum and can evacuate more quickly than pumps without drying systems.

Pump components that come into contact with media
 Pump head: PTFE
 Diaphragm: PTFE
 Valves: FFPM

Supplied as follows: Chemistry laboratory vacuum pumps are complete instruments that are ready for connection with mains switch, mains cable (supply requirements: 230V/50Hz, other voltages and frequencies available on request) and fully automatic self-drying system. Easy connection to vacuum desiccator cabinets.

Type	Flow rate L / min.	Ultimate vacuum mbar (abs).	Width mm	Length mm	Height mm	PK	Cat. No.
N 820.3 FT.40.18	20	10	177	312	220	1	9.880 615
N 840.3 FT.40.18	34	10	189	341	239	1	9.880 616
N 842.3 FT.40.18	34	4	189	341	242	1	9.880 617



9.880 930

2 Diaphragm pumps, Aluminum PTFE design, ME 1, MD 1

The diaphragm pumps ME 1 offer a compact and high performance solution. With their easy-to-use functionality, they are a perfect partner for both single and multiple filtrations.

VACUUBRAND

One-stage diaphragm pumps are an excellent solution for continuous, oil-free pumping of gases and vapors for modest vacuum requirements. In contrast to water-jet pumps, they do not consume water and therefore do not produce any contaminated waste water in daily use.

Vacuum filtration is frequently used for sample preparation in chemistry, microbiology, waste water control and analysis. Typical applications for the ME 1 are aqueous filtrations. The PTFE diaphragm and valves are rugged and provide high chemical resistance. If aluminum has the required specific resistance, also solvent-containing samples can be filtrated.



9.880 080

Type	Connector	Number of steps	Flow rate (50/60Hz) L / min.	Ultimate vacuum mbar	Weight kg	Dimensions (W x D x H) mm	PK	Cat. No.
ME 1	CEE	1	11.67 / 14.17	100	5.0	247 x 121 x 145	1	9.880 930 2
ME 1	CH	1	11.67 / 14.17	100	5.0	247 x 121 x 145	1	9.880 931
ME 1	UK	1	11.67 / 14.17	100	5.0	247 x 121 x 145	1	9.880 932
MD 1	CEE	3	20 / 23.33	1.5	6.5	303 x 143 x 163	1	9.880 080 3



4 Accessories for ME 1, ME 1C and MZ 1C

Vacuum regulator valve for ME 1, ME 1C and MZ 1C with manual vacuum control using air bleed. The manometer can be mounted and pivoted in several orientations for optimal visibility. High chemical compatibility (especially with the vacuum regulator valve for ME 1C)

VACUUBRAND

Description	PK	Cat. No.
Vacuum regulator valve for ME 1	1	9.880 938
Vacuum regulator valve for ME 1C and MZ 1C	1	9.880 939
Vacuum tubing, rubber, DN 6*	1	9.881 930
Vacuum tubing, rubber, DN 8*	1	9.881 931

*Supplied per metre

9. Vacuum technology, Drying, Dry storage Diaphragm pumps/Pumps

Diaphragm pumps Chemistry design, ME 1C, MZ 1C, MD 1C

The diaphragm pumps ME 1C offer a compact and high performance solution. With their easy-to-use functionality, they are perfect partner for both single and multiple filtrations. One-stage diaphragm pumps are an excellent solution for continuous, oil-free pumping of gases and vapors for modest vacuum requirements. In contrast to water-jet pumps, they do not consume water and therefore do not produce any contaminated waste water in daily use. Vacuum filtration is frequently used for sample preparation in chemistry, microbiology, waste water control and analysis. In the chemistry diaphragm pumps („C“) all major parts in contact with pumped media are made of chemically resistant fluoroplastics. The ME 1C is also often used for solid phase extraction (SPE). An optional manual regulator valve with dial gauge enables variable fine adjustment of the pumping speed and the ultimate vacuum.

VACUUBRAND



9 880 934



9.880 083

Type	Connector	Flow rate (50/60Hz) L / min.	Ultimate vacuum without / with gas ballast mbar	Weight kg	Dimensions (W x D x H) mm	PK	Cat. No.
ME 1C	CEE	11.67 / 14.17	100	5.0	247 x 121 x 145	1	9.880 934 1
ME 1C	CH	11.67 / 14.17	100	5.0	247 x 121 x 145	1	9.880 935
ME 1C	UK	11.67 / 14.17	100	5.0	247 x 121 x 145	1	9.880 936
MZ 1C	CEE	12.5 / 15	12	6.7	312 x 121 x 170	1	6.254 394
MZ 1C	UK	12.5 / 15	12	6.7	312 x 121 x 170	1	9.880 947
MZ 1C	CH	12.5 / 15	12	6.7	312 x 121 x 170	1	9.880 948
MD 1C	CEE	21.67 / 25	2	6.7	316 x 143 x 223	1	9.880 083 2

Diaphragm pumps ATEX-models available on request.

Diaphragm pumps NT Series, Aluminium

- improved performance, increased pumping speed (up to 16m³/h) and better ultimate vacuum extend applications with non-aggressive gases whether used in the laboratory or for industrial processes
- very low leak rate due to enhanced leak-tight tubing connections, resulting in consistent performance characteristics - even after many years operation. Ideal for analytical applications
- long diaphragm and valve lifetimes: made of highly flexible FPM, with fabric-reinforced double diaphragms for improved long term stability
- whisper quiet and ultra low vibration due to compact drive with patented motor drive system. Ideal as a built-in component for sensitive analytical equipment
- easy to clean due to smooth surfaces. A robust solution for numerous applications in industrial environments

VACUUBRAND



9.880 890



9.880 952

Specifications

Vacuum inlet
10 mm tubing nozzle: ME4NT, ME4RNT, ME8NT, MZ2NT
KF DN16: MZ2DNT, MD4NT, MV2NT
Pressure outlet
Silencer: ME4NT, MZ2NT, MZ2DNT, MD4NT, MV2NT
Twin silencers: ME8NT
Tubing nozzle: ME4RNT

Type	Connector	Number of steps	Flow rate (50/60Hz) L / min.	Ultimate vacuum mbar	Dimensions (W x D x H) mm	PK	Cat. No.
ME 2 NT	CEE	1	33.33 / 36.67	70	243 x 211 x 198	1	9.880 940
ME 4 NT	CEE	1	66.67 / 73.33	70	239 x 243 x 198	1	9.880 883
ME 4R NT	CEE	1	63.33 / 70	100/4	239 x 243 x 290	1	9.880 884
ME 8 NT	CEE	1	121.67 / 135	70	239 x 325 x 198	1	9.880 885
ME 8 NT	CH	1	121.67 / 135	70	239 x 325 x 198	1	9.880 886
ME 16 NT	CEE	1	273.30 / 306.67	70	554 x 260 x 359	1	9.880 952 4
ME 16 NT	UK	1	273.30 / 306.67	70	554 x 260 x 359	1	9.880 953
MZ 2 NT	CEE	2	36.67 / 40	7	239 x 243 x 198	1	9.880 887
MZ 2 NT	CH	2	36.67 / 40	7	239 x 243 x 198	1	9.880 888
MZ 2D NT	CEE	2	38.33 / 41.67	4	242 x 243 x 198	1	9.880 889
MD 12 NT	CEE	3	201 / 221	2	554 x 260 x 359	1	9.880 949
MD 12 NT	UK	3	201 / 221	2	554 x 260 x 359	1	9.880 950
MD 12 NT	CH	3	201 / 221	2	554 x 260 x 359	1	9.880 951
MD 4 NT	CEE	3	63.30 / 71.67	1	239 x 325 x 198	1	9.880 890 3
MD 4 NT	CH	3	63.30 / 71.67	1	239 x 325 x 198	1	9.880 891
MV 2 NT	CEE	4	36.67 / 40	0.5	239 x 325 x 198	1	9.880 892
MV 2 NT	CH	4	36.67 / 40	0.5	239 x 325 x 198	1	9.880 893
MV 10 NT	CEE	4	173.30 / 193.30	0.5	554 x 260 x 359	1	9.880 954



1 Diaphragm vacuum pumps -NT Series, Chemistry design

VACUUBRAND

- improved performance, increased pumping speed and lower ultimate vacuum extend applications in both the laboratory and in industrial applications
- long-life diaphragm with PTFE sandwich construction and unstressed diaphragm support
- easy service/exchange of diaphragm or valves due to novel integrated valve head assembly. Easy dismantling, cleaning and reassembly without requiring readjustment
- whisper quiet and ultra low vibration due to compact drive with patented motor control system. Ideal as a built-in component for sensitive equipment in both the laboratory and in industry
- superior vapour tolerance due to integral tubing connections and gas ballast valve for continuous purge (at ME 16C NT, MZ 2C NT, MD 4C/12C NT and MV 10C NT).
- easy to clean due to smooth exterior surfaces

Specifications

Vacuum inlet: 10mm tubing nozzle
 Pressure outlet: 10mm tubing nozzle

Type	Connector	Number of steps	Flow rate (50/60Hz) L / min.	Ultimate vacuum mbar (abs).	Dimensions (W x D x H) mm	PK	Cat. No.
ME 2C NT	CEE	1	35 / 40	70	243 x 211 x 198	1	9.880 943
ME 4C NT	CEE	1	65 / 73.30	70	243 x 255 x 198	1	9.880 894
ME 4C NT	CH	1	65 / 73.30	70	243 x 255 x 198	1	9.880 895
ME 8C NT	CEE	1	118 / 130	70	243 x 325 x 198	1	9.880 896
ME 8C NT	CH	1	118 / 130	70	243 x 325 x 198	1	9.880 897
ME 16C NT	UK	1	271 / 307	70	533 x 260 x 359	1	9.880 956
ME 16C NT	CEE	1	271 / 307	70	533 x 260 x 359	1	9.880 955
MZ 2C NT	CEE	2	33.30 / 38.30	7*	243 x 243 x 198	1	9.880 898
MZ 2C NT	CH	2	33.30 / 38.30	7*	243 x 243 x 198	1	9.880 899
MD 4C NT	CEE	3	56.70 / 63.30	1,5**	243 x 325 x 198	1	9.880 900
MD 4C NT	CH	3	56.70 / 63.30	1,5**	243 x 325 x 198	1	9.880 901
MD 4CRL NT	Power cord	3	56.70 / 63.30	1,5***	243 x 325 x 198	1	9.880 926
MD 12C NT	CEE	3	185 / 205	2	533 x 260 x 359	1	9.880 957
MD 12C NT	UK	3	185 / 205	2	533 x 260 x 359	1	9.880 958
MD 12C NT	CH	3	185 / 205	2	533 x 260 x 359	1	9.880 959
MV 10C NT	CEE	4	158.30 / 178.30	0,9	533 x 260 x 359	1	9.880 960

Ultimate vacuum with gas ballast: *12 mbar, **3 mbar, ***diaphragm pump with reduced leakage rate



9.880 645

Variable speed vacuum system SC 920/SC 950 with remote control

NEW!

KNF

Freeing up space in the lab: this vacuum pump system can be placed above or below the lab bench and controlled remotely with the hand terminal. The new vacuum pump system SC 920/SC 950 now supports remote control from a portable handset, thus ensuring maximum flexibility in the laboratory. Short process times and high accuracy, and automatic boiling point detection are the outstanding features of this new product. The intuitive user guidance on the handset ensures ease of operation; the process parameters can be entered over a touch screen and a rotary knob.

- Simply touch the various menus to enter:
- parameters, such as the setpoint
 - pressure or suction capacity of the system
 - units of measurement
 - operating language
 - operating modes

Specifications

Control: over hand terminal and Windows®-based software
 Mains connection: 100-240V 50/60Hz
 Power consumption: max. 135W
 Hose connections, pneumatic: 10mm i.d.
 Hose connections for coolants: 8mm i.d.
 Current consumption: max. 1.7A
 Weight: 15kg/14.5kg
 Dimensions (H x W x D): 423 x 366 x 294mm/487 x 246 x 313mm



6.266 708

Type	Description	Flow rate L / min.	Ultimate vacuum mbar (abs).	PK	Cat. No.
SC 920	Vacuum pump system	20	2	1	9.880 645 2
SC 950	Vacuum pump system	50	2	1	6.266 708 3

With overload protection and mains fuse

VARIO® Chemistry Pumping Units

VARIO® Chemistry Pumping Units offer all the advantages of modern control technology and provide excellent possibilities for solvent recovery. They attain an ultimate vacuum down to 0.6mbar. They are exceptionally quiet in operation and entirely oil-free. Inside the pump, vapours and gases only come into contact with fluoroplastics of optimum chemical resistance.

VARIO® Chemistry Pumping Units provide vacuum control by adaptation of motor speed. This has clear advantages compared to even the best of two-point control systems. The vacuum is continuously adjusted to actual process requirements, irrespective of apparatus size and vapour volume. Process times are typically shortened by 30%. Solvent recovery next to 100% is supported through continuous evaporation.

All VARIO® Chemistry Pumping Units include a chemistry diaphragm vacuum pump and an integrated vacuum controller with display and vacuum sensor.

The new PC 3001 VARIO^{pro} version builds on the worldwide popular PC 3001 VARIO unit, boosting the pumping speed and thereby extending its range to larger applications.

VACUUBRAND



9.881 337

Type	Connector	Flow rate (50/60Hz) L / min.	Ultimate vacuum without / with gas ballast mbar	Weight kg	Dimensions (W x D x H) mm	PK Cat. No.
PC 3001 VARIO ^{pro}	CEE	33.3	2 / 4	7.7	306 x 300 x 400	1 9.881 337 1
PC 3002 VARIO	CEE	46.67	7 / 12	17.4	243 x 419 x 444	1 9.881 338
PC 3003 VARIO	CEE	46.97	0.6 / 2	20.6	243 x 419 x 444	1 9.881 346
PC 3004 VARIO	CEE	76.67	1.5 / 3	20.6	243 x 419 x 444	1 9.881 339
PC 3010 NT VARIO	CEE	193.33	0.6 / 1.2	29.7	616 x 387 x 420	1 9.881 322
PC 3012 NT VARIO	CEE	215	1.5 / 3	29.7	616 x 387 x 420	1 9.881 320
PC 3010 NT VARIO	CH	143.00	0.6 / 9	35.8	616 x 387 x 420	1 9.881 323
PC 3012 NT VARIO	CH	215	1.5 / 3	29.7	616 x 387 x 420	1 9.881 321
PC 3001 VARIO ^{pro}	CH	33.3	2 / 4	7.7	306 x 300 x 400	1 9.881 336
PC 3002 VARIO	CH	46.67	7 / 12	17.9	258 x 422 x 516	1 9.881 335
PC 3003 VARIO	CH	46.67	0.6 / 2	20.5	258 x 422 x 516	1 9.881 334
PC 3004 VARIO	CH	76.67	1.5 / 3	20.5	258 x 422 x 516	1 9.881 333
PC 3016 NT VARIO	CEE	321.67	70 / 100	29.7	616 x 387 x 420	1 9.881 329

VARIO Chemistry Pumping Unit PC 3001 VARIO^{pro} with condenser Peltronic®

NEW!

This VARIO^{pro} chemistry pumping unit provides vacuum control by precise and continuous adaptation of the diaphragm pump's motor speed. The compact size and low weight of the pumping unit offer great convenience in the lab. The pump's variable motor speed responds to demand, reducing energy waste and mechanical wear, ensuring unrivalled service life for the diaphragms. The PC 3001 is based on MD 1C chemistry diaphragm pump; The emission condenser Peltronic® at outlet of the pump is highly efficient with a very compact design. It provides near-100% recovery of solvents without any external coolants.

VACUUBRAND

Items supplied:

VARIO® chemistry pumping unit PC 3001 VARIO^{pro} completely mounted with condenser Peltronic®, ready for use, with manual. Without mains cable, please order separately.

Exhaust Vapour Condenser Peltronic

- Fully automatic electronic control of cooling surface temperature and fan

Specifications

Cooling power at 21°C:	50W
Ambient temperature range:	10 to 40°C
Preset cooling temperature:	10°C
Materials in contact with media:	PP, PFA, ETFE/ECTFE, borosilicate glass
Mains supply:	100 - 230V 50/60Hz
Dimensions (WxDxH):	175 x 179 x 392mm



9.881 330

Description	Connector	Flow rate (50/60Hz) L / min.	Ultimate vacuum mbar	Weight kg	Dimensions (W x D x H) mm	PK Cat. No.
PC 3001 VARIO ^{pro} with condenser Peltronic®	-	33.33	2	10.0	400 x 300 x 400	1 9.881 330 2
Exhaust Vapour Condenser Peltronic	-	-	-	4.3	-	1 9.880 852
Power cable	CEE	-	-	-	-	1 6.901 984
Power cable	CH	-	-	-	-	1 9.882 240

1 Modular vacuum system KNF LABOPORT®

All LABOPORT® pumps can be fitted with separators, high-performance condensers and vacuum controllers to create customised systems. If a larger diaphragm pump is used for two different processes simultaneously for economic reasons, then a second vacuum controller is required. The control unit always switches the pump off when the desired vacuum has been achieved, even if two receivers are used. This reduces the noise level and increases operational life. Supply requirements: 230V /50Hz.

KNF

Module/configuration:

1. Baseplate.

The separator and all other modules are mounted together with the pump on the baseplate to form the LABOPORT® vacuum system

2. Separator.

Additional, implosion-proof NR 800 module can be integrated on the inlet or outlet side.

Solvent droplets contained in the vapour at the outlet are separated to prevent them from being released into the surrounding air. On the inlet side the separator traps any particles contained in the system.

3. High-performance condenser.

For efficient condensation of solvents contained in the vapour. Connected to the pump at the outlet enabling controlled solvent recovery, saving valuable resources and protecting the environment.

4./5. Vacuum controller.

For precise and accurate attainment of the required vacuum after the set point has been entered. A highly accurate, piezo-ceramic measuring cell monitors the process and is resistant to all aggressive media.

Type	Flow rate L / min.	Ultimate vacuum mbar (abs).	Pump Model	Module no.	PK	Cat. No.
LABOPORT® SR 810	10	8	N 810.3 FT.18	1A 2 2	1	9.880 621
LABOPORT® SH 810	10	8	N 810.3 FT.18	1A 2 3	1	9.880 622
LABOPORT® SC 810	10	8	N 810.3 FT.18	1A 2 3 4	1	9.880 623
LABOPORT® SCC 810	10	8	N 810.3 FT.18	1A 2 3 4 5	1	9.880 624
LABOPORT® SR 820	20	8	N 820.3 FT.18	1A 2 2	1	9.880 625
LABOPORT® SH 820	20	8	N 820.3 FT.18	1A 2 3	1	9.880 626
LABOPORT® SC 820	20	8	N 820.3 FT.18	1A 2 3 4	1	9.880 627
LABOPORT® SCC 820	20	8	N 820.3 FT.18	1A 2 3 4 5	1	9.880 628
LABOPORT® SR 840	34	8	N 840.3 FT.18	1 2 2	1	9.880 629
LABOPORT® SH 840	34	8	N 840.3 FT.18	1 2 3	1	9.880 631
LABOPORT® SC 840	34	8	N 840.3 FT.18	1 2 3 4	1	9.880 632
LABOPORT® SC 842	34	2	N 842.3 FT.18	1 2 3 4	1	9.880 639
LABOPORT® SCC 840	34	8	N 840.3 FT.18	1 2 3 4 5	1	9.880 633
LABOPORT® SCC 842	34	2	N 842.3 FT.18	1 2 3 4 5	1	9.880 640

Accessory modules for vacuum pump systems LABOPORT®

Modules for LABOPORT® system vacuum pumps.
See details outlined below for the relevant descriptions.

KNF

Module no.	Type	PK	Cat. No.
1A	Baseplate NP 810/820	1	9.880 643
1	Baseplate NP 840	1	9.880 634
3	High-performance condenser	1	9.880 636
4	Vacuum controller (First controller)	1	9.880 637
5	Vacuum controller (Second controller)	1	9.880 638



9. Vacuum technology, Drying, Dry storage Diaphragm pumps/Pump units-valve controlled

1 Vacuum system LABOXACT®, chemical-resistant

Rotary evaporation processes can be reliably monitored using the LABOXACT® vacuum system. A closed system arrangement enables gentle distillation and high recovery rates, even with low-boiling solvents.

KNF



Advantages:

- gentle distillation, due to closed system
- stepless, fine-adjustment valve for precise vacuum regulation
- careful control of evaporation
- very economical
- environmentally friendly

Items supplied:

LABOXACT® vacuum systems are ready-to-use. With chemically resistant membrane vacuum pump, separator, condenser, fine-adjustment valve, digital vacuum meter, safety vent valve, switch and cable. Supply requirements: 230V 50Hz (other voltages and frequencies are available on request).

Type	Flow rate L / min.	Ultimate vacuum mbar (abs).	PK	Cat. No.
SEM 810	10	8	1	9.880 549
SEM 820	20	8	1	9.880 550
SEM 840	34	8	1	9.880 551
SEM 842	34	2	1	9.880 552

2 LABOBASE® multi-user vacuum systems, chemical-resistant

Comprises a central base station with vacuum controller which provides a vacuum to multiple laboratory work stations or outlets.

KNF

Outlets may either be controlled with a separate vacuum controller plus solenoid valve (even as a mobile unit) or with a manual valve as an unregulated outlet. LABOBASE® can be retrofitted into existing laboratories or integrated into new constructions. This multi-user, vacuum system saves precious lab bench space.

Pump units or base stations are connection ready; complete with chemical-resistant, diaphragm vacuum pump and appropriate fittings (see table) on a single base stand, power cable (mains connection 230V 50Hz, other voltages and frequencies on request).

Integral components

diaphragm vacuum pump with base stand, separator, condenser and vacuum controller with integrated gas ballast valve (.40)

Description	Flow rate l / min.	Ultimate vacuum mbar (abs).	PK	Cat. No.
Base unit LABOBASE® SBC 840.40	34	10	1	9.050 715
Base unit LABOBASE® SBC 860.40	60	4	1	9.050 717
Mobile control unit for regulated outlet			1	9.050 721
Vacuum supply point manually controlled for fume hoods chemical resistant			1	9.050 722
Vacuum supply point manually controlled, chemical resistant			1	9.050 723



E & OE.

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9.880 921

Chemistry Vacuum Systems NT

NEW!

VACUUBRAND

Compact design, ready to use, no set-up required. Constructed in highly chemical resistant materials. Quiet operation.

- 100% oil-free pumping of gases
- gas ballast as standard for working with condensable vapours
- good ultimate vacuum even with gas ballast
- high vapour tolerance for water and solvents
- long service life, low maintenance

Features:
2AK: Inlet and outlet separator

AK + EK: Inlet separator, exhaust vapour condenser

PC 510 NT(two-stage)/610 NT(three-stage) : with AK + EK; 1 electronically controlled vacuum port

PC 511 NT(two-stage)/611 NT(three-stage) : with AK + EK; 1 electronically controlled and 1 manually controlled vacuum port

PC 520 NT(two-stage) /620 NT(three-stage) : with AK + EK; 2 electronically controlled vacuum ports

Characteristics and applications:

Without vacuum control:
MZ 2C NT +2AK:

e.g. filtration, distillation without condensation at the outlet

MZ 2C NT +AK+EK:

Well-proven unit for a wide range of applications for the single-user, e.g. gel drying, vacuum for gels that were previously dried using water-jet pumps, e.g. sequence gels, SDS-PAGE up to 10%. For low-boiling-point solvents.

MD 1C +AK+EK:

Space-saving single-user configuration with 2 mbar ultimate vacuum. For high-boiling-point solvents.

MD 4C NT + AK+EK:

Larger or multi-user applications (e.g. several gel dryers) in a local-area vacuum network (VACUU-LAN®). 1.5/3 mbar ultimate vacuum. For high-boiling-point solvents and/or gradient gels, SDS-PAGE >10%.

MV 10C NT +EK:

Four-stage diaphragm pump with exhaust vapour condenser. 0.9mbar ultimate vacuum. For particularly high demands regarding low ultimate vacuum and pumping speed in chemistry laboratories, pilot plant or small production units.

With vacuum controller:
PC 510 NT/511 NT:

Well-proven units for a wide range of processes in chemistry laboratories, e.g. all "classical" low-boiling-point solvents. 7/12mbar ultimate vacuum.

The PC 511 NT has an additional, manually controlled, vacuum port.

PC 610 NT /611 NT:

Well-proven units for vacuum generation and control up to 1.5/3mbar ultimate vacuum, including high-boiling-point solvents.

The PC 611NT has an additional, manually controlled, vacuum port.

PC 520 NT/620 NT:

Synchro chemistry pumping units with two, independent, vacuum controllers for running two separate processes. PC 520 with 7/12mbar ultimate vacuum, PC 620 NT with 1.5/3mbar ultimate vacuum.

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9.880 912

Type	Connector	Flow rate (50/60Hz) L / min.	Ultimate vacuum without / with gas ballast mbar (abs.)	Dimensions (W x D x H) mm	PK	Cat. No.
MZ 2C NT +2AK	CEE	33.30 / 38.30	7 / 12	243 x 319 x 309	1	9.880 832
MZ 2C NT +AK+EK	CEE	33.30 / 38.30	7 / 12	242 x 326 x 402	1	6.234 067
MZ 2C NT +AK SYNCHRO +EK	CEE	33.30 / 38.30	7 / 12	243 x 326 x 402	1	9.880 921 1
MD 4C NT +AK+EK	CEE	56.60 / 63.30	1.5 / 3	243 x 326 x 402	1	9.880 837
MD 1C +AK+EK	CEE	21.70 / 25	2 / 4	239 x 316 x 405	1	9.880 828
PC 510 NT	CEE	33.30 / 38.30	7 / 12	243 x 419 x 444	1	9.880 910
PC 511 NT	CEE	33.30 / 38.30	7 / 12	243 x 435 x 444	1	9.880 912 2
PC 520 NT	CEE	33.30 / 38.30	7 / 12	361 x 435 x 444	1	9.880 914
PC 610 NT	CEE	56.60 / 63.30	1.5 / 3	243 x 419 x 444	1	9.880 916
PC 611 NT	CEE	56.60 / 63.30	1.5 / 3	243 x 435 x 444	1	9.880 918
PC 620 NT	CEE	56.60 / 63.30	1.5 / 3	361 x 435 x 444	1	9.880 919
MZ 2C NT +2AK	CH	33.30 / 38.30	7 / 12	242 x 319 x 309	1	9.880 844
PC 510 NT	CH	33.30 / 38.30	7 / 12	243 x 419 x 444	1	9.880 911
PC 511 NT	CH	33.30 / 38.30	7 / 12	243 x 435 x 444	1	9.880 913
PC 520 NT	CH	33.30 / 38.30	7 / 12	361 x 435 x 444	1	9.880 915
PC 610 NT	CH	56.60 / 63.30	1.5 / 3	243 x 419 x 444	1	9.880 917
PC 620 NT	CH	56.60 / 63.30	1.5 / 3	361 x 435 x 444	1	9.880 920
MZ 2C NT +AK SYNCHRO +EK	CH	33.30 / 38.30	7 / 12	248 x 326 x 402	1	9.880 922
MZ 2C NT +AK+EK	CH	33.30 / 38.30	7 / 12	242 x 326 x 402	1	9.880 923
MD 4C NT +AK+EK	CH	56.60 / 63.30	1.5 / 3	242 x 326 x 402	1	9.880 924
MD 1C +AK+EK	CH	21.70 / 178	2 / 4	239 x 316 x 405	1	9.880 925
MV 10C NT +EK	CEE	158 / 178	0.9 / 1.5	528 x 387 x 395	1	9.880 976
MD 12C NT +AK+EK	CEE	185 / 205	2 / 4	616 x 387 x 395	1	9.880 968
MD 12C NT +AK+EK	CH	185 / 205	2 / 4	616 x 387 x 395	1	9.880 969
MD 12C NT +AK+EK	UK	185 / 205	2 / 4	616 x 387 x 395	1	9.880 970

1 Pumps, vacuum/pressure, diaphragm, for gel dryers



VACUUBRAND

Highly efficient and oil-free. Inlet separator and exhaust condenser supplied

- quiet running
- continuous, totally oil-free pumping of gases
- components in contact with gases are manufactured in chemical-resistant materials
- with gas ballast for reducing condensates
- Optimum service life, easy to exchange diaphragm and valves
- compact design with small footprint
- close to 100% solvent recovery
- easy to maintain
- supply requirements: 230V 50/60Hz

MZ 2C NT +AK+EK:

Simple use (Gel dryer)

Ultimate pressure 7/12mbar.

Vacuum for gels, which were previously evacuated using water jet pumps, e.g. sequencing gels, SDS-PAGE up to 10%.

MD 4C NT +AK+EK:

Multiple use (several gel dryers) with VACUU-LAN® local vacuum network

Ultimate pressure 1.5/3mbar.

For high-boiling point solvents at low temperatures and/or gradient gels, SDS-PAGE >10 %.

MD 1C +AK+EK:

Simple use (Gel dryer)

Ultimate pressure 2mbar.

Space-saving and compact solution, for high-boiling point solvents.

Type	Flow rate (50/60Hz) L / min.	Ultimate vacuum mbar	PK	Cat. No.
MD 1C +AK+EK	21.67 / 25	2	1	9.880 828
MZ 2C NT +AK+EK	33.33 / 38.33	7 / 12	1	6.234 067
MD 4C NT +AK+EK	56.67 / 63.33	1.5 / 3	1	9.880 837

1



➔ Rotary evaporators please see page 615.



Rotary vane pumps/Pumps-Pump units



1 Rotary vane pumps

Vacuubrand rotary vane pumps encompass one and two stage pumps with throughputs from 2 to 16m³/h.

VACUUBRAND

Typical rotary vane pump applications include, use as a backing pump for turbomolecular pumps but also serve in diverse chemical laboratory applications.

Features and important characteristics: high water vapour tolerance, vacuum tight pumping mechanism when switched off, high performance gas ballast mechanisms. These increase the overall performance potential of these pumps, the service life of mechanical parts, increase oil-change intervals and reduce maintenance overheads.

Type	Flow rate (50/60Hz) L / min.	Ultimate vacuum (abs.) mbar	Weight kg	Dimensions (W x D x H) mm	PK	Cat. No.
RE 2.5	38.33 / 46.67	0.3	10.2	316 x 125 x 190	1	9.880 120
RE 6	95 / 133.33	0.1	15.4	370 x 142 x 207	1	9.880 121
RE 9	148.33 / 170	0.1	21.4	460 x 152 x 232	1	9.880 101
RE 16	276.67 / 318.33	0.1	25.2	505 x 152 x 232	1	9.880 102
RZ 2.5	38.33 / 46.67	0.002	11.4	316 x 125 x 190	1	9.880 123
RZ 6	95 / 133.33	0.002	16.4	370 x 142 x 207	1	9.880 124
RZ 9	148.33 / 170	0.002	24.2	460 x 152 x 232	1	9.880 125
RZ 16	276.67 / 318.33	0.002	29.0	545 x 152 x 232	1	9.880 104



2 Chemistry Hybrid Pump RC 6

The Chemistry Hybrid Pump RC 6 has been designed to minimise the adverse effects of condensable and corrosive vapours. Its main components are a two-stage rotary-vane pump and a two-stage chemistry diaphragm for optimized corrosion resistance. The diaphragm pump continuously evacuates the oil reservoir of the rotary-vane pump in order to keep the partial pressures of solvent vapours, oxygen and corrosive gases at a low level and/or below their condensation point. The RC 6 is a low-maintenance pump for freeze-drying and other applications requiring an ultimate vacuum in the 10⁻³ mbar range.

VACUUBRAND

Items supplied: Pump with on/off switch, overload circuit breaker and 2m cable with plug, centering and clamping ring for inlet, particulate filter and operating instructions. Oil supplied in separate bottle.

Specifications

Pumping speed 50/60 Hz:	98.33/115 l/min
Ultimate vacuum (partial) without gas ballast:	0.0004 mbar
Ultimate vacuum (total) without gas ballast:	0.002 mbar
Ultimate vacuum (total) with gas ballast:	0.01 mbar
Oil capacity (B-Oil):	min. 0.34 l; max. 0.53 l
Inlet connection:	Small flange NW 16
Outlet connection:	Hose nozzle NW 8-10mm
Motor rating:	0.37kW
Nominal speed 50/60Hz:	1500/1800rpm
Dimensions (L x W x H):	510 x 305 x 230mm
Weight:	24.2kg
Protection class:	IP 40

Type	PK	Cat. No.
RC 6 with plug CEE	1	9.882 235
RC 6 with plug CH	1	9.882 236



3 Chemistry pumping units

Vacuubrand chemistry vacuum systems and chemistry pumping units for fine to high vacuum ranges. Complete chemical vacuum systems and chemical pump stands offer the advantages of practical, connection-ready units.

VACUUBRAND

- compact structure, little space requirement and a high degree of mobility
- the great convenience of proven pump stand configuration
- good ultimate vacuum even with gas ballast and smooth running
- high tolerance to water and solvent vapours due to efficient gas ballast

Type	Pump Model	Flow rate (50/60Hz) L / min.	Ultimate vacuum (abs.) mbar	Dimensions (W x D x H) mm	PK	Cat. No.
PC 3 with RZ 2.5	RZ 2.5	38.33 / 46.67	0.002	342 x 448 x 608	1	9.881 368
PC 3 with RZ 6	RZ 6	95 / 113.33	0.002	370 x 448 x 608	1	9.881 369
PC 3 with RZ 9	RZ 9	148.33 / 170	0.002	460 x 486 x 608	1	9.881 370
PC 3 with RZ 16	RZ 16	276.67 / 318.33	0.002	545 x 486 x 608	1	9.881 371

1 Chemistry Vacuum Pumping Unit PC 8/RC 6

The Chemistry Vacuum Pumping Unit PC 8/RC 6 incorporates the Chemistry Hybrid Pump RC 6 (Cat. No. 9.882 235). It achieves an ultimate vacuum in the 0.0004 mbar range and is used for demanding vacuum applications such as freeze drying, drying chambers, concentrators, etc. The RC 6 combines the vacuum performance of an oil-sealed rotary-vane pump and, to a large extent, the good corrosion resistance of a chemistry diaphragm pump.

VACUUBRAND

Items supplied:

Pumping unit completely mounted, with Chemistry Hybrid Pump RC6, insulated exhaust vapour condenser, condensate catchpot on pumping unit console, on/off switch, cable with plug and instructions for use.

Specifications

Pumping speed 50/60 Hz:	98.33/115 l/min
Ultimate vacuum (partial) without gas ballast:	0.0004 mbar
Ultimate vacuum (total) without gas ballast:	0.002 mbar
Ultimate vacuum (total) with gas ballast:	0.01 mbar
Oil capacity (B-Oil):	min. 0.34 l max. 0.53 l
Inlet connection:	Small flange NW 16
Outlet connection:	Hose nozzle NW 8-10mm
Cooling water connection:	2 x hose nozzle NW 6/8
Motor rating:	0.37kW
Nominal speed 50/60Hz:	1500/1800rpm
Dimensions (L x W x H):	507 x 377 x 429mm
Weight:	31.2kg
Protection class:	IP 40

Type	PK	Cat. No.
PC 8 / RC 6 with plug CEE	1	9.882 239
Plug CH	1	9.882 240



Accessories/for vacuum pumps



1 Vacuum pump trolley, CP1 - CP2

Vacuum pump trolley with two condensate traps that can be operated alternately or together. The pump trolley consists of an aluminium frame mounted on lockable castors with a lower PE-shelf for a vacuum pump and a PE-top shelf which accommodates two cold traps. The condensate traps can each hold approx. 150ml. Spherical ground joints are sealed with FEP covered O-rings. Supplied without pump. The standard assembly is designed for use with LN₂ as coolant. When using CO₂ and acetone please order 2 x CO₂ grid (Cat. No. 9.032 081).

KGW

Type	PK	Cat. No.
With pressure gauge	1	9.881 380
Without pressure gauge	1	9.881 381

Note: Price does not include vacuum pump.



2 Oil for rotary vane pumps

Oil for rotary vane pumps B: Standard pump oil. High viscosity, low vapour pressure, good chemical resistance. VACUUBRAND
 Oil for rotary vane pumps K 8: For acid vapours. Strongly hygroscopic, with limited capacity for water vapour. Pump must be factory-adjusted to accept this oil.
 Perfluoropolyether oil: Synthetic Oil. Certified for pumping pure oxygen.

Type	Capacity L	PK	Cat. No.
Oil for rotary vane pumps B	1.00	1	9.881 921
Oil for rotary vane pumps B	5.00	1	9.881 922
Oil for rotary vane pumps K 8	1.00	1	9.881 911
Oil for rotary vane pumps K 8	5.00	1	9.881 915
Perfluoropolyether oil 2	0.50	1	9.882 924
Perfluoropolyether oil 1	0.30	1	9.882 925



3 Small flange fittings

Small flanges. Stainless steel. With male or female conical ground joints and DN flange as outlined below. VACUUBRAND

Type	NS	PK	Cat. No.
Male ground joint - DN 10	14 / 23	1	9.882 504
Male ground joint - DN 10	19 / 38	1	9.882 501
Male ground joint, DN 25	19 / 38	1	9.882 502
Male ground joint - DN 25	29 / 32	1	9.882 503
Male ground joint - DN 40	29 / 32	1	9.882 505
Male ground joint - DN 40	45 / 40	1	9.882 507
Female ground joint - DN 10	14 / 35	1	9.882 510
Female ground joint DN 10	19 / 38	1	9.882 511
Female ground joint - DN 25	19 / 38	1	9.882 512
Female ground joint - DN 25	29 / 32	1	9.882 513
Female ground joint - DN 40	29 / 32	1	9.882 514
Female ground joint - DN 40	45 / 40	1	9.882 515



4 Vacuum fittings, clamping rings for type KF small flange

VACUUBRAND

Type	Size	PK	Cat. No.
Aluminium	DN 10/16	1	9.882 401
Aluminium	DN 20/25	1	9.882 402
Aluminium	DN 32/40	1	9.882 403
Aluminium	DN 50	1	9.882 404
Stainless steel	DN 10/16	1	9.882 411
Stainless steel	DN 20/25	1	9.882 412
Stainless steel	DN 32/40	1	9.882 413
Stainless steel	DN 50	1	9.882 414



5 Vacuum fittings, centring rings

Stainless steel/FPM (e.g. Viton®). For Type KF small flange. VACUUBRAND

Size	PK	Cat. No.
DN 10	1	9.882 415
DN 16	1	9.882 419
DN 20	1	9.882 416
DN 25	1	9.882 420
DN 32	1	9.882 417
DN 40	1	9.882 421
DN 50	1	9.882 418

1 Vacuum fittings, external centering rings

Plastic 'PBT'. For Type KF small flange.

VACUUBRAND

Type	Size	PK	Cat. No.
NBR	DN 10/16	1	9.882 441
NBR	DN 20/25	1	9.882 442
NBR	DN 32/40	1	9.882 443
NBR	DN 50	1	9.882 444
FPM	DN 10/16	1	9.882 451
FPM	DN 20/25	1	9.882 452
FPM	DN 32/40	1	9.882 453
FPM	DN 50	1	9.882 454



2 Vacuum fittings, nozzles

Flanged tubing nozzles, aluminium. For Type KF small flange.

VACUUBRAND

Size	For tubing Ø mm	PK	Cat. No.
DN 10	6	1	9.882 492
DN 16	6	1	9.882 497
DN 16	10	1	9.882 498
DN 25	8	1	9.882 494
DN 25	10	1	9.882 493
DN 25	12	1	9.882 491
DN 25	15	1	9.882 495
DN 40	8	1	9.882 499
DN 40	10	1	9.882 490
DN 40	15	1	9.882 496



➔ Further vacuum tubing - please see page 140.

3 Local vacuum network VACUU LAN®



VACUUBRAND

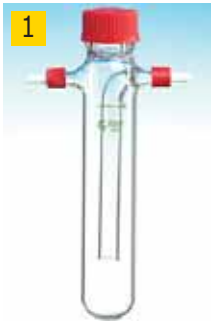
The VACUU LAN® local vacuum network allows multiple work stations to be connected to a single vacuum pump. This is useful for almost any conventional vacuum application in a chemical laboratory VACUU LAN® can be directly incorporated into new laboratory installations or retro-fitted. All assemblies have integral check (1-way) valves. A practical and economical solution for multiple vacuum users in a single laboratory.



Type	Connection	PK	Cat. No.
Manual control module VCL 01	A1	1	9.882 830
Shut-off/control module VCL 02	A1	1	9.882 832
Manual control module VCL 01	A5	1	9.882 822
Auto-regulating module VCL- B 10	A1	1	9.882 818
Auto-regulating module VCL- B 10	A5	1	9.882 820
Auto-regulating module VCL- B 11	A5	1	9.882 821
Manual flow control module VCL AR	A5	1	6.236 108
Module for hoods VCL A	A5	1	6.266 569
Shut off module VCL K	A5	1	6.266 570
Shut off module VCL K	A1	1	6.900 722

Detailed brochures are available on request!





1 Cold traps, borosilicate 3.3, one-piece

Borosilicate 3.3 glass, one-piece, with GL 45 neck and cap closure, GL 14 threaded side connections with caps and plastic tubing adapters.

Capacity ml	PK	Cat. No.
250	1	9.305 349



2 Condensation traps, borosilicate 3.3, two-piece

Borosilicate 3.3 glass, comprising bottle with ground glass cone neck fitting a separate inlet/outlet head with choice of tubing or ground joint connections.

Capacity ml	Cone NS	Socket NS	Connection	PK	Cat. No.
100	29	29	Tubing connections	1	9.305 350
250	45	45	Tubing connections	1	9.305 351
100	29	29	Cone / socket NS 29	1	9.305 352
250	45	45	Cone / socket NS 29	1	9.305 353

Cold traps with Dewar flask, borosilicate glass 3.3

Cold traps with Dewar flasks are made from 3.3 DIN/ISO 3585 borosilicate glass to hold LN₂ for vacuum applications. The flasks are vacuum insulated and silver-plated. They are encased in metal sheet, blue coated for protection and have a plastic ring collar, into which the cold trap is inserted. Thus no additional support is needed for the cold trap. The Dewar flask has got a theoretical coolant capacity of 1.0L or 2.0L respectively. The cold trap has got a theoretical condensate capacity of 150ml or 250ml respectively.

KGW

Items supplied: Cold trap, Dewar-flask, plastic ring.

Dewar type 12C/18C: see no. 9.032.024/9.032.030

Versions Cold trap joints:

S29 = spherical joints

GL18 = glass screwthead with PTFE olive 10mm

O 29 = spherical joints S29 with O-ring seal

The standard assembly is designed for use with LN₂ as coolant. When using CO₂ and acetone please order CO₂ grid separately (Dewar Type 12 C Cat. No. 9.032 081 and Dewar Type 18 C Cat. No. 9.032 082).

Type	Condensate capacity ml	Coolant capacity ml	Dewar type	Cold trap joints	PK	Cat. No.
KF 29-K	150	1000	12 C	S 29	1	9.032 065 3
KF 29-OK	150	1000	12 C	O 29	1	9.032 066 5
KF 29-GL	150	1000	12 C	GL 18	1	9.032 067 4
KFL 29-K	250	2000	18 C	S 29	1	9.032 068
KFL 29-OK	250	2000	18 C	O 29	1	9.032 069
KFL 29-GL	250	2000	18 C	GL 18	1	9.032 070
KF 29-K-A	150	1000	12 C	S 29	1	9.032 071
KF 29-OK-A	150	1000	12 C	O 29	1	9.032 072
KF 29-GL-A	150	1000	12 C	GL 18	1	9.032 073 6
KFL 29-K-A	250	2000	18 C	S 29	1	9.032 074
KFL 29-OK-A	250	2000	18 C	O 29	1	9.032 075
KFL 29-GL-A	250	2000	18 C	GL 18	1	9.032 076



9.032 065



9.032 067



9.032 066



9.032 073

➔ Dewar vessels please see page 716.

9. Vacuum technology, Drying, Dry storage Accessories/Cold traps, Woulff bottles

1 Cold traps, SKF H, stainless steel

Cold traps protect both the vacuum system and the pump. They extend maintenance intervals and improve the overall performance of the vacuum installation.

VACUUBRAND

- sturdy, easy-to-clean design
- easy to disassemble
- double-wall design without separate insulating vacuum for good conductance
- long operating time with one filling
- easy condensate drain and cleaning without disassembling

Type	Connection	Dimensions (W x D x H) mm	PK	Cat. No.
SKF H 25	KF DN 25	166 x 140 x 303	1	9.882 855
SKF H 40	KF DN 40	166 x 140 x 319	1	9.882 856

1



2 Cold traps with Dewar flask, stainless steel

NEW!

KGW

Cold traps are used in conjunction with vacuum pumps to collect condensation produced from humidity or solvents and these cold traps can be used for many different tasks. The most common application is collecting condensation produced from humidity or solvents from rotating discs, vacuum pumps or high vacuum systems that use oil diffusion or turbo-molecular pumps. In this case a common coolant such as liquid nitrogen (LN₂) or dry-ice (CO₂) with acetone is normally used. Simple cold traps, which are also known as cold finger condensers, are used in conjunction with vacuum pumps and the condensation is forced out of the humidity or solvents used in the chemical applications. The cold trap is used to protect the vacuum pump in this case and the speciality of this type of construction is that the user does not need to use a stand to hold the cold trap. The cold trap has a rim, which is hung inside the Dewar-flask's support ring. The cold trap can be changed very quickly without any problems arising.

2



Type	Condensate capacity ml	Coolant capacity ml	Cold trap joints	PK	Cat. No.
KF 54V-K16-Z-DSS2000-CO2	200	1200	DSS2000	1	6.262 187
KF 54V-K16-Z-DSS2000	200	1200	DSS2000	1	6.264 963

Spare parts cold traps with Dewar flask, stainless steel

NEW!

KGW

Description	PK	Cat. No.
Dewar jar type DSS 2000, 2000 ml, from stainless steel	1	6.236 479
Cooling trap type S 54V-K16-Z	1	6.265 693 3
Rest ring for DSS 2000 with CO ₂ grid	1	6.265 694 4

3



6.265 693

4



6.265 694

Woulff bottles, DURAN®

Erlenmeyer pattern (5000ml is bottle-shaped), with reinforced walls, for work under vacuum and plastic coating to act as a splinter and implosion protection. A glass insert is fitted with removable PP tubing connections, vent valve head and analogue pressure gauge with 2 scale ranges (1000 to 0mbar, 760mm to 0mm Hg).

Capacity ml	Diam. mm	Form	PK	Cat. No.
500	110	Erlenmeyer pattern	1	9.305 340 5
1000	140	Erlenmeyer pattern	1	9.305 341
2000	170	Erlenmeyer pattern	1	9.305 342
5000	185	bottle-shaped	1	9.305 343
10000	240	bottle-shaped	1	9.305 344
15000	255	bottle-shaped	1	9.305 345
20000	290	bottle-shaped	1	9.305 346

5



9.305 340

6 Woulff bottles, DURAN®

DIN 12480. With 3 NS standard ground joints. Without base tubulature. Vacuum resistant. Glass Type I/neutral glass as per USP, EP and JP. Autoclavable.

DURAN Group

Capacity L	Diam. mm	Neck NS	PK	Cat. No.
0.50	87	19/26	1	9.305 319
1.00	113	24/29	1	9.305 324
2.00	135	29/32	1	9.305 329
5.00	185	34/35	1	9.305 336

6



Vacuum controller/Sensors and Controllers

1



1 LLG-Vacuum measuring instrument DVR 2

Versatile vacuum gauge for vacuum measurement between atmospheric pressure and 1 mbar. With integral, alumina ceramic, pressure transducer providing excellent corrosion resistance and long-term stability.

DKD initial delivery calibration (Cat. No. 7.059 540) please order separately.

Specifications

Measuring range:	1080 to 1mbar (hPa), 810 to 1 Torr
Measurement principle:	Capacitive; gas type-independent absolute pressure measurement
Measuring accuracy:	< 1mbar (0.75 Torr) ±1 digit
Power supply/battery:	9V Lithium battery/1.2 Ah Ultralife U9VL
Dimensions (WxDxH):	115 x 115 x 66mm
Weight:	0.40kg

Type	PK	Cat. No.
DVR 2	1	9.882 209

2



2 Vacuum measuring instrument DCP 3000 with VSK 3000



VACUUBRAND

The DCP 3000 is an outstanding vacuum gauge for rough and fine vacuum (1080 to 0.1mbar). A large illuminated display shows the measuring values of all sensors by a simple turn of a button. The VSK 3000 capacitive vacuum gauge head measures independent of gas type, is very corrosion resistant and has an outstanding measuring accuracy and long term stability. Simultaneous connection of up to four of these pressure transducers allows flexible measuring on the spot. The communication of the DCP 3000 and the external components proceeds via the VACUU-BUS® digital bus system. This system is characterized by fully automatic configuration, unified plug connections and cable lengths of up to 30m. Supply requirements: 100-230V 50/60Hz CEE/CH/UK/US/AUS.

Items supplied: Vacuum gauge, ready to use with 1 vacuum gauge head VSK 3000 with measuring cable, wall-mounted power supply and manual

- external sensor on-the-spot measuring, flexible and upgradeable up to four sensors
- external capacitive alumina-ceramic vacuum gauge head with excellent chemical resistance
- outstanding measuring accuracy and long term stability
- splash-proof pressure transducer for tough operation conditions
- datalogger with 32000 measurement reading recording capacity

Specifications

Measurement range:	1080 to 0.1mbar (hPa), 810 to 0.1 Torr
Measuring principle:	Capacitive; gas type independent, absolute pressure measurement
Measurement accuracy:	< ±1 mbar (Torr) ±1 digit
Vacuum connection:	Small flange KF DN 16, PTFE-tubing conn. 10/8mm, hose nozzle DN 6/10mm
Power supply:	100-230 V/50-60 Hz/CEE/CH/UK/US/AUS
Dimensions (L x W x H):	138 x 124 x 114mm
Weight of display unit:	0.44kg

Type	PK	Cat. No.
DCP 3000 with VSK 3000	1	9.882 206
DAkKS-calibration	1	7.059 540
DAkKS-recalibration	1	7.088 492



1 Vacuum measuring instrument DCP 3000 with Pirani sensor VSP 3000

VACUUBRAND

The Pirani-type vacuum sensor VSP 3000 offers an outstanding corrosion resistance and mechanical robustness for fine vacuum measurements. It is primarily designed for applications in chemistry and process engineering. The vacuum gauge DCP 3000 is now also available with this new Pirani sensor VSP 3000 for an increased measuring range down to the 10⁻³ mbar range. Up to eight external gauge heads (four of ceramic diaphragm-type VSK 3000 and four VSP 3000) can be connected simultaneously to the DCP 3000 vacuum gauge for easy measurements at multiple points. Communication between the DCP 3000 and the external components is provided by the especially developed bus control system VACUU-BUS®. It is self-configuring, easy to use due to standardized plug connectors and allows cable extensions up to 30m. The large illuminated display, controlled by a simple jog wheel, displays the readings from each gauge head.

Performance features

- brand new rugged vacuum sensor VSP 3000 made of plastics and ceramics with high chemical resistance
- wide measurement range from atmospheric pressure to fine vacuum (10⁻³ mbar) due to Pirani measurement system (thermal conductivity)
- upto 8 gauge heads VSP 3000 (Atm. to 10⁻³ mbar), VSK 3000 (Atm. to 0.1mbar) can be connected (4 of each)
- rugged, splash-water proof vacuum sensor, also for rough operating conditions
- with vacuum controller CVC 3000, VSP 3000 and vacuum solenoid valves of type VV-B vacuum control from atm. to 10⁻³ mbar is achieved

Specifications:

Upper measuring limit mbar/hPa/torr:	1 x 10 ³ /7.5 x 10 ²
Lower measuring limit mbar/hPa/torr:	1 x 10 ⁻³ /1 x 10 ⁻³
Measurement principle	Thermal conductivity acc. to Pirani
Measurement uncertainty	±15% of indicated value in the range 0.01-10mbar/hPa/torr
Vacuum connection	Small flange KF DN 16 and hose nozzle DN 6/10mm
Control connections:	1 socket for supply/Vario pump 2 expandable sockets for external sensors/valves
Rated mains voltage	100-240V 50/60 Hz a.c. 1ph.
Dimensions (desktop unit, L x W x H):	138 x 124 x 114mm
Weight (without mains adapter):	0.44kg



Description	PK	Cat. No.
Vacuum gauge Set DCP 3000 + VSP 3000	1	9.882 207

2 Automatic Vacuum Controller CVC 3000

VACUUBRAND

Extremely versatile vacuum controller for the laboratory. No configuration required. Just connect and the CVC 3000 will identify all apparatus with VACUU-BUS® VACUUBRAND pumps, vacuum valves, cooling water valves, external sensors, etc. Intuitive menu guidance via graphics display with analogue and digital vacuum readout. Demand-related control of process vacuum, cooling water and venting. Integral sensor made of highly resistant, alumina ceramic provides reliable absolute-pressure measurement. Boiling-point monitoring facility for evaporations*. No more searching for data or data input. Preset for many common vacuum applications, e.g. vacuum ovens, filtration.

Specifications:

Measuring range:	1080 to 0.1mbar (810 to 0.1 Torr)
Vacuum control range:	1060 to <0.1mbar (795 to 1 Torr) (depending on vacuum pump)
Uncertainty of measurement:	< ±1mbar (0.75 Torr) (after calibration)
Temperature coefficient:	< ±0.07mbar/K (< ±0.05 Torr/K)
Control interface:	Digital VACUU-BUS®
Control connections:	1 socket for supply/Vario pump 2 expandable sockets for external sensors/valves
Supply requirements (mains adapter):	100-240V 50/60Hz a.c. 1ph.
Dimensions (desktop unit, L x W x H):	138 x 124 x 115mm
Weight (without mains adapter):	0.44kg



Description	PK	Cat. No.
CVC 3000	1	9.882 861
Package CVC 3000 + VACUU-BUS® VV-B 6C valve	1	9.882 860

* in conjunction with VACUUBRAND Vario NT pumps

Vacuum Controller CVC 3000 detect

NEW!

VACUUBRAND

The CVC 3000 detect compact vacuum controller complete with integral vacuum valve and sensor is ready to use either as a bench top or stand mounted unit. The CVC 3000 detect is a compact two-point vacuum regulator, with integrated ceramic vacuum sensor and ventilation valve. The "detect" function provides the ability to find the boiling pressure automatically and thus greatly facilitates the work of solvent evaporation. With integrated non-return valve and chemistry vacuum valve, it forms a highly compact and easy-to-install unit for vacuum regulation. Used in conjunction with existing vacuum pumps or networks, process efficiency is significantly increased through the "detect" electronic vacuum control, the solvent recovery is increased and the environment better protected. The programmable CVC 3000 detect is available for both bench top and stand mounting operation.

Supplied with:

Vacuum Controller CVC 3000 detect with vacuum valve, ventilation valve, back-pressure valve, power supply and bench top holder or stand mounting.

Specifications

Vacuum control range:	1080 to 0.1mbar (810 to 0.1torr)
Accuracy:	< ±1mbar/hPa/torr/±1 digit (after adjustment, constant temperature)
Temperature coefficient:	< ±0.07mbar/K (< ±0.05torr/K)
Control interface:	Digital VACUU-BUS®
Venting valve, connection:	Hose nozzle DN 6/10mm Integrated, hose nozzle DN 4-5mm
Power supply:	100 - 230V, 50/60Hz CEE/CH/UK/US/AUS/CN

Type	Dimensions (W x D x H) mm	Weight kg	PK	Cat. No.
CVC 3000 detect bench top unit	162 x 181 x 174	1.5	1	6.260 488 1
CVC 3000 detect stand unit	162 x 138 x 144	1.0	1	9.882 859 2



3 Accessories for Automatic Vacuum Controller CVC 3000 and DCP 3000

NEW!

VACUUBRAND



For	Description	PK	Cat. No.
CVC 3000	Solenoid inline valve VV-B 6C	1	9.882 851
CVC 3000	External sensor VSK 3000	1	9.882 850
CVC 3000	Cooling water valve VKW-B	1	9.882 852
CVC 3000	Air admittance valve VBM-B	1	9.882 849
CVC 3000	Extension cable for VACUU-BUS®, 2m	1	9.882 853
CVC 3000	Y-adapter for VACUU-BUS®	1	9.882 854
CVC 3000	Liquid level sensor for VACUUBRAND 500ml catchpot	1	9.882 848
DCP 3000	External sensor VSP 3000	1	9.882 867
DCP 3000	External sensor VSP 3000	1	6.238 192
CVC 3000, DCP 3000	Remote Control VACUU-CONTROL® with web based, graphical user interface (WLAN)	1	6.266 571
CVC 3000, DCP 3000	Remote Control VACUU-CONTROL® with web based, graphical user interface (LAN)	1	6.266 572

Controller package Pirani

NEW!

Controller package fine vacuum with CVC 3000 and VSP 3000 for KF DN 16 or 25

VACUUBRAND

The packages enable convenient vacuum control in the fine vacuum range down to 10^{-3} mbar and consist of a CVC 3000 vacuum controller, a VSP 3000 external Pirani vacuum sensor, a VV-B 15C in-line solenoid valve and all necessary small flange components. VACUUBRAND offers two packages, one with small flanges KF DN 16, suitable, e.g., for the VACUUBRAND RE/RZ 2.5 to RE/RZ 6 rotary vane pumps or RC 6 Chemistry-HYBRID pump; or select the small flange KF DN 25 version suitable for our RE/RZ 9 to RE/RZ 16 rotary vane pumps.

Specifications:

Vacuum sensor	VSP 3000
Upper measuring limit	1000/750 mbar/torr
Lower measuring limit	$1 \times 10^{-3}/1 \times 10^{-3}$ mbar/torr
Measurement principle	Thermal conductivity (Pirani), chemically resistant plastics/ceramics
Measurement uncertainty	$\pm 15\%$ of indicated value in the range 0.01-10 mbar/hPa/torr
Venting valve, connection	No
Ambient temperature range (operation)	10 - 40°C
Ambient temperature range (storage)	-10 - 60°C
Max. media temp. for continuous operation/short times	40 - 80°C
Interface	RS 232C
Weight	0.44kg

Description	PK	Cat. No.
Controller package fine vacuum with CVC 3000 and VSP 3000 for KF DN 16	1	6.251 423 1
Controller package fine vacuum with CVC 3000 and VSP 3000 for KF DN 25	1	6.251 424 2



6.251 423

6.251 424

Desiccators/Desiccators - glass



1 Desiccators, borosilicate glass 3.3, with plastic knob and porcelain plate

Desiccator made of borosilicate glass 3.3, clear glass, with plastic lid, without vacuum connector.

Bohemia (Simax)

DN	Ext. diam. mm	Plate diam. mm	PK	Cat. No.
100	151.0	90	1	9.042 810
150	210.0	140	1	9.042 811
200	269.0	190	1	6.230 515
250	329.0	240	1	9.042 812
300	392.0	290	1	6.225 773



2 Desiccators, DURAN®, knob lid

DURAN®. Clear glass, without vacuum, with knob lid. DIN 13130.

DURAN Group

DN	Height mm	PK	Cat. No.
100	187	1	9.042 019
150	252	1	9.042 031
200	309	1	9.042 038
250	357	1	9.042 043
300	433	1	9.042 047



3 LLG-Vacuum-Desiccators, soda-lime glass, with lid, stopcock and porcelain plate

Desiccator made of soda-lime glass, vacuum-tight, the stopcock has an outer diameter of about 9 mm.

Ext. diam. mm	Plate diam. mm	Height mm	PK	Cat. No.
215	140	224	1	9.042 740
262	190	239	1	9.042 741
293	235	278	1	9.042 742
380	280	414	1	9.042 743



4 Vacuum-Desiccators with tubes, borosilicate glass 3.3, stopcock SJ 24/29 and porcelain plate

Desiccators borosilicate glass 3.3, vacuum-tight. The stopcock has an outer diameter of approx. 9mm.

Bohemia (Simax)

DN	Ext. diam. mm	Plate diam. mm	PK	Cat. No.
100	151.0	90	1	9.042 815
150	210.0	140	1	6.226 934
200	269.0	190	1	6.226 935
250	329.0	240	1	6.226 936
300	392.0	290	1	6.227 443

1 Desiccators, DURAN®, vacuum, with stopcock

DURAN®. Clear glass. With Novus stopcock assembly in lid. Vacuum-tight. DIN 13130.

DURAN Group

DN	Height	Tube socket	PK	Cat. No.
	mm	NS		
100	174	24/29	1	9.042 119
150	239	24/29	1	9.042 131
200	296	24/29	1	9.042 138
250	344	24/29	1	9.042 143
300	420	24/29	1	9.042 147



Vacuum-Desiccators, DURAN®, complete

DURAN® vacuum desiccator "ready to use".

DURAN Group

Type NOVUS

DURAN® Vacuum desiccator with plane flange and porcelain plate, with NOVUS standard ground joint (NS 24/29), junction tube in the lid and stopcock.

Type MOBILEX

DURAN® Vacuum Desiccator with flat flange, no outlet, DURAN® desiccator lid with threaded outlet type Mobilex GL 32, porcelain desiccator plate, silicone sealing ring with bonded PTFE face, DURAN® stopcock with PTFE spindle, PBT screw cap with pierced aperture GL 32.

Type	DN	Height mm	Tube socket	PK	Cat. No.
NOVUS	150	239	NS 24/29	1	9.042 132 2
NOVUS	200	296	NS 24/29	1	9.042 139
NOVUS	250	344	NS 24/29	1	9.042 144
NOVUS	300	420	NS 24/29	1	9.042 148
MOBILEX	150	239	GL 32	1	9.042 232 3
MOBILEX	200	296	GL 32	1	9.042 239
MOBILEX	250	344	GL 32	1	9.042 244
MOBILEX	300	420	GL 32	1	9.042 248



9.042 132



9.042 232

4 Desiccator lids with knob, DURAN®

DURAN®. Clear glass. Knob lid. Fits all desiccator bases with the corresponding flat flange. Vacuum-tight. DIN 13130.

DURAN Group

DN	Height	ID diam. Flange	OD diam. Flange	PK	Cat. No.
	mm	mm	mm		
100	75	119	153 ± 2	1	9.042 319
150	98	172	215 ± 2	1	9.042 331
200	107	224	270 ± 2	1	9.042 338
250	122	274	320 ± 2	1	9.042 343
300	150	332	380 ± 2	1	9.042 347



5 Desiccator lids, NOVUS type, DURAN®

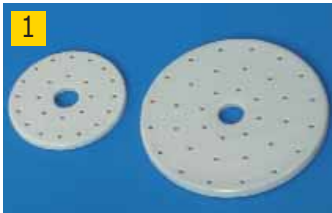
DURAN®. Clear glass. Tube top, for NOVUS stopcock assembly. Without stopcock. Vacuum-tight. DIN 13130.

DURAN Group

DN	Height	NS	ID diam. Flange	OD diam. Flange	PK	Cat. No.
	mm		mm	mm		
100	62	24 / 29	119	153 ± 2	1	9.042 419
150	85	24 / 29	172	215 ± 2	1	9.042 431
200	94	24 / 29	224	270 ± 2	1	9.042 438
250	109	24 / 29	274	320 ± 2	1	9.042 443
300	137	24 / 29	332	380 ± 2	1	9.042 447



Desiccators/Desiccators - glass



1 LLG-Plate for desiccator, porcelain

Perforated. Without feet. To DIN 12911. 20mm diameter central hole and 5mm diameter outer holes.

Diam. mm	For DN	PK	Cat. No.
90	100	1	9.042 801
140	150	1	9.042 802
190	200	1	9.042 803
235	250	1	9.042 804
280	300	1	9.042 805

Desiccator stopcock, borosilicate glass 3.3

With PTFE spindle. For NOVUS-type desiccators.

Cone: NS 24/29, bore: NW 2.5mm,, hose connection: outer dia. 8mm.

Lenz

Description	Length mm	NS	PK	Cat. No.
for side tubulation	108	24/29	1	9.042 500 2
for lid tubulation	124	24/29	1	9.042 505 3



9.042 500



9.042 505

Stopcocks for desiccators, DURAN®



DURAN® stopcocks with PTFE spindle. Outer diameter: 8mm

DURAN Group

Description	Length mm	For Tube socket	For Type	PK	Cat. No.
For lateral connection	85	NS 24/29	NOVUS	1	6.901 259 4
For lid connection	85	NS 24/29	NOVUS	1	7.200 573 5
For thread connection	160	GL 32	MOBILEX	1	9.042 507 6



6.901 259



7.200 573



9.042 507



7 Desiccators, vacuum, O- ring seals

Soft rubber. These O-ring seals make glass lubrication unnecessary. Suitable for desiccators, Witt jars etc.

For DN	PK	Cat. No.
mm		
100	1	9.042 710
150	1	9.042 715
200	1	9.042 720
250	1	9.042 725
300	1	9.042 730

9. Vacuum technology, Drying, Dry storage Desiccators/Desiccators - plastic

1 LLG-Vacuum desiccators, polycarbonate, round form, "Heavy Duty"

Cost effective alternative to glass desiccators. Highly transparent, lightweight, shatterproof, made of polycarbonate. Silicon O-ring and specially designed 'locking clip' allows use without grease and ensures an airtight seal. Flange lock holds the bottom and the lid together during non-vacuum conditions. Three-way stopcock provides great convenience for consistent vacuum draw, vacuum release or gas exchange e.g. inert gas. Maximum vacuum of 1.3mbar (1.3×10^{-4} MPa) for more than 72 hours. Wide base provides superior stability.
Also available in brown with UV-blocking effect for light sensitive samples.
 G Models will be delivered with a vacuum gauge.

Included in delivery: Drying agent tray, perforated sample tray, O-ring and flange locker.

Type	Ext. diam. mm	Height mm	Capacity litres	PK	Cat. No.
VDR-20 Vacuum Desiccator	242	279	6	1	9.042 751
VDR-20G Vacuum Desiccator with gauge	242	354	6	1	9.042 753
VDR-25 Vacuum Desiccator	308	325	10	1	9.042 755
VDR-25G Vacuum Desiccator with gauge	308	400	10	1	9.042 757
VDR-30 Vacuum Desiccator	385	399	20	1	9.042 759
VDR-30G Vacuum Desiccator with gauge	385	475	20	1	9.042 761



Accessories for LLG-Vacuum desiccators VDR Series

NEW!

Description	PK	Cat. No.
Drying Agent Tray for VDR-20 Series	1	9.042 771
Drying Agent Tray for VDR-25 Series	1	9.042 772
Drying Agent Tray for VDR-30 Series	1	9.042 773
Perforated Sample Tray for VDR-20 Series	1	9.042 776
Perforated Sample Tray for VDR-25 Series	1	9.042 777
Perforated Sample Tray for VDR-30 Series	1	9.042 778
Lock ring for VDR-20 series	1	9.042 781
Lock ring for VDR-25 series	1	9.042 782
Lock ring for VDR-30 series	1	6.260 351
Vacuum gauge for VDR series	1	9.042 783
Vacuum seal for VDR-20 series	1	9.042 785
Vacuum seal for VDR-25 series	1	9.042 786
Vacuum seal for VDR-30 series	1	6.260 350
Stopcock for VDR series	1	6.260 353

2 LLG-Desiccant drying agents, silica gel, self-indicating

NEW!

With orange indicator colour. Grain size 1 to 3.15mm or 2 to 5mm. This self-indicating drying agent (white silica gel) is free from any heavy metals and therefore environmentally compatible. The gel is naturally orange when active and at a 6 weight-% saturation level. As the gel adsorbs moisture, the colour changes into white. The total adsorption capacity is approximately 23 in weight-% at 40% RH. The range of application is identical with that of white silica gel. The colour change, however, represents a great advantage since it allows monitoring of the saturation level. The gel can be regenerated when heated at a temperature of maximum 120°C until it turns to its original orange colour.



Granulation	Package contents	PK	Cat. No.
1 to 3,15mm	Tin, 1kg	1	6.267 160
1 to 3,15mm	Tin, 3 kg	1	6.267 161
1 to 3,15mm	Carton box, 8 kg	1	6.267 162
1 to 3,15mm	Tin, 25 kg	1	6.267 163
2 to 5mm	Tin, 1kg	1	9.042 543
2 to 5mm	Tin, 3 kg	1	9.042 544
2 to 5mm	Carton box, 8 kg	1	9.042 545

Desiccators/Desiccators - plastic



1 2 Portable Desiccator DURAPorter™, PC

Heathrow Scientific

Ideal for transporting biological and clinical samples, as well as instruments and products that you want to keep clean and dry under testing environmental conditions. Are light weight and easy to carry; they are ideal for moving samples that must be protected from humidity, dust and other environmental influence. The clarity of the DURAPorter™ enables the user to visibly check sample integrity, so that it can be opened using the right precautions.

- Polycarbonate construction are available in three colours for use/owner identification
- Silicone water-tight seal and three lid clasps provide secure closure
- Carry handle folds neatly into body space allowing the units to be stacked
- Lid opens a full 180°, allowing total access to contents and making it easier to clean
- Will accommodate 13 and 16 mm tubes in a 72-place one rack®, or similar sized/brand of rack
- Use the separators provided to create your own compartment sizes, or use empty to transport larger products and equipment
- Autoclavable
- Dimensions (WxDxH): 380 x 160 x 196 mm

Matching rack (e.g. Cat. No. 9193 997, 9193 998) please order separately. Further colours available on request.



Type	Colour	For tubes diam. mm	Array	Dimensions (l x w x h) mm	Material	PK	Cat. No.
DURAPorter™	Clear with blue handles			380 x 196 x 160	PC	1	9.194 005
DURAPorter™	Yellow with yellow handles			380 x 196 x 160	PC	1	9.194 006
DURAPorter™	Red with red handles			380 x 196 x 160	PC	1	9.194 007
one rack®	Blue	13 (5 - 10 ml)	72	104 x 202 x 59	POM	1	6.266 916
one rack®	Blue	16 (5 - 10 ml)	72	127 x 250 x 70	POM	1	6.266 917
one rack®	Blue	20 (10 - 18 ml)	40	100 x 252 x 83	POM	1	6.266 918
one rack®	Blue	25 (10 - 18 ml)	40	120 x 300 x 92	POM	1	6.266 919
one rack®	Blue	30 (15 - 50 ml)	24	110 x 282 x 85	POM	1	6.266 920



3 Desiccators, plastic, vacuum, PC/PP

Kartell

Crystal clear, PC dome lid. PP. Lower section and desiccant tray. Venting stopper with non-return valve in lid. Polychlorbutadiene rubber (CK) O-ring seal between lid and base which is compressed when vacuum is applied. Lightweight and easy to use.

Nominal diam. mm	Diam. mm	Height mm	PK	Cat. No.
150	170	195	1	9.042 615
200	235	240	1	9.042 620
250	285	300	1	9.042 625



4 Spare O-Rings

Neoprene rubber.

Kartell

Diam. mm	PK	Cat. No.
150	1	9.042 681
200	1	9.042 682
250	1	9.042 683

1 Desiccator plates, PP			
PP. For use at room temperature. Not suitable for use with hot crucibles.			<i>Kartell</i>
Diam. mm	PK	Cat. No.	
141	1	9.042 674	
189	1	9.042 675	
238	1	9.042 676	



2 Accessory venting stopper for desiccators, PC			
PC. With non-return valve.			<i>BRAND</i>
Type	PK	Cat. No.	
Desiccators	1	9.042 684	



3 Desiccators, Type 5309, 5310, PC, blue			
Transparent PC bell and blue PP lower part. Will not break or implode under vacuum provided that the operating instructions are obeyed. Lower part is resistant to diluted acids, alkalis and other common desiccants. Vacuum connection at lower part. TFE stopcock is suitable for vacuum tubing 6.4mm i.d. For air tight sealing it is sufficient to grease sealing surface a little. No additional sealing ring is necessary. The additional rim at the bell prevents grease stains on lab benches.			<i>Thermo Scientific</i>
External diameter:	330mm		
Internal diameter:	246mm		
Type	Description	PK	Cat. No.
5309	Desiccator, without stopcock	1	7.048 801
5310	Desiccator, with stopcock (not autoclavable)	1	7.048 802



4 Desiccator, Type 5311, PC			
Transparent, lightweight, unbreakable, for vacuum or non-vacuum use. With stopcock. Large, stable base. No danger of implosion. Capable of maintaining 0.95bar negative pressure over a 24 hour period. With silicone O-ring, no lubrication required. Suitable for 230mm diameter desiccator discs or plates. Max. height over plate 195mm. Plate not included.			<i>Thermo Scientific</i>
External diameter:	280mm		
Internal diameter:	251mm		
Type	Description	PK	Cat. No.
5311		1	9.042 690



5 Desiccator disc, Type 5312, enamel			
Light-green, ceramic-metal composite. With numbered quadrants. Autoclavable. Recommended for use with 7.048 801, 7.048 802 and 9.042 690.			<i>Thermo Scientific</i>
Type	Ext. diam. mm	PK	Cat. No.
5312	230	1	9.042 573



➔ Vacuum drying ovens please see page 794.

Desiccators/Desiccator cabinets

1

1

LLG-Vacuum desiccator cabinets, polycarbonate, square form, "Heavy Duty"

High-quality and stable construction made of polycarbonate. Highly transparent, lightweight, shatterproof and stackable.

Silicon O-ring and specially designed locking clip allows use without grease. Three-way stopcock provides great convenience for consistent vacuum draw, vacuum release or gas exchange e.g. inert gas.

Maximum vacuum of 1 Torr (1.3mbar; 1.33×10^{-4} MPa) for more than 72 hours, with built-in vacuum gauge.

Also available in brown with UV-blocking effect for light sensitive samples.

Included in delivery: Vacuum gauge, O-ring, drying agent tray, 2 x perforated sample trays (VDC-11 and VDC-21) or 3 x perforated sample trays (VDC-31 and VDC-41).

Type	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Capacity	Max. number	PK	Cat. No.
			litres	shelves		
VDC-11	322 x 285 x 271	248 x 254 x 238	11	4	1	9.042 769
VDC-21	420 x 392 x 281	346 x 365 x 246	23	4	1	9.042 767
VDC-31	420 x 397 x 381	355 x 375 x 345	35	5	1	9.042 765
VDC-41	420 x 397 x 491	355 x 374 x 445	45	6	1	9.042 763

2


2 Accessories for LLG-Vacuum desiccator cabinets VDC Series

NEW!

Description	PK	Cat. No.
Drying Agent Tray for VDC-41/31/21 Series	1	9.042 774
Drying Agent Tray for VDC-11 Series	1	9.042 775
Perforated Sample Tray for VDC-41/31/21 Series	1	9.042 779
Perforated Sample Tray for VDC-11	1	9.042 780
Vacuum gauge for VDC series	1	9.042 784
Vacuum seal for VDC-11/11U	1	9.042 790
Vacuum seal for VDC-21/21U	1	9.042 789
Vacuum seal for VDC-31/31U	1	9.042 788
Vacuum seal for VDC-41/41U	1	9.042 787
Stopcock for VDC series	1	6.262 107

3


3 LLG-Desiccant drying agents, silica gel, self-indicating

NEW!

With orange indicator colour. Grain size 1 to 3.15mm or 2 to 5mm. This self-indicating drying agent (white silica gel) is free from any heavy metals and therefore environmentally compatible. The gel is naturally orange when active and at a 6 weight-% saturation level. As the gel adsorbs moisture, the colour changes into white. The total adsorption capacity is approximately 23 in weight-% at 40% RH. The range of application is identical with that of white silica gel. The colour change, however, represents a great advantage since it allows monitoring of the saturation level. The gel can be regenerated when heated at a temperature of maximum 120°C until it turns to its original orange colour.

Granulation	Package contents	PK	Cat. No.
1 to 3,15mm	Tin, 1kg	1	6.267 160
1 to 3,15mm	Tin, 3 kg	1	6.267 161
1 to 3,15mm	Carton box, 8 kg	1	6.267 162
1 to 3,15mm	Tin, 25 kg	1	6.267 163
2 to 5mm	Tin, 1kg	1	9.042 543
2 to 5mm	Tin, 3 kg	1	9.042 544
2 to 5mm	Carton box, 8 kg	1	9.042 545



Desiccators Mini, polycarbonate

SICCO Desiccators are designed for storing or drying humidity sensitive products using silica gel. The tight fitting door protects the contents from contamination from the atmosphere. The controlled environment inside the desiccators are ideal for storing reference materials, retained samples, metallographic specimen, tobacco and DNA-samples.

SICCO

Desiccators Mini Premium including 2 shelves, hygrometer. Bottom with non-slip rubber feet.

Product advantages:

- One Touch Door with circular seal
- Robust construction
- Transparent, shatterproof cabinet made of polycarbonate
- Superb all-round visibility (except Mini Black, Mini Protect and Mini Antistatik)
- Hinge door with wide opening angle
- Lightweight, transportable
- Stackable
- Desiccant in a handy, resealable container included in delivery
- Total all-over load: 3kg

Applications:

Ideal for small parts, convenient for use.

Desiccators Mini Basic/Premium, polycarbonate

Three versions (one, two or three permanently fixed compartments).

SICCO

Specifications

Panels: clear
 Temperature resistance: from -35°C to +70°C

Type	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Volume		Weight	PK	Cat. No.
			litres	kg			
Mini 1 Basic	221 x 214 x 183	212 x 180 x 162	6.2	0.9	1	9.042 646	1
Mini 2 Basic	221 x 214 x 362	212 x 180 x 162	2 x 6.2	1.8	1	9.042 647	3
Mini 3 Basic	221 x 214 x 540	212 x 180 x 162	3 x 6.2	2.7	1	9.042 648	4
Mini 1 Premium	221 x 214 x 183	212 x 180 x 162	6.2	0.9	1	9.042 652	2
Mini 2 Premium	221 x 214 x 362	212 x 180 x 162	2 x 6.2	1.8	1	9.042 653	
Mini 3 Premium	221 x 214 x 540	212 x 180 x 162	3 x 6.2	2.7	1	9.042 654	

Premium Versions incl. 2 shelves, hygrometer. Bottom with non-slip rubber feet.



Desiccators Mini Black/Mini Protect, polycarbonate

Black or orange, non-transparent polycarbonate panels reduce light incidence and protect against ultraviolet radiation.

SICCO

Specifications

Panels: black or orange
 Temperature resistance: from -35°C to +70°C

Type	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Volume		Weight	PK	Cat. No.
			litres	kg			
Mini Black Basic	221 x 214 x 183	212 x 180 x 162	6.2	0.9	1	9.042 655	5
Mini Protect Basic	221 x 214 x 183	212 x 180 x 162	6.2	0.9	1	9.042 656	6
Mini Black Premium	221 x 214 x 183	212 x 180 x 162	6.2	0.9	1	9.042 659	7
Mini Protect Premium	221 x 214 x 183	212 x 180 x 162	6.2	0.9	1	9.042 660	8

Premium Versions incl. 2 shelves, hygrometer. Bottom with non-slip rubber feet.



9 10 Desiccators Mini Antistatik, polycarbonate



Made of conductive black polycarbonate which is capable to discharge electrostatic charging by means of a grounding cable over a connection on the back side. Black panels reduce light incidence and protect against ultraviolet radiation. With connection for grounding cable, Cable not included in delivery.

SICCO

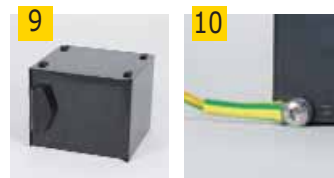
Shelves of Mini Antistatik Premium are made of conductive PE-HD.

Specifications:

Panels: black
 Temperature resistance: from -35°C to +70°C

Type	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Volume		Weight	PK	Cat. No.
			litres	kg			
Mini Antistatik Basic	221 x 214 x 183	212 x 180 x 162	6.2	0.9	1	9.042 639	
Mini Antistatik Premium	221 x 214 x 183	212 x 180 x 162	6.2	0.9	1	9.042 638	
Grounding cable	-	-	-	-	1	6.253 896	

Premium version incl. 2 shelves, hygrometer. Bottom with non-slip rubber feet.





7.638 923

9.042 657

Desiccators Mini Mobil, polycarbonate

With practical handle, one compartment.

SICCO

Specifications

Panels: clear
 Temperature resistance: from -35°C to +70°C
 Use: normal pressure

Type	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Volume litres	Weight kg	PK	Cat. No.
Mini Mobil Basic	221 x 214 x 183	212 x 180 x 162	6.2	1.0	1	7.638 923 1
Mini Mobil Premium	221 x 214 x 183	212 x 180 x 162	6.2	1.0	1	9.042 657 2

Premium version incl. 2 shelves, hygrometer. Bottom with non-slip rubber feet.



7.629 763

9.042 658

Desiccators Mini for Gas Filling, polycarbonate

Two gas filling couplings with self-closing valves and hoses.

SICCO

Specifications

Panels: clear
 Temperature resistance: from -35°C to +70°C
 Use: normal pressure

Type	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Volume litres	Weight kg	PK	Cat. No.
Mini Inertgas Basic	221 x 214 x 183	212 x 180 x 162	6.2	0.9	1	7.629 763 3
Mini Inertgas Premium	221 x 214 x 183	212 x 180 x 162	6.2	0.9	1	9.042 658 4

Premium version incl. 2 shelves, hygrometer. Bottom with non-slip rubber feet.

Desiccators Star series

Desiccators are designed for storing or drying humidity-sensitive products, using silica gel. The tight fitting door protects the contents from atmospheric contamination. The controlled environment inside the desiccators are ideal for storing reference materials, library samples, metallographic specimens, tobacco and DNA-samples.

SICCO

Product advantages:

- Reinforced aluminium frame with acrylic panels (for Star-Vitrum made of Borosilicate glass 3.3)
- Door with magnetic catch and circular rubber seal
- Non-slip rubber feet
- Easy to read electronic digital hygrometer with temperature and humidity display
- Variable height shelves made of acrylic glass (for Star-Vitrum, Star-Big and Star-Auto-Big made of stainless steel)
- Telescopic shelves
- Desiccant tray
- Silica gel included
- Raster and rails made metal-free PA/fiberglass
- Rails with level numbering



5

5 Desiccator Star, PMMA

Includes four transparent acrylic shelves, tray, hygrometer and desiccant, with positions for up to 26 shelves and stackable.

SICCO

Specifications

Panels: clear
 Material: PMMA
 Temperature resistance: -20°C to + 70°C
 Maximum all-over load per shelf: 10kg
 Total all-over load: 30kg

Type	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Volume litres	Weight kg	PK	Cat. No.
Star	310 x 375 x 525	260 x 330 x 480	42	7.0	1	9.042 651

1 Desiccators Star-Super, PMMA

Gas filling Desiccators provide ideal conditions for the safe and secure storing of poisonous chemicals. An inert gas such as nitrogen can be introduced as soon as the door is closed tightly. Unlike the ambient air, the inert gas does not react with the stored substances. Includes four transparent acrylic shelves, positions for up to 26 shelves, hygrometer, tray, desiccant and tubing with quick coupling for gas filling and door lock. SICCO

Specifications

Panels: clear
 Material: PMMA
 Temperature resistance: from -20°C to +70°C
 Maximum all-over load per shelf: 10kg
 Total all-over load: 30kg

Type	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Volume litres	Weight kg	PK	Cat. No.
Star-Super	310 x 375 x 525*	260 x 330 x 480	42	7.1	1	6.800 667

* Additional space requirement for coupling, 150mm per side.



2 Desiccator Star-Auto, PMMA

With automatic drying that can maintain a constant humidity of between 20% and 30%, Automatic Desiccators are highly suitable for long-term storage. Even frequent opening of the door is compensated for automatically. The ideal solution for storing reference materials, electronics, photo equipment, papers, historical artefacts and much more. With four transparent acrylic shelves and hygrometer with positions for up to 26 shelves and stackable. SICCO

Specifications

Panels: clear
 Material: PMMA
 Temperature resistance: -20°C to +70°C
 Maximum all-over load per shelf: 10kg
 Total all-over load: 30kg

Type	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Volume litres	Weight kg	PK	Cat. No.
Star-Auto	310 x 375 x 525	260 x 330 x 480	42	7.3	1	6.201 892



3 Desiccator Star-Protect, PMMA

Including four shelves made of acrylic glass, tray, hygrometer and desiccant, usable with up to 26 shelves, stackable, orange acrylic panels reduce light incidence and protect against ultraviolet radiation. SICCO

Specifications

Panels: orange
 Material: PMMA
 Temperature resistance: from -20°C to +70°C
 Maximum all-over load per shelf: 10kg
 Total all-over load: 30kg

Type	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Volume litres	Weight kg	PK	Cat. No.
Star-Protect	310 x 375 x 525	260 x 330 x 480	42	7.0	1	6.901 030



4 Desiccator Star-Black, PMMA

Aluminium frame, panels made of black acrylic glass prevent light incidence and protect against ultraviolet radiation, including four shelves made of acrylic glass, tray, hygrometer and desiccant, usable with up to 26 shelves, stackable. SICCO

Specifications

Panels: black
 Material: PMMA
 Temperature resistance: from -20°C to +70°C
 Maximum all-over load per shelf: 10kg
 Total all-over load: 30kg

Type	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Volume litres	Weight kg	PK	Cat. No.
Star-Black	310 x 375 x 525	260 x 330 x 480	51	7.0	1	9.042 663



NEW!

Desiccators/Desiccator cabinets



1 Desiccator Star-Horizontal, PMMA

The desiccator can be equipped with up to 13 shelves. Raster and rails made metal-free PA/fiberglass. Rails with level numbering.

SICCO

Specifications

Panels:	clear
Material:	PMMA
Temperature resistance:	-20°C to +70°C
Maximum all-over load per shelf:	1.5kg
Total all-over load:	30kg

Type	External dimensions (W x D x H)	Internal dimensions (W x D x H)	Volume	Weight	PK	Cat. No.
	mm	mm	litres	kg		
Star-Horizontal	520 x 375 x 340	480 x 320 x 260	42	7.0	1	6.800 632



2 Desiccator Star-Auto-Big, PMMA

Including two shelves made of stainless steel, tray and hygrometer, usable with up to 17 shelves, stackable.

SICCO

- Automatic drying
- Constant low interior humidity between 20% and 30%

Specifications

Panels:	clear
Material:	PMMA
Temperature resistance:	-20°C to +70°C
Maximum all-over load per shelf:	30kg
Total all-over load:	80kg

Type	External dimensions (W x D x H)	Internal dimensions (W x D x H)	Volume	Weight	PK	Cat. No.
	mm	mm	litres	kg		
Star-Auto-Big	560 x 580 x 560	495 x 540 x 500	140	22.0	1	9.042 007



3 Desiccator Star-Antistatik-Big, PC



Aluminium frame with static dissipative panels made of polycarbonate, including two stainless steel shelves, tray and hygrometer, usable with up to 17 shelves. All materials used can discharge electrostatic charging by means of a grounding cable which can be connected on the back side (connecting thread M6).

SICCO

Specifications

Panels:	clear
Material:	PC
Temperature resistance:	-20°C to +70°C
Maximum all-over load per shelf:	30kg
Total all-over load:	80kg

Type	External dimensions (W x D x H)	Internal dimensions (W x D x H)	Capacity	Weight	PK	Cat. No.
	mm	mm	litres	kg		
Star-Antistatik-Big	560 x 580 x 560	495 x 540 x 500	156	18.0	1	9.042 664



4 Desiccator Star-Big, PMMA

Inclusive two removable and adjustable shelves made of stainless steel. The desiccator can be equipped with up to 17 shelves.

SICCO

Specifications

Panels:	clear
Material:	PMMA
Temperature resistance:	-20°C to +70°C
Maximum all-over load per shelf:	30kg
Total all-over load:	80kg

Type	External dimensions (W x D x H)	Internal dimensions (W x D x H)	Capacity	Weight	PK	Cat. No.
	mm	mm	litres	kg		
Big Star	585 x 560 x 555	502 x 502 x 502	140	18.0	1	6.300 334

Desiccators Star-Big Black/Star-Big Protect, PMMA



Black or orange, non-transparent acrylic glass panels reduce light incidence and protect against ultraviolet radiation. Including two shelves made of stainless steel, tray and hygrometer, usable with up to 17 shelves.

Specifications

Panels: black or orange
 Material: PMMA
 Temperature resistance: from -20°C to +70°C
 Maximum all-over load per shelf: 30kg
 Total all-over load: 80kg



9.042 670

9.042 665

Type	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Volume litres	Weight kg	PK	Cat. No.
Star-Big Black	560 x 580 x 560	495 x 540 x 500	156	18	1	9.042 670 1
Star-Big Protect	560 x 580 x 560	495 x 540 x 500	156	18	1	9.042 665 2

3 Desiccator Star-Vitrium, borosilicate glass 3.3

Panels made of borosilicate glass 3.3, including four shelves made of stainless steel, tray, hygrometer and desiccant, usable with up to 26 shelves, stackable.

Specifications

Panels: clear
 Material: Borosilicate glass 3.3/stainless steel
 Temperature resistance: -70°C to +150°C
 Maximum all-over load per shelf: 10kg
 Total all-over load: 30kg

Type	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Volume litres	Weight kg	PK	Cat. No.
Star-Vitrium	310 x 375 x 525	260 x 330 x 480	42	14.0	1	9.042 006



4 Desiccator Star-Vitrium-Big, borosilicate glass 3.3



Aluminium frame with panels made of borosilicate glass 3.3, including two shelves made of stainless steel, tray and hygrometer, usable with up to 17 shelves.

Specifications

Panels: clear
 Material: Borosilicate glass 3.3/stainless steel
 Temperature resistance: -70°C to +150°C
 Maximum all-over load per shelf: 30kg
 Total all-over load: 80kg

Type	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Volume litres	Weight kg	PK	Cat. No.
Star-Vitrium-Big	495 x 540 x 500	560 x 580 x 560	156	22.0	1	9.042 661



5 Desiccator Star-Thermo, PMMA/Glass



Inside the new SICCO Star-Thermo-Desiccators with integrated heating, you can store your samples and products at a constant temperature. Starting at room temperature plus 5°C you can adjust any value up to max. 60°C. The fan on the back side sucks in the air inside the desiccator and blows it over the heating spiral. At the same time, the warmed air flows back into the desiccator. This air circulation provides an even heating of the interior space. 2-pane insulation (inside glass, outside PMMA), including 4 shelves made of PMMA, usable with up to max. 26 shelves. Integrated heating (850 W) with temperature sensor and air circulation.

Specifications

Panels: clear
 Material: PMMA/glass
 Temperature resistance: -20°C to +70°C
 Maximum all-over load per shelf: 2.5kg
 Total all-over load: 10kg

Type	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Volume litres	Weight kg	PK	Cat. No.
Star-Thermo	310 x 420 x 630	260 x 330 x 480	42	16.0	1	9.042 640



Desiccators Maxi

SICCO Desiccators are designed for storing or drying humidity sensitive products using silica gel. The tight fitting door protects the contents from contamination from the atmosphere. The controlled environment inside the desiccators are ideal for storing reference materials, retained samples, metallographic specimen, tobacco and DNA-samples.

SICCO

- Reinforced aluminium frame with acrylic panels
- Door with magnetic catch and circular rubber seal
- Four casters (two of the casters with brakes)
- Easy to read electronic hygrometer
- Variable height shelves made of stainless steel
- Telescopic shelves
- Desiccant tray



9.042 643



9.042 644

Desiccators Maxi 1 and Maxi 2, PMMA

Maxi 1: Including four shelves made of stainless steel, tray and hygrometer, usable with up to 34 shelves.

SICCO

Maxi 2: Two chambers, two doors, each chamber usable with up to 17 shelves. Including two shelves per chamber, two trays and two hygrometers.

Specifications

Panels:	clear
Material:	PMMA, stainless steel
Temperature resistance:	-20°C to +70°C
Maximum all-over load per shelf:	30/80kg
Total all-over load:	160kg

Maxi 1/Maxi 2

Type	External dimensions (W x D x H) mm	Internal dimensions (W x D x H) mm	Weight		Volume		PK	Cat. No.
			kg	litres	litres	kg		
Maxi 1	560 x 1150 x 580	495 x 1030 x 540	30.0	280	1	9.042 643	1	
Maxi 2	560 x 1150 x 580	495 x 500 x 450*	80.0	140	1	9.042 644	2	

* per chamber



3 Desiccators Maxi 1-Vitrum and Maxi 2-Vitrum



Maxi 1-Vitrum: Aluminium frame with panels made of borosilicate glass 3.3, including four shelves made of stainless steel, tray and hygrometer, four castors, usable with up to 34 shelves.

SICCO

Maxi 2-Vitrum: Aluminium frame with panels made of borosilicate glass 3.3, two compartments and two doors, including four shelves made of stainless steel, two trays and two hygrometers, four castors, usable with up to 17 shelves per compartment.

Specifications

Panels:	clear
Material:	Borosilicate glass 3.3/stainless steel
Temperature resistance:	-70°C to +150°C
Maximum all-over load per shelf:	30kg
Total all-over load:	
Maxi 1-Vitrum:	160kg
Maxi 2-Vitrum:	80kg per chamber

Type	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Volume		Weight		PK	Cat. No.
			litres	kg	kg	litres		
Maxi 1-Vitrum	495 x 540 x 1030	560 x 580 x 1150	311	37.0	1	9.042 662		
Maxi 2-Vitrum	495 x 540 x 500*	560 x 580 x 1150	156*	42.0	1	6.253 315		

* per chamber

Desiccators Maxi 1-Black/Protect and Maxi 2-Black/Protect, PMMA



Aluminium frame. Black or orange, non-transparent acrylic glass panels reduce light incidence and protect against ultraviolet radiation.

SICCO

Maxi 1-Black/Maxi 1-Protect: Including four shelves made of stainless steel, tray and hygrometer, four castors, usable with up to 34 shelves.

Maxi 2-Black/Maxi 2-Protect: Two compartments and two doors, including four shelves made of stainless steel, two trays and two hygrometers, four castors, usable with up to 17 shelves per compartment.

Specifications

Panels:	black or orange
Material:	PMMA
Temperature resistance:	-20°C to +70°C
Maximum all-over load per shelf:	30kg
Total all-over load	
Maxi 1-Black/Protect:	160kg
Maxi 2-Black/Protect:	80kg per chamber

Type	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Volume	Weight	PK	Cat. No.
			litres	kg		
Maxi 1-Black	495 x 540 x 1030	560 x 580 x 1150	311	30.0	1	9.042 668 1
Maxi 2-Black	495 x 540 x 500*	560 x 580 x 1150	156*	34.0	1	9.042 669 2
Maxi 1-Protect	495 x 540 x 1030	560 x 580 x 1150	311	30.0	1	9.042 666 3
Maxi 2-Protect	495 x 450 x 500*	560 x 580 x 1150	156*	34.0	1	9.042 667 4

* per chamber



9.042 668



9.042 669



9.042 666



9.042 667



1 Laboratory Freeze Dryer ALPHA 1-2 LDplus Package

NEW!

Christ

Small but big in performance in routine applications. Complete, universal package for sample drying in up to 8 flasks, alternatively for handling materials in dishes on up to 3 unheated shelves. With new user-friendly controller "Lyo Display LDplus".

- Graphic LC display with a clear layout showing the most important process data (ice condenser temperature, process time, section time and vacuum).
- Comfortable and self-explaining menu guidance in German, English or French language.
- Vacuum control for optimization and reduction of process time.
- Conversion of product temperature and vacuum according to the vapour pressure curve above ice.
- RS232 communication interface available as an option.

Equipped with 8 rubber valves for flasks and 3 unheated shelves (diameter 200 mm) for drying in dishes.

Required for operation: two-stage rotary vane vacuum pump with a suction capacity of min. 2 m³/h suction capacity, final vacuum approx. 5x10⁻³ mbar (e.g. type RZ 2.5, manufacturer VACUUBRAND).

Universal applicable accessories for almost all drying applications such as flasks, dishes, ampoules, injection bottles available.

Specifications

Total ice capacity:	2.5kg
Ice condenser temperature:	-55°C
Line voltage:	230V/50Hz
Dimensions (WxDxH):	315 x 460 x 345mm (basic unit)
Weight:	approx. 28kg

Type	PK	Cat. No.
ALPHA 1-2 LDplus Package	1	9.883 151
Rotary vane pumps RZ 2.5, 2 steps, 230V/50-60Hz	1	9.880 123



2 Laboratory Freeze Dryer Alpha 2-4 LDplus Package

NEW!

Christ

Large-capacity laboratory freeze dryer for routine applications in up to 8 flasks, due to low ice condenser temperature most suitable for drying of samples containing organic solvents (e. g. alcohols). With new user-friendly controller "Lyo Display LDplus".

- Graphic LC display with a clear layout showing the most important process data (ice condenser temperature, process time, section time and vacuum).
- Comfortable and self-explaining menu guidance in German, English or French language.
- Vacuum control for optimization and reduction of process time.
- Conversion of product temperature and vacuum according to the vapour pressure curve above ice.
- RS232 communication interface available as an option.

Equipped with stainless steel manifold for up to 8 flasks.

Required for operation: chemically resistant two-stage rotary vane vacuum pump with a suction capacity of min. 5m³/h suction capacity, final vacuum approx. 5x10⁻³mbar (e.g. type RC 6, manufacturer VACUUBRAND).

Specifications

Total ice capacity:	4kg
Ice condenser temperature:	-85°C
Line voltage:	230V/50Hz
Dimensions WxDxH:	390 x 555 x 415mm (basic unit)
Weight:	approx. 65kg

Type	PK	Cat. No.
ALPHA 2-4 LDplus Package	1	9.883 152
Chemistry Hybrid Pump RC 6 230V/50-60Hz, with plug CEE	1	9.882 235

1 Laboratory Freeze Dryer BETA 1-8 LDplus Package



Christ

Laboratory freeze dryer for routine drying processes of larger sample quantities. This complete package provides a universal system for drying in up to 12 flasks, alternatively in dishes on 5 unheated shelves. With new user-friendly controller "Lyo Display LDplus":

- Graphic LC display with a clear layout showing the most important process data (ice condenser temperature, process time, section time and vacuum).
- Comfortable and self-explaining menu guidance in German, English or French language.
- Vacuum control for optimization and reduction of process time.
- Conversion of product temperature and vacuum according to the vapour pressure curve above ice.
- RS232 communication interface available as an option.

Equipped with 12 rubber valves for flasks and 5 unheated shelves (diameter 265mm) for drying in dishes.

Required for operation: two-stage rotary vane vacuum pump with a suction capacity of min. 5m³/h suction capacity, final vacuum approx. 5x10⁻³mbar (e.g. type RZ 6, manufacturer VACUUBRAND).

Specifications

Total ice capacity: 8kg
 Ice condenser temperature: -55°C
 Line voltage: 230V/50Hz
 Dimensions WxDxH: 780 x 545 x 415mm (basic unit)
 Weight: approx. 63kg

Type	PK	Cat. No.
BETA 1-8 LDplus Package	1	9.883 153
Rotary vane pump RZ6, 2 steps, 230V/50-60Hz	1	9.880 124

1

