

HIRSCHMANN®



rotarus®

The high-class peristaltic pump

rotarus®

Continuous dispensing, intelligent control

The rotarus® peristaltic pump series sees Hirschmann taking the leap into the world of continuous dispensing pumps.

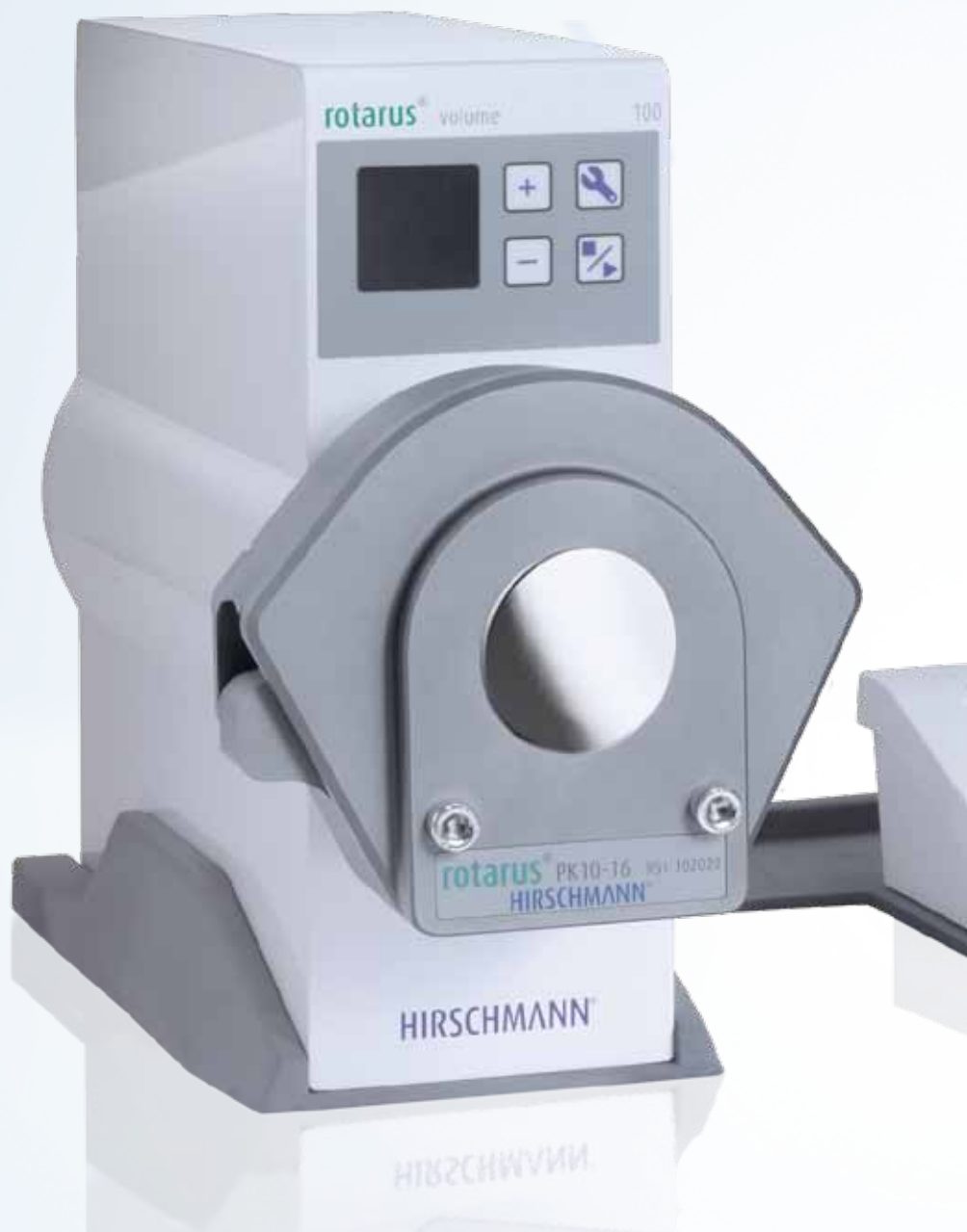
An universal planned product family is available with a selection of different motors, varying housing protection classes and intelligent control of delivery volumes, covering a broad spectrum of application areas in the lab or industry.

Hirschmann's liquid handling competence is also evident in the sophisticated functions and innovative details of rotarus®.

50 and 100 watt motors ensure precise delivery in speed ranges from 0.2 to 500 revolutions per minute. This means that media with a high viscosity can also be accurately dispensed. RFID technology is used to detect the pump head. Configuration data for basic parameters can also be stored in this manner and retrieved at any time. The rotarus® flow and volume models have automatic blockage detection and tube rupture monitoring.

Overview of details

- Rapid tool-free changing of pump heads
- Automatic pump head and tube detection with RFID technology (rotarus® flow and volume)
- Control panel located directly on pump housing
- External TFT touchscreen with user-friendly menu (standard feature on rotarus® flow and volume)
- Calibratable
- Operation with 24 V DC, outdoor use is also possible with appropriate accessories
- USB and RS232 interface for PC connection



Comfortable use and rapid handling

A control panel for the most important functions is integrated directly into the housing of all rotarus® models. In addition, rotarus® flow and volume are equipped with an external control unit with touchscreen.

The pump head connection technology guarantees rapid handling as a standard feature.

Changing is realised quickly and simply in a single action without using tools. The range encompasses a comprehensive selection of single and multichannel pump heads. Pump heads from other manufacturers can also be fitted without difficulty using an adapter.



flexible

Changeable pump heads, single and multichannel design

enduring

Continuous precise delivery with low to high flow rates

powerful

Two different motor variants for speed ranges from 0.2 to 500 revolutions per minute

foresighted

Integrated blockage detection and rupture monitoring (rotarus® flow and volume variants)

intelligent

Fully automatic pump head detection using RFID prevents confusion

interactive

USB and RS232 interface for PC connection

variable

The pump housing can also be attached to a stand or stacked

rapid

Pump heads can be changed with a single action

comfortable

The rotarus® flow and volume models are comprehensive, but can still be programmed easily via the table module

Precise media delivery

Three models, numerous applications

The new rotarus® series is being launched with three versions, each with a choice of two different motors and two unit designs.

An intelligent pump range which always provides the appropriate model for a variety of applications.



rotarus® standard

rotarus® standard is a powerful basic model. The cost-effective, precise delivery pump for small delivery volumes and high viscosities is ideal for flexible applications, thanks to the use of diverse pump heads and tubes. The control panel on the housing enables simple and rapid configuration of the most important parameters, and the speed can be programmed directly on the unit.

rotarus® flow

rotarus® flow is the comfortable delivery pump. With control options for velocity and flow speed, flow is particularly suitable for delivery tasks which require a particular delivery speed calibrated in flow rate (e.g. ml/min). Basic functions can be configured quickly and easily using the control panel on the housing. The external control module with a TFT touchscreen provides clear, self-explanatory menu guidance through further functions. Speed in the case of the rotarus® flow model can be configured directly on the unit. The flow rate is programmed on the table module.

As with all rotarus® pumps, pump heads on the rotarus® flow version can also be replaced quickly and simply with a single action. Use of RFID technology enhances user comfort and safety through automatic detection of the pump head and tube. The intelligent functions are supplemented by rupture monitoring and blockage detection on the tube. rotarus® flow also has a calibration function and method memory.

rotarus® volume

rotarus® volume, an extremely comfortable and accurate dispensing pump, has positioned itself right from the outset as the top model in the series. In addition to selection options for speed, flow rate, dispensing duration and total volume, rotarus® volume also has a range of other intelligent functions. Different pump methods with variable cycles and graduated speeds can also be accurately and reliably controlled. In common with the flow model, the control panel on the housing enables rapid and simple configuration of the basic functions.

The external control module with a TFT touchscreen provides clear, self-explanatory menu guidance through further functions.

As with all rotarus® pumps, pump heads on the volume version can also be replaced quickly and simply with a single action. Use of RFID technology enhances user comfort and safety through automatic detection of the pump head and tube.

The intelligent functions are supplemented by rupture monitoring and blockage detection on the tube. rotarus® volume also has a calibration function and method memory.



Intelligent range

Appropriate power for individual use

A choice of two different motors with 50 or 100 watt is available for pump drive. They ensure that the required power is provided to suit the application, flow rate and fluid.



Series 50

The Series 50 is a powerful precision pump drive for low flow rates or highly viscous media.

The speed of rotarus® Series 50 models can be set between 0.2 rpm and 100 rpm with a resolution of 0.1 rpm on the pump drive or the external control unit.

In addition, the achievable flow rates are determined by the pump head used and the selected tube size.

Series 100

The Series 100 is a rapid pump drive for high flow rates.

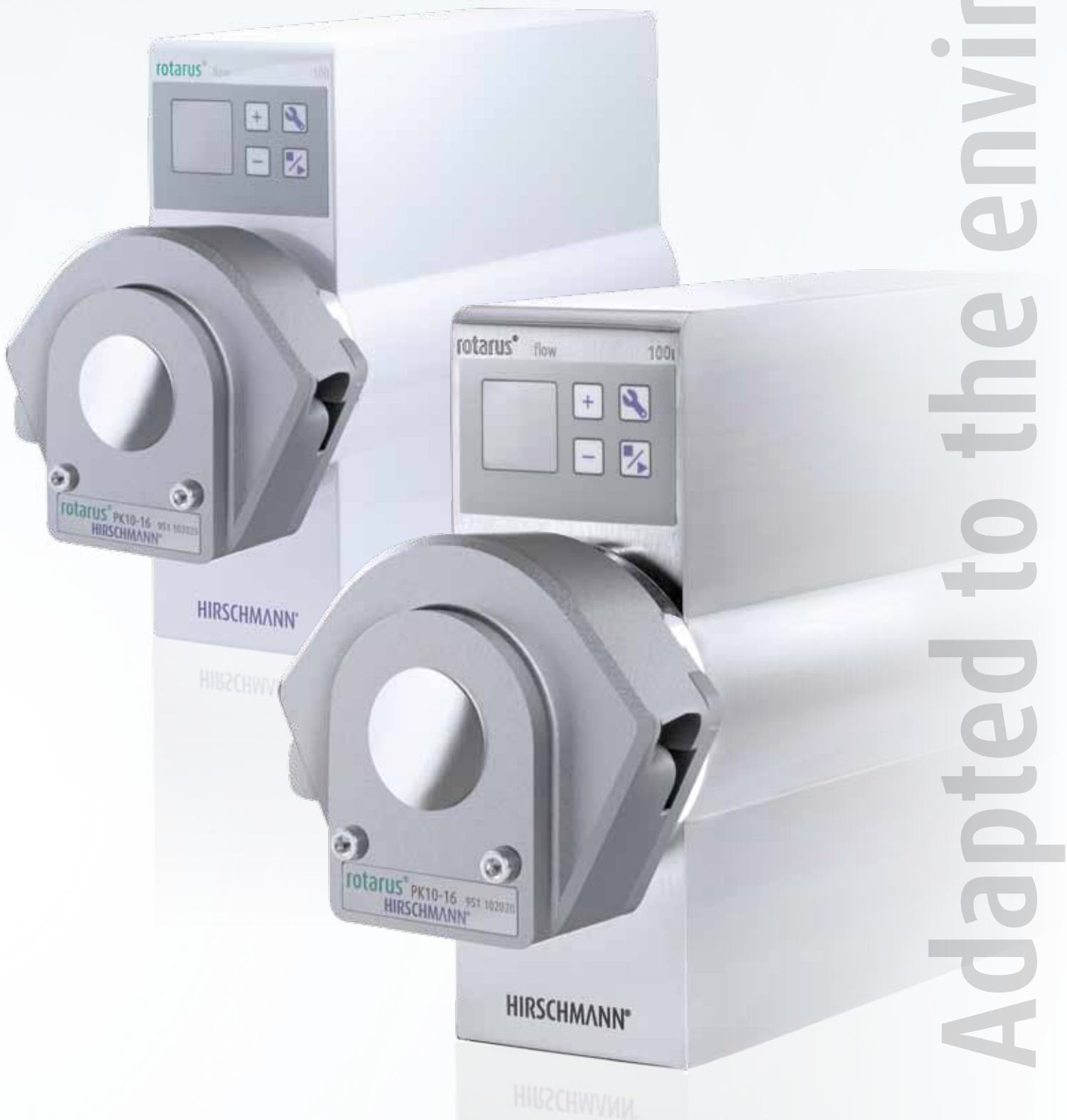
The speed of rotarus® Series 100 models can be set between 5 rpm and 500 rpm with a resolution of 0.1 rpm on the pump drive or the external control unit.

In addition, the achievable flow rates are determined by the pump head used and the selected tube size.

Housing and interior in perfect combination

Two housing versions with different protection classes are available for rotarus®. The housing with white powder coating conforms to protection class IP54 and is ideally suitable for use in the laboratory. The inox stainless steel design with protection class IP65 meets stricter environmental requirements and is the right choice for use in industrial applications in pharmaceutical, medicinal or food production.

Both housing versions have been developed to conform to the fundamental principles of Hirschmann design. Design and functionality also complement each other in rotarus® to produce units which, thanks to their low space requirement, can be easily integrated in an existing laboratory environment or production system, achieving convincing results during use with their sophisticated technology. The smooth housing surfaces can be cleaned without difficulty.



Adapted to the environment

Speedier change, more versatile functions

The rotarus® range encompasses a comprehensive selection of single and multichannel pump heads. The pump head connection technology was developed for rapid handling. Changing of heads is realised quickly and simply in a single action without using tools.

Pump heads from other manufacturers can also be fitted without difficulty using an adapter. rotarus® single channel pump heads are easily cascaded (i.e. they can be stacked in an assembly and operated on a single rotarus® pump).



PK 10-16



PK 10-24



MKF 4-8



MKF 8-4



Numerous versions

MKF 12-8

Specially developed accessory range for maximum adaptability



Stacking aid
For stacking 2 or more rotarus®.



Stand holder
The stand holder also facilitates use of rotarus® in a stand assembly.



Control unit holder
For placing the control module on the rotarus®.



Pedal switch - so you have both hands free.
An ingenious accessory range ensures that you have complete freedom of action. For example, you can start dispensing with the pedal switch and have both hands free for work on the laboratory table.



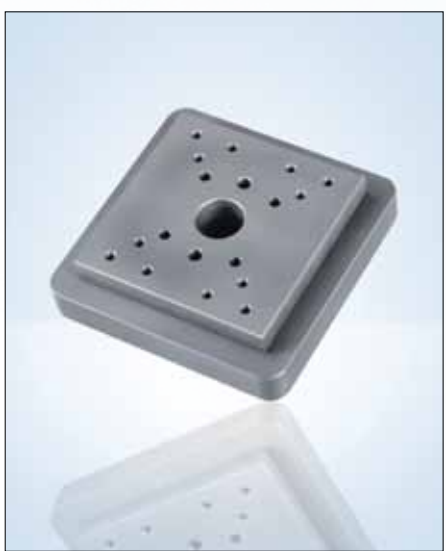
System platform
Non-slip depositing surface for rotarus® control unit, inclusive cable guide.



Mouse
For extremely sensitive medium dispensing.

Accessories for rotarus®	
Order number	Article designation
953 11 20	rotarus® pedal switch
953 11 21	rotarus® mouse
953 11 61	rotarus® system platform
953 11 62	rotarus® control unit holder
953 11 63	rotarus® stacking aid
953 11 70	rotarus® stand holder

Accessories for pump heads		
Order number	Article designation	Suitable for pump head
953 12 50	rotarus® adapter plate	for MASTERFLEX pump heads
953 12 51	rotarus® adapter plate	for ISMATEC pump heads

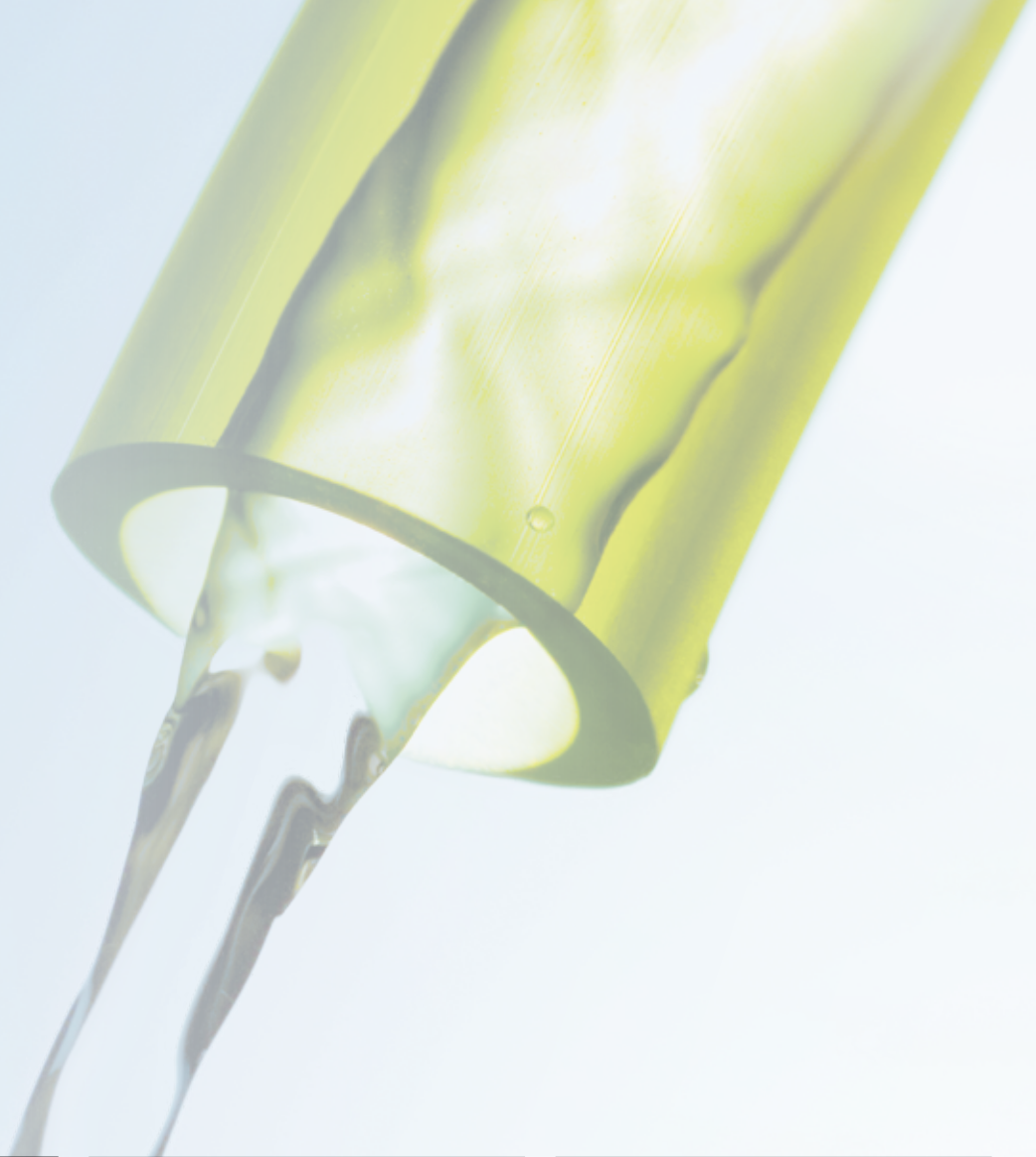


Adapter plate
For use with pump heads from other manufacturers.



Connection cable for the serial interface
Cable for linking units to the serial interface (9-pole) and USB interface of the PC.

Tubes



Tygon® R-3603/E-3603

Tygon® laboratory tube for general use in the lab and industry.

Properties:

highly transparent, temperature resistance from -54 to 74 °C, Shore hardness A 55, autoclavable, excellent chemical resistance to the majority of chemical, inorganic lab products, low particle detachment, due to extremely smooth inner wall, extreme flexibility.



Tygon® LFL

Tygon® Long Flex Life pump tube for general applications in the lab and industry and a long service life.

Properties:

highly transparent, temperature resistance from -54 to 74 °C, Shore hardness A 56, autoclavable, max. bending fatigue strength of all transparent Tygon® tubes, extremely low particle detachment, broad chemical resistance, long service life.



PharMed® BPT

Biocompatible tubes for sensitive pharmaceutical and biotechnological applications.

Properties:

beige-coloured, temperature resistance from -50 to 135 °C, Shore hardness A 64, autoclavable, good general chemical resistance, excellent resistance to acid, alkali and oxidation, impermeable to light and UV radiation.



Tygon® 2001

Ultra-pure tube free of softeners for applications in the food industry and aggressive media.

Properties:

transparent, temperature resistance from -78 to 57 °C, Shore hardness A 69, autoclavable, broad chemical resistance, free of softeners.



Norprene® Chemical

The tube for chemical applications.

Properties:

beige-coloured, temperature resistance from -60 to 74 °C, Shore hardness A 61, autoclavable, very high chemical resistance to acids, bases, salts, ketones, alcohols.



Tygon® 3350

Sanitary silicon tube.

Properties:

translucent, temperature resistance from -80 to 200 °C, Shore hardness A 50, platinum-cured silicon tube, ultra smooth inner wall, non-toxic, non-haemolytic, non-pyrogenic.



Silicon Peroxide

Silicon tube for industrial use.

Properties:

translucent, temperature resistance from -51 to 238 °C, Shore hardness A 55, autoclavable, silicon tube with organic peroxide, non-toxic, resistant to ozone and sunlight.

Constant flow



Tygon® F-4040-A

The tube for hydrocarbons and mineral oil products

Properties:

yellow transparent, temperature resistance from -40 to 75 °C, Shore hardness A 57, low gas permeability, ozone resistant.



Fluran® F-5500-A

The tube for extreme environmental conditions

Properties:

black, temperature resistance from -51 to 204 °C, Shore hardness A 60, high chemical resistance, resistant to ozone, sunlight and the weather, extremely tear resistant, high flexibility and elasticity.



Norprene® A-60-G

The tube for industrial applications.

Properties:

black, temperature resistance from -60 to 135°C, Shore hardness A 61, outstanding bending fatigue strength, good abrasion resistance, low gas permeability when compared to rubber tubes.



Tubes for rotarus®

Order number	Article designation	ID mm	wall thickness mm	Length m	PU per piece
952 10011	Tygon® E-3603	1.6	1.6	15	1
952 10012	Tygon® E-3603	2.4	1.6	15	1
952 10013	Tygon® E-3603	3.2	1.6	15	1
952 10014	Tygon® E-3603	4	1.6	15	1
952 10015	Tygon® E-3603	4.8	1.6	15	1
952 10016	Tygon® E-3603	6.4	1.6	15	1
952 10017	Tygon® E-3603	8	1.6	15	1
952 10018	Tygon® E-3603	9.6	1.6	15	1
952 10019	Tygon® E-3603	11.2	1.6	15	1
952 10035	Tygon® E-3603	4.8	2.4	15	1
952 10036	Tygon® E-3603	6.4	2.4	15	1
952 10037	Tygon® E-3603	8	2.4	15	1
952 10038	Tygon® E-3603	9.6	2.4	15	1
952 10039	Tygon® E-3603	11.2	2.4	15	1
952 10040	Tygon® E-3603	12.7	2.4	15	1
952 10041	Tygon® E-3603	15.9	2.4	15	1
952 12011	Tygon® LFL	1.6	1.6	7.5	1
952 12013	Tygon® LFL	3.2	1.6	7.5	1
952 12015	Tygon® LFL	4.8	1.6	7.5	1
952 12016	Tygon® LFL	6.4	1.6	7.5	1
952 12017	Tygon® LFL	8	1.6	7.5	1
952 13010	PharMed® BPT	0.8	1.6	7.5	1
952 13011	PharMed® BPT	1.6	1.6	7.5	1
952 13 012	PharMed® BPT	2.4	1.6	7.5	1
952 13013	PharMed® BPT	3.2	1.6	7.5	1
952 13015	PharMed® BPT	4.8	1.6	7.5	1
952 13016	PharMed® BPT	6.4	1.6	7.5	1
952 13017	PharMed® BPT	8	1.6	7.5	1
952 14011	Tygon® 2001	1.6	1.6	15	1
952 14013	Tygon® 2001	3.2	1.6	15	1
952 14015	Tygon® 2001	4.8	1.6	15	1
952 14016	Tygon® 2001	6.4	1.6	15	1
952 14017	Tygon® 2001	8	1.6	15	1
952 14018	Tygon® 2001	9.5	1.6	15	1
952 15013	Norprene® Chemical	3.2	1.6	15	1
952 15015	Norprene® Chemical	4.8	1.6	15	1
952 15016	Norprene® Chemical	6.4	1.6	15	1
952 15018	Norprene® Chemical	9.5	1.6	15	1

Tubes for rotarus®

Tubes for rotarus®

Order number	Article designation	ID mm	wall thickness mm	Length m	PU per piece
952 17011	Tygon® 3350	1.6	1.6	15	1
952 17012	Tygon® 3350	2.4	1.6	15	1
952 17013	Tygon® 3350	3.2	1.6	15	1
952 17015	Tygon® 3350	4.8	1.6	15	1
952 17016	Tygon® 3350	6.4	1.6	15	1
952 17017	Tygon® 3350	8	1.6	15	1
952 17018	Tygon® 3350	9.5	1.6	15	1
952 17019	Tygon® 3350	11.1	1.6	15	1
952 17035	Tygon® 3350	4.8	2.4	15	1
952 17036	Tygon® 3350	6.4	2.4	15	1
952 17037	Tygon® 3350	8	2.4	15	1
952 17038	Tygon® 3350	9.5	2.4	15	1
952 17039	Tygon® 3350	11.1	2.4	15	1
952 17040	Tygon® 3350	12.7	2.4	15	1
952 17041	Tygon® 3350	15.9	2.4	15	1
952 18011	Silicon Peroxide	1.6	1.6	15	1
952 18013	Silicon Peroxide	3.2	1.6	15	1
952 18015	Silicon Peroxide	4.8	1.6	15	1
952 18016	Silicon Peroxide	6.4	1.6	15	1
952 18017	Silicon Peroxide	8	1.6	15	1
952 18035	Silicon Peroxide	4.8	2.4	15	1
952 18036	Silicon Peroxide	6.4	2.4	15	1
952 19013	Tygon® F-4040-A	3.2	1.6	15	1
952 19015	Tygon® F-4040-A	4.8	1.6	15	1
952 19016	Tygon® F-4040-A	6.4	1.6	15	1
952 19017	Tygon® F-4040-A	8	1.6	15	1
952 20011	Fluran® F-5500-A	1.6	1.6	15	1
952 20013	Fluran® F-5500-A	3.2	1.6	15	1
952 20015	Fluran® F-5500-A	4.8	1.6	15	1
952 20016	Fluran® F-5500-A	6.4	1.6	15	1
952 20017	Fluran® F-5500-A	8	1.6	15	1
952 21011	Norprene® A-60-G	1.6	1.6	15	1
952 21013	Norprene® A-60-G	3.2	1.6	15	1
952 21015	Norprene® A-60-G	4.8	1.6	15	1
952 21016	Norprene® A-60-G	6.4	1.6	15	1
952 21017	Norprene® A-60-G	8	1.6	15	1
952 21018	Norprene® A-60-G	9.5	1.6	15	1
952 21019	Norprene® A-60-G	11.1	1.6	15	1
952 21035	Norprene® A-60-G	4.8	2.4	15	1
952 21036	Norprene® A-60-G	6.4	2.4	15	1
952 21037	Norprene® A-60-G	8	2.4	15	1
952 21038	Norprene® A-60-G	9.5	2.4	15	1



Stopper tubes

Order number	Article designation	ID mm	Colour code	Length m	PU per piece
952 11702	Tygon® R-3603 2 stopper 104	0,19	orange-red	381 mm	12
952 11703	Tygon® R-3603 2 stopper 104	0,25	orange-blue	381 mm	12
952 11710	Tygon® R-3603 2 stopper 104	0,89	orange-orange	381 mm	12
952 11717	Tygon® R-3603 2 stopper 104	1,42	yellow-yellow	381 mm	12
952 11722	Tygon® R-3603 2 stopper 104	2,06	violet-violet	381 mm	12
952 11725	Tygon® R-3603 2 stopper 104	2,79	violet-white	381 mm	12
952 13703	PharMed® BPT 2 stopper 104	0,25	orange-blue	381 mm	6
952 13710	PharMed® BPT 2 stopper 104	0,89	orange-orange	381 mm	6
952 13717	PharMed® BPT 2 stopper 104	1,42	yellow-yellow	381 mm	6
952 13722	PharMed® BPT 2 stopper 104	2,06	violet-violet	381 mm	6
952 13725	PharMed® BPT 2 stopper 104	2,79	violet-white	381 mm	6
952 17710	Tygon® 3350 2 stopper 104	0,89	orange-orange	381 mm	6
952 17717	Tygon® 3350 2 stopper 104	1,42	yellow-yellow	381 mm	6
952 17722	Tygon® 3350 2 stopper 104	2,06	violet-violet	381 mm	6
952 17725	Tygon® 3350 2 stopper 104	2,79	violet-white	381 mm	6
952 19703	Tygon® F-4040-A 2 stopper 104	0,25	orange-blue	381 mm	12
952 19710	Tygon® F-4040-A 2 stopper 104	0,89	orange-orange	381 mm	12
952 19717	Tygon® F-4040-A 2 stopper 104	1,42	yellow-yellow	381 mm	12
952 19722	Tygon® F-4040-A 2 stopper 104	2,06	violet-violet	381 mm	12
952 19725	Tygon® F-4040-A 2 stopper 104	2,79	violet-white	381 mm	12
952 20710	Fluran® F-5500-A 2 stopper 104	0,89	orange-orange	180 mm	12
952 20717	Fluran® F-5500-A 2 stopper 104	1,42	yellow-yellow	180 mm	12
952 20722	Fluran® F-5500-A 2 stopper 104	2,06	violet-violet	180 mm	12
952 20725	Fluran® F-5500-A 2 stopper 104	2,79	violet-white	180 mm	12



Tubes for rotarus®

Extension tubes

Order number	Article designation	ID mm	Length m	PU per piece
952 11502	Tygon® R-3603 extension tube	0.19	10	1
952 11503	Tygon® R-3603 extension tube	0.25	10	1
952 11510	Tygon® R-3603 extension tube	0.89	10	1
952 11517	Tygon® R-3603 extension tube	1.42	10	1
952 11522	Tygon® R-3603 extension tube	2.06	10	1
952 11525	Tygon® R-3603 extension tube	2.79	10	1
952 13503	PharMed® BPT extension tube	0.25	3	1
952 13510	PharMed® BPT extension tube	0.89	3	1
952 13517	PharMed® BPT extension tube	1.42	3	1
952 13522	PharMed® BPT extension tube	2.06	3	1
952 13525	PharMed® BPT extension tube	2.79	3	1
952 17510	Tygon® 3350 extension tube	0.89	10	1
952 17517	Tygon® 3350 extension tube	1.42	10	1
952 17522	Tygon® 3350 extension tube	2.06	10	1
952 17525	Tygon® 3350 extension tube	2.79	10	1
952 19503	Tygon® F-4040-A extension tube	0.25	3	1
952 19510	Tygon® F-4040-A extension tube	0.89	3	1
952 19517	Tygon® F-4040-A extension tube	1.42	3	1
952 19522	Tygon® F-4040-A extension tube	2.06	3	1
952 19525	Tygon® F-4040-A extension tube	2.79	3	1
952 20510	Fluran® F-5500-A extension tube	0.89	10	1
952 20517	Fluran® F-5500-A extension tube	1.42	10	1
952 20522	Fluran® F-5500-A extension tube	2.06	10	1
952 20525	Fluran® F-5500-A extension tube	2.79	10	1

Each tube contains an RFID transponder in which the technical data of the particular tube is recorded. This ensures that the tube concerned is recognized by the peristaltic pump or pump head of the rotarus® flow and volume.

rotarus® The high-class peristaltic pump

Ordering data		
Order number	Designation	Brief description
950 13 22	rotarus® standard 50	precise delivery pump for small delivery volumes and high viscosities, speed can be programmed directly on the unit
950 13 24	rotarus® standard 50i	precise delivery pump for small delivery volumes and high viscosities, speed can be programmed directly on the unit
950 13 42	rotarus® flow 50	precise delivery pump for small delivery volumes and high viscosities, speed and flow rate can be programmed directly via table module
950 13 44	rotarus® flow 50i	precise delivery pump for small delivery volumes and high viscosities, speed and flow rate can be programmed directly via table module
950 13 62	rotarus® volume 50	precise delivery pump for small delivery volumes and high viscosities, can be programmed very comfortably and comprehensively via table module
950 13 64	rotarus® volume 50i	precise delivery pump for small delivery volumes and high viscosities, can be programmed very comfortably and comprehensively via table module
950 15 22	rotarus® standard 100	rapid delivery pump for high flow rates, speed can be programmed on the unit
950 15 24	rotarus® standard 100i	rapid delivery pump for high flow rates, speed can be programmed on the unit
950 15 42	rotarus® flow 100	rapid delivery pump for high flow rates, speed and flow rate can be programmed via table module
950 15 44	rotarus® flow 100i	rapid delivery pump for high flow rates, speed and flow rate can be programmed via table module
950 15 62	rotarus® volume 100	rapid dispensing pump for high flow rates, can be programmed very comfortably and comprehensively via table module
950 15 64	rotarus® volume 100i	rapid dispensing pump for high flow rates, can be programmed very comfortably and comprehensively via table module

Scope of delivery
<ul style="list-style-type: none"> • rotarus® • external power-supply unit • junction cable for EU, UK, US • control unit when flow- or volume-model is ordered

rotarus® Pump heads

Ordering data				
Order number	Article designation	No. of channels	No. of rolls	Gear mechanism
951 102020	rotarus® PK 10-16, single-channel pump head for tubes with wall thickness 1.6 mm	1	3	-
951 102021	rotarus® PK 10-24, single-channel pump head for tubes with wall thickness 2.4 mm	1	3	-
951 108020	rotarus® MKF 4-8, multichannel pump head for stopper tubes	4	8	-
951 108021	rotarus® MKF 8-4, multichannel pump head for stopper tubes	8	4	-
951 108022	rotarus® MKF 12-8, multichannel pump head for stopper tubes	12	8	5:1

rotarus® high-class non stop

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