

APPLICATION

- For elimination of NH_3 from the sample of liquids intended for measurement of conductivity to 6.3 S.cm^{-1} and other parameters

The cation exchange filter is not a rated product pursuant to the Act No. 22/1997 Coll..

DESCRIPTION

The cation exchange filter is a cylindrical tank from transparent or non-transparent plastic material, which contains acid cation exchanger C100H+ or LEWATIT S100G1. If LEWATIT S100G1 is used as a filling (in case of the transparent design), the depletion of capacity of the ion exchanger is indicated with a change of its colour from light brown to red.

In the input screw-joint, a thermal fuse is located, in the body of which there is a hole sealed with material, which melts if the sample of the liquid exceeds the designed temperature. Then the sample flows out to the drain pipe.

TECHNICAL DATA

Operation position:	vertical
Type of operation:	continuous
Weight:	approx. 4.5 kg
Used materials:	
Tube of transparent filter	Plexiglas
Tube of non-transparent filter	polypropylene
Filter face + output terminal	polyoxymethylene
Mesh	Plexiglas + polyamide
Thermal fuse + weld-on cone	steel 1.4571
Filling of thermal fuse	ceresine 78/83
Sealing	silicone rubber
Body	steel class 11 painted with grey synthetic baking enamel

OPERATION CONDITIONS

The armatures are designed for the environment defined by the group of parameters and their severity grades IE34 pursuant to the standard ČSN EN 60 721-3-3 and the following operation conditions.

Surrounding temperature: +5 to 60 °C

Relative ambient humidity:
10 to 95 % with condensation, with upper limit of water content 29 g $\text{H}_2\text{O/kg}$ of dry air

Atmospheric pressure: 70 to 106 kPa

Level of vibrations only in class: 3M1

Operation (measured) liquid:

Supply water, boiler sediment concentrate, return concentrate etc. without mechanical impurities

Parameters of measured liquid:

overpressure max. 10 ... 30kPa
temperature max. 70°C

DESIGN OF CATION EXCHANGE FILTERS, TYPE 162 34

SPECIFICATIONS	ORDERING NUMBER			
	916	056	xxx	xxx
Cation exchange filter non-transparent with thermal fuse with filling C100H+			015	
Cation exchange filter transparent with thermal fuse with filling C100H+			115	
Cation exchange filter transparent with thermal fuse with filling LEWATIT S100G1				LW1

ORDERING

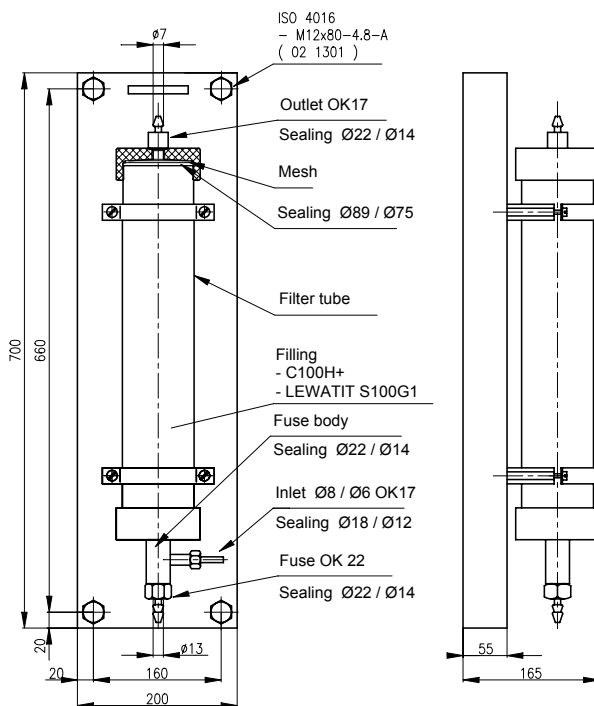
The purchase order shall specify:

- Name
- Product ordering number
- Other (special) requirements
- Number of pieces

PURCHASE ORDER EXAMPLE

Standard design:

1. Cation exchange filter with thermal fuse



DELIVERY

Unless agreed otherwise with the customer, each delivery includes

- Delivery note
- Products pursuant to the purchase order
- Two bottles with cation exchanger according to the design and safety data sheet of such filling
- Accompanying technical documentation in Czech:
 - o Product quality and completeness certificate, which also serves as the warranty certificate
 - o Product manual

If it is established in the purchase contract or agreed otherwise, the following documentation can be also delivered with the product:

- Copy of the Inspection Certificate 3.1 pursuant to ČSN EN 10204 for the material of the thermal fuse and weld-on cone with the casting number
- Declaration of Conformity with purchase order 2.1 according to ČSN EN 10204

916 056 115 - 20 pcs

2. Cation exchange filter with thermal fuse
916 056 115 LW1 - 20 pcs

DESIGNATION

Data on product

- Trademark of the manufacturer
- Made in Czech Republic
- Product ordering number
- Manufacturing number

Data on bottle with cation exchanger

- Type of cation exchanger
- Grading
- Capacity

PACKING

Both the products and accessories are delivered in a packing ensuring resistance to the impact of thermal effects and mechanical effects pursuant to controlled packing regulations.

TRANSPORT

The products may be transported on conditions corresponding to the set of combinations of classes IE 21 pursuant to ČSN EN 60721-3-2 (i.e. by airplanes and trucks, in premises that are ventilated and protected against atmospheric conditions).

STORAGE

The products may be stored on conditions corresponding to the set of combinations of classes IE 11 pursuant to ČSN EN 60721-3-1 (i.e. in places with uninterrupted temperature control from 5 to 40 °C and humidity from 5 to 85%, without a special threat of an attack with biological agents, with vibrations of small significance and not situated close to sources of dust and sand).

INSTALLATION AND CONNECTION

Before the connection of inlet of the cation exchange filter, unscrew the top face, remove the mesh and fill with the cation exchange filling.

COMMISSIONING

During the operation, the cation exchanger shall be under water continually.

OPERATION AND MAINTENANCE

Serviceability of the cation exchange filling is determined by the content of NH₃ in the sample.

CATION EXCHANGE FILTER WITH FILLING C100H+

Test the function of the cation exchange filter as follows: Enrich demineralized water with specific conductivity max. 1.2 μS.cm⁻¹ with 1% ammonia water till specific conductivity reaches the value of 10 μS.cm⁻¹ and let it flow through the cation exchange filter for about 30 minutes. After that period specific conductivity of water on the outlet from the filter may be max. 2 μS.cm⁻¹.

If the filter fails in this test, the cation exchanger shall be regenerated with 7% solution of HCl. The quantity of this solution is about 2.5- to 3-fold of the quantity of the cation exchanger; the period of operation is 40 to 60 minutes. In case of replacement, use the filling with ordering number 019442515 (2 bottles).

CATION EXCHANGE FILTER WITH FILLING LEWATIT S100G1

Depleting capacity of the filling is indicated with a change of colour from light brown to red. Regeneration of the filling is realized with 4 to 6% solution of HCl in quantity min. 3l, which flows once through the filling for the period of 30 to 40 minutes against the direction of sample flow. Follow-up flushing is realized with the use of approx. 10l of demineralized water for the period of approx. 30 minutes. In case of replacement, use the filling with ordering number 019506315 (2 bottles).

THERMAL FUSE

Ceresine 78/83 is used as filling in the thermal fuse. In case of a failure of the fuse, this filling (spare part 020006815) shall be replaced. The fuse filling is melted in case of flow of the sample 15l/hour within the range of temperatures 65 to 75°C (informative data).

PROCEDURE FOR REPLACEMENT OF THERMAL FUSE

Disconnect the waste tube from the body of the fuse and unscrew the fuse from the body of the fuse. Clamp an auxiliary mandrel into a cramp (rod 8 with a vertical face) and slide the fuse on this mandrel from the side of the waste outlet up to the inner recess. At first, insert the enclosed ring into the hole in the fuse and fill the space above the ring with tiny pieces of the replacement filling of ceresine. With the use of a solder, heat the external wall of the fuse so as to melt the ceresine; if required, add other pieces of ceresine till the whole space is filled up to the upper edge. After cooling down, remove the fuse from the auxiliary mandrel and install it back into the body of the fuse.

**WARNING**

Do not fill the fuse with melted ceresine in advance; such procedure does not ensure correct function of the fuse.

SPARE PARTS

SPECIFICATIONS	ORDERING NUMBER
Bottle with cation exchanger C 100H+ (approx. 1l)	019 442 515
Bottle with cation exchanger LEWATIT S 100G1 (approx. 1l)	019 506 315
Filling of fuse	020 006 815

To fill one cation exchange filter, 2 bottles with the applicable filling shall be ordered.

WARRANTY

Pursuant to § 429 of the Commercial Code and the provisions of § 620 (2) of the Civil Code, the manufacturer warrants for technical and operation parameters of the product specified in the manual. The warranty period is 24 months from the receiving of the product by the customer, unless established otherwise in the contract. The rejection of defects shall be enforced in writing at the manufacturer within the warranty period. The rejecting side shall identify the product name, ordering and manufacturing numbers, date of issue and number of the delivery note, clear description of the occurring defect and the subject of the claim. If the rejecting side is invited to send the device for repair, it shall do so in the original package of the manufacturer and/or in another package ensuring safe transport.

The warranty shall not apply to defects caused by unauthorized intervention into the device, its forced mechanical damage or failure to comply with operation conditions of the product and the product manual.

REPAIRS

The repairs shall be realized by the manufacturer. The devices shall be sent for repair in the original or equal package without accessories.

DISABLING AND LIQUIDATION

They shall be realized in compliance with the Waste Act No. 106/2005 Coll.

Both the product and its package do not include any parts that could impact the environment.

Products that are withdrawn from operation (including their packages) may be disposed of to sorted or unsorted waste pursuant to the type of waste.

Liquidation of the cation exchanger filling shall be realized pursuant to the applicable safety data sheet.

The package of the product can be recycled completely. Metal parts of the product are recycled, non-recyclable plastic materials shall be disposed of in compliance with the aforesaid Act.

April 2006

ZPA Nová Paka, a.s.



NOVÁ PAKA



ZPA Nová Paka, a. s.
Pražská 470
509 39 Nová Paka

tel.: spojovatel: 493 761 111
fax: 493 721 194
e-mail: obchod@zpanp.cz

www.zpanp.cz
bankovní spojení: ČSOB Trutnov
číslo účtu: 271 992 523/0300

IČO: 46 50 48 26
DIČ: CZ46504826