



MANN+HUMMEL Contact

Sales

Sina Braun
Sales Manager New Products
sina.braun@mann-hummel.com
Phone: +49 7141 98-3484

Engineering

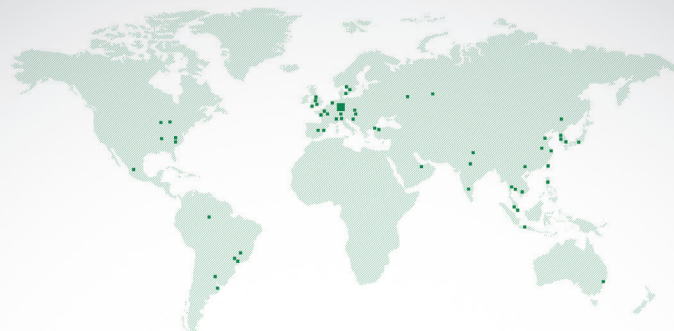
Dr. Simon Leininger
Development Ion Exchange Filter
simon.leininger@mann-hummel.com
Phone: +49 7141 98-2635

MANN+HUMMEL GmbH
Schwieberdinger Strasse 126
71636 Ludwigsburg
Germany

www.mann-hummel.com



Open the QR-code for more information about MANN+HUMMEL products for e-mobility and fuel cell applications.



MANN+HUMMEL Group

MANN+HUMMEL is the leading global expert for filtration solutions. The company group with its headquarters in Ludwigsburg, Germany, develops solutions for motor cars, industrial applications, clean air in interior spaces and the sustainable use of water. In 2019 the group achieved sales of approx. 4 billion euros worldwide with more than 20,000 employees at more than 80 locations. The products manufactured by the group include air cleaner systems, intake manifold systems, liquid filter systems, plastic components, filter media, cabin filters, industrial filters and membrane filters.

Further information about MANN+HUMMEL is available on our website.

**MANN+
HUMMEL**

www.mann-hummel.com

MANN+HUMMEL
IonFree
Ion exchange filter
for fuel cells



- ✓ Modular
- ✓ Easy service
- ✓ Universal

**MANN+
HUMMEL**

Leadership in Filtration

Over 12 years experience with
ion exchange filters

Functional Description

- **Protection against electrical shorts in the stack:**
IonFree keeps the conductivity of cooling liquid in fuel cells low through ion exchange technology
- **Optimum protection:** high quality ion exchange resin regarding capacity and purity
- **Easy to adapt:** different sizes, mounting positions, stud angles and stud types allow easy fit in almost every installation space
- **Clean and easy service:** no loss of high quality coolant as only the cartridge needs to be replaced

Large variety of possibilities for you to configure our modular kit to fit your specific application.

MANN+HUMMEL memberships and partnerships in e-mobility and fuel cells:

Hydrogen Council

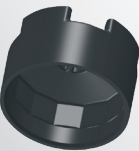


elektromobilität
süd-west

brennstoffzelle
BW

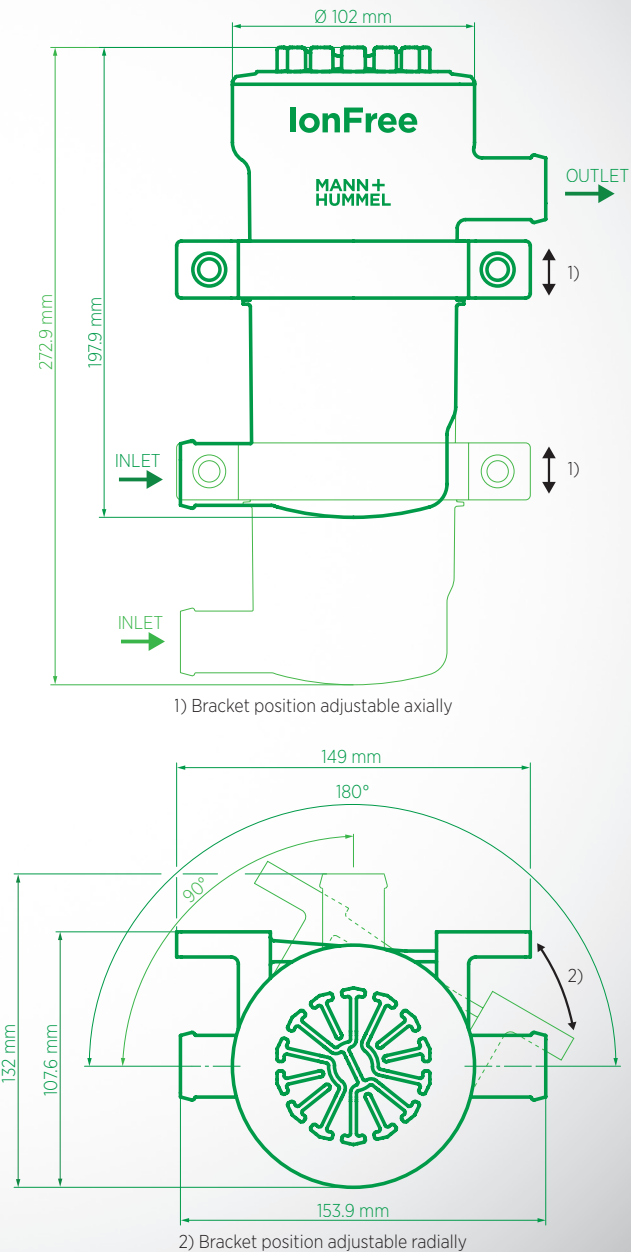
VDMA
Brennstoffzellen

FVV

Technical specification
of the IonFree

	Medium capacity	High capacity
Capacity (cation + anion)	820 meq	1,190 meq
Amount of brackets	1	2
Flow direction	Bottom up	
Mounting orientation	Vertical	
Connector	DIN 3021-A 26 or VDA coupling DN 20	
Ion exchange resin	1:1 mixed bed of anion and cation resin in OH ⁻ / H ⁺ form	
Max. pressure (absolute)	4 bar	
Operating temperature	-40 °C to +90 °C	
Electrical conductivity	< 5 µS/cm	
Calculated pressure loss (@ 10 l/min, 90 °C)	250 mbar	370 mbar
Optional feature	Different inlet nozzles to adjust the flow rate through the IonFree	
Cartridge spare part order number	ION 7001	ION 7002
<div><div></div><div></div><div></div></div> <div>Replaceable with a 64 mm 14 flutes wrench</div>		

Dimensions
of the IonFree



Matrix codes
for the IonFree modular kit

CAPACITY			MATRIX CODE			
	Passenger car	Heavy duty	Capacity			
Medium	820 meq	-	1	↓		
High	-	1,190 meq	2			
STUD TYPE			Stud type			
	Passenger car	Heavy duty	Stud type			
DIN 3021-A 26	✓	✓	1	↓		
VDA DN 20	✓	✓	2			
STUD ANGLE			Stud angle			
	Passenger car	Heavy duty	Stud angle			
180 degree	✓	✓	1	↓		
90 degree	✓	✓	2			
YOUR IONFREE MATRIX CODE						
Example: Ion exchange filter for heavy duty applications with high capacity, VDA DN 20 stud and 180 degree angle.			IF		2	2
Your IonFree matrix code			IF			

