

## Filter / Carrier HC2A advanced probes

### DESCRIPTION

Filter carriers protect the humidity and temperature sensors against mechanical damage. Filters act as a protective barrier against contaminants/pollutants that can influence the sensor. When choosing the correct combination of filter carrier and filter there are many factors to consider. Specific conditions such as high air velocities, pollutants in the air, disinfection and cleaning routines, mechanical impacts, high bioactivity, condensation, airborne chemical contaminants and required response time are some of the many considerations.

Plastic filter carrier	Metal filter carrier
<ul style="list-style-type: none"> <li>Maximum temperature 100 °C</li> <li>Mechanical protection</li> </ul>	<ul style="list-style-type: none"> <li>Maximum temperature 200 °C</li> <li>Mechanical protection</li> </ul>
	

Overview filters				
	Teflon filters	Polyethylene filters	Sintered steel filters (stainless steel)	Wire mesh filters (metal)
Maximum temperature (consider range of application of filter carrier)	200 °C	100 °C	200 °C	200 °C
Protection against particulates	✓✓	✓✓	✓	✓
Protection against abrasives in the air			✓✓✓	✓
Pore size	10 µm	40 µm	25 µm	10 µm
Max. air velocity [m/s] (continuous load)	50	50	70	50


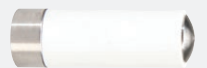

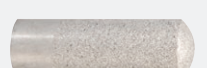

✓ = low      ✓✓ = medium      ✓✓✓ = high

Overview probes													
Range of application (temp.)		-50...100 °C						-40...85°C	-100...200°C				
Probe		HC2A-S	HC2A-S3	HC2A-SH	HC2A-S3H	HC2A-S-HH	HC2A-SM	XD33A-S3X	HC2A-ICxxx	HC2A-ICxxx-A	HC2A-IMxxx-M	HC2A-IExxx	
Filters & carriers	-50...100 °C			✓				✓					
				✓				✓					
	-100...200°C			✓			✓	✓		✓			
				✓				✓					
				✓				✓					
				✓				✓					
	-50...100 °C			✓				✓					
				✓				✓					
				✓				✓					
				✓			✓	✓					
				✓			✓	✓					
	-100...200°C			✓			✓	✓		✓			
				✓			✓	✓		✓			
				✓			✓	✓		✓			
				✓			✓	✓		✓			




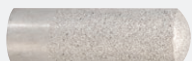

## HC2A-S / HC2A-S3 / HC2A-SH / HC2A-S3H / HC2A-S-HH / HC2A-SM

Order code	Filter carrier	Filter element	Pore size	Range of application	
SPA-PCB	Polycarbonate, black	No filter, only filter carrier		-50...100 °C	
SPA-PCB-PE		Polyethylene, white	40-50 µm		
SPA-PCB-PTFE		PTFE, white	10 µm		
SPA-PCB-WM		Wire mesh 1.4401	10 µm		
SPA-PCW	Polycarbonate, white	No filter, only filter carrier		-50...100 °C	
SPA-PCW-PE		Polyethylene, white	40-50 µm		
SPA-PCW-PTFE		PTFE, white	10 µm		
SPA-PCW-WM		Wire mesh 1.4401	10 µm		
SPA-PE	No filter carrier, only filter	Polyethylene, white	40-50 µm	-100...200 °C	
SPA-PTFE	No filter carrier, only filter	PTFE, white	10 µm		
Particulate filter / Waterproof					
SPA-POM-FD2	POM white	Teflon	2 µm	-50...100 °C	
SPA-PE-FD2	POM white	Polyethylene	2 µm		

## HC2A-IC / HC2A-IM / HC2A-IE

Order code	Filter carrier	Filter element	Pore size	Range of application	
SPA-SS	1.4301	No filter, only filter carrier		-100...200 °C	
SPA-SS-PTFE		PTFE, white	10 µm		
SPA-SS-WM		Wire mesh 1.4401	10 µm		
SPA-SSS	Filter carrier incl. filter	Sintered steel 1.4404	25 µm		
SPA-WM	No filter carrier, only filter	Wire mesh 1.4401	10 µm		

## HC2A-SM

Order code	Filter carrier	Filter element	Pore size	Range of application	
SPA-SS	1.4301	No filter, only filter carrier		-50...100 °C	
SPA-SS-PTFE		PTFE, white	10 µm		
SPA-SS-WM		Wire mesh 1.4401	10 µm		
SPA-SSS	Filter carrier incl. filter	Sintered steel 1.4404	25 µm	-100...200 °C	
SPA-WM	No filter carrier, only filter	Wire mesh 1.4401	10 µm		

**Note**

The range of application depends on the component with the smallest temperature range.

## Filter / Carrier HC2 probes

### DESCRIPTION






Filter carriers protect the humidity and temperature sensors against mechanical damage. Filters act as a protective barrier against contaminants/pollutants that can influence the sensor. When choosing the correct combination of filter carrier and filter there are many factors to consider. Specific conditions such as high air velocities, pollutants in the air, disinfection and cleaning routines, mechanical impacts, high bioactivity, condensation, airborne chemical contaminants and required response time are some of the many considerations.

Plastic filter carrier	Metal filter carrier
<ul style="list-style-type: none"> <li>Maximum temperature 120 °C</li> <li>Mechanical protection</li> </ul>	<ul style="list-style-type: none"> <li>Maximum temperature 200 °C</li> <li>Mechanical protection</li> </ul>
	

Overview filters						
	Teflon filters	Polyethylene filters	MFD filters (membrane)	Polypropylene filters (screen)	Sintered steel filters (stainless steel)	Wire mesh filters (metal)
Maximum temperature (consider range of application of filter carrier)	200 °C	100 °C	120 °C	120 °C	200 °C	200 °C
Protection against particulates	✓✓	✓✓	✓		✓	✓
Protection against abrasives in the air					✓✓✓	✓
Fast response time (low damping)			✓	✓✓		
Pore size	10 µm	40 µm	-	150 µm	25 µm	10 µm
Max. air velocity [m/s] (continuous load)	50	50	15	10	70	50


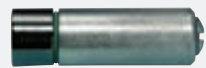


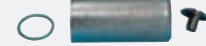

✓ = low      ✓✓ = medium      ✓✓✓ = high

Suitable for standard probes HC2-S / HC2-S3 / Thread: Rotronic round thread

Order code	Filter carrier	Filter element	Pore size	Range of application	
NSP-PCB-PE	Polycarbonate, black	Polyethylene, gray	20 μm	-50...100 °C	
NSP-PCB-PE40		Polyethylene, white	40 μm		
NSP-PCB-WM		Wire mesh	20...25 μm		
NSP-PCB-TF		Teflon	10 μm		
NSP-PCB-MFD		MFD	–		
NSP-PCB-PP100		Polypropylene	150 μm		
NSP-PCB		No filter element, only carrier			
NSP-PCW-PE		Polycarbonate, white	Polyethylene, gray	20 μm	-50...100 °C
NSP-PCW-PE40	Polyethylene, white		40 μm		
NSP-PCW-WM	Wire mesh		20...25 μm		
NSP-PCW-TF	Teflon		10 μm		
NSP-PCW	No filter element, only carrier				
NSP-PE	No carrier, only filter		20 μm	-50...100 °C	
Particulate filter / Waterproof					
NSP-POM-FD2	POM, white	Teflon	2 μm	-50...100 °C	


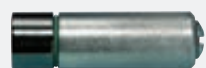



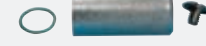

## Suitable for industrial probes HC2-IC / HC2-HK

Thread: Rotronic round thread


Order code	Filter carrier	Filter element	Pore size	Range of application	
NSP-ME-WM	Brass, nickel-plated	Wire mesh DIN 1.4401	20...25 µm	-100...200 °C	
NSP-ME-SS		Sintered steel DIN 1.4401	5 µm	-100...200 °C	
NSP-ME-TF		Teflon	10 µm	-80...200 °C	
Spare parts					
SP-M15	No filter carrier, only filter	Wire mesh DIN 1.4401	20...25 µm	-100...200 °C	
SP-S15	No filter carrier, only filter	Sintered steel DIN 1.4401	5 µm	-100...200 °C	
SP-T15	No filter carrier, only filter	Teflon	10 µm	-80...200 °C	

## Suitable for industrial probes HC2-IM / HC2-IE


Thread: M12 x 1.5

Order code	Filter carrier	Filter element	Pore size	Range of application	
SP-MC15	Brass, nickel-plated	Wire mesh DIN 1.4401	20...25 µm	-100...200 °C	
SP-SC15		Sintered steel DIN 1.4401	5 µm	-100...200 °C	
SP-TC15		Teflon	10 µm	-80...200 °C	
Spare parts					
SP-MSB15	Brass, nickel-plated	No filter element, only carrier		-100...200 °C	
SP-M15	No filter carrier, only filter	Wire mesh DIN 1.4401	20...25 µm	-100...200 °C	
SP-S15	No filter carrier, only filter	Sintered steel DIN 1.4401	5 µm	-100...200 °C	
SP-T15	No filter carrier, only filter	Teflon	10 µm	-80...200 °C	


## Suitable for handheld probes HC2-HP28/HP50

Order code	Filter carrier	Filter element	Pore size	Range of application	
ET-Z10	No filter carrier, only filter	Sintered steel DIN 1.4401	15 µm	-40...85 °C	

## Suitable for HF3 type R &amp; S

Order code	Filter carrier	Filter element	Pore size	Range of application	
NSP-PCG-PE	Polycarbonate, gray	Polyethylene, gray	20 µm	-40...85 °C	

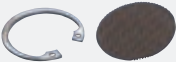
## Suitable for HF3 type D &amp; W

Order code	Filter carrier	Filter element	Pore size	Range of application	
SPA-PCW-PE	Polycarbonate, white	Polyethylene, white	40-50 µm	-50...100 °C	

## Suitable for MP100A/400A

Order code	Filter carrier	Filter element	Pore size	Range of application	
SP-W3-25	Polycarbonate, white	Wire mesh	20 µm	-40...85 °C	

## Suitable for web and water activity probes AwEasy, HC2A-AW-USB, HC2A-AW, HC2-AW-USB, HC2-AW

Order code	Description	
ET-W24-Set	Flat wire mesh filter with circlip, Ø 24 mm for HC2-AW (-USB) Pore size: 20...25 µm	

## Suitable for HF1, CP11, CL11

Order code	Description	
NSP-PCB-PE-AZ	Polycarbonate filter for HF1, CP11, CL11, CF1	