

# Hepatex CR-WS

## High-efficiency Protection



CLEAN  
AIR



POWER  
GENERATION



CLEAN  
ROOM



INDUSTRIAL

**Hepatex CR-WS filters are high-efficiency submicron particulate air filters designed to protect people, equipment and processes from airborne particulate contamination.**

Hepatex CR-WS filters are used in situations requiring high levels of air purity. They are primarily designed as intake filters for low turbulence displacement (or laminar flow) clean room ceilings and clean workbenches.

Typical applications can be found in medical, chemistry, pharmacy, microbiology, hospital, laboratories and the food industry.

Hepatex CR-WS filters offer high efficiencies and are designed for a wide range of different “clean” air applications. CR-WS filters are suitable for the highest clean room requirements up to class 1 (ISO 16 644-1) and for class A sterile pharmaceutical zones.

### KEY FACTS

- Optimised velocity distribution:  
For stable air flow and a long service life
- Scan test certificates available:  
For assured performance
- Solid wood frame: Provides rigidity and strength
- Mechanically stable:  
For optimum performance
- Optional face guards available:  
For media protection from harmful particles
- Low pressure drop: Reduces energy consumption and operating costs



# Hepatex CR-WS Construction

## CONSTRUCTION

A filter medium constructed from various grades of micro glass fibre paper is folded into a pack designed with the optimum pleat height and density for the specific operating conditions. Hotmelt or continuous thread separators support the individual pleats and impart great stability to the whole pack. The pack is entirely sealed into the frame.

## PRE-FILTRATION

The service life of Hepatex CR-WS filters can be prolonged by efficient pre-filtration for which we would recommend the higher grades of the Compatex FP filter range.

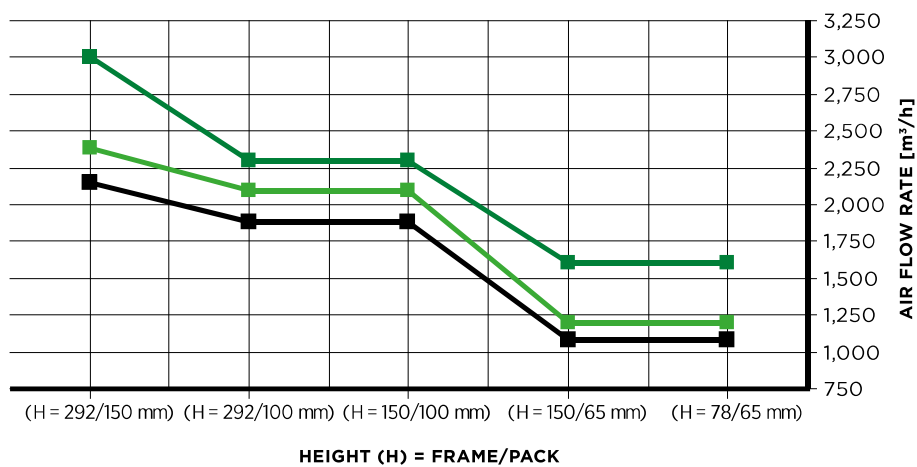
## QUALITY POLICY

At MANN+HUMMEL we are committed to the design and production of filter equipment which is fit for its stated purpose, is of the highest quality, consistent in its performance and offers safety and reliability.

This is achieved by operating and maintaining a comprehensive quality control system based on ISO 9001. MANN+HUMMEL concentrates on the quality assurance of the filter medium, production process and finished filter element. Hepatex CR-WS filters are manufactured and tested in accordance with an established and audited procedure.

## FILTER SELECTION DIAGRAM

Maximum Air Flow Rate for CR-WS-610x610 mm @ 250 Pa.



# Hepatex CR-WS

## Technical Data

Filtration Efficiencies	Units	E11	E12	H13	H14
EN 1822 Integral Value (typ. for CR) <sup>1)</sup>	%	97	99.8	99.98	99.998
with MPPS-DEHS-aerosol (min.) <sup>1)</sup>	%	≥ 95	≥ 99.5	≥ 99.95	≥ 99.995
EN 1822, MPPS-DEHS, local value 1)	%	-	≥ 97.5	≥ 99.75	≥ 99.975
Filter Class to EN 1822	-	E11	E12	H13	H14

### Specifications

Filter Frame	Wooden construction – 46, 54, 69, 75, 78, 150, 292 mm deep <sup>4)</sup>
Filter Medium	Water repellent micro-glass-fibre paper, pleated in a regular V-pattern
Face Guards	Optional on both sides of the pleat pack, expanded sheet steel, powder coated in white (RAL 9010)
Sealing Compound	Fire-resistant, white two-component polyurethane
Gasket	Various options available
Maximum Operating Temperature	70 °C
Fire Classification	K2/F2 to DIN 53438

Maximum air flow rates for CR-WS-610 x 610 mm @ 250 Pa					Standard External Dimensions (mm) <sup>4)</sup>		Weight inc. frame (kg)
Height (mm)		Air Flow Rate (m <sup>3</sup> /h)			Length	Width	
Frame	Pack	E12	H13	H14			
78	65	1,600	1,200	1,080	305	305	2.0
150	65	1,600	1,200	1,080	457	457	3.4
150	100	2,300	2,095	1,885	557	557	4.2
292	100	2,300	2,095	1,885	610	305	3.3
292	150	3,000	2,385	2,150	610	610	4.9
Differential pressure (Pa) <sup>2) 3)</sup>		250	250	250	1,220	610	8.2

Important note: E10 and E11 available upon request in pack height 65, 100 and 150 mm.

1) DEHS = DiEthylHexylSebacat

MPPS = Most Penetrating Particle Size

2) Tolerance: ± 10%

3) Maximum final pressure drop: ≤ 600 Pa

4) Other dimensions available upon request

### SUMMARY

Hepatex CR-WS ultra filters consist of a multi-layer wood or a MDF frame with a high-quality glass fibre paper medium folded into a 'V' formation. Hotmelt or optional textile thread spacers provide exceptional stability and the filter pack is secured in place with a two-component polyurethane sealant. PU foamed, flat or U profile gasket types are available, and one or two-sided face guards are offered as an option to protect the filter media and provide additional stability.