Anti-Scatter Grids

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SIEMENS Healthineers

Features and benefits

Siemens Healthineers Anti-Scatter Grids

Product description
Anti-scatter grids are used in front the image reception area of diagnostic or interventional X-ray systems in order to reduce the incidence of scattered radiation upon that area and thus increase the contrast in the X-ray pattern.

Designed for clinical precision, Siemens Healthineers grids combine excellent contrast and resolution with uniform image homogeneity, enabling high-quality diagnostic results at low dose levels.

A specially developed fiber material improves efficiency and supports dose reduction in comparison to traditional aluminum grids.

We offer a wide variety of grid types for different applications from radiography, fluoroscopy and mammography to angiography.

- Siemens Healthineers interspacing fiber material
- Designed for a significant improvement of the dose yield compared to aluminum/lead
- High variety of different line rates up to 80 lp/cm suitable to your requirements
- Cover material can be CFRP or aluminum
- Customized versions available for your needs

Physical characteristics

The definitions are given according to IEC 60627:2013.

- Transmission of primary radiation: T_p
- Transmission of scattered radiation: T_s
- Transmission of total radiation: T_t
- Max. deviation between central line indication and the true central line: Δ
- Grid selectivity: $\Sigma = \frac{T_p}{T_s}$
- Contrast improvement ratio: $K = \frac{T_p}{T_t}$
- Grid exposure factor: $B = \frac{1}{T_t}$
- Image improvement factor: $Q = \frac{T_p^2}{T_t}$

All values are measured according to IEC 60627:2013.

Grid type	5/31 CFRP-Cover	8/40 CFRP-Cover	13/40 Al-Cover	17/70 Al-Cover	17/70 CFRP-Cover	15/80 Al-Cover	15/80 CFRP-Cover
Application	**Grid for mammo-graphy[1]**	**Grids for general purpose[2]**					
Tp [%]	75.47	67.10	62.87	66.38	68.34	73.05	76.26
∑	4.17	5.45	10.41	9.12	9.27	5.38	5.49
K	1.48	3.05	3.88	3.75	3.78	3.01	3.06
B	1.96	4.54	6.17	5.63	5.53	4.13	4.01
Q	1.12	2.04	2.44	2.49	2.58	2.20	2.33
Δ [mm]	4	5	5	4	4	4	4

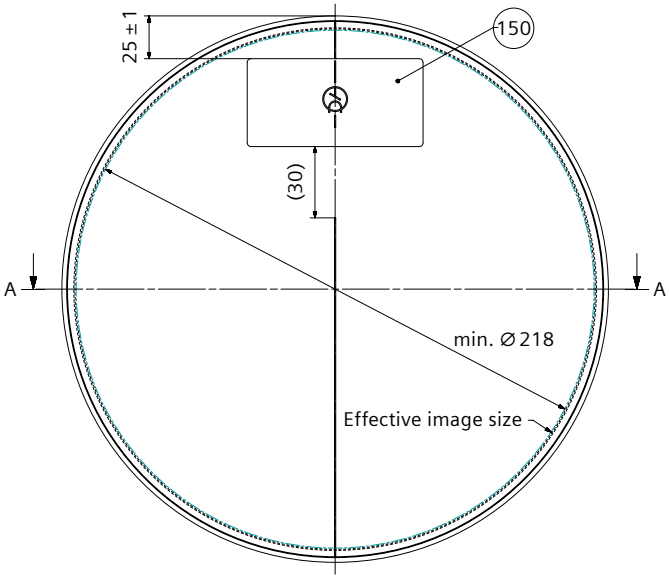
Environmental specification

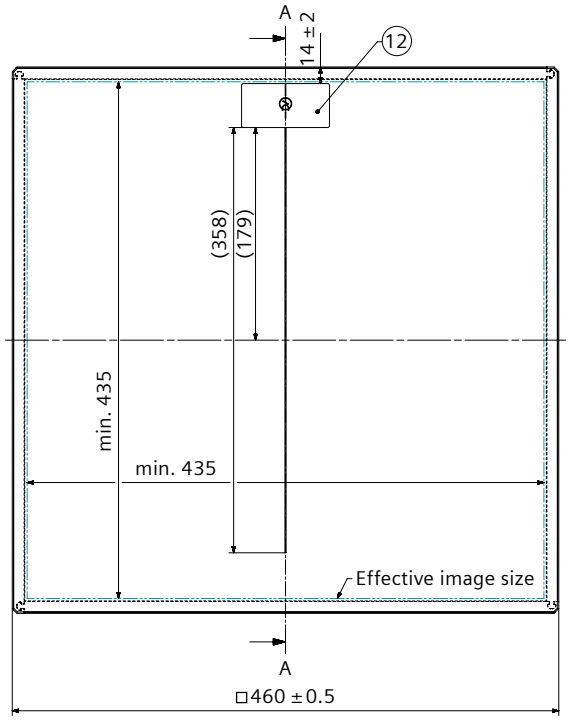
	Transport conditions	Operating conditions
Temperature	0 °C to + 50 °C	+ 10 °C to + 45 °C
Relative air humidity	10% to 95% (not condensing)	20% to 75% (not condensing)
Air pressure	700 hPA to 1060 hPa	700 hPa to 1060 hPa

[1] *Performed with 28 kV*
[2] *Performed with 80 kV*

Dimensions

In our portfolio, we have a variety of different grids with different shapes and dimensions.
The following dimensional drawing shows an example.





Types and material numbers

Customized grids to meet your needs. We offer a wide range of different types of grids tailored for each application with different angles, rotations (prevent moiré-effect), attachments such as handles and rails. Here are a few examples from our portfolio.

Type	Material Number	Focusing distance
Grid 15/80	3837379	Variety of different focus
Grid 8/40	4933727	Variety of different focus
Grid 13/40	11345044	Variety of different focus
Grid 17/70	8080996	Variety of different focus
Grid 5/31	8404274	Variety of different focus

This document is not considered to be a contractual specification. Kindly contact Siemens Healthineers prior to using this information for equipment design.

These components and configurations are not finished medical devices. Compliance with all laws and regulations that are applicable to finished medical devices is the responsibility of the assembler/ manufacturer of the finished medical device.

The information in this document contains general descriptions of the technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.

This component does not contain any substances that exceed the limitations defined in the Directive 2011/65/EU, Annex II, on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

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This document shall not be made available to healthcare professionals or to the general public.

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