

Surface Finish

HC4 Diaphragm Valves

End users in the clean industries, such as pharmaceuticals and biotechnology, demand a significant amount of variation in their requirements for the surface finish of stainless steel valves used in aseptic process plants. For internal valve surfaces, however, the main aim is to specify a surface finish that:

- Minimizes product adhesion to the interior surface of the valve
- Is readily cleanable by CIP in the minimum of time
- Is defect free and consistent across the valve surface

The external profile of the valve should be designed with the minimum of protuberances and crevices. Valve bodies tend to be polished externally to match the surface finish of the adjoining pipework and contoured to facilitate external washdown.

Saunders HC4 range has been continuously developed to meet the above design criteria and our surface finish options specifically meet customers' system requirements. Our aim is to provide a solution of the highest integrity for a given application.

Saunders' standard surface finish options are detailed in the following table:

Surface Finish				
ASME BPE Code	Saunders Finish Code	Ra (Max)	Mechanical Polish	Electro-Polish
SFV1	7	20	Yes	No
SFV2	5	25	Yes	No
SFV3	3	30	Yes	No
SFV4	8	15	Yes	Yes
SFV5	2	20	Yes	Yes
SFV6	6	25	Yes	Yes
SFV7	1	10	Yes	Yes

Standard Surface Finish Options

The Ra value is measured in micro inches and is defined as the average value of the departures from its center line through a prescribed sampling length.

Conversion - micro meters to micro inches

1 micro meter = 39.3701 micro inch

1 micro inch = 0.0254 micro meter

Note: Ra values are based on measurements taken on the internal bore of the end connections.

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