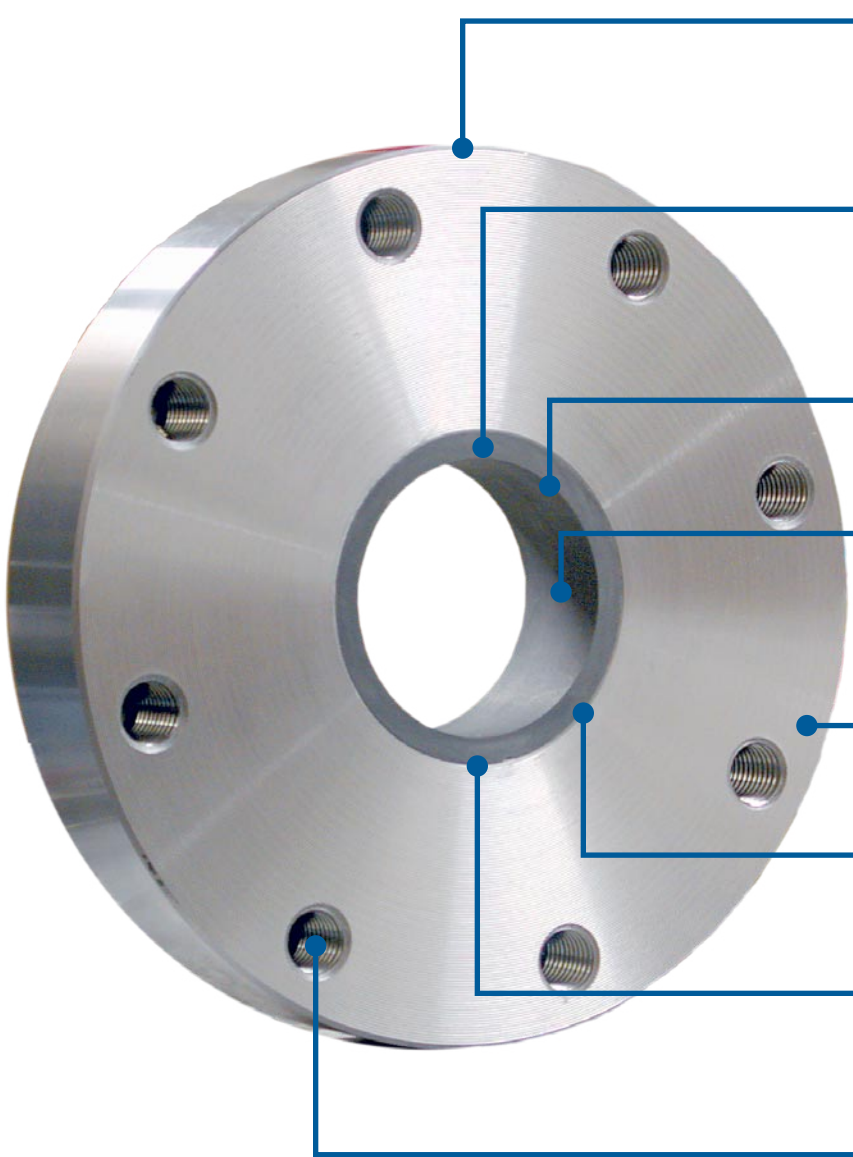


# Ceramic-Lined Flange Adapters

*Ceresist flange adapters are very versatile and extremely cost-effective wear-preventative items. Heavy wall thickness ceramics are installed to prevent virtually any type of wear caused by ID mis-matching, yet are able to survive in the most aggressive services.*



## Engineer's Review

Our engineers review every application, cross-reference the process with our installation history and corrosion/wear charts, and will only recommend a ceramic material that is both cost-effective yet will yield years of trouble-free service.

## Technical Ceramics

Ceresist flange adapters are available with 99.5% or 99.8% purity alumina or sintered silicon carbide ceramics. All of these ceramics are extremely corrosion and wear resistant materials, and their preference is based upon the severity of the process.

## Custom ID

Flange adapter ceramics are custom-cut and machined in-house to provide our customers with a perfectly tailored transition for their service.

## Seamless Interior

All flange adapters, straight pipe spools, and reducers are manufactured out of a single-piece, heavy wall thickness ceramic tube, and not by fitted ceramic tiles. This prevents media from attacking and eroding tile epoxies, which would otherwise cause the adapter to fail prematurely.

## Exterior Protection

Carbon steel fittings are sandblasted, degreased, and coated with a corrosion and abrasion resistant finish for added protection and longevity in harsh environments.

## Minimal Transition

The ceramic OD and flange ID are tightly toleranced to minimize gaps and to keep epoxy exposure to an absolute minimum.

## Perfect Matching

Our innovative manufacturing methods ensure a smooth, perfectly matched and level sealing surface without any length difference between the flange face and the ceramic lining, assuring zero leak-by.

## ASME Conformance

All flanged fittings meet or exceed ASME B16.5 requirements for pressure-temperature ratings, materials, dimensions, tolerances, marking, and testing.

## Applications



### Valve Damage Due to Worn Piping

*If lined piping is in good condition overall but has worn unevenly at the ends, a ceramic flange adapter will prevent costly equipment damage — such as this extensive wear as seen in this stainless steel ball valve.*

## Ceresist Flange Adapters Are Perfect For:

### Flow-Element Protection

When installing valves, pumps, flowmeters, or other equipment whose ID does not match the ID of the piping system, ceramic-lined flange adapters will transition gracefully between the mis-matched diameters, saving the flow element and piping — from wear.

### Lined Piping Transitions

Abrasion-resistant pipe materials such as basalt, glass, or cast-in-place linings are rarely perfectly round — especially if they have been in service for an extended amount of time and have experienced wear. Installing mis-matched diameters will cause the downstream flow element to protrude into the flow path and wear rapidly. Rather than replace the partially-worn length of pipe, it is much more economical to install flange adapters to correct mis-matched ID's.

### Mini-Reducers

If a short distance between flanges prohibits the use of standard-length reducers, a flange adapter is ideal. Flange adapters can be made to any custom length — from ½" to greater than 4".

### Flange Transitions

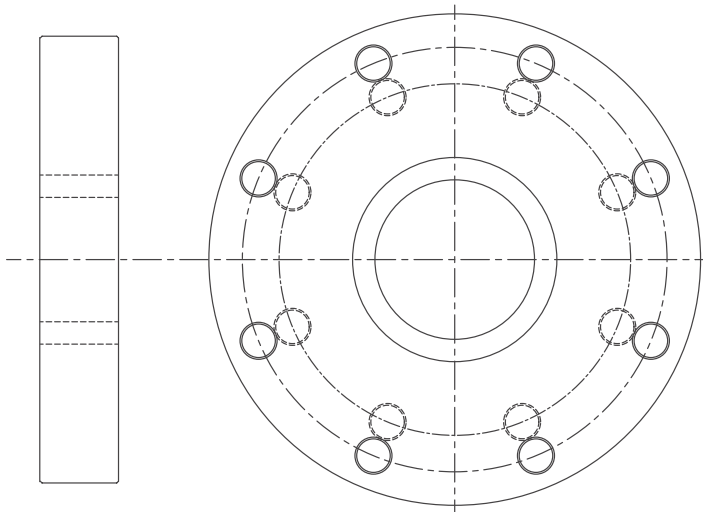
When transitioning between flanges of different class ratings and wear protection is necessary, a ceramic-lined flange adapter is ideal. Upstream and downstream bolt patterns can be custom drilled and/or tapped to suit any scenario.

## Ceramic Materials

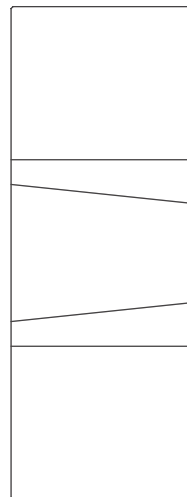
If the flange adapter will be used to correct mis-matched ID's and will therefore be subject to direct impingement, sintered silicon carbide is highly recommended. However, if the service requires the flange adapter to be used as a mini-reducer, both sintered silicon carbide as well as high-purity alumina will perform very well.

## Housing Materials

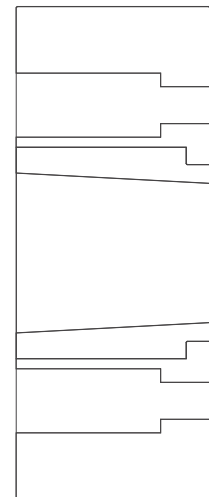
In addition to our standard carbon steel housing, stainless steel 316, 304, and other custom materials can be supplied. Mating surfaces are machined to a phonograph finish to ensure positive sealing. For added protection, a corrosion resistant epoxy coating may be applied to carbon steel housings to offer longevity in harsh environments.



Standard Flange Adapter



Mini-Reducer



Mini-Reducer with Counterbored Socket-Cap Bolt Mounting

# Ceresist

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