V-Clamps
280

Reliable Connections

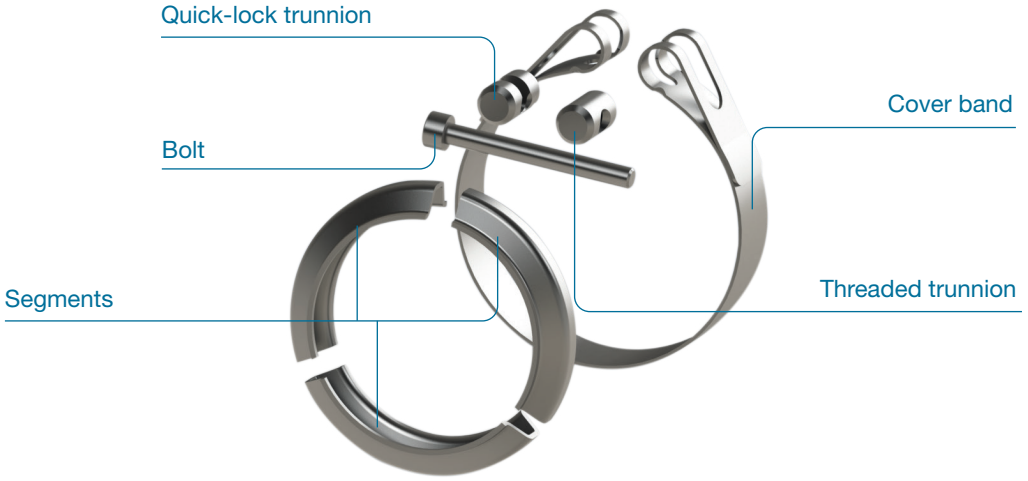
Recommended where flanges need to be reliably and safely connected, such as in exhaust piping, aftertreatment systems or air compressors.

Benefits

- Excellent assembly efficiency
- Superior axial load and gasket sealing
- Customizable design with testing support
- Reliable performance and trusted quality

Precise low friction screw: consistently delivers superior clamping force
Easy implementation: several screw head designs available to match existing tools
Quick-lock latching mechanism: effortless swing-action design, no alignment required
(optionally closed trunnion for higher torque requirements)
Self-locking thread (optional): retains tightness in high vibration environments
Customizable: designed to maximize joint performance with application specific materials and components

COMPONENTS



V-Clamps 280

TECHNICAL DATA OVERVIEW

The optimum composition of a V-Clamp is based on the material of the parts to be connected and the applications requirements. Below a summary of commonly used components.

Cover band and segments materials
1.4301 / AISI 304 | 1.4509 / AISI 441 | 1.4310 / AISI 301
1.4404 / AISI 316L | 1.4571 / AISI 316Ti
1.4828 / AISI 309 | 1.4835 / AISI 253 MA

Screws
A4-70 or A2-70 stainless steel (M6)
A4-80 high strength acid resistant steel (M8)

Trunnions (solid, threaded, quick-lock)
1.4021 Hardened slotted trunnion (1.4021)
1.4305 / AISI 303 stainless steel

Dimensions

Hardware	Cover	Band bolt	Trunnion
M6	1.0 × 20 mm	M6 × 50 mm	ø 11.5 mm
M8	1.5 × 25 mm	M8 × 70 mm	ø 14.0 mm

PRODUCT DESCRIPTION

V-Clamps 280 are high quality clamps used to hold together and seal circular flange connections. This is done by utilizing the profile segments to convert the force applied by tightening the screw into axial load. The thereby created force in longitudinal direction holds together the 2 flanges and combined with the gasket creates sealing.

Oetiker V-Clamps 280 are engineered to operate reliably and safely under conditions of stress, vibration, corrosion and temperature variation.

Customized design adaptions and engineered features guarantee high efficiency, performance and long-lasting reliability

PRODUCT DESCRIPTION

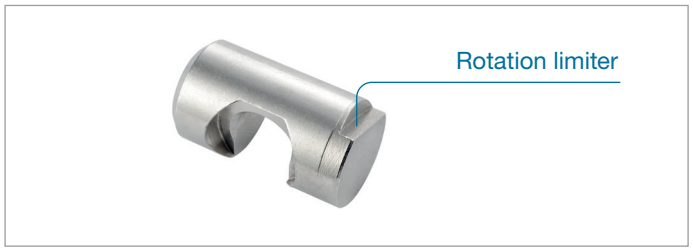
Quick-lock

Effortless swing-action design, no alignment required

Solid trunnion

For above average torque and safety requirements

Rotation limiter

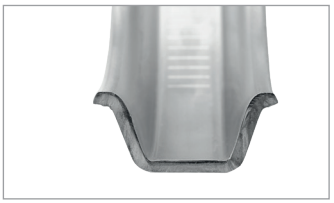


A smart feature increasing assembly efficiency by preventing the trunnion from turning to an unfavorable position when the quick-lock is opened

V-Profile segments

Space-saving slim design (Standard)

Hat-Profile segments



For improved assembly and high load requirements

Oetiker designs and produces V-Clamps in diameters up to 400 mm covering the whole range from smaller engine & exhaust ducts up to large aftertreatment connections.

ASSEMBLY

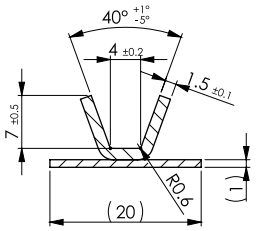
Oetikers V-Clamp 280 standard screw interfaces, like allen key or outside hex head bolt, guarantee full compatibility with the customers' existing tools. Controlled installation tools are recommended, however also he installation with manual torque wrenches is possible, leading to higher clamp stress.

Hardware	Torque[1]	Speed
M6	7.0 Nm	250-350 Rpm
M8 (open trunnion)	12 Nm	250-350 Rpm
M8 (open hardened trunnion)	15 Nm	250-350 Rpm
M8 (closed trunnion)[2]	18 Nm	250-350 Rpm

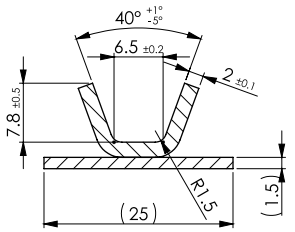
1) no step down
2) closed trunnion recommended to be used on diameter sizes > 200 mm

COMMONLY USED V-CLAMP CONFIGURATIONS

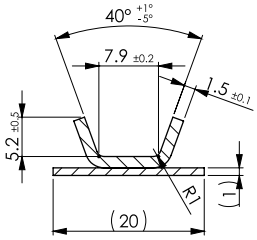
Type 1
M6
ø 80-200 mm
V-Profile



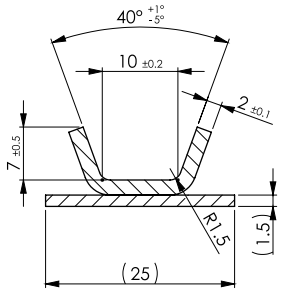
Type 2
M8
ø 80-200 mm
V-Profile



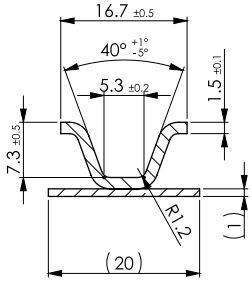
Type 3
M6
ø 80-200 mm
V-Profile



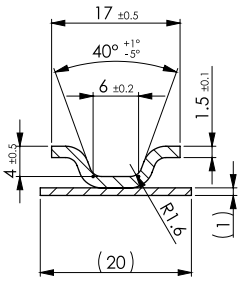
Type 4
M8
ø 80-200 mm
V-Profile



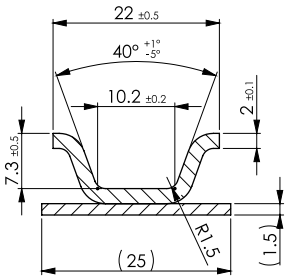
Type 5
M6
ø 80-200 mm
Hat-Profile



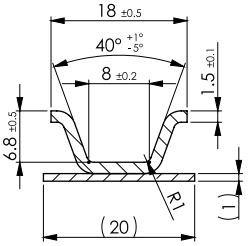
Type 6
M6
ø 80-200 mm
Hat-Profile



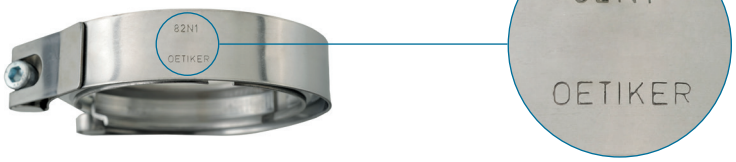
Type 7
M8
ø 80-200 mm
Hat-Profile

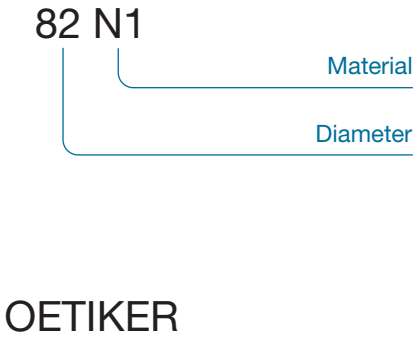


Type 8
M6
ø 80-200 mm
Hat-Profile



CLAMP MARKING





Standard marking, can be customized to customer requirements.