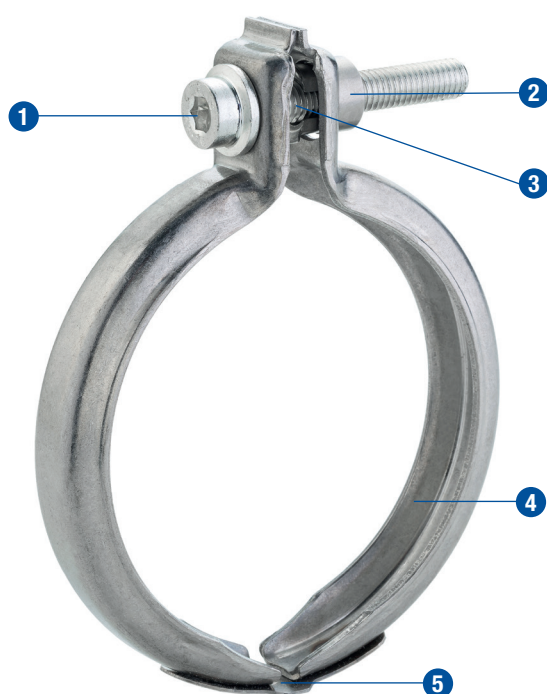


VPP BRIDGE

The VPP bridge clamps offer a connection solution to applications exposed to high temperatures. A typical application is petrol turbocharger connections.



The advantages at a glance

- Fast and easy assembly thanks to its swivel nut, bridge and anti-loss washer components
- Head support feature on the clamp closure provides better force distribution and increases high temperature resistance

1 Flanged bolt

2 Swivel nut

3 Anti-loss washer

4 Profile half

5 Bridge

• Internal profile diameters available:

∅ 69–138 mm (other diameters upon request)

Note: Many NORMA VPP clamps have head support

Applications

- Turbo petrol engine manifold, turbocharger and catalyst joints
- High temperature diesel engine manifold and turbocharger joints

Materials

W1	W2	W3	W4*	W5
			X	X

* Available on request

PIPE CONNECTIONS AND V-BAND CLAMPS

V2PP – TWO-PIECE PROFILE CLAMP

The V2PP two-piece profile clamps enable fast and easy pre-assembly by using only two fingers. The special design is based on a spring element and a hook at the bottom of the clamp in combination with a pre-assembled bolt.



The advantages at a glance

- Fast and easy assembly
- Pre-engaged screw and hook closure allows one-handed assembly
- No risk of cross-threading the bolt during assembly
- Optimized for extremely tight packaging spaces

- 1 Pre-assembled bolt
- 2 Fixed nut / collar formed thread
- 3 Spring element
- 4 Profile half

- **Internal profile diameters available:**
 \varnothing 31 mm and 98 mm (other diameters upon request)

Materials

W1	W2	W3	W4	W5*
			x	x

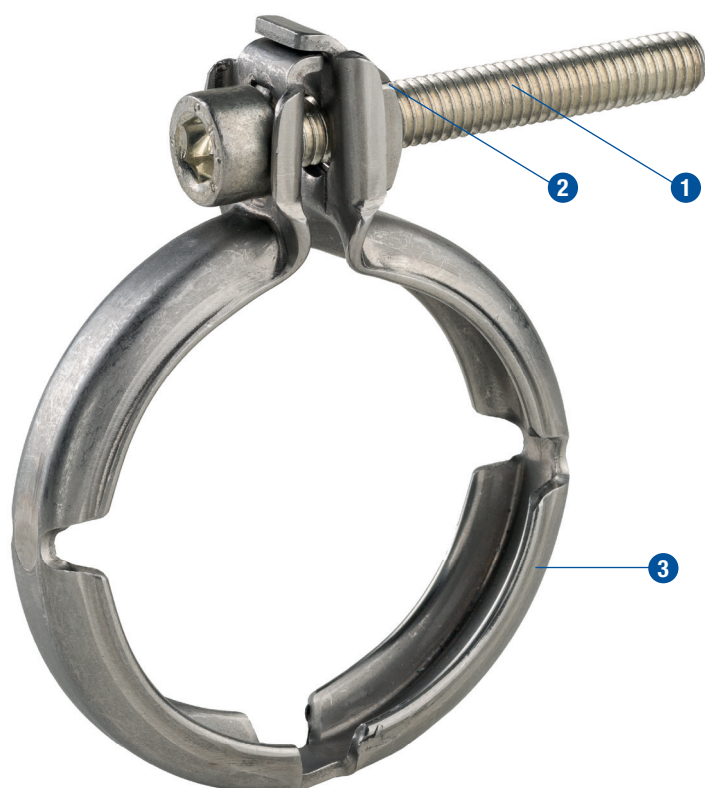
* Available on request

Applications

- Turbocharger
- Hot end and cold end joints
- EGR, SCR injector and sensor joints

VPP COMPACT

The VPP profile clamps are reliable and time-efficient connection elements.



The advantages at a glance

- Easy assembly
- Reliable and time-efficient solution

- 1 Bolt
- 2 Nut
- 3 Profile

- **Internal profile diameters available:**
Ø 50–98 mm (other diameters on demand)

Applications

- Turbocharger
- Hot end and Cold end joints
- EGR, SCR injector and sensor joints

Materials

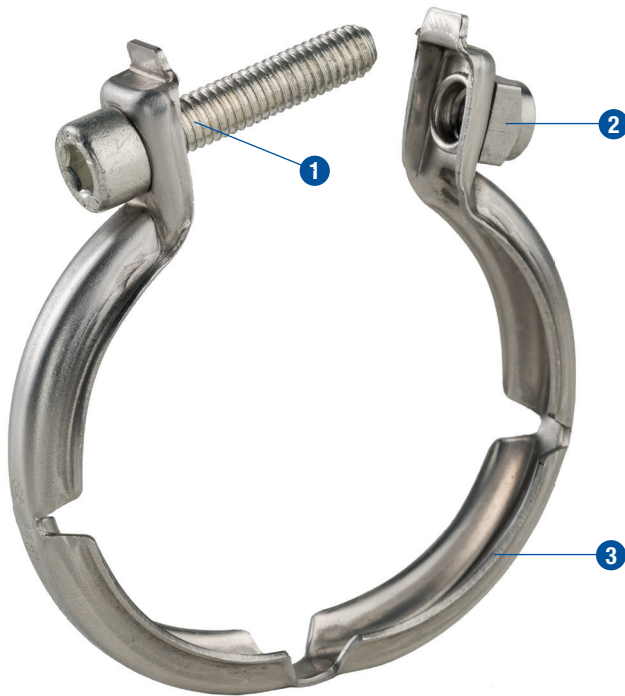
W1	W2	W3	W4	W5*
			x	x

* Available on request

PIPE CONNECTIONS AND V-BAND CLAMPS

VPP STANDARD

The VPP profile clamps are reliable and time-efficient connection elements.



The advantages at a glance

- Easy assembly
- Reliable and time-efficient solution

- 1 Bolt**
- 2 Fixed nut / collar formed thread**
- 3 Profile**

- **Internal profile diameters available:**
 \varnothing 20–180 mm (other diameters upon request)

Applications

- Turbocharger
- Hot end and Cold end joints
- EGR, SCR injector and sensor joints

Options:



Pre-assembly Clip



VPP Clip (Snap-in closure)

Materials

W1	W2	W3	W4	W5*
			x	x

* Available on request

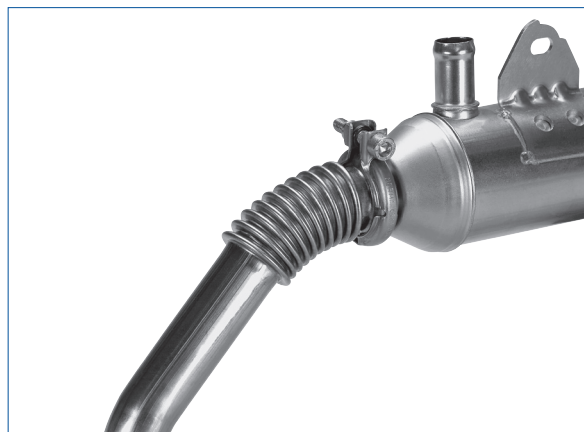
PIPE CONNECTIONS AND V-BAND CLAMPS

EXAMPLES OF TYPICAL APPLICATIONS

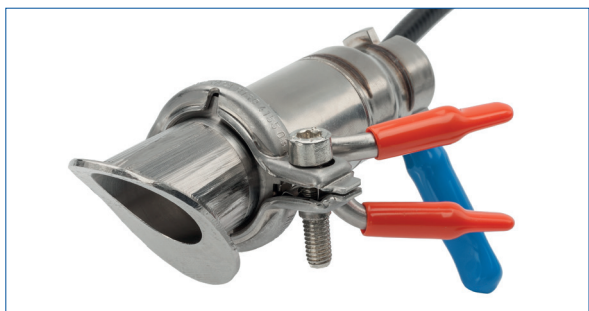
V-Profile clamps are quick assembly connecting devices for flanges which offer an economical alternative to conventional bolted flange joints.

Examples of applications

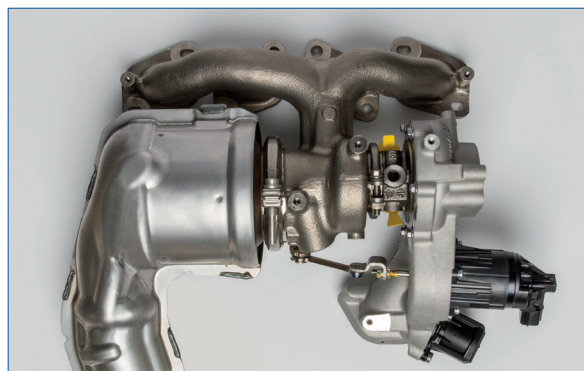
- Exhaust gas systems
- Exhaust gas recirculation (EGR)
- Charged air applications
- Cooling systems
- Filter systems
- Selective catalytic reduction (SCR)
- Turbocharger manifold connections



Exhaust gas recirculation



SCR injector



Petrol turbocharger application