



- 1 Cover band**
– optimum distribution of clamping forces
- 2 Closure**
- 3 profile segments**
– ease of assembly



The SVS STC-type closure is a cost effective alternative to conventional T-bolt closures.

Profile clamp with cover band

The V profile clamps are reliable and time-effective connection elements for industrial and automotive use. They are made to customer requirements and can be supplied with various profiles, band widths and closure types.

Advantages at a glance

- Low friction losses
- Robust precision components
- Consistently high material quality
- State-of-the-art automated manufacturing
- Highly competitively priced

Applications

- Automotive: Turbocharger – catalytic converter connection
- Automotive: Exhaust manifold
- Industry: Bulk material container
- Industry: Bypass filter unit

Materials

NORMACONNECT® SVS profile clamps are available in three material specifications:

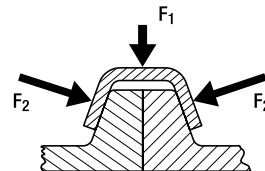
Code	Closures			Closure components	Profile segments/ Cover band
	STC	QRC	SVS		
W2	•		•	Mild steel, zinc plated	
W4	•	•	•	Stainless steel	Stainless steel
W5*	•	•	•	Stainless steel	

* Available on request

ISO	DIN	AISI	BS	AFNOR
X5 CrNi 18-10	1.4301	304	304 S 31	Z6 CN 18-09

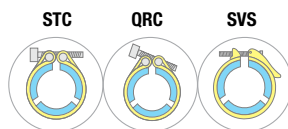
Product's method of operation

The profile clamp's method of operation is based on the principle of an inclined plane. When the closure bolt is tightened, this exerts circumferential force on the profile segments. The two halves of the flange are pressed together by means of the profile (see diagram opposite). The circumferential force that is exerted is converted into considerably higher axial force.



All profiles at a glance

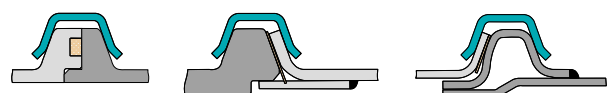
Single-part 3 profile segments
Available up to diameter 300 mm



Two-part 2 profile segments
Available from diameter 200 mm up to 500 mm

Example of flange designs

Use of gasket may be required in some applications. Support and advice on gasket selection can be provided.



Profile types

4.0 b		≥ ø 89		5.0 a		≥ ø 82		5.3 b		≥ ø 110		6.0 a		≥ ø 125	
	20 mm		25 mm		20 mm		25 mm		20 mm		25 mm		20 mm		25 mm
STC	•			STC	•			STC	•			STC	•		
QRC	•			QRC	•			QRC	•			QRC	•		
SVS	•			SVS	•			SVS	•			SVS	•		
6.6 b		≥ ø 100		9.2 a		≥ ø 100		10.2 a		≥ ø 130		14.5 a		≥ ø 105	
	20 mm		25 mm		20 mm		25 mm		20 mm		25 mm		20 mm		25 mm
STC	•			STC			•	STC			•	STC			•
QRC	•			QRC			•	QRC			•	QRC			•
SVS	•			SVS			•	SVS			•	SVS			•

The inner profile diameter can be freely selected in millimeter increments. All profiles can be supplied with a diameter of up to ø 500 mm. Please refer to the relevant profile diagram in the table below to find out the minimum diameter permissible for that profile.

Profile clamps can be supplied with cover bands measuring 20 mm or 25 mm in width.

The table above indicates which cover band is suitable for which profile.

Examples of flange structures

Inner profile ø		Flange 1				Flange 2				Flange 3				Flange 4				
Profile type	Profile ø (mm)	W (mm)	H (mm)	R (mm)	T (mm)	W (mm)	H (mm)	R (mm)	T (mm)	W (mm)	H (mm)	R (mm)	T (mm)	W (mm)	H (mm)	R (mm)	T (mm)	
4.0b	≥ 100	5.1	7.5			5.1	8	2	2	5.1	7.5	1	1	Not recommended				
5.0a	≥ 100	6.1	4.6	6.1	4.6	1.5	1.5	6.1	4.6	1	1	6.1	4.6	1.5	1.5			
5.3b	≥ 110	6.4	7.3	6.4	7.8	2	2	6.4	7.3	1.5	1.5	6.4	7.8	2	2			
6.0a	≥ 125	7.1	4	7.1	4	1.5	1.5	Not recommended				7.1	4	1.5	1.5			
6.5a	≥ 130	7.6	8.3	7.6	8.8	2	2	7.6	8.3	1.5	1.5	7.6	8.8	2	2			
6.6b	≥ 100	7.7	6.6	7.7	6.6	1.5	1.5	7.7	6.6	1.5	1.5	7.7	6.6	1.5	1.5			
7.9b	≥ 100	9	5.7	9	6.2	2	2	9	5.7	1.5	1.5	9	6.2	2	2			
9.2a	≥ 100	10.3	7.3	10.3	7.8	2	2	10.3	7.8	2	2	10.3	7.8	2	2			
10.2a	≥ 130	11.3	7.3	11.3	7.8	2	2	11.3	7.8	2	2	11.3	7.8	2	2			
14.5a	≥ 105	15.6	7.4	15.6	7.9	2	2	15.6	7.9	2	2	Not recommended						
Abbreviations:		W = overall flange width H = overall flange height				R = flange radius				T = flange thickness								

Technical information

Profile type	Profile ø (mm)	Performance (stainless steel only)	Technical information													
5.0 a 6.0a 6.6b	≥ 100 ≥ 125 ≥ 100	<p>Profile 1mm</p>	<ol style="list-style-type: none"> Determine the application or test pressure. Determine the max. operating temperature to which the profile clamp will be exposed. (Note: The profile clamps presented in this brochure have been designed for a maximum operating temperature of 400°C.) Calculate the required inner diameter of the profile as follows: outer flange diameter + 3 mm Using the diagrams on the left. Check whether the profile thickness you have selected will be sufficient. (Note: The result only represents an initial approximation based on static pressures and ideal operating conditions.) <p>Other factors may come into play, such as:</p> <ul style="list-style-type: none"> Shape of and material used for sealing measures Roughness of flange surface Operating temperatures Bending moments Pressure surges/Vibrations Safety requirements <p>Based on these factors, you may decide that a thicker profile is necessary. The SVS closure is only recommended for low pressures (e.g., vacuum applications).</p> <ol style="list-style-type: none"> The tables below provide information on the tightening torques for the various closure types and bolt sizes. <p>5.1. Recommended tightening torque for STC & QRC-type closures:</p> <table border="1"> <thead> <tr> <th>Band width</th> <th>Bolt</th> <th>Tightening torque</th> </tr> </thead> <tbody> <tr> <td>20 mm</td> <td>M 6</td> <td>6 Nm</td> </tr> <tr> <td>25 mm</td> <td>M 8</td> <td>12 Nm</td> </tr> </tbody> </table> <p>5.2 SVS closing force:</p> <table border="1"> <thead> <tr> <th>Bolt</th> <th>Force</th> </tr> </thead> <tbody> <tr> <td>M 6</td> <td>≈ 80 Nm</td> </tr> </tbody> </table> <p>Example of application:</p> <ul style="list-style-type: none"> Operating pressure: 4 bar (static) Temperature: 20 °C Profile type: 4.0b Profile thickness: 1.5 mm Flange diameter: ø 197 mm Inner profile diameter: ø 200 <p>Max. permissible pressure at 20 °C:</p> <ul style="list-style-type: none"> 5.4 bar > 4 bar -OK 	Band width	Bolt	Tightening torque	20 mm	M 6	6 Nm	25 mm	M 8	12 Nm	Bolt	Force	M 6	≈ 80 Nm
Band width	Bolt	Tightening torque														
20 mm	M 6	6 Nm														
25 mm	M 8	12 Nm														
Bolt	Force															
M 6	≈ 80 Nm															
4.0b 5.3b 7.9b 14.5a	≥ 100 ≥ 110 ≥ 100 ≥ 105	<p>Profile 1.5mm</p>														
6.5a 9.2a 10.2a 11.4b	≥ 130 ≥ 100 ≥ 130 ≥ 180	<p>Profile 2.0mm</p>														
9.2 b	≥ 155	<p>Profile 3.0mm</p>														

NORMACONNECT®

NORMACONNECT® V profile clamps are manufactured in two different band widths and with different closures, depending on the profile type concerned:

Closure type	Cover band 1.0 x 20 mm	Cover band 1.5 x 25 mm
STC	Bolt M 6 x 50	Bolt M 8 x 70
QRC		
SVS	Bolt M 6 x 70	Bolt M 6 x 70

Technical data & Ordering information

NORMACONNECT® V STC			
Min. profile type	Profile Ø (mm)	W2	W4
		Product No.	Product No.
		STC	STC
4.0b	≥ 89	0611 1043 ...	0611 2043 ...
5.0a	≥ 82	0611 1032 ...	0611 2032 ...
5.3b	≥ 110	0611 1078 ...	0611 2078 ...
6.0a	≥ 125	0611 1004 ...	0611 2004 ...
6.5a	≥ 130	0611 3015 ...	0611 4015 ...
6.6b	≥ 100	0611 1031 ...	0611 2031 ...
7.9b	≥ 100	0611 1099 ...	0611 2099 ...
9.2a	≥ 100	0611 3009 ...	0611 4009 ...
10.2a	≥ 130	0611 3081 ...	0611 4081 ...
14.5a	≥ 105	0611 3028 ...	0611 4028 ...

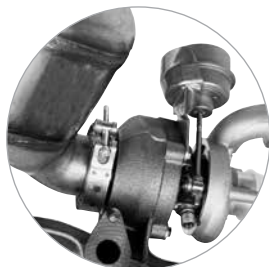
Single-part design • 3 segments • Cover band • Inner profile diameter $\varnothing \leq 300$ mm
 " ... = \varnothing without decimals in mm "

NORMACONNECT® V STC		
Profile type	W2	W4
	Product No.	Product No.
	STC	STC
4.0b	0609 1043 ...	0609 2043 ...
5.0a	0609 1032 ...	0609 2032 ...
5.3b	0609 1078 ...	0609 2078 ...
6.0a	0609 1004 ...	0609 2004 ...
6.5a	0609 3015 ...	0609 4015 ...
6.6b	0609 1031 ...	0609 2031 ...
7.9b	0609 1099 ...	0609 2099 ...
9.2a	0609 3009 ...	0609 4009 ...
10.2a	0609 3081 ...	0609 4081 ...
14.5a	0609 3028 ...	0609 4028 ...

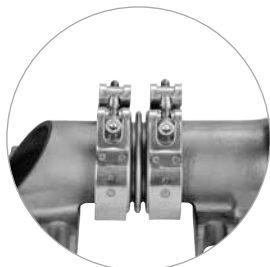
Two-part version* • 2 segments • No cover band • Inner profile diameter $\varnothing 200 - 500$ mm
 " ... = \varnothing without decimals in mm "

Application areas

NORMACONNECT® V profile clamps are quick-release connecting elements for flanges and represent an economical alternative to conventional bolted flange connections.



Automotive: Turbocharger – catalytic converter connection



Automotive: Exhaust manifold



Industry: Bulk material container



Industry: Bypass filter unit

QRC



The revolutionary new QRC-type closure offers significant advantages over conventional T-bolt solutions.

Advantages at a glance

- Rapid closing and opening
- Captive closure components
- Significantly shorter installation
- Closure bolt secured during tightening

Materials

- W4

NORMACONNECT® V QRC		
Min. profile type	Profile Ø (mm)	W4
		Product No. QRC
4.0b	≥ 89	0615 2043 ...
5.0a	≥ 82	0615 2032 ...
5.3b	≥ 110	0615 2078 ...
6.0a	≥ 125	0615 2004 ...
6.5a	≥ 130	0615 4015 ...
6.6b	≥ 100	0615 2031 ...
7.9b	≥ 100	0615 2099 ...
9.2a	≥ 100	0615 4009 ...
10.2a	≥ 130	0615 4081 ...
14.5a	≥ 105	0615 4028 ...

Single-part design • 3 segments • Cover band • Inner profile diameter Ø ≤ 300 mm
 " ... = Ø without decimals in mm "

SVS



The SVS type includes an over-center lever which enables manual installation.

Advantages at a glance

- Installation without tools
- Ideal for frequent handling

Materials

- W2, W4

NORMACONNECT® V SVS			
Min. profile type	Profile Ø (mm)	W2	W4
		Product No. SVS	Product No. SVS
4.0b	≥ 89	0607 1043 ...	0607 2043 ...
5.0a	≥ 82	0607 1032 ...	0607 2032 ...
5.3b	≥ 110	0607 1078 ...	0607 2078 ...
6.0a	≥ 125	0607 1004 ...	0607 2004 ...
6.5a	≥ 130	0607 3015 ...	0607 4015 ...
6.6b	≥ 100	0607 1031 ...	0607 2031 ...
7.9b	≥ 100	0607 1099 ...	0607 2099 ...
9.2a	≥ 100	0607 3009 ...	0607 4009 ...
10.2a	≥ 130	0607 3081 ...	0607 4081 ...
14.5a	≥ 105	0607 3028 ...	0607 4028 ...

Single-part design • 3 segments • Cover band • Inner profile diameter Ø ≤ 300 mm
 " ... = Ø without decimals in mm "

NORMACONNECT® V SVS		
Profile type	W2	W4
	Product No. SVS	Product No. SVS
4.0b	0605 1043 ...	0605 2043 ...
5.0a	0605 1032 ...	0605 2032 ...
5.3b	0605 1078 ...	0605 2078 ...
6.0a	0605 1004 ...	0605 2004 ...
6.5a	0605 3015 ...	0605 4015 ...
6.6b	0605 1031 ...	0605 2031 ...
7.9b	0605 1099 ...	0605 2099 ...
9.2a	0605 3009 ...	0605 4009 ...
10.2a	0605 3081 ...	0605 4081 ...
14.5a	0605 3028 ...	0605 4028 ...

Two-part version* • 2 segments • No cover band • Inner profile diameter Ø 200 - 500 mm
 " ... = Ø without decimals in mm "