




FROM ANDERSTORP, SWEDEN



CLAMPING & CONNECTING PRODUCTS





We began life, over a hundred years ago, manufacturing fire-fighting equipment. With the invention of a new type of hose clamp, we helped improve the effectiveness of fire-fighting operations at the time. Today, we still firmly believe that quality saves lives. Perhaps that's why our clamps have become the industry benchmark.

ABA represents the flagship brand in the NORMA Group. Over the years, we have built up a strong and loyal following around the world due to the outstanding quality of our products.



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A little piece of metal could seem insignificant, but both you and i know that the quality in every detail is vital. That is why we, since the very start in 1896. And we firmly believe that quality saves lives. Perhaps that is why our hose clamps are considered the best in the industry.

Our clamps with their iconic blue housing are synonymous with quality, reliability and safety the world over. Demanding professionals know that we make no compromises on clamping force, tightening and breaking torque. Ever.



# ABA SAFESEAL TECHNOLOGY™

## Reliable

ABA clamps are designed to have a clamping force reserve and not break. They will reliably continue to develop a sealing force around the hose when tightened (see blue line fig. 1) 360° around the joint.



## One-piece pressed housing

The worm gear housing is pressed from custom-made piping to an interior tolerance of a few hundredths of a millimetre. ABA worm gear housings withstand high breaking torques due to the design in comparison with riveted, welded or just folded housing designs.

## High clamping force

A good clamp should be able to develop a high level of tightening force around the hose or pipe. The even tightening force secures a tight seal. Through the installation torque you decide on the level of force to apply.

## Gentle on the hose

The smooth underside and rolled-up band edges are gentle on the hose and reduce the risk of leakages.

A choice of hose clamp is a choice of clamping force. Bear in mind that settings in the rubber will in the long term reduce the clamping force. Is the clamping force you have selected large enough?

Be sure – choose ABA Original clamps.

## Aluzink

Our standard bands are made from an Aluzink material, which provides roughly three times better corrosion protection than traditional galvanization. An Aluzink band, in conjunction with our product design, provides the optimum clamping force.

## ABA – for a better environment and quality

ABA clamps are produced in factories certified to ISO 14001 and our products can be reused many times thanks to the high and constant quality continuously surveyed in our ISO 9000:2000 as well as ISO TS 16949 systems.

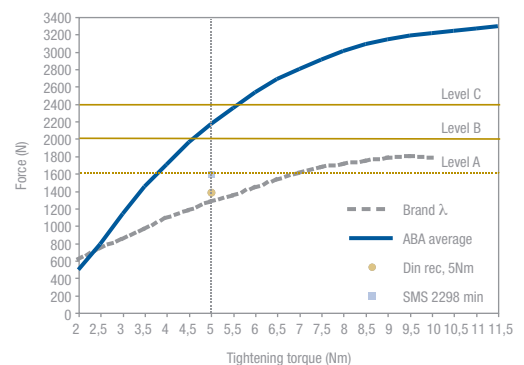


Fig 1. Mechanical efficiency of ABA clamps i.e. the relation tightening torque and sealing force. (2-sector "mechanical efficiency" test. Force: Newton, Speed: 200 rpm.)

# OUR GROUP TECHNICAL CENTRE – STATE OF THE ART TEST FACILITIES

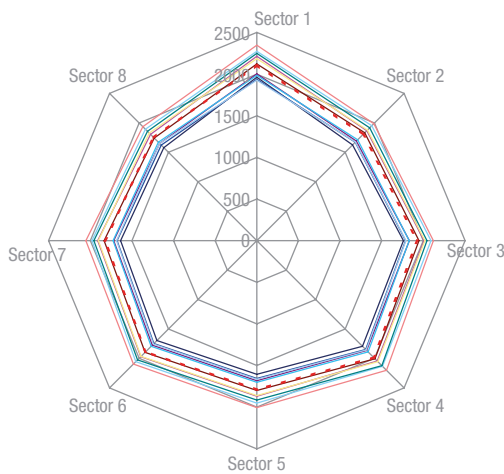


Fig 2. High and consistent quality from clamp to clamp. Each graph is one clamp. (8-sector "one measure" test. Force: Newton, Speed: 200 rpm.)

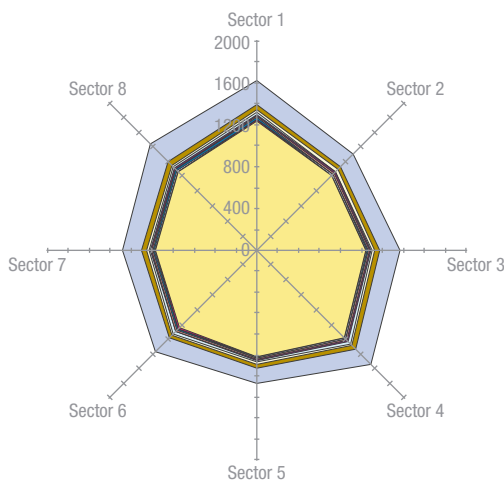


Fig 3. High remaining clamping force thanks to the one piece housing design. (8-sector load test. Force: Newton, Time: 1 min, Time step: 6 sec, Tightening torque: 4,5 Nm.)

## Our tests – a guarantee against leakage

A hose connection has three components:

- Pipe ends – a large number are available for different purposes.
- Hoses – an equally large number are available.
- Naturally, hose clamps with different characteristics intended for different jobs are also required. ABA Original can be used, with the correct tightening torque, for a large number of applications. ABA Original with aluzink or stainless bands provide a very large clamping force and a leakproof connection.
- Testing according to SS-ISO 9227 with neutral salt mist spray
- First-class products produced in plants certified to TS 16949:2000. The best steel qualities enable stable production processes and provide a high and even product quality.
- Products produced in plants certified to ISO 14001 and made entirely with recyclable materials.

## Clamping force meter

If you wish to compare the clamping force of different products, we can help you on site with our portable measuring equipment. Once the clamping force has been determined, a suitable level of corrosion protection can be selected from the table on next page.

## Extensive global expertise

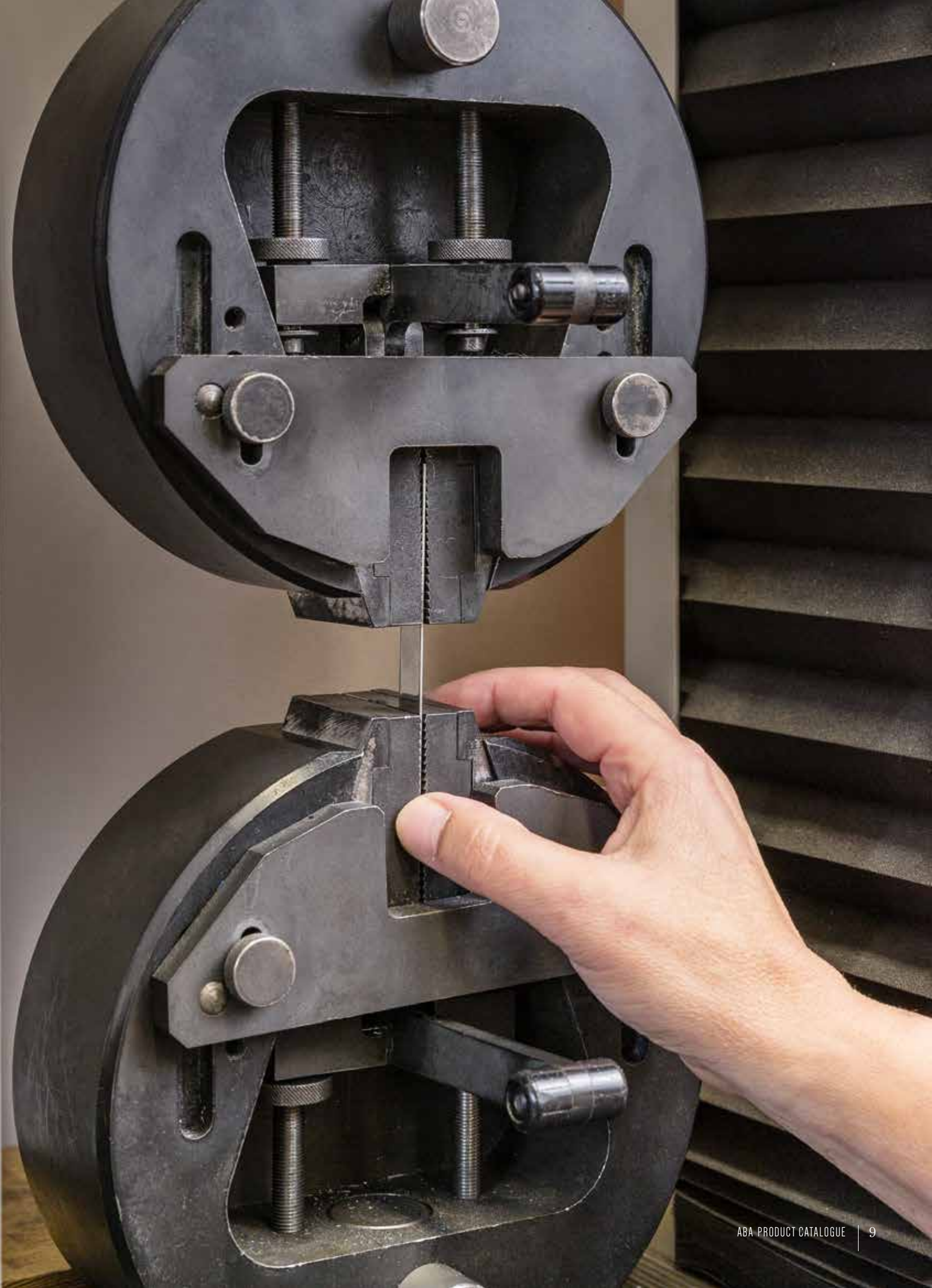
We continuously test systems of hoses, pipe ends, clamps and couplings at our Technical Centre, in order to develop new products and to improve our existing products.

## Technical Centre in Anderstorp

Mechanical efficiency is one of our test parameters, which is shown in the diagram on the left side Fig. 1. An increase of tightening torque does not always mean an increase in clamping force! Here the Clamp design and lubrication plays a vital role. Our Technical Centre has a state-of-the-art equipment for testing of pressure, vibration and temperature variations. Essential parameters which over time will affect a hose or pipe connection. Many customers have during recent years asked us to perform tests and give technical advice concerning their specific applications.

In industry, the choice of clamp is important. Therefore, we have developed a meter that measures the exact clamping force at eight points, directly after installation and over extended periods of time. Tests have shown that ABA products achieve high clamping forces before breaking and thus ensure that the customer has a clamping force reserve in the clamp to avoid blow-off or leakage over time. If you want us to perform tests for your specific need – just contact your Area Sales Manager.





| PAGE | TYPE                                                                                                                  | RANGE DIAMETER | BAND WITH | MATERIAL                                              |
|------|-----------------------------------------------------------------------------------------------------------------------|----------------|-----------|-------------------------------------------------------|
| P14  |  ABA Original                        | 15–307 mm      | 12 mm     | Aluzink, stainless steel and acid resistant           |
| P16  |  ABA Original SMO                    | 15–307 mm      | 12 mm     | Acid resistant stainless steel                        |
| P18  |  ABA Nova                            | 8-85 mm        | 9 mm      | Aluzink, stainless steel and acid resistant           |
| P20  |  ABA Safe                          | 32-112 mm      | 12 mm     | Aluzink and stainless steel                           |
| P22  |  ABA Mini                          | 7–17 mm        | 9 mm      | Zinc plated and stainless steel                       |
| P26  |  Breeze Standard Hi-Torque         | 25-232 mm      | 16 mm     | Stainless steel                                       |
| P27  |  Breeze Constant-Torque Standard   | 12-160 mm      | 14,3 mm   | Stainless steel band and screws in different material |
| P28  |  Breeze Constant-Torque Heavy Duty | 44-168 mm      | 16 mm     | Stainless steel band and screws in different material |
| P30  |  Breeze Aero BG/BGV                | 12-160 mm      | 14.3 mm   | Stainless steel band and screws in different material |
| P32  |  Breeze Aero-Seal                  | 11–311 mm      | 14.2 mm   | Stainless steel band and screws in different material |
| P34  |  Breeze Mini                       | 5.6–64 mm      | 7.9 mm    | Stainless steel band and screws in different material |



| PAGE | TYPE                                                                                                            | RANGE DIAMETER | BAND WITH     | MATERIAL                                              |
|------|-----------------------------------------------------------------------------------------------------------------|----------------|---------------|-------------------------------------------------------|
| P36  |  Breeze Power-Seal             | 11-178 mm      | 12.7 mm       | Stainless steel band and screws in different material |
| P38  |  Breeze liner                  | 13-140 mm      | 14 mm         | Stainless steel band and screws in different material |
| P40  |  Breeze Make-A-Clamp          | 2.6-30.5 mm    | 12.7 mm       | Stainless steel                                       |
| P42  |  ABA Power clamp             | 32-175 mm      | 20 mm         | Zinc plated and acid resistant                        |
| P44  |  ABA Robust acid resistant   | 17-252 mm      | 18, 20, 25 mm | Acid resistant                                        |
| P46  |  Breeze T-Bolt               | 31.8-223.8 mm  | 19 mm         | Stainless steel band and screws in different material |
| P48  |  Breeze T-Bolt Spring Loaded | 54-198.4 mm    | 19 mm         | Stainless steel band and screws in different material |
| P50  |  Tool clips                  | 6-93 mm        | NA            | Zinc plated and nylon coated                          |
| P52  |  Pen & pencil clips          | 7-15 mm        | NA            | Spring steel and nickel plated                        |
| P54  |  Rubber lined clips          | 3.2-110 mm     | 12 mm         | Zinc plated steel and stainless steel                 |
| P56  |  Low profile cable tie       | 30-240 mm      | 4.52, 7.62 mm | 6/6 Nylon grade                                       |

| PAGE | TYPE                                                                                                                      | RANGE DIAMETER | BAND WITH | MATERIAL                    |
|------|---------------------------------------------------------------------------------------------------------------------------|----------------|-----------|-----------------------------|
| P58  |  ABA Assortment 270                      | 8-56 mm        | 9 mm      | Aluzink and stainless steel |
| P58  |  ABA Assortment 120                      | 8-15 mm        | 9 mm      | Zinc plated                 |
| P59  |  ABA Assortment 335                      | 8-65 mm        | 9 mm      | Aluzink                     |
| P59  |  ABA Assortment 244                    | 8-65 mm        | 9 mm      | Aluzink                     |
| P60  |  Low profile cable tie mounting tool   |                |           |                             |
| P60  |  Low profile cable tie demounting tool |                |           |                             |
| P60  |  Pliers for stainless steel cable tie  |                |           |                             |
| P60  |  ABA Flexidriver - 25 cm               |                |           |                             |
| P60  |  ABA Flexidriver - 60 cm               |                |           |                             |
| P60  |  ABA Dynamometric screwdriver          |                |           |                             |



S10

Material and surface treatment chosen by the manufacturer. Min 72 hours to red rust.\* Comparable to W1.

S20

Material and surface treatment chosen by the manufacturer. Min. 200 hours to red rust.\*

S30

All parts in chrome steel 1.4016/AISI 430/SS2320. Min. time to red rust is 500 hours.\* Comparable to W3.

S40

All parts in stainless steel 1.4301/AISI 304/SS2333. Min. time to red rust is 500 hours.\* Comparable to W4.

S50

All parts in acid resistant steel 1.4436/AISI 316/SS2343. Min. time to red rust is 2.000 hours.\* Comparable to W5.

S60

All parts in acid resistant steel 1.4547/SS2378. Min. time to red rust – well over 4000 hours.\*

\* Testing according to SS-ISO 9227 with neutral salt mist spray.

## Materials International Standards

| Standard | DIN                                                       | AISI/AS | BS       | AFNOR NF       | SS   | SUS |
|----------|-----------------------------------------------------------|---------|----------|----------------|------|-----|
| S10, W1  | Completely zinc plated steel                              |         |          |                |      |     |
| S20      | Manufacturer's choice min. 200 hours to red rust.         |         |          |                |      |     |
| W2       | 1. 4016 in housing and band. Screw: 72 hours to red rust. |         |          |                |      |     |
| S30, W3  | 1.4016                                                    | 430     | 430 S 17 | Z8 C17         | 2320 | 430 |
| S40, W4  | 1.4301                                                    | 304     | 304 S 15 | Z6 CN 18-09    | 2332 | 304 |
| S50, W5  | 1.4401                                                    | 316     | 316 S 31 | Z3 CND 17-11-1 | 2343 | 316 |
| S60      | 1.4547                                                    |         |          |                |      |     |

SS = Swedish Standard.

DIN = Deutsches Institut für Normung.

AISI = American Iron and Steel Institute.

# ABA ORIGINAL



- ① Extra strong one-piece pressed housing
- ② Rolled-up band edges
- ③ Smooth band underside

## There is only one Original

ABA Original clamps feature an extra strong one-piece pressed housing, rolled-up band edges and a smooth band underside that protects the hose. ABA Original – the trouble-free clamp with high tightening force and high breaking torque.

## Advantages at a glance

- High clamping force
- High breaking torque
- Protection of the hose thanks to the smooth band underside
- Every clamp is date stamped for traceability

## Typical applications

- Machine building
- Chemical industry
- Irrigation systems
- Railway
- Agricultural machines
- Building machines
- Marine

## Materials



ABA stainless steel clamps are the natural choice for applications where corrosion resistance is required.

### ABA Original Aluzink S20

- The band is made of Aluzink for added corrosion resistance, this gives three times the protection offered by conventional galvanized steel

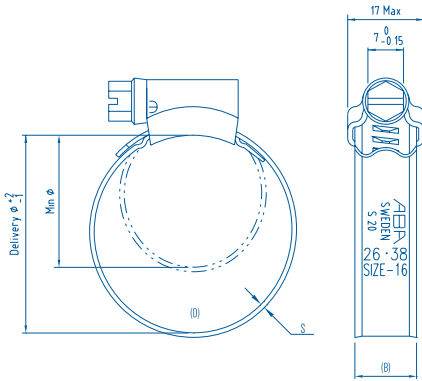
### ABA Original Stainless S40

- All parts are made of SS 2333/AISI 304 stainless steel

### ABA Original Acid-Resistant S50

- All parts are made of SS 2343/AISI 316 stainless steel
- Natural choice for applications where premium corrosion resistance is required

## Dimensions



## Specifications

| ABA ORIGINAL 12 MM |                           |                            |                     |                    |                    |                    |
|--------------------|---------------------------|----------------------------|---------------------|--------------------|--------------------|--------------------|
| Width<br>(B mm)    | Clamping ranges<br>(D mm) | Clamping ranges<br>(D in.) | Thickness<br>(S mm) | S20<br>Product No. | S40<br>Product No. | S50<br>Product No. |
| 12                 | 15-24                     | 9/16-15/16                 | 0.8                 | 0813 4001 020      | 0813 4003 020      | 0813 4034 020      |
|                    | 19-28                     | 3/4-1 1/8                  | 0.8                 | 0813 4001 024      | 0813 4003 024      | 0813 4034 024      |
|                    | 22-32                     | 7/8-1 1/4                  | 0.8                 | 0813 4001 027      | 0813 4003 027      | 0813 4034 027      |
|                    | 26-38                     | 1-1 1/2                    | 0.8                 | 0813 4001 032      | 0813 4003 032      | 0813 4034 032      |
|                    | 32-44                     | 1 1/4-1 3/4                | 0.8*                | 0813 4001 038      | 0813 4003 038      | 0813 4034 038      |
|                    | 38-50                     | 1 1/2-2                    | 0.8*                | 0813 4001 044      | 0813 4003 044      | 0813 4034 044      |
|                    | 44-56                     | 1 3/4-2 3/16               | 0.8*                | 0813 4001 050      | 0813 4003 050      | 0813 4034 050      |
|                    | 50-65                     | 2-2 9/16                   | 0.8*                | 0813 4001 058      | 0813 4003 058      | 0813 4034 058      |
|                    | 58-75                     | 2 1/4-2 15/16              | 0.8*                | 0813 4001 067      | 0813 4003 067      | 0813 4034 067      |
|                    | 68-85                     | 2 11/16-3 3/8              | 0.8*                | 0813 4001 077      | 0813 4003 077      | 0813 4034 077      |
|                    | 77-95                     | 3-3 3/4                    | 0.8*                | 0813 4001 086      | 0813 4003 086      | 0813 4034 086      |
|                    | 87-112                    | 3 7/16-4 7/16              | 0.8*                | 0813 4001 100      | 0813 4003 100      | 0813 4034 100      |
|                    | 104-138                   | 4 1/16-5 7/16              | 0.8*                | 0813 4001 121      | 0813 4003 121      | 0813 4034 121      |
|                    | 130-165                   | 5 1/8-6 1/2                | 0.8*                | 0813 4001 148      | 0813 4003 148      | 0813 4034 148      |
|                    | 150-180                   | 5 15/16-7 1/16             | 0.8*                | 0813 4001 165      | 0813 4003 165      | 0813 4034 165      |
|                    | 175-205                   | 6 7/8-8 1/16               | 0.8*                | 0813 4001 190      | 0813 4003 190      | 0813 4034 190      |
|                    | 200-231                   | 7 7/8-9 1/16               | 0.8*                | 0813 4001 216      | 0813 4003 216      | 0813 4034 216      |
|                    | 226-256                   | 8 7/8-10 1/16              | 0.8*                | 0813 4001 241      | 0813 4003 241      | 0813 4034 241      |
|                    | 251-282                   | 9 7/8-11 1/8               | 0.8*                | 0813 4001 267      | 0813 4003 267      | 0813 4034 267      |
|                    | 277-307                   | 10 15/16-12 1/16           | 0.8*                | 0813 4001 292      | 0813 4003 292      | 0813 4034 292      |

\* 1.0 for S20

# ABA ORIGINAL SMO



- ① Hexagon screw
- ② Traceability code
- ③ One-piece pressed housing
- ④ Smooth band underside

## For the most extreme environments

Produced in SMO 254 material for extreme environments where lower grade stainless steel or acid proof material is not enough. SMO 254 is an austenitic stainless steel designed for maximum resistance to pitting and crevice corrosion and has a very good resistance to various types of stress corrosion.

## Advantages at a glance

- Every clamp is date stamped for traceability
- Excellent resistance against pitting and crevice corrosion
- Very high resistance against stress corrosion cracking
- Strong performance under heavy mechanical loads

## Typical applications

- Wire for parts for seawater handling equipments
- Chemical and food processing equipments
- Oil and gas production equipments
- Marine and shipbuilding

## Material

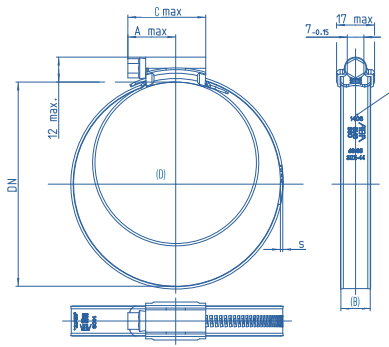


### ABA Original SMO S60

- This steel is especially suited for high chloride environments such as brackish water, seawater and high chloride resistance streams.
- All parts produced from SMO 254 material / SS 2378 / EN 1.4547 / S31254
- Min time to red rust - well over 4000 hours



## Dimensions



## Specifications

| ABA ORIGINAL SMO 12 MM |                           |                            |                     |                    |
|------------------------|---------------------------|----------------------------|---------------------|--------------------|
| Width<br>(B mm)        | Clamping ranges<br>(D mm) | Clamping ranges<br>(D in.) | Thickness<br>(S mm) | S60<br>Product No. |
| 12                     | 15-24                     | 9/16-15/16                 | 0.8                 | 0813 0043 020      |
|                        | 19-28                     | 3/4-1 1/8                  | 0.8                 | 0813 0043 024      |
|                        | 22-32                     | 7/8-1 1/4                  | 0.8                 | 0813 0043 027      |
|                        | 26-38                     | 1-1 1/2                    | 0.8                 | 0813 0043 032      |
|                        | 32-44                     | 1 1/4-1 3/4                | 0.8                 | 0813 0043 038      |
|                        | 38-50                     | 1 1/2-2                    | 0.8                 | 0813 0043 044      |
|                        | 44-56                     | 1 3/4-2 3/16               | 0.8                 | 0813 0043 050      |
|                        | 50-65                     | 2-2 9/16                   | 0.8                 | 0813 0043 058      |
|                        | 58-75                     | 2 1/4-2 15/16              | 0.8                 | 0813 0043 067      |
|                        | 68-85                     | 2 11/16-3 3/8              | 0.8                 | 0813 0043 077      |
|                        | 77-95                     | 3-3 3/4                    | 0.8                 | 0813 0043 086      |
|                        | 87-112                    | 3 7/16-4 7/16              | 0.8                 | 0813 0043 100      |
|                        | 104-138                   | 4 1/16-5 7/16              | 0.8                 | 0813 0043 121      |
|                        | 130-165                   | 5 1/8-6 1/2                | 0.8                 | 0813 0043 148      |
|                        | 150-180                   | 5 15/16-7 1/16             | 0.8                 | 0813 0043 165      |
|                        | 175-205                   | 6 7/8-8 1/16               | 0.8                 | 0813 0043 190      |
|                        | 200-231                   | 7 7/8-9 1/16               | 0.8                 | 0813 0043 216      |
| 226-256                | 8 7/8-10 1/16             | 0.8                        | 0813 0043 241       |                    |
| 251-282                | 9 7/8-11 1/8              | 0.8                        | 0813 0043 267       |                    |
| 277-307                | 10 15/16-12 1/16          | 0.8                        | 0813 0043 292       |                    |

# ABA NOVA



- ① **Specially designed screw** – Improved idle torque
- ② **Compact housing** – Better and more evenly spread clamping force
- ③ **Mechanically locked** – No welding points
- ④ **Band marking** – Material & size marked on each clamp
- ⑤ **Traceability** code of each clamp

## The highly versatile clamp

ABA Nova clamps incorporate a newly designed housing positioned to more evenly distribute a high clamping force and give safer guidance of the emerging band. The short housing saddle also provides optimal contact pressure on the hose.

The New Generation design results in a clamping force reserve that resists breaks for a safe seal connection. In addition, smooth undersides and rolled-up band edges are gentle on the hose and reduce risk of leakage as well.

## Advantages at a glance

- High clamping force
- High break torque
- Lower idle torque
- Every clamp is date stamped for traceability
- Requires very low packing space

## Materials



The highly versatile ABA Nova clamp is an ideal choice for smaller dimensions of hoses.

## Typical applications

- Machine building
- Chemical industry
- Irrigation systems
- Railway
- Agricultural machines
- Building machines
- Marine

### ABA Nova Aluzink S20

- The band is made of Aluzink for added corrosion resistance, this gives three times the protection offered by conventional galvanized steel

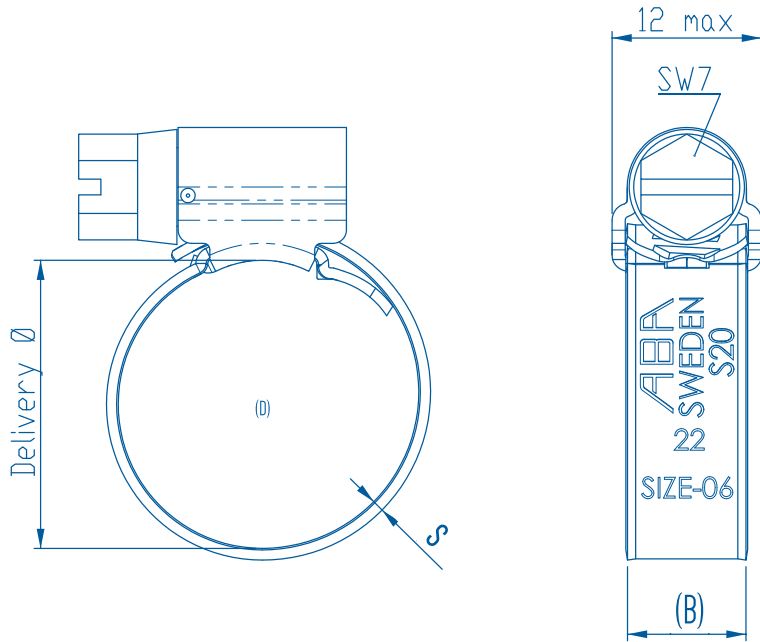
### ABA Nova Stainless S40

- All parts are made of SS 2333/AISI 304 stainless steel

### ABA Nova Acid-Resistant S50

- All parts are made of SS 2343/AISI 316 stainless steel
- Natural choice for applications where premium corrosion resistance is required
- This not only ensures premium corrosion resistance, it also prevents abrasion caused by using different material grades.

## Dimensions



## Specifications

| ABA NOVA 9 MM   |                           |                            |                     |                    |                    |                    |
|-----------------|---------------------------|----------------------------|---------------------|--------------------|--------------------|--------------------|
| Width<br>(B mm) | Clamping ranges<br>(D mm) | Clamping ranges<br>(D in.) | Thickness<br>(S mm) | S20<br>Product No. | S40<br>Product No. | S50<br>Product No. |
| 9               | 8-14                      | 5/16-9/16                  | 0.8                 | 0811 6108 011      | 0811 6110 011      | 0811 6112 011      |
|                 | 11-17                     | 7/16-11/16                 | 0.8                 | 0811 6108 014      | 0811 6110 014      | 0811 6112 014      |
|                 | 13-20                     | 1/2-13/16                  | 0.8                 | 0811 6108 017      | 0811 6110 017      | 0811 6112 017      |
|                 | 15-24                     | 9/16-15/16                 | 0.8                 | 0811 6108 020      | 0811 6110 020      |                    |
|                 | 19-28                     | 3/4-11/8                   | 0.8                 | 0811 6108 024      | 0811 6110 024      |                    |
|                 | 22-32                     | 7/8-11/4                   | 0.8                 | 0811 6108 027      | 0811 6110 027      |                    |
|                 | 26-38                     | 1-1 1/2                    | 0.8                 | 0811 6108 032      | 0811 6110 032      |                    |
|                 | 32-44                     | 1 1/4-1 3/4                | 0.8*                | 0811 6108 038      |                    |                    |
|                 | 38-50                     | 1 1/2-2                    | 0.8*                | 0811 6108 044      |                    |                    |
|                 | 44-56                     | 1 3/4-2 3/16               | 0.8*                | 0811 6108 050      |                    |                    |
|                 | 50-65                     | 2-2 9/16                   | 0.8*                | 0811 6108 058      |                    |                    |
|                 | 58-75                     | 2 1/4-2 15/16              | 0.8*                | 0811 6108 067      |                    |                    |
|                 | 68-85                     | 2 11/16-3 3/8              | 0.8*                | 0811 6108 077      |                    |                    |
|                 | 70-90                     | 2 3/4-3 9/16               | 0.8*                | 0811 6109 080      |                    |                    |
|                 | 80-100                    | 3 1/8-3 15/16              | 0.8*                | 0811 6109 090      |                    |                    |
|                 | 90-110                    | 3 9/16-4 5/16              | 0.8*                | 0811 6109 100      |                    |                    |
|                 | 100-120                   | 3 15/16-4 3/4              | 0.8*                | 0811 6109 110      |                    |                    |
|                 | 110-130                   | 4 5/16-5 1/8               | 0.8*                | 0811 6109 120      |                    |                    |
|                 | 120-140                   | 4 3/4-5 1/2                | 0.8*                | 0811 6109 130      |                    |                    |
|                 | 130-150                   | 5 1/8-5 15/16              | 0.8*                | 0811 6109 140      |                    |                    |
| 140-160         | 5 1/2-6 5/16              | 0.8*                       | 0811 6109 150       |                    |                    |                    |

\*1.0 for S20

# ABA SAFE



- ① Extra strong one-piece pressed housing
- ② Smooth inner band
- ③ Spring insert

## The flexible clamp

ABA Safe™ utilizes the flexibility of the hose (rubber) and protects soft hoses against damage. The profile beads increase the clamp pressure locally, which means the clamp can also be used for plastic piping that is relatively resistant to deformation. Safe™ clamp provides the clamping force needed for an effective joint.

## Advantages at a glance

- Protect soft hoses from damage
- Insert made of stainless steel in all cases
- Every clamp is date stamped for traceability

## Typical applications

- Plastic ducts or soft hose.

## Materials



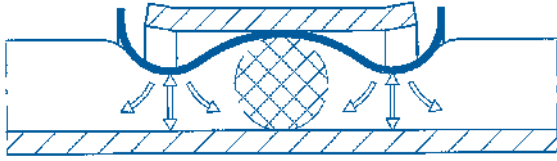
### ABA Safe Aluzink S20

- The band is made of Aluzink for added corrosion resistance this gives three times the protection offered by conventional galvanized steel

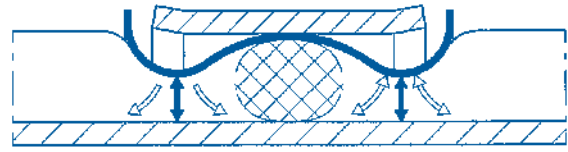
### ABA Safe Stainless S40

- All parts are made of SS 2333/AISI 304 stainless steel
- Every clamp is date stamped for traceability This not only ensures premium corrosion resistance, it also prevents abrasion caused by using different material grades.

## Safe characteristics

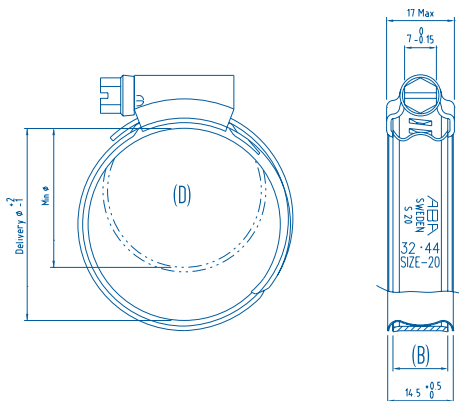


**Illustration 1.** On tightening, the wave-shaped band causes maximum compression of the rubber at the two beads. The rubber is squeezed inwards towards the middle and outwards towards the edges. As the rubber between the two beads is only marginally affected it retains its elasticity and acts as an "O" ring.



**Illustration 2.** On heating the band the "O" ring flattens out. As it cools down it will assume its original shape and seal against the end fitting. The design of the Safe™ clamp makes it particularly suitable for soft hoses with relatively thick walls. Plastic piping that is relatively resistant to compression can often be sealed due to the increased pressure.

## Dimensions



## Specifications

| ABA SAFE™ 12 MM |                           |                            |                     |                    |                    |
|-----------------|---------------------------|----------------------------|---------------------|--------------------|--------------------|
| Width<br>(B mm) | Clamping ranges<br>(D mm) | Clamping ranges<br>(D in.) | Thickness<br>(S mm) | S20<br>Product No. | S40<br>Product No. |
| 12              | 32-44                     | 1 1/4-1 3/4                | 0.8*                | 0813 4008 038      | 0813 4017 038      |
|                 | 38-50                     | 1 1/2-2                    | 0.8*                | 0813 4008 044      | 0813 4017 044      |
|                 | 44-56                     | 1 3/4-2 3/16               | 0.8*                | 0813 4008 050      | 0813 4017 050      |
|                 | 50-65                     | 2-2 9/16                   | 0.8*                | 0813 4008 058      | 0813 4017 058      |
|                 | 58-75                     | 2 1/4-2 15/16              | 0.8*                | 0813 4008 067      | 0813 4017 067      |
|                 | 68-85                     | 2 11/16-3 3/8              | 0.8*                | 0813 4008 077      | 0813 4017 077      |
|                 | 77-95                     | 3-3 3/4                    | 0.8*                | 0813 4008 086      | 0813 4017 086      |
|                 | 87-112                    | 3 7/16-4 7/16              | 0.8*                | 0813 4008 100      | 0813 4017 100      |

\* 1.0 for S20

# ABA MINI



- ① **Rolled-up band edges**
- ② **Band tongue** that fits under the hose is profiled for added strength.
- ③ **Hexagonal head** and can be tightened with a flexible socket.
- ④ **The nut is retained** even if the screw is removed.

## A durable solution for quick and safe clamping

**ABA Mini Standard** clamp is particularly suitable for use on small, thin-walled hoses. This little clamp provides an excellent clamping force well over screwless clamps.

### Advantages at a glance

- Excellent clamping force well over screwless clamps.
- The band is stamped with the ABA brand name and its size.

### Typical applications

- For small thin-walled hoses

### Materials

|      |     |     |      |     |     |
|------|-----|-----|------|-----|-----|
| S10  | S20 | S30 | S40  | S50 | S60 |
| (W1) |     |     | (W4) |     |     |
| ×    |     |     | ×    |     |     |

### Type of bands housing and screw

#### **ABA Mini S10 combi slot screw.**

- Pre-galvanized clamp. Combi slot screw permits use of various installation tools.

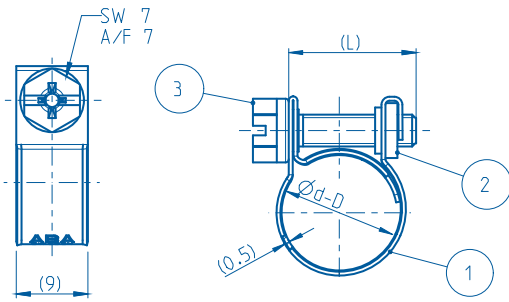


#### **ABA Mini S40 cross slot screw.**

- Durable small clamp. Stainless steel construction is ideal for demanding environments.



## Dimensions



## Specifications

| ABA MINI |                 |                 |           |               |               |
|----------|-----------------|-----------------|-----------|---------------|---------------|
| Width    | Clamping ranges | Clamping ranges | Thickness | S10           | S40           |
| (B mm)   | (D mm)          | (D in.)         | (S mm)    | Product No.   | Product No.   |
| 9        | 7               | 1/4             | 0.5       | 0810 6101 007 | 0810 3002 007 |
|          | 8               | 5/16            | 0.5       | 0810 6101 008 | 0810 3002 008 |
|          | 9               | 3/8             | 0.5       | 0810 6101 009 | 0810 3002 009 |
|          | 10              | 3/8             | 0.5       | 0810 6101 010 | 0810 3002 010 |
|          | 11              | 7/16            | 0.5       | 0810 6101 011 | 0810 3002 011 |
|          | 12              | 1/2             | 0.5       | 0810 6101 012 | 0810 3002 012 |
|          | 13              | 1/2             | 0.5       | 0810 6101 013 | 0810 3002 013 |
|          | 14              | 9/16            | 0.5       | 0810 6101 014 | 0810 3002 014 |
|          | 15              | 9/16            | 0.5       | 0810 6101 015 | 0810 3002 015 |
|          | 16              | 5/8             | 0.5       | 0810 6101 016 | 0810 3002 016 |
|          | 17              | 11/16           | 0.5       | 0810 6101 017 | 0810 3002 017 |







# BREEZE STANDARD HI-TORQUE



- ① Incredible torquing drive, sealing pressure and vibration resistance
- ② Inner liner to protect soft hose
- ③ Eight screw-threads are engaged in the band simultaneously
- ④ 7.9mm hexagonal slotted screw

## Fixing traffic signs

The strongest worm-gear clamp made in the world today. Withstands more than 3 times the SAE torque requirements for Type F worm-gear clamps. The Hi-Torque Clamp is produced using components entirely manufactured from stainless steel.

The construction of the worm-drive housing on the band facilitates installation of a wide range of signs. The recommended tightening torque for secure and reliable installation is 16 Nm and the breaking torque is more than 20 Nm.

## Advantages at a glance

- Very high break torque
- Quadra-Lock housing construction
- Secure and reliable installation
- No sharp edges to injure the installer
- Easy installation of two signs on one pole

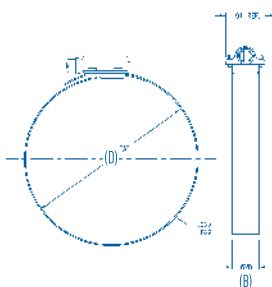
## Materials



## Typical applications

- Traffic signs, street signs, billboards and illuminated signs installations
- Heavy duty sealing applications
- Agricultural
- Chemical Industry
- Food Processing
- Fluid Transfer

## Dimensions



## Specifications

| BREEZE STANDARD HI-TORQUE |                           |                            |                                 |                    |
|---------------------------|---------------------------|----------------------------|---------------------------------|--------------------|
| Width<br>(B mm)           | Clamping ranges<br>(D mm) | Clamping ranges<br>(D in.) | Hexagonal slotted screw<br>(mm) | S40<br>Product No. |
| 16                        | 25-45                     | 1-1 3/4                    | 7.9                             | 0156 6021 035      |
|                           | 32-54                     | 1 1/4-2 1/8                |                                 | 0156 6021 043      |
|                           | 45-67                     | 1 3/4-2 5/8                |                                 | 0156 6021 056      |
|                           | 57-79                     | 2 1/4-3 1/8                |                                 | 0156 6021 068      |
|                           | 70-92                     | 2 3/4-3 5/8                |                                 | 0156 6021 081      |
|                           | 83-105                    | 3 1/4-4 1/8                |                                 | 0156 6021 094      |
|                           | 95-118                    | 3 3/4-4 5/8                |                                 | 0156 6021 106      |
|                           | 108-130                   | 4 1/4-5 1/8                |                                 | 0156 6021 119      |
|                           | 121-143                   | 4 3/4-5 5/8                |                                 | 0156 6021 132      |
|                           | 133-156                   | 5 1/4-6 1/8                |                                 | 0156 6021 144      |
|                           | 146-168                   | 5 3/4-6 5/8                |                                 | 0156 6021 157      |
|                           | 159-181                   | 6 1/4-7 1/8                |                                 | 0156 6021 170      |
|                           | 172-194                   | 6 3/4-7 5/8                |                                 | 0156 6021 183      |
|                           | 184-206                   | 7 1/4-8 1/8                |                                 | 0156 6021 195      |
|                           | 197-219                   | 7 3/4-8 5/8                |                                 | 0156 6021 208      |
|                           | 210-232                   | 8 1/4-9 1/8                |                                 | 0156 6021 221      |

# BREEZE CONSTANT-TORQUE STANDARD



- ① Custom designed stainless steel Belleville washer springs
- ② Inner liner which protects all types of hoses from damage

## Constant tension clamp

This Breeze Constant Torque Standard (HKFK) is a breakthrough in clamping technology. A Belleville spring mechanism permits the constant torque clamp to automatically increase or decrease its own diameter due to changes in operational or environmental temperatures. The unique design eliminates “cold flow” leaks.

The Standard version is based on the Breeze Aero and comes with 8 Belleville washer springs for the smaller sizes and 10 washers for bigger sizes for an increased performance in demanding applications.

## Advantages at a glance

- Increased sealing reliability across a wide temperature range
- Automatic re-tensioning during temperature changes
- High performance
- Inner liner helps to maintain consistent sealing pressure

## Materials



\*Classified by corrosion resistance. Band material S40/Screw material S10. According to DIN norms it would be comparable to W2

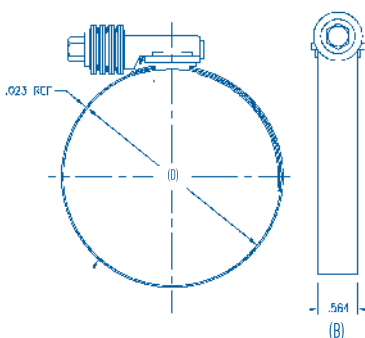
## Typical applications

- Commercial vehicle
- Passenger vehicle
- Industrial
- Infrastructure

## Specifications

| BREEZE CONSTANT TORQUE STANDARD |                           |                            |                                         |                                    |                                           |               |
|---------------------------------|---------------------------|----------------------------|-----------------------------------------|------------------------------------|-------------------------------------------|---------------|
| Width<br>(B mm)                 | Clamping ranges<br>(D mm) | Clamping ranges<br>(D in.) | Belleville springs<br>(Qty. of washers) | S10<br>Product No.<br>Carbon screw | S40<br>Product No.<br>304 Stainless screw |               |
| 14,3                            | 12-22                     | 1/2-7/8                    | 8                                       | 0362 6105 017                      | 0362 6101 017                             |               |
|                                 | 16-27                     | 5/8-1 1/16                 |                                         | 0362 6105 022                      | 0362 6101 022                             |               |
|                                 | 20-32                     | 3/4-1 1/4                  |                                         | 0362 6105 026                      | 0362 6101 026                             |               |
|                                 | 25-40                     | 1-1 9/16                   |                                         | 0362 6105 033                      | 0362 6101 033                             |               |
|                                 | 30-45                     | 1 3/16-1 3/4               |                                         | 0362 6105 038                      | 0362 6101 038                             |               |
|                                 | 35-50                     | 1 3/8-2                    |                                         | 0362 6105 043                      | 0362 6101 043                             |               |
|                                 | 40-60                     | 1 9/16-2 3/8               |                                         | 0362 6105 050                      | 0362 6101 050                             |               |
|                                 | 50-70                     | 2-2 3/4                    |                                         | 0362 6105 060                      | 0362 6101 060                             |               |
|                                 | 60-80                     | 2 3/8-3 1/8                |                                         | 0362 6105 070                      | 0362 6101 070                             |               |
|                                 | 70-90                     | 2 3/4-3 9/16               |                                         | 0362 6105 080                      | 0362 6101 080                             |               |
|                                 | 80-100                    | 3 1/8-4                    |                                         | 10                                 |                                           | 0362 6102 090 |
|                                 | 90-110                    | 3 1/2-4 3/8                |                                         |                                    |                                           | 0362 6102 100 |
|                                 | 100-120                   | 4-4 3/4                    |                                         |                                    |                                           | 0362 6102 110 |
|                                 | 110-130                   | 4 3/8-5 1/8                |                                         |                                    |                                           | 0362 6102 120 |
| 120-140                         | 4 3/4-5 1/2               |                            | 0362 6102 130                           |                                    |                                           |               |
| 130-150                         | 5 1/8-5 7/8               |                            | 0362 6102 140                           |                                    |                                           |               |
| 140-160                         | 5 1/2-6 1/4               |                            |                                         | 0362 6102 150                      |                                           |               |

## Dimensions



# BREEZE CONSTANT-TORQUE HEAVY DUTY



- ① Custom designed stainless steel Belleville washer springs
- ② Inner liner which protects all types of hoses from damage
- ③ 10mm hexagonal screw

## Constant tension clamp

The Breeze Constant-Torque® Heavy Duty (HKF) is a breakthrough in clamping technology. A Belleville spring mechanism permits the constant torque clamp to automatically increase or decrease its own diameter due to changes in operational or

environmental temperatures. The unique design eliminates “cold flow” leaks. With its 16mm band width and the 10 Belleville washer springs this clamps is the perfect solution for heavy duty applications exposed to temperature changes.

## Advantages at a glance

- Increased sealing reliability across a wide temperature range
- Automatic re-tensioning during temperature changes
- Very high performance
- Per SAE standard J1508 Type “SLHD”
- Inner liner helps to maintain consistent sealing pressure

## Materials



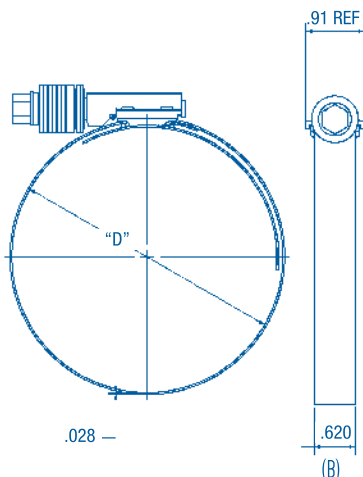
×\*

\*Classified by corrosion resistance. Band material S40/Screw material S10. According to DIN norms it is comparable to W2

## Typical applications

- Commercial vehicle
- Passenger vehicle
- Industrial
- Infrastructure

## Dimensions

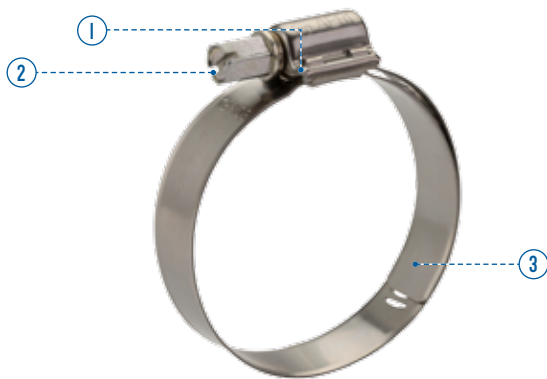


## Specifications

| BREEZE CONSTANT TORQUE HEAVY DUTY |                           |                            |                                         |                                    |
|-----------------------------------|---------------------------|----------------------------|-----------------------------------------|------------------------------------|
| Width<br>(B mm)                   | Clamping ranges<br>(D mm) | Clamping ranges<br>(D in.) | Belleville springs<br>(Qty. of washers) | S10<br>Product No.<br>Carbon screw |
| 16                                | 44-67                     | 1 3/4-2 5/8                | 10                                      | 0156 8020 056                      |
|                                   | 57-79                     | 2 1/4-3 1/8                |                                         | 0156 8020 068                      |
|                                   | 70-92                     | 2 3/4-3 5/8                |                                         | 0156 8020 081                      |
|                                   | 83-105                    | 3 1/4-4 1/8                |                                         | 0156 8020 094                      |
|                                   | 95-117                    | 3 3/4-4 5/8                |                                         | 0156 8020 106                      |
|                                   | 108-130                   | 4 1/4-5 1/8                |                                         | 0156 8020 119                      |
|                                   | 121-143                   | 4 3/4-5 5/8                |                                         | 0156 8020 132                      |
|                                   | 133-156                   | 5 1/4-6 1/8                |                                         | 0156 8020 145                      |
|                                   | 146-168                   | 5 3/4-6 5/8                |                                         | 0156 8020 157                      |



# BREEZE AERO BG/BGV®



- ① **High-strength Quadra-Lock housing construction**
- ② **8mm hexagonal slotted screw**
- ③ **Lined band protects hose from damage**

## The strong clamp for every situation

The Breeze Aero BG is the clamp of choice for applications that require a bit more power than the standard. It was designed to seal high pressure connections transporting air, water or hydraulic medias. The BGV offers an innovative quick-latch solution for a

much faster mounting of the clamp. An integral extension of the band as an inner liner protects soft-surface hose (silicone and others) from damage caused by extrusion or shearing through the band slots.

## Advantages at a glance

- High performance
- Quick-latch closure available
- Inner liner which protects all types of hoses from damage
- SAE Standard J1508 Type F

## Materials



\*Classified by corrosion resistance. Band material S40/Screw material S10. According to DIN norm it is comparable to W2

## Typical applications

- Industrial
- Passenger vehicle
- Commercial vehicle
- Air and water lines
- Hydraulic lines

## Type of bands housing and screw

### Breeze Aero BG

- Hexagonal slotted screw permits use of various installation tools.

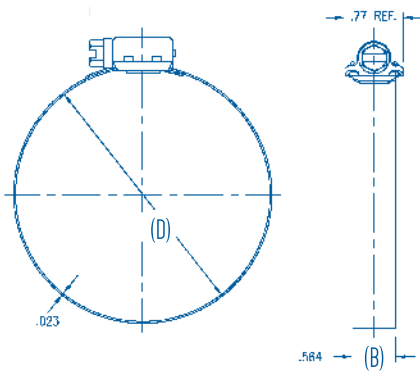


### Breeze Aero BGV

The quick-latch closing mechanism enables a much faster installation by opening the connection between screw and band.



## Dimensions



## Specifications

| BREEZE AERO BG  |                           |                            |                                    |
|-----------------|---------------------------|----------------------------|------------------------------------|
| Width<br>(B mm) | Clamping ranges<br>(D mm) | Clamping ranges<br>(D in.) | S10<br>Product No.<br>Carbon screw |
| 14.3            | 12-22                     | 1/2-7/8                    | 0362 7000 017                      |
|                 | 16-27                     | 5/8-1 1/16                 | 0362 7000 022                      |
|                 | 20-32                     | 3/4-1 1/4                  | 0362 7000 026                      |
|                 | 25-40                     | 1-1 9/16                   | 0362 7000 033                      |
|                 | 30-45                     | 1 3/16-1 3/4               | 0362 7000 038                      |
|                 | 35-50                     | 1 3/8-2                    | 0362 7000 043                      |
|                 | 40-60                     | 1 9/16-2 3/8               | 0362 7000 050                      |
|                 | 50-70                     | 2-2 3/4                    | 0362 7000 060                      |
|                 | 60-80                     | 2 3/8-3 1/8                | 0362 7000 070                      |
|                 | 70-90                     | 2 3/4-3 9/16               | 0362 7000 080                      |
|                 | 80-100                    | 3 1/8-4                    | 0362 7000 090                      |
|                 | 90-110                    | 3 1/2-4 3/8                | 0362 7000 100                      |
|                 | 100-120                   | 4-4 3/4                    | 0362 7000 110                      |
|                 | 110-130                   | 4 3/8-5 1/8                | 0362 7000 120                      |
| 120-140         | 4 3/4-5 1/2               | 0362 7000 130              |                                    |
| 130-150         | 5 1/8-5 7/8               | 0362 7000 140              |                                    |
| 140-160         | 5 1/2-6 1/4               | 0362 6000 150              |                                    |

| BREEZE AERO BGV |                           |                            |                                    |                                           |
|-----------------|---------------------------|----------------------------|------------------------------------|-------------------------------------------|
| Width<br>(B mm) | Clamping ranges<br>(D mm) | Clamping ranges<br>(D in.) | S10<br>Product No.<br>Carbon screw | S40<br>Product No.<br>304 Stainless screw |
| 14.3            | 25-40                     | 1-1 9/16                   | 0362 7001 033                      | 0362 7010 033                             |
|                 | 30-45                     | 1 3/16-1 3/4               | 0362 7001 038                      | 0362 7010 038                             |
|                 | 35-50                     | 1 3/8-2                    | 0362 7001 043                      | 0362 7010 043                             |
|                 | 40-60                     | 1 9/16-2 3/8               | 0362 7001 050                      | 0362 7010 050                             |
|                 | 50-70                     | 2-2 3/4                    | 0362 7001 060                      | 0362 7010 060                             |
|                 | 60-80                     | 2 3/8-3 1/8                | 0362 7001 070                      | 0362 7010 070                             |
|                 | 70-90                     | 2 3/4-3 9/16               | 0362 7001 080                      | 0362 7010 080                             |
|                 | 80-100                    | 3 1/8-4                    | 0362 7001 090                      | 0362 7010 090                             |
|                 | 90-110                    | 3 1/2-4 3/8                | 0362 7001 100                      | 0362 7010 100                             |
|                 | 100-120                   | 4-4 3/4                    | 0362 7001 110                      | 0362 7010 110                             |
|                 | 110-130                   | 4 3/8-5 1/8                | 0362 7001 120                      | 0362 7010 120                             |
|                 | 120-140                   | 4 3/4-5 1/2                | 0362 7001 130                      | 0362 7010 130                             |
|                 | 130-150                   | 5 1/8-5 7/8                | 0362 7001 140                      | 0362 7010 140                             |
|                 | 140-160                   | 5 1/2-6 1/4                | 0362 6001 150                      | 0362 6010 150                             |

# BREEZE AERO-SEAL



- ① **Hex head Screw**
- ② **Heavy-duty Quadra-Lock design**
- ③ **Conical Arched Perforated Slots:** More steel between perforations for added strength and smoother worm-drive engagement

## The original perforated stainless steel worm-drive clamp

A heavy-duty Quadra-Lock construction enables far more tightening torque to be delivered to the band perforations. Use for aircraft and heavy-duty industrial applications.

### Advantages at a glance

- Very high break torque
- Different screws depending on uses
- Stronger performance

### Typical applications

- Commercial vehicles
- Passenger vehicles
- Industrial

### Materials

|     |     |      |      |     |     |
|-----|-----|------|------|-----|-----|
| S10 | S20 | S30  | S40  | S50 | S60 |
|     |     | (W3) | (W4) |     |     |
| ×   |     | ×    | ×    |     |     |

\* Classified by corrosion resistance. Band material S40/Screw material S10. According to DIN norm it is comparable to W2.

\*\* Classified by corrosion resistance. Band material S40/Screw material S30.

### Type of bands housing and screw

#### Thumb/Wing screw

- Only available in S30 material



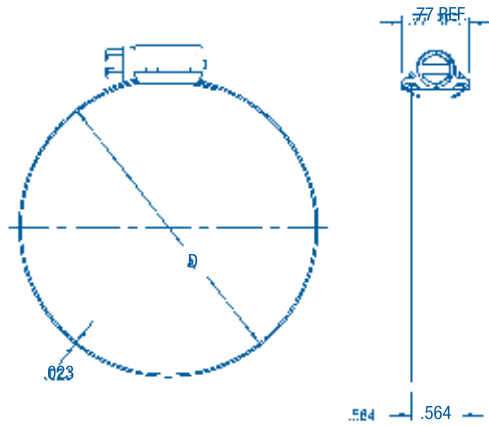
#### Safe-seal screw head

- Safe-seal collared screw.  
Only available in S30 material





## Dimensions



## Specifications

| BREEZE AERO-SEAL |                           |                            |                                 |                                    |                                            |                                           |
|------------------|---------------------------|----------------------------|---------------------------------|------------------------------------|--------------------------------------------|-------------------------------------------|
| Width<br>(mm)    | Clamping ranges<br>(D mm) | Clamping ranges<br>(D in.) | Hexagonal slotted screw<br>(mm) | S10<br>Product No.<br>Carbon Screw | S30<br>Product No.<br>410 Stainless Screw* | S40<br>Product No.<br>304 Stainless Screw |
| 14.2             | 11-20                     | 7/16-13/16                 | 7.9                             | 0360 0000 016                      | 0360 0020 016                              | 0360 0030 016                             |
|                  | 13-23                     | 1/2-15/16                  |                                 | 0360 0000 018                      | 0360 0020 018                              | 0360 0030 018                             |
|                  | 14-27                     | 9/16-11/16                 |                                 | 0360 0000 021                      | 0360 0020 021                              | 0360 0030 021                             |
|                  | 17-32                     | 11/16-11/4                 |                                 | 0360 0000 025                      | 0360 0020 025                              | 0360 0030 025                             |
|                  | 21-38                     | 13/16-11/2                 |                                 | 0360 0000 030                      | 0360 0020 030                              | 0360 0030 030                             |
|                  | 21-44                     | 13/16-1 3/4                |                                 | 0360 0000 033                      | 0360 0020 033                              | 0360 0030 033                             |
|                  | 27-51                     | 11/16-2                    |                                 | 0360 0000 039                      | 0360 0020 039                              | 0360 0030 039                             |
|                  | 33-57                     | 15/16-2 1/4                |                                 | 0360 0000 045                      | 0360 0020 045                              | 0360 0030 046                             |
|                  | 40-64                     | 19/16-2 1/2                |                                 | 0360 0000 052                      | 0360 0020 052                              | 0360 0030 052                             |
|                  | 46-70                     | 113/16-2 3/4               |                                 | 0360 0000 058                      | 0360 0020 058                              | 0360 0030 058                             |
|                  | 52-76                     | 2 1/16-3                   |                                 | 0360 0000 064                      | 0360 0020 064                              | 0360 0030 064                             |
|                  | 59-83                     | 2 5/16-3 1/4               |                                 | 0360 0000 071                      | 0360 0020 071                              | 0360 0030 071                             |
|                  | 65-89                     | 2 9/16-3 1/2               |                                 | 0360 0000 077                      | 0360 0020 077                              | 0360 0030 077                             |
|                  | 71-95                     | 2 13/16-3 3/4              |                                 | 0360 0000 083                      | 0360 0020 083                              | 0360 0030 083                             |
|                  | 78-102                    | 3 1/16-4                   |                                 | 0360 0000 090                      | 0360 0020 090                              | 0360 0030 090                             |
|                  | 84-108                    | 3 5/16-4 1/4               |                                 | 0360 0000 096                      | 0360 0020 096                              | 0360 0030 096                             |
|                  | 91-114                    | 3 9/16-4 1/2               |                                 | 0360 0010 103                      | 0360 0020 103                              | 0360 0030 103                             |
|                  | 48-127                    | 1 7/8-5                    |                                 | 0360 0000 088                      | 0360 0020 088                              | 0360 0030 088                             |
|                  | 64-140                    | 2 1/2-5 1/2                |                                 | 0360 0000 102                      | 0360 0020 102                              | 0360 0030 102                             |
|                  | 79-152                    | 3 1/8-6                    |                                 | 0360 0000 116                      | 0360 0020 116                              | 0360 0030 116                             |
|                  | 92-165                    | 3 5/8-6 1/2                |                                 | 0360 0000 129                      | 0360 0020 129                              | 0360 0030 129                             |
|                  | 105-178                   | 4 1/8-7                    |                                 | 0360 0000 142                      | 0360 0020 142                              | 0360 0030 142                             |
|                  | 143-216                   | 5 5/8-8 1/2                |                                 | 0360 0000 180                      | 0360 0020 180                              | 0360 0030 180                             |
|                  | 181-254                   | 7 1/8-10                   |                                 | 0360 0000 218                      | 0360 0020 218                              | 0360 0030 218                             |
|                  | 238-311                   | 9 3/8-12 1/4               |                                 | 0360 0000 275                      | 0360 0020 275                              | 0360 0030 275                             |

\*410 Stainless Steel Hex Screw also available with thumb/wing screw and safety collar screw

# BREEZE MINI



- ① **One Piece Housing** provides strength and stability
- ② **Conical Arched Perforated Slots:** More steel between perforations for added strength and smoother worm-drive engagement

## A lightweight and streamlined clamp

The streamlined configuration allows for installation in tight fitting or difficult to reach areas. This clamp creates high sealing pressure with only 1,2 to 1,7 nm of installation torque.

## Advantages at a glance

- Installation in tight fitting or difficult to reach areas
- High sealing pressure with low torque
- Used in small diameter applications

## Typical applications

- Commercial vehicles
- Passenger vehicles
- Industrial
- Infrastructure
- Residential
- Air & fuel lines

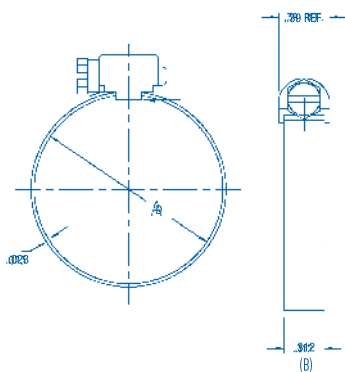
## Materials



\* Classified by corrosion resistance. Band material S40/Screw material S10. According to DIN norm it is comparable to W2.

\*\* Classified by corrosion resistance. Band material S40/Screw material S30.

## Dimensions



## Specifications

| BREEZE MINI     |                           |                            |                   |                    |                     |                     |
|-----------------|---------------------------|----------------------------|-------------------|--------------------|---------------------|---------------------|
| Width<br>(B mm) | Clamping ranges<br>(D mm) | Clamping ranges<br>(D in.) | Hex Screw<br>(mm) | S10<br>Product No. | S30<br>Product No.  | S40<br>Product No.  |
| 7.9             | 5.6-16                    | 1/4-5/8                    | 6.4               | Carbon Screw       | 410 Stainless Screw | 304 Stainless Screw |
|                 | 11-20                     | 7/16-13/16                 |                   | 0360 0102 011      | 0360 0103 011       | 0360 0104 011       |
|                 | 13-23                     | 1/2-15/16                  |                   | 0360 0102 016      | 0360 0103 016       | 0360 0104 016       |
|                 | 14-27                     | 9/16-11/16                 |                   | 0360 0102 018      | 0360 0103 018       | 0360 0104 018       |
|                 | 17-32                     | 11/16-1 1/4                |                   | 0360 0102 021      | 0360 0103 021       | 0360 0104 021       |
|                 | 24-38                     | 15/16-1 1/2                |                   | 0360 0102 025      | 0360 0103 025       | 0360 0104 025       |
|                 | 30-44                     | 1 3/16-1 3/4               |                   | 0360 0102 031      | 0360 0103 031       | 0360 0104 031       |
|                 | 37-51                     | 1 7/16-2                   |                   | 0360 0102 037      | 0360 0103 037       | 0360 0104 037       |
|                 | 43-57                     | 1 11/16-2 1/4              |                   | 0360 0102 044      | 0360 0103 044       | 0360 0104 044       |
|                 | 49-64                     | 1 15/16-2 1/2              |                   | 0360 0102 050      | 0360 0103 050       | 0360 0104 050       |
|                 |                           |                            |                   |                    | 0360 0102 057       | 0360 0103 057       |



# BREEZE POWER-SEAL



- ① **Quadra-Lock Housing** provides strength and stability
- ② **Conical Arched Perforated Slots:** More steel between perforations for added strength and smoother worm-drive engagement
- ③ **12,7mm S40 stainless band**

## General purpose clamp

General purpose automotive and industrial clamps. High strength Quadra-Lock housing construction. Exceeds all SAE requirements. Use for all standard clamp applications.

## Advantages at a glance

- Per SAE standard J1508 Type "F"

## Typical applications

- Commercial vehicles
- Passenger vehicles
- Industrial
- Infrastructure

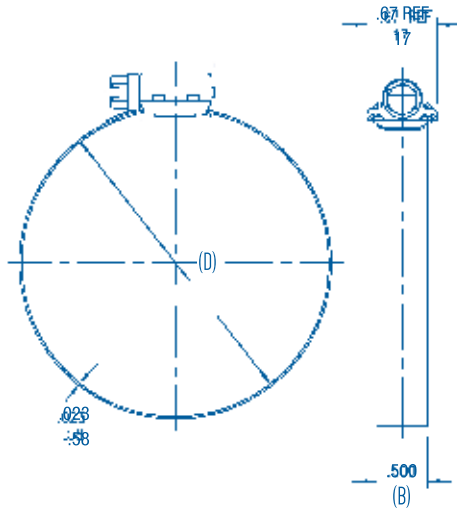
## Materials

|     |     |             |             |             |     |
|-----|-----|-------------|-------------|-------------|-----|
| S10 | S20 | S30<br>(W3) | S40<br>(W4) | S50<br>(W5) | S60 |
| ×   |     | ×           | ×           | ×           |     |

\* Classified by corrosion resistance. Band material S40/Screw material S10. According to DIN norm it is comparable to W2.

\*\* Classified by corrosion resistance. Band material S40/Screw material S30.

## Dimensions



## Specifications

| POWER SEAL      |                           |                            |                   |                    |                           |                           |                         |
|-----------------|---------------------------|----------------------------|-------------------|--------------------|---------------------------|---------------------------|-------------------------|
| Width<br>(B mm) | Clamping ranges<br>(D mm) | Clamping ranges<br>(D in.) | Hex Screw<br>(mm) | S10<br>Product No. | S30<br>Product No.        | S40<br>Product No.        | S50<br>Product No.      |
| 12.7            | 11-20                     | 7/16-13/16                 | 7.9               | Plated Hex Screw   | 410 Stainless Steel Screw | 304 Stainless Steel Screw | All 316 Stainless Steel |
|                 | 13-23                     | 1/2-15/16                  |                   | 0361 0114 016      | 0361 0116 016             | 0361 0117 016             | 0361 0115 016           |
|                 | 14-27                     | 9/16-1 1/16                |                   | 0361 0114 018      | 0361 0116 018             | 0361 0117 018             | 0361 0115 018           |
|                 | 17-32                     | 11/16-1 1/4                |                   | 0361 0114 021      | 0361 0116 021             | 0361 0117 021             | 0361 0115 021           |
|                 | 21-38                     | 13/16-1 1/2                |                   | 0361 0114 025      | 0361 0116 025             | 0361 0117 025             | 0361 0115 025           |
|                 | 21-44                     | 13/16-1 3/4                |                   | 0361 0114 030      | 0361 0116 030             | 0361 0117 030             | 0361 0115 030           |
|                 | 27-51                     | 1 1/16-2                   |                   | 0361 0114 033      | 0361 0116 033             | 0361 0117 033             | 0361 0115 033           |
|                 | 33-57                     | 1 5/16-2 1/4               |                   | 0361 0114 039      | 0361 0116 039             | 0361 0117 039             | 0361 0115 039           |
|                 | 40-64                     | 1 9/16-2 1/2               |                   | 0361 0114 045      | 0361 0116 045             | 0361 0117 045             | 0361 0115 045           |
|                 | 46-70                     | 1 13/16-2 3/4              |                   | 0361 0114 052      | 0361 0116 052             | 0361 0117 052             | 0361 0115 052           |
|                 | 52-76                     | 2 1/16-3                   |                   | 0361 0114 058      | 0361 0116 053             | 0361 0117 058             | 0361 0115 058           |
|                 | 59-83                     | 2 5/16-3 1/4               |                   | 0361 0114 053      | 0361 0116 058             | 0361 0117 064             | 0361 0115 053           |
|                 | 65-89                     | 2 9/16-3 1/2               |                   | 0361 0114 059      | 0361 0116 059             | 0361 0117 071             | 0361 0115 059           |
|                 | 71-95                     | 2 13/16-3 3/4              |                   | 0361 0114 065      | 0361 0116 065             | 0361 0117 077             | 0361 0115 065           |
|                 | 78-102                    | 3 1/16-4                   |                   | 0361 0114 072      | 0361 0116 072             | 0361 0117 083             | 0361 0115 072           |
|                 | 84-108                    | 3 5/16-4 1/4               |                   | 0361 0114 083      | 0361 0116 083             | 0361 0117 090             | 0361 0115 083           |
|                 | 91-114                    | 3 9/16-4 1/2               |                   | 0361 0114 084      | 0361 0116 084             | 0361 0117 096             | 0361 0115 084           |
|                 | 48-127                    | 1 7/8-5                    |                   | 0361 0114 091      | 0361 0116 088             | 0361 1097 102             | 0361 0115 091           |
|                 | 64-140                    | 2 1/2-5 1/2                |                   | 0361 0114 088      | 0361 0116 091             | 0361 0117 088             | 0361 0115 088           |
|                 | 79-152                    | 3 1/8-6                    |                   | 0361 0114 102      | 0361 0116 102             | 0361 1093 127             | 0361 0115 102           |
|                 | 92-165                    | 3 5/8-6 1/2                |                   | 0361 0114 116      | 0361 0116 116             | 0361 0117 116             | 0361 0115 116           |
|                 | 105-178                   | 4 1/8-7                    |                   | 0361 0114 129      | 0361 0116 129             | 0361 1090 152             | 0361 0115 129           |
|                 |                           |                            |                   | 0361 0114 141      | 0361 0116 142             | 0361 0117 142             | 0361 0115 142           |

# BREEZE LINER



- ① **High-strength Quadra-Lock housing construction**
- ② **7,9mm hexagonal slotted screw**
- ③ **Lined band protects hose from damage**

## Extension clamp

An integral extension of the band as an inner liner protects soft-surface hose (silicone and others) from damage caused by extrusion or shearing through the band slots. Liner clamps afford

maximum protection to soft hoses while providing a true concentric seal.

## Advantages at a glance

- Inner liner which protects all types of hoses from damage
- SAE Standard J1508 Type F

## Materials



\* Classified by corrosion resistance. Band material S40/Screw material S10. According to DIN norms it would be comparable to W2

\*\* Classified by corrosion resistance. Band material S40/Screw material S30.

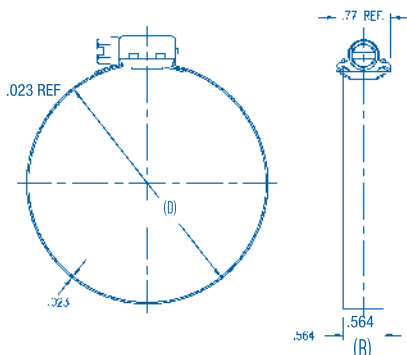
## Typical applications

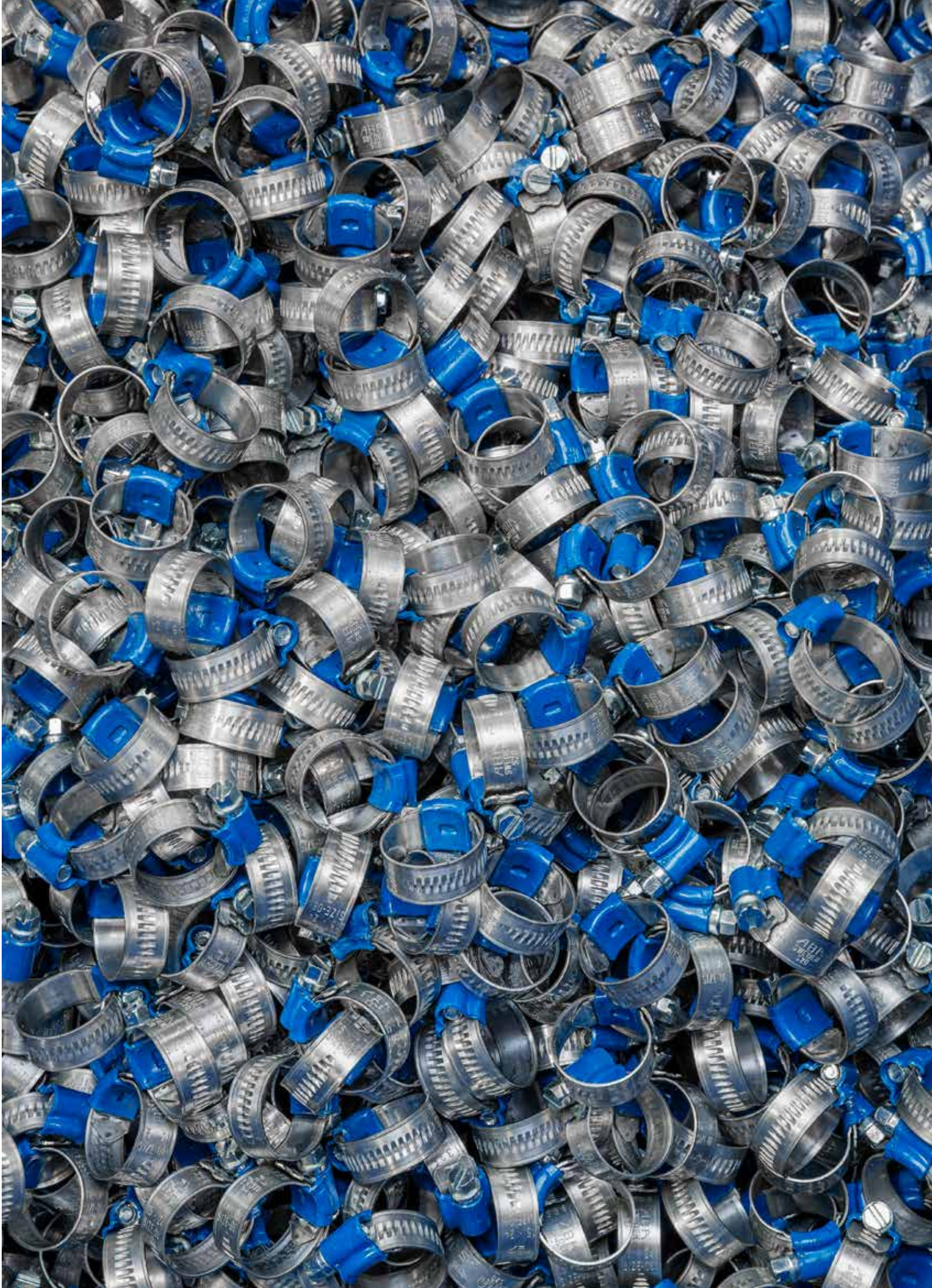
- Commercial vehicle
- Passenger vehicle
- Industrial
- Infrastructure

## Specifications

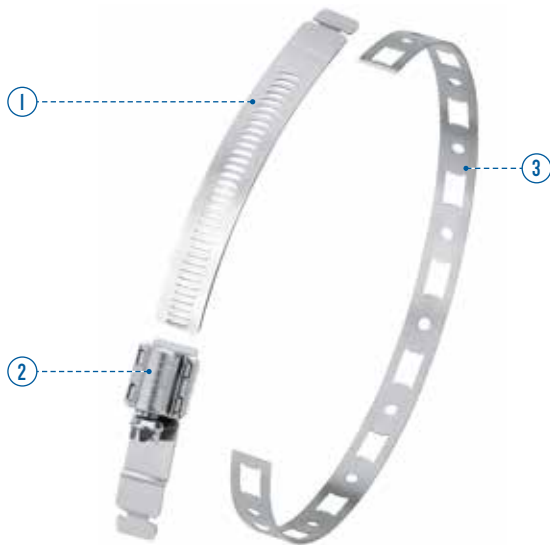
| BREEZE LINER    |                           |                            |                                    |                                           |
|-----------------|---------------------------|----------------------------|------------------------------------|-------------------------------------------|
| Width<br>(B mm) | Clamping ranges<br>(D mm) | Clamping ranges<br>(D in.) | S10<br>Product No.<br>Carbon screw | S30<br>Product No.<br>410 Stainless screw |
| 12,7            | 11-20                     | 7/16-25/32                 | 0361 0200 016                      | 0361 0122 016                             |
|                 | 13-23                     | 1/2-29/32                  | 0361 0200 018                      | 0361 0122 018                             |
|                 | 14-27                     | 9/16-11/16                 | 0361 0200 021                      | 0361 0122 021                             |
|                 | 17-32                     | 11/16-11/4                 | 0361 0200 025                      | 0361 0122 025                             |
|                 | 21-38                     | 13/16-11/2                 | 0361 0200 030                      | 0361 0122 030                             |
|                 | 21-44                     | 13/16-1 3/4                | 0361 0200 033                      | 0361 0122 033                             |
|                 | 27-51                     | 1/16-2                     | 0361 0200 039                      | 0361 0122 039                             |
|                 | 33-57                     | 15/16-2 1/4                | 0361 0200 045                      | 0361 0122 045                             |
|                 | 40-64                     | 19/16-2 1/2                | 0361 0200 052                      | 0361 0122 052                             |
|                 | 46-70                     | 1 13/16-2 3/4              | 0361 0200 058                      | 0361 0122 058                             |
|                 | 52-76                     | 2 1/16-3                   | 0361 0200 064                      | 0361 0122 064                             |
|                 | 59-83                     | 2 5/16-3 1/4               | 0361 0200 071                      | 0361 0122 071                             |
|                 | 65-89                     | 2 9/16-3 1/2               | 0361 0200 077                      | 0361 0122 077                             |
|                 | 71-95                     | 2 13/16-3 3/4              | 0361 0200 083                      | 0361 0122 083                             |
|                 | 78-102                    | 3 1/16-4                   | 0361 0200 090                      | 0361 0122 090                             |
|                 | 84-108                    | 3 5/16-4 1/4               | 0361 0200 096                      | 0361 0122 096                             |
|                 | 91-114                    | 3 9/16-4 1/2               | 0361 0200 103                      | 0361 0122 103                             |
|                 | 105-127                   | 4 1/8-5                    | 0361 0200 116                      | 0361 0122 116                             |
|                 | 117-140                   | 4 5/8-5 1/2                | 0361 0200 129                      | 0361 0122 129                             |

## Dimensions





# BREEZE MAKE-A-CLAMP



- ① **4-piece** Quadra Lock housing
- ② **Modular interlocking band** to hardware system
- ③ **S40 Series stainless steel band** with safety edge

By simply cutting off a piece of banding from a continuous roll, you can make any size 100% stainless steel worm-gear clamp. Superior to and more versatile than "crimp/buckle" banding and strapping products.

## The maintenance clamp system in a box

Breeze Make-A-Clamp gives you a reusable total maintenance clamp system in a kit, consisting of a continuous roll of stainless steel banding and all stainless steel adjustable worm-gear assembly fasteners. It's a must for anyone who's likely to encounter requirements for varying sized large clamps.

## Advantages at a glance

- A maintenance "clamp system" in a box
- Make any size 100% stainless steel worm-gear clamp
- Highly versatile
- Reusable

## Typical applications

- Commercial vehicles
- Passenger vehicles
- Industrial
- Infrastructure
- DIY

## Materials





## Specifications

| BREEZE MAKE-A-CLAMP |                                                               |                                 |                                              |                    |
|---------------------|---------------------------------------------------------------|---------------------------------|----------------------------------------------|--------------------|
| Width<br>(mm)       | Designation                                                   | Hexagonal slotted screw<br>(mm) | Fasteners & screw housing assemblies<br>(mm) | S40<br>Product No. |
| 12.7                | Mini kit: 2.6 meters band, 3 adj. fasteners, 1 band splice    | 7                               | 14.2                                         | 0364 0200 025      |
|                     | Kit with 30.5 meters band, 25 adj. fasteners, 10 band splices |                                 |                                              | 0364 0201 003      |
|                     | Kit with 15.2 meters band, 10 adj. fasteners, 5 band splices  |                                 |                                              | 0364 0202 030      |
|                     | Box of 25 adj. fasteners                                      |                                 |                                              | 0364 0203 125      |
|                     | Box of 10 adj. fasteners                                      |                                 |                                              | 0364 0204 100      |
|                     | Box with 30.5 meters band, 10 band splices                    |                                 |                                              | 0364 0205 300      |
|                     | Box with 15.2 meters band, 50 band splices                    |                                 |                                              | 0364 0206 000      |
|                     | 6" demonstrator kit with clamp                                |                                 |                                              | 0364 0207 050      |
|                     | Box of 10 band splices                                        |                                 |                                              | 0364 0208 000      |

# ABA POWER CLAMP



- ① **Single screw version**
- ② **Double screw version**
- ③ **Heavy-Duty double band clamp.**
- ④ **Full trunnions**
- ⑤ **Welding spots**

## Heavy-duty clamps

A very strong heavy-duty double band clamp. Also available in a double screw version for extra clamping force. Both “single” and “double” are available in standard version and in stainless steel 316/S50.

## Advantages at a glance

- High break torque
- Excellent tensile force

## Typical applications

- Agriculture
- Drainage systems
- Irrigation
- Sludge suction

## Materials

|      |     |     |     |      |     |
|------|-----|-----|-----|------|-----|
| S10  | S20 | S30 | S40 | S50  | S60 |
| (W1) |     |     |     | (W5) |     |
| ×    |     |     |     | ×    |     |

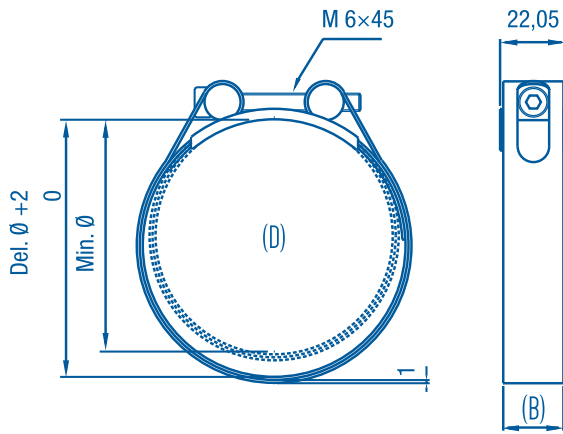
### Single screw version

- Power Clamp – S10(W1): Electro zink plated
- Power Clamp – S50(W5): All parts are made in SS2343/AISI 316 stainless steel.

### Double screw version for extra clamping force.

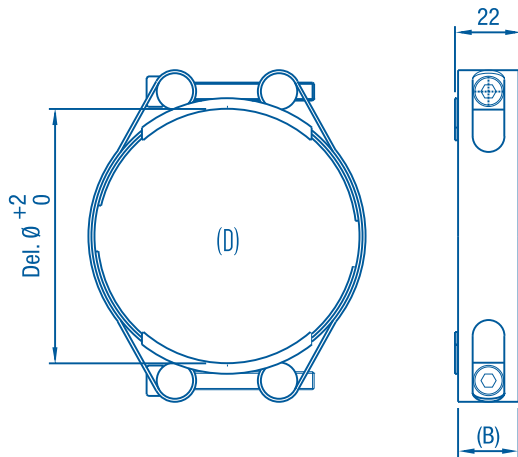
- Power Clamp Double – S10(W1): Electro zink plated
- Power Clamp Double – S50(W5): All parts are made in SS2343/AISI 316 stainless steel.

## Dimensions



## Specifications

| ABA POWER CLAMP SINGLE |                 |                 |               |               |
|------------------------|-----------------|-----------------|---------------|---------------|
| Width                  | Clamping ranges | Clamping ranges | S10           | S50           |
| (B mm)                 | (D mm)          | (D in.)         | Product No.   | Product No.   |
| 20                     | 34-40           | 1 5/16-1 9/16   | 0569 7002 040 | 0569 6001 040 |
|                        | 39-45           | 1 9/16-1 3/4    | 0569 6002 045 | 0569 0001 045 |
|                        | 44-50           | 1 3/4-2         | 0569 6002 050 | 0569 0001 050 |
|                        | 49-55           | 1 15/16-2 3/16  | 0569 7002 055 | 0569 6001 055 |
|                        | 54-60           | 2 1/8-2 3/8     | 0569 7002 060 | 0569 6001 060 |
|                        | 59-65           | 2 5/16-2 9/16   | 0569 7002 065 | 0569 600 065  |
|                        | 64-70           | 2 1/2-2 3/4     | 0569 7002 070 | 0569 6001 070 |
|                        | 69-75           | 2 3/4-2 15/16   | 0569 7002 075 | 0569 6001 075 |
|                        | 74-80           | 2 15/16-3 1/8   | 0569 6002 080 | 0569 0001 080 |
|                        | 79-85           | 3 1/8-3 3/8     | 0569 7002 085 | 0569 6001 085 |
|                        | 84-90           | 3 5/16-3 9/16   | 0569 7002 090 | 0569 6001 090 |
|                        | 89-95           | 3 1/2-3 3/4     | 0569 7002 095 | 0569 6001 095 |
|                        | 94-100          | 3 11/16-3 15/16 | 0569 6002 100 | 0569 0001 100 |
|                        | 99-105          | 3 7/8-4 1/8     | 0569 7002 105 | 0569 6001 105 |
|                        | 104-110         | 4 1/16-4 5/16   | 0569 7002 110 | 0569 6001 110 |
|                        | 109-115         | 4 5/16-4 1/2    | 0569 7002 115 | 0569 6001 115 |
|                        | 114-120         | 4 1/2-4 3/4     | 0569 6002 120 | 0569 0001 120 |
|                        | 119-125         | 4 11/16-4 5/16  | 0569 7002 125 | 0569 6001 125 |
|                        | 124-130         | 4 7/8-5 1/8     | 0569 6002 130 | 0569 0001 130 |
|                        | 129-135         | 5 1/16-5 5/16   | 0569 7002 135 | 0569 6001 135 |
| 134-140                | 5 1/4-5 1/2     | 0569 7002 140   | 0569 6001 140 |               |



| ABA POWER CLAMP DOUBLE |                 |                 |               |               |
|------------------------|-----------------|-----------------|---------------|---------------|
| Width                  | Clamping ranges | Clamping ranges | S10           | S50           |
| (B mm)                 | (D mm)          | (D in.)         | Product No.   | Product No.   |
| 20                     | 32-40           | 1 1/4-1 9/16    | 0569 7003 040 | 0569 6004 040 |
|                        | 40-50           | 1 9/16-2        | 0569 6003 050 | 0569 6004 050 |
|                        | 45-55           | 1 3/4-2 3/16    | 0569 7003 055 | 0569 6004 055 |
|                        | 50-60           | 2-2 3/8         | 0569 7003 060 | 0569 6004 060 |
|                        | 55-65           | 2 3/16-2 9/16   | 0569 7003 065 | 0569 6004 065 |
|                        | 60-70           | 2 3/8-2 3/4     | 0569 7003 070 | 0569 6004 070 |
|                        | 65-75           | 2 9/16-2 15/16  | 0569 7003 075 | 0569 6004 075 |
|                        | 70-80           | 2 3/4-3 1/8     | 0569 7003 080 | 0569 6004 080 |
|                        | 75-85           | 2 15/16-3 3/8   | 0569 7003 085 | 0569 6004 085 |
|                        | 80-90           | 3 1/8-3 9/16    | 0569 6003 090 | 0569 6004 090 |
|                        | 85-95           | 3 3/8-3 3/4     | 0569 7003 095 | 0569 6004 095 |
|                        | 90-100          | 3 9/16-3 15/16  | 0569 7003 100 | 0569 6004 100 |
|                        | 95-105          | 3 3/4-4 1/8     | 0569 6003 105 | 0569 6004 105 |
|                        | 100-110         | 3 15/16-4 5/16  | 0569 7003 110 | 0569 6004 110 |
|                        | 105-115         | 4 1/8-4 1/2     | 0569 6003 115 | 0569 7004 115 |
|                        | 110-120         | 4 5/16-4 3/4    | 0569 6003 120 | 0569 6004 120 |
|                        | 115-125         | 4 1/2-4 15/16   | 0569 6003 125 | 0569 6004 125 |
|                        | 120-130         | 4 3/4-5 1/8     | 0569 7003 130 | 0569 6004 130 |
|                        | 125-135         | 4 15/16-5 5/16  | 0569 7003 135 | 0569 6004 135 |
|                        | 130-140         | 5 1/8-5 1/2     | 0569 7003 140 | 0569 6004 140 |
|                        | 135-145         | 5 5/16-5 11/16  | 0569 7003 145 | 0569 6004 145 |
|                        | 140-150         | 5 1/2-5 15/16   | 0569 6003 150 | 0569 6004 150 |
|                        | 145-155         | 5 11/16-6 1/8   | 0569 6003 155 | 0569 6004 155 |
|                        | 150-160         | 5 15/16-6 5/16  | 0569 6003 160 | 0569 6004 160 |
|                        | 155-165         | 6 1/8-6 1/2     | 0569 6003 165 | 0569 6004 165 |
|                        | 160-170         | 6 5/16-6 11/16  | 0569 6003 170 | 0569 6004 170 |
| 165-175                | 6 1/2-6 7/8     | 0569 6003 175   | 0569 6004 175 |               |

# ABA ROBUST ACID RESISTANT



- ① **The bolt is manufactured with integrated spacer** – one piece less to take care of
- ② **Band bridge with rolled up edges** – to protect the hose when the tightening force becomes high
- ③ **Hexagonal bolt** – ordinary tools such as a universal spanner can be used for tightening

## A strongly dimensioned hose clamp

A big, strong clamp producing a secure and careful grip around powerful hoses. The Robust Acid resistant clamp is used where great tightening forces are needed – for instance large and reinforced hoses within agriculture, irrigation, drainage systems, sludge suction etc. where there is a high demand for durability and a safe functionality in spite of tough handling and severe conditions.

The curve radius of the band bridge, the even transitions between the parts and the band as well as the smooth band underside give a good contact surface against the hose and consequently good sealing.

## Advantages at a glance

- Gentle on the hose when the tightening force becomes high
- Withstands hard tightening, repeated mounting and dismounting
- Safe functionality in severe conditions

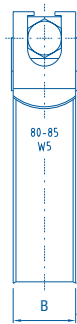
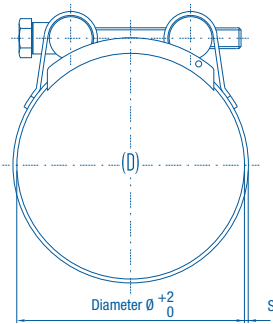
## Materials



## Typical applications

- For large/reinforced hoses
- Agriculture
- Irrigation
- Drainage systems
- Sludge suction

## Dimensions



## Specifications

| ABA ROBUST ACID RESISTANT |                           |                            |               |                         |                    |               |               |
|---------------------------|---------------------------|----------------------------|---------------|-------------------------|--------------------|---------------|---------------|
| Width<br>(B mm)           | Clamping ranges<br>(D mm) | Clamping ranges<br>(D in.) | S<br>(in)     | Hexagonal screw<br>(mm) | S50<br>Product No. |               |               |
| 18                        | 17-19                     | 11/16-3/4                  | 0.6           | M5x35                   | 0569 6013 019      |               |               |
|                           | 20-22                     | 13/16-7/8                  |               | M5x35                   | 0569 6013 022      |               |               |
|                           | 23-25                     | 15/16-1                    |               | M5x35                   | 0569 6013 025      |               |               |
|                           | 26-28                     | 1-1 1/8                    |               | M5x35                   | 0569 6013 028      |               |               |
|                           | 29-31                     | 1 1/8-1 1/4                |               | M5x35                   | 0569 6013 031      |               |               |
| 20                        | 32-35                     | 1 1/4-1 3/8                | 1             | M6x50                   | 0569 7013 035      |               |               |
|                           | 36-39                     | 1 7/16-1 9/16              |               | M6x50                   | 0569 7013 039      |               |               |
|                           | 40-43                     | 1 9/16-1 11/16             |               | M6x50                   | 0569 7013 043      |               |               |
|                           | 44-47                     | 1 3/4-1 7/8                |               | M6x50                   | 0569 6013 047      |               |               |
|                           | 48-51                     | 1 7/8-2                    |               | M6x50                   | 0569 6013 051      |               |               |
|                           | 52-55                     | 2 1/16-2 3/16              |               | M6x50                   | 0569 7013 055      |               |               |
|                           | 56-59                     | 2 3/16-2 5/16              |               | M6x55                   | 0569 7013 059      |               |               |
|                           | 60-63                     | 2 3/8-2 1/2                |               | M6x55                   | 0569 7013 063      |               |               |
|                           | 25                        | 64-67                      |               | 2 1/2-2 5/8             | 1.2                | M8x70         | 0569 6014 067 |
|                           |                           | 68-73                      |               | 2 11/16-2 7/8           |                    | M8x70         | 0569 7014 073 |
| 74-79                     |                           | 2 15/16-3 1/8              | M8x70         | 0569 7014 079           |                    |               |               |
| 80-85                     |                           | 3 1/8-3 3/8                | M8x70         | 0569 7014 085           |                    |               |               |
| 86-91                     |                           | 3 3/8-3 9/16               | M8x70         | 0569 7014 091           |                    |               |               |
| 92-97                     |                           | 3 5/8-3 13/16              | M8x70         | 0569 7014 097           |                    |               |               |
| 98-103                    |                           | 3 7/8-4 1/16               | M8x70         | 0569 7014 103           |                    |               |               |
| 104-112                   |                           | 4 1/16-4 7/16              | M8x80         | 0569 6014 112           |                    |               |               |
| 113-121                   |                           | 4 7/16-4 3/4               | M8x80         | 0569 7014 113           |                    |               |               |
| 122-130                   |                           | 4 13/16-5 1/8              | M8x80         | 0569 7014 130           |                    |               |               |
| 131-139                   |                           | 5 3/16-5 1/2               | M8x80         | 0569 6014 139           |                    |               |               |
| 140-148                   |                           | 5 1/2-5 13/16              | M8x80         | 0569 7014 148           |                    |               |               |
| 149-161                   |                           | 5 7/8-6 5/16               | 1.5           | M8x80                   |                    | 0569 7014 161 |               |
| 162-174                   |                           | 6 3/8-6 7/8                |               | M8x80                   |                    | 0569 6014 174 |               |
| 175-187                   |                           | 6 7/8-7 3/8                |               | M8x80                   |                    | 0569 6014 187 |               |
| 188-200                   | 7 3/8-7 7/8               | M8x80                      |               | 0569 6014 200           |                    |               |               |
| 201-213                   | 7 15/16-8 3/8             | M8x80                      |               | 0569 6014 213           |                    |               |               |
| 214-226                   | 8 7/16-8 7/8              | M8x80                      |               | 0569 6014 226           |                    |               |               |
| 227-239                   | 8 15/16-9 7/16            | M8x80                      |               | 0569 6014 239           |                    |               |               |
| 240-252                   | 9 7/16-9 15/16            | M8x80                      | 0569 6014 252 |                         |                    |               |               |

# BREEZE T-BOLT



- ① **Locking or free-spinning nut.**
- ② **Bolt available in carbon or stainless.**
- ③ **Floating bridge for 360° loading.**
- ④ **S40 stainless steel band with safety edge.**

## Engineered for long-term durability

A clamp that is performance engineered for long-term durability and manufactured to the highest quality standards. Designed for a wide variety of automotive, industrial and marine applications.

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## Advantages at a glance

- High-strength clamp design
- Available with Spring design for constant tension

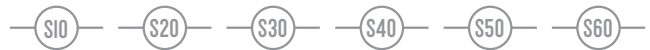
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## Typical applications

- Commercial vehicles
- Passenger vehicles
- Industrial
- Infrastructure

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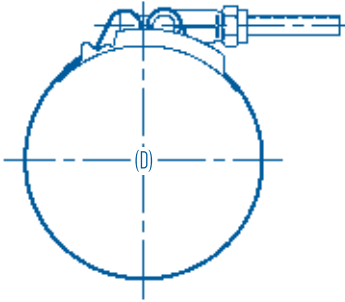
## Materials



×\*

\* Classified by corrosion resistance. Band material S40/Screw material S10. According to DIN norm it is comparable to W2.

## Dimensions



## Specifications

| BREEZE T-BOLT |                           |                             |                    |
|---------------|---------------------------|-----------------------------|--------------------|
| Width<br>(mm) | Clamping ranges<br>(D mm) | Clamping ranges*<br>(D in.) | S40<br>Product No. |
| 19            | 44.5-50.8                 | 1 3/4-2                     | 0363 0021 048      |
|               | 47.6-55.6                 | 1 7/8-2 3/16                | 0363 0021 052      |
|               | 50.8-58.7                 | 2-2 5/16                    | 0363 0021 055      |
|               | 54-61.9                   | 2 1/8-2 7/16                | 0363 0021 058      |
|               | 57.2-65.1                 | 2 1/4-2 9/16                | 0363 0021 061      |
|               | 60.3-68.3                 | 2 3/8-2 11/16               | 0363 0021 064      |
|               | 63.5-71.4                 | 2 1/2-2 13/16               | 0363 0021 068      |
|               | 66.7-74.6                 | 2 5/8-2 15/16               | 0363 0021 071      |
|               | 69.9-77.8                 | 2 3/4-3 1/16                | 0363 0021 074      |
|               | 73-81                     | 2 7/8-3 3/16                | 0363 0021 077      |
|               | 76.2-84.1                 | 3-3 5/16                    | 0363 0021 080      |
|               | 79.4-87.3                 | 3 1/8-3 7/16                | 0363 0021 084      |
|               | 82.6-90.5                 | 3 1/4-3 9/16                | 0363 0021 087      |
|               | 85.7-93.7                 | 3 3/8-3 11/16               | 0363 0021 090      |
|               | 88.9-96.8                 | 3 1/2-3 13/16               | 0363 0021 093      |
|               | 92.1-100                  | 3 5/8-3 15/16               | 0363 0021 096      |
|               | 95.3-103.2                | 3 3/4-4 1/16                | 0363 0021 099      |
|               | 101.6-109.5               | 4-4 5/16                    | 0363 0021 106      |
|               | 103.2-111.1               | 4 1/16-4 3/8                | 0363 0021 107      |
|               | 108-115.9                 | 4 1/4-4 9/16                | 0363 0021 112      |
|               | 114.3-122.2               | 4 1/2-4 13/16               | 0363 0021 118      |
|               | 127-134.9                 | 5-5 1/4                     | 0363 0021 131      |
|               | 133.4-141.3               | 5 1/4-5 9/16                | 0363 0021 137      |
|               | 139.7-147.6               | 5 1/2-5 13/16               | 0363 0021 144      |
|               | 146.1-154                 | 5 3/4-6 1/16                | 0363 0021 150      |
|               | 152.4-160.3               | 6-6 5/16                    | 0363 0021 156      |
|               | 158.8-166.7               | 6 1/4-6 9/16                | 0363 0021 163      |
|               | 165.1-173                 | 6 1/2-6 13/16               | 0363 0021 169      |
|               | 171.5-179.4               | 6 3/4-7 1/16                | 0363 0021 175      |
|               | 177.8-185.7               | 7-7 5/16                    | 0363 0021 182      |
|               | 184.2-192.1               | 7 1/4-7 9/16                | 0363 0021 188      |
|               | 190.5-198.4               | 7 1/2-7 13/16               | 0363 0021 195      |
|               | 196.9-204.8               | 7 3/4-8 1/16                | 0363 0021 201      |
|               | 215.9-223.8               | 8 1/2-8 13/16               | 0363 0021 220      |

Other diameters available on request

# BREEZE T-BOLT SPRING LOADED



- ① **Large spring**
- ② **Small spring**
- ③ **Floating bridge for 360° loading**
- ④ **Solid S40 stainless steel band**

## Heavy-Duty Large Spring

A clamp that is performance engineered for long-term durability and manufactured to the highest quality standards. The Spring-Loaded T-Bolt clamps provide comprehensive application coverage and are performance engineered.

They meet the same durability, torque and quality standards as the T-Bolt clamps. The spring design adds constant tension performance.

## Advantages at a glance

- Increased sealing reliability across a wide temperature range
- Automatic re-tensioning during temperature changes
- High-strength clamp design
- Per SAE standard J1508 Type "SLTB"

## Typical applications

- Designed for a wide variety of automotive, industrial and marine applications

## Materials

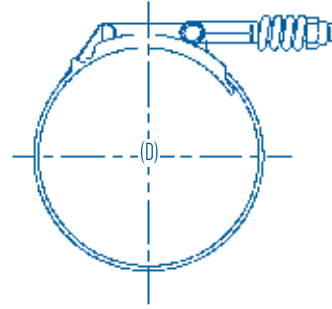
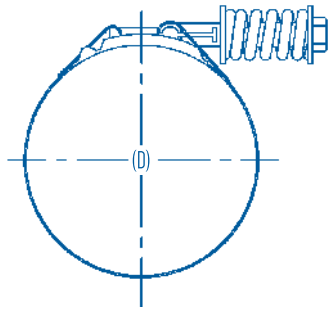


×\*

\* Classified by corrosion resistance. Band material S40/Screw material S10. According to DIN norm it is comparable to W2.



## Dimensions



## Specifications

| BREEZE T-BOLT SPRING LOADED (HEAVY DUTY) |                        |                         |                 |
|------------------------------------------|------------------------|-------------------------|-----------------|
| Width (mm)                               | Clamping ranges (D mm) | Clamping ranges (D in.) | SIO Product No. |
| 19                                       | 54-61.9                | 2 1/8-2 3/8             | 0363 0004 058   |
|                                          | 57.2-65.1              | 2 1/4-2 9/16            | 0363 0004 061   |
|                                          | 60.3-68.3              | 2 3/8-2 11/16           | 0363 0004 064   |
|                                          | 63.5-71.4              | 2 1/2-2 13/16           | 0363 0004 068   |
|                                          | 66.7-74.6              | 2 5/8-2 15/16           | 0363 0004 071   |
|                                          | 69.9-77.8              | 2 3/4-3 1/16            | 0363 0004 074   |
|                                          | 73-81                  | 2 7/8-3 3/16            | 0363 0004 077   |
|                                          | 76.2-84.1              | 3-3 5/16                | 0363 0004 080   |
|                                          | 77.8-85.7              | 3 1/16-3 3/8            | 0363 0004 082   |
|                                          | 79.4-87.3              | 3 1/8-3 7/16            | 0363 0004 084   |
|                                          | 82.6-90.5              | 3 1/4-3 9/16            | 0363 0004 087   |
|                                          | 85.7-93.7              | 3 3/8-3 11/16           | 0363 0004 090   |
|                                          | 88.9-96.8              | 3 1/2-3 13/16           | 0363 0004 093   |
|                                          | 90.5-98.4              | 3 9/16-3 7/8            | 0363 0004 094   |
|                                          | 92.1-100               | 3 5/8-3 15/16           | 0363 0004 096   |
|                                          | 95.3-103.2             | 3 3/4-4 1/16            | 0363 0004 099   |
|                                          | 103.2-111.1            | 4 1/16-4 3/8            | 0363 0004 107   |
|                                          | 104.8-112.7            | 4 1/8-4 7/16            | 0363 0004 109   |
|                                          | 108-115.9              | 4 1/4-4 9/16            | 0363 0004 112   |
|                                          | 114.3-122.2            | 4 1/2-4 13/16           | 0363 0004 118   |
| 115.9-123.8                              | 4 9/16-4 7/8           | 0363 0004 120           |                 |
| 127-134.9                                | 5-5 1/4                | 0363 0004 131           |                 |
| 133.4-141.3                              | 5 1/4-5 9/16           | 0363 0004 137           |                 |
| 139.7-147.6                              | 5 1/2-5 13/16          | 0363 0004 144           |                 |
| 146.1-154                                | 5 3/4-6 1/16           | 0363 0004 150           |                 |
| 152.4-160.3                              | 6-6 5/16               | 0363 0004 156           |                 |
| 158.8-166.7                              | 6 1/4-6 9/16           | 0363 0004 163           |                 |
| 165.1-173                                | 6 1/2-6 13/16          | 0363 0004 169           |                 |
| 177.8-185.7                              | 7-7 5/16               | 0363 0004 182           |                 |
| 184.2-192.1                              | 7 1/4-7 9/16           | 0363 0004 188           |                 |
| 190.5-198.4                              | 7 1/2-7 13/16          | 0363 0004 195           |                 |

| BREEZE T-BOLT SMALL SPRING (STANDARD DUTY) |                        |                         |                 |
|--------------------------------------------|------------------------|-------------------------|-----------------|
| Width (mm)                                 | Clamping ranges (D mm) | Clamping ranges (D in.) | SIO Product No. |
| 19                                         | 54-61.9                | 2 1/8-2 3/8             | 0363 0006 058   |
|                                            | 57.2-65.1              | 2 1/4-2 9/16            | 0363 0006 061   |
|                                            | 60.3-68.3              | 2 3/8-2 11/16           | 0363 0006 064   |
|                                            | 63.5-71.4              | 2 1/2-2 13/16           | 0363 0006 068   |
|                                            | 66.7-74.6              | 2 5/8-2 15/16           | 0363 0006 071   |
|                                            | 69.9-77.8              | 2 3/4-3 1/16            | 0363 0006 074   |
|                                            | 73-81                  | 2 7/8-3 3/16            | 0363 0006 077   |
|                                            | 76.2-84.1              | 3-3 5/16                | 0363 0006 080   |
|                                            | 77.8-85.7              | 3 1/16-3 3/8            | 0363 0006 082   |
|                                            | 79.4-87.3              | 3 1/8-3 7/16            | 0363 0006 084   |
|                                            | 82.6-90.5              | 3 1/4-3 9/16            | 0363 0006 087   |
|                                            | 85.7-93.7              | 3 3/8-3 11/16           | 0363 0006 090   |
|                                            | 88.9-96.8              | 3 1/2-3 13/16           | 0363 0006 093   |
|                                            | 90.5-98.4              | 3 9/16-3 7/8            | 0363 0006 094   |
|                                            | 92.1-100               | 3 5/8-3 15/16           | 0363 0006 096   |
|                                            | 95.3-103.2             | 3 3/4-4 1/16            | 0363 0006 099   |
|                                            | 103.2-111.1            | 4 1/16-4 3/8            | 0363 0006 107   |
|                                            | 104.8-112.7            | 4 1/8-4 7/16            | 0363 0006 109   |
|                                            | 108-115.9              | 4 1/4-4 9/16            | 0363 0006 112   |
|                                            | 114.3-122.2            | 4 1/2-4 13/16           | 0363 0006 118   |
| 115.9-123.8                                | 4 9/16-4 7/8           | 0363 0006 120           |                 |
| 127-134.9                                  | 5-5 1/4                | 0363 0006 131           |                 |
| 133.4-141.3                                | 5 1/4-5 9/16           | 0363 0006 137           |                 |
| 139.7-147.6                                | 5 1/2-5 13/16          | 0363 0006 144           |                 |
| 146.1-154                                  | 5 3/4-6 1/16           | 0363 0006 150           |                 |
| 152.4-160.3                                | 6-6 5/16               | 0363 0006 156           |                 |
| 158.8-166.7                                | 6 1/4-6 9/16           | 0363 0006 163           |                 |
| 165.1-173                                  | 6 1/2-6 13/16          | 0363 0006 169           |                 |
| 177.8-185.7                                | 7-7 5/16               | 0363 0006 182           |                 |
| 184.2-192.1                                | 7 1/4-7 9/16           | 0363 0006 188           |                 |
| 190.5-198.4                                | 7 1/2-7 13/16          | 0363 0006 195           |                 |

# TOOL CLIPS



①

## ① Closed Type

Closed Clips are produced in high quality spring steel. They are produced according to industrial and professional users' demands but are also frequently used in the DIY sector. The closed type is our most popular clip.

Three surface finishes are available:

- Standard – Zinc plated (5 µm)
- Black Nylon coated
- White Nylon coated

Dimensional allowance should be made for a reduction in hole size due to the nylon coating.



②

## ② Open Type

Tool Clips are produced in high quality spring steel. The open type allows an easier entry or withdrawal from the item being secured.

Three surface finishes:

- Standard – Zinc plated (5 µm)
- Black Nylon coated
- White Nylon coated

Dimensional allowance should be made for a reduction in hole size due to the nylon coating.



③

## ③ Super Clips

Super Clips are the heavy-duty Tool Clips, designed for larger objects up to 93 mm diameter.

Three surface finishes are available:

- Standard – Zinc plated, 5 µm thickness
- Black Nylon coated
- White Nylon coated

Dimensional allowance should be made for a reduction in hole size due to the nylon coating.

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## Advantages at a glance

- High quality spring steel
- Simple and reliable

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## Typical applications

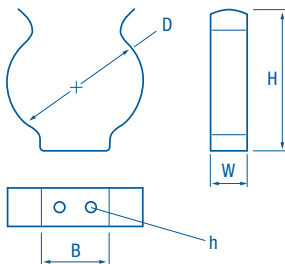
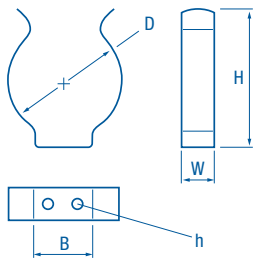
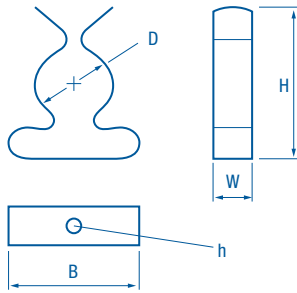
- DIY (Do-it-yourself)

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## Materials

- Standard – Zinc plated, 5 µm thickness
- Black Nylon coated
- White Nylon coated

## Dimensions



## Specifications

| TERRY CLOSED CLIP         |                            |                  |                 |                   |                |               | Nylon coated (CS70 carbon steel) |               |  |
|---------------------------|----------------------------|------------------|-----------------|-------------------|----------------|---------------|----------------------------------|---------------|--|
| Diameter ranges<br>(D mm) | Diameter ranges<br>(D in.) | Height<br>(H mm) | Width<br>(W mm) | Breadth<br>(B mm) | Hole<br>(h mm) | Product No.   | Product No.                      | Product No.   |  |
|                           |                            |                  |                 |                   |                | Black         | White                            | Zinc plated   |  |
| 6-7                       | 1/4-1/4                    | 15.3             | 6.35            | 12.9              | 2.4            | 0816 5005 006 |                                  | 0816 5009 006 |  |
| 10-12                     | 3/8-1/2                    | 20.0             | 6.35            | 15.5              | 2.4            | 0816 5005 010 | 0816 5007 010                    | 0816 5009 010 |  |
| 13-14                     | 1/2-9/16                   | 26.4             | 7.94            | 20.1              | 3.2            | 0816 5005 013 | 0816 5007 013                    | 0816 5009 013 |  |
| 16-19                     | 5/8-3/4                    | 32.2             | 7.94            | 22.6              | 3.2            | 0816 5005 016 | 0816 5007 016                    | 0816 5009 016 |  |
| 19-21                     | 3/4-13/16                  | 36.4             | 7.94            | 25.3              | 3.2            | 0816 5005 019 | 0816 5007 019                    | 0816 5009 019 |  |
| 25-27                     | 1-11/16                    | 40.3             | 9.52            | 28.8              | 3.2            | 0816 5005 025 | 0816 5007 025                    | 0816 5009 025 |  |
| 28-31                     | 11/8-11/4                  | 48.7             | 9.52            | 34.1              | 3.6            | 0816 5005 028 | 0816 5007 028                    | 0816 5009 028 |  |
| 32-34                     | 11/4-15/16                 | 59.3             | 11.11           | 42.8              | 3.6            | 0816 5005 032 | 0816 5007 032                    | 0816 5009 032 |  |
| 38-40                     | 11/2-19/16                 | 67.0             | 12.70           | 49.5              | 4.0*           | 0816 5005 038 | 0816 5007 038                    | 0816 5009 038 |  |
| 51-54                     | 2-21/8                     | 80.2             | 12.70           | 53.0              | 4.0*           | 0816 5005 051 | 0816 5007 051                    | 0816 5009 051 |  |

\* 2 holes

| TERRY OPENED CLIP         |                            |                  |                 |                   |                |               | Nylon coated (CS70 carbon steel) |               |  |
|---------------------------|----------------------------|------------------|-----------------|-------------------|----------------|---------------|----------------------------------|---------------|--|
| Diameter ranges<br>(D mm) | Diameter ranges<br>(D in.) | Height<br>(H mm) | Width<br>(W mm) | Breadth<br>(B mm) | Hole<br>(h mm) | Product No.   | Product No.                      | Product No.   |  |
|                           |                            |                  |                 |                   |                | Black         | White                            | Zinc plated   |  |
| 6-7                       | 1/4-1/4                    | 10.5             | 6.35            | 3.8               | 2.4            | 0816 5004 006 |                                  | 0816 5008 006 |  |
| 10-12                     | 3/8-1/2                    | 13.3             | 6.35            | 4.3               | 2.4            | 0816 5004 010 | 0816 5006 010                    | 0816 5008 010 |  |
| 13-14                     | 1/2-9/16                   | 16.1             | 7.94            | 5.0               | 3.2            | 0816 5004 013 | 0816 5006 013                    | 0816 5008 013 |  |
| 16-19                     | 5/8-3/4                    | 20.5             | 7.94            | 6.5               | 3.2            | 0816 5004 016 | 0816 5006 016                    | 0816 5008 016 |  |
| 19-21                     | 3/4-13/16                  | 26.6             | 7.94            | 9.0               | 3.2            | 0816 5004 019 | 0816 5006 019                    | 0816 5008 019 |  |
| 25-27                     | 1-11/16                    | 30.0             | 9.52            | 10.2              | 3.2            | 0816 5004 025 | 0816 5006 025                    | 0816 5008 025 |  |
| 28-31                     | 11/8-11/4                  | 33.4             | 9.52            | 12.0              | 3.6            | 0816 5004 028 | 0816 5006 028                    | 0816 5008 028 |  |
| 32-34                     | 11/4-15/16                 | 39.0             | 11.11           | 12.0              | 3.2            | 0816 5004 032 | 0816 5006 032                    | 0816 5008 032 |  |
| 38-40                     | 11/2-19/16                 | 48.0             | 12.70           | 13.0              | 3.2            | 0816 5004 038 | 0816 5006 038                    | 0816 5008 038 |  |
| 51-54                     | 2-21/8                     | 61.3             | 12.70           | 19.5              | *3.6           | 0816 5004 051 | 0816 5006 051                    | 0816 5008 051 |  |

\* 2 holes

| TERRY SUPER CLIP          |                            |                  |                 |                   |                |               | Nylon coated (CS70 carbon steel) |               |  |
|---------------------------|----------------------------|------------------|-----------------|-------------------|----------------|---------------|----------------------------------|---------------|--|
| Diameter ranges<br>(D mm) | Diameter ranges<br>(D in.) | Height<br>(H mm) | Width<br>(W mm) | Breadth<br>(B mm) | Hole<br>(h mm) | Product No.   | Product No.                      | Product No.   |  |
|                           |                            |                  |                 |                   |                | Black         | White                            | Zinc plated   |  |
| 44-66                     | 13/4-25/8                  | 53.4             | 12.7            | 25.5              | 4.0            | 0816 6010 044 | 0816 6011 044                    | 0816 6012 044 |  |
| 64-67                     | 21/2-25/8                  | 75.5             | 19.1            | 35.5              | 4.90           | 0816 6010 064 | 0816 6011 064                    | 0816 6012 064 |  |
| 76-79                     | 3-31/8                     | 87.5             | 19.1            | 47.0              | 4.75           | 0816 6010 076 | 0816 6011 076                    | 0816 6012 076 |  |
| 89-93                     | 31/2-311/16                | 101.6            | 22.2            | 48.0              | 4.75           | 0816 6010 089 | 0816 6011 089                    | 0816 6012 089 |  |

# PEN & PENCIL CLIPS

① Single



② Double



③ Triple



## Practical and safe pen and small tools holder

- Clips on pocket or uniform
- Adjusts to diameter of pen or small tool
- Spring steel holder & nickel plated clip
- Single, double and triple holder

## Specifications

| TERRY PEN & PENCIL CLIP   |                            |                  |                 |                                               |
|---------------------------|----------------------------|------------------|-----------------|-----------------------------------------------|
| Diameter ranges<br>(D mm) | Diameter ranges<br>(D in.) | Height<br>(H mm) | Width<br>(W mm) | Spring steel and nickel plated<br>Product No. |
| 7-15                      | 1/4-9/16                   | 40.0             | 11.0            | 0819 5000 001                                 |
| 7-15                      | 1/4-9/16                   | 40.0             | 25.5            | 0819 5000 002                                 |
| 7-15                      | 1/4-9/16                   | 40.0             | 40.0            | 0819 5000 003                                 |



2260

1101-01

2266

# RUBBER LINED CLIPS



- ① **The rubber prevent vibrations** from being transmitted, safeguards against scratching and also insulates.
- ② **The SS range** of clips has a solid single layer hot dip galvanized steel.
- ③ **The rubber profile** is in EPDM material.

## Rubber lined retaining clamps

Retaining clamps are primarily used for securing pipes, tubes and cables in place. The rubber profile prevents vibrations from being transmitted, safeguards against scratching and also insulates.

### Advantages at a glance

- Alternative clamp forms available on request
- Many material options

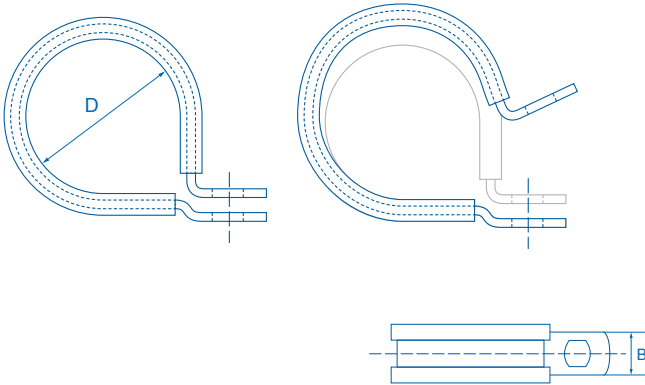
### Typical applications

Rubber lined clips are used in the automotive industry, machine construction, hydraulic and pneumatic applications, process industries, shipbuilding and refrigeration.

### Materials

|      |     |     |      |     |     |
|------|-----|-----|------|-----|-----|
| S10  | S20 | S30 | S40  | S50 | S60 |
| (W1) |     |     | (W4) |     |     |
| ×    |     |     | ×    |     |     |

## Dimensions

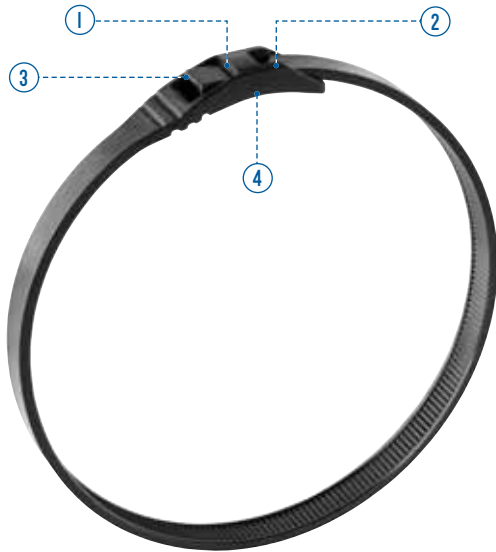


## Specifications

| ABA RUBBER LINED CLIP SMS |                     |                      |                    |
|---------------------------|---------------------|----------------------|--------------------|
| Width<br>(B mm)           | Diameters<br>(D mm) | Diameters<br>(D in.) | SIO<br>Product No. |
| 12                        | 3,2                 | 1/8                  | 0975 8112 003      |
|                           | 4,8                 | 3/16                 | 0975 8112 005      |
|                           | 6,4                 | 1/4                  | 0975 8112 006      |
|                           | 7,9                 | 5/16                 | 0975 8112 008      |
|                           | 9,5                 | 3/8                  | 0975 8112 010      |
|                           | 11,1                | 7/16                 | 0975 8112 011      |
|                           | 12,7                | 1/2                  | 0975 8112 013      |
|                           | 14,3                | 9/16                 | 0975 8112 014      |
|                           | 15,9                | 5/8                  | 0975 8112 016      |
|                           | 17,5                | 11/16                | 0975 8112 018      |
|                           | 19                  | 3/4                  | 0975 8112 019      |
|                           | 20,6                | 13/16                | 0975 8112 021      |
|                           | 22,2                | 7/8                  | 0975 8112 022      |
|                           | 23,8                | 15/16                | 0975 8112 024      |
|                           | 25,4                | 1                    | 0975 8112 025      |
|                           | 27                  | 1 1/16               | 0975 8112 027      |
|                           | 28,6                | 1 1/8                | 0975 8112 029      |
|                           | 30,2                | 1 3/16               | 0975 8112 030      |
|                           | 31,8                | 1 1/4                | 0975 8112 032      |
|                           | 33,3                | 1 5/16               | 0975 8112 033      |
|                           | 34,9                | 1 3/8                | 0975 8112 035      |
|                           | 36,5                | 1 7/16               | 0975 8112 036      |
|                           | 38,1                | 1 1/2                | 0975 8112 038      |
|                           | 41                  | 1 5/8                | 0975 8112 041      |
|                           | 44,5                | 1 3/4                | 0975 8112 045      |
|                           | 47                  | 1 7/8                | 0975 8112 047      |
|                           | 51                  | 2                    | 0975 8112 051      |
|                           | 54                  | 2 1/8                | 0975 8112 054      |
|                           | 60                  | 2 3/8                | 0975 8112 060      |
|                           | 65                  | 2 9/16               | 0975 8112 065      |
|                           | 74                  | 2 15/16              | 0975 8112 074      |
|                           | 110                 | 4 5/16               | 0975 8112 110      |

\* Available in stainless steel on request

# LOW PROFILE CABLE TIE



- ① Lowest profile nylon tie available today
- ② Flexible head design easily flexes around tubing or bundled wiring
- ③ No sharp cut-off edges to injure the user
- ④ Tamper-proof pawl located under the tie's head

## Low-profile, easy-to-use nylon zip ties

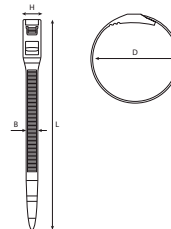
ABA cable ties combine superior tensile strength and long-lasting quality with the market's lowest profile. Highly versatile, they are the first choice for virtually any medium or heavy-duty application requiring a good-looking, high-quality zip tie. They are also safer than standard ties.

Their smooth, snag-proof contour has no barbs or spikes to injure an installer, technician or user. ABA cable ties are the first choice whenever a safe, visually appealing, low-profile tie is needed. Applications span industrial use to high-end consumer products. Natural or black colors are available.

## Advantages at a glance

- Exceptional functionality, strength and safety
- Snug-fitting, good-looking and safe, ABA cable ties bring a wealth of positive benefits to installers and users alike.
- Very easy to install. No special tools are required. Any pair of pliers or industrial application tools can be used. Ties can also be tightened by hand.
- Made of 6/6 grade nylon, ABA cable ties are very resistant.
- Working temperature spans -40°C to +85°C, permitting use in a wide range of environments.

## Dimensions



## Specifications

| ABA LOW PROFILE CABLE TIE (MEDIUM DUTY) |                     |                      |                  |                |               |               |
|-----------------------------------------|---------------------|----------------------|------------------|----------------|---------------|---------------|
| Width<br>(B mm)*                        | Diameters<br>(D mm) | Diameters<br>(D in.) | Length<br>(L mm) | Head<br>(H mm) | Nylon 6/6     |               |
|                                         |                     |                      |                  |                | Product No.   | Product No.   |
|                                         |                     |                      |                  |                | Black         | Natural       |
| 4.52                                    | 30-50               | 1 3/16-2             | 177              | 8.37           | 0860 0510 177 | 0860 0520 177 |
|                                         | 30-80               | 1 3/16-3 1/8         | 280              | 8.37           | 0860 0520 280 | 0860 0510 280 |
|                                         | 30-110              | 1 3/16-4 5/16        | 350              | 8.37           | 0860 0520 350 | 0860 0510 350 |

## Typical applications

- Industrial
- Wire harnessing
- Automotive
- Marine
- Computer components
- Outdoor access platforms
- Racks and store fixtures
- Show cars
- Camping
- Cycling
- Playgrounds

| ABA LOW PROFILE CABLE TIE (HEAVY DUTY) |                     |                      |                  |                |               |               |
|----------------------------------------|---------------------|----------------------|------------------|----------------|---------------|---------------|
| Width<br>(B mm)*                       | Diameters<br>(D mm) | Diameters<br>(D in.) | Length<br>(L mm) | Head<br>(H mm) | Nylon 6/6     |               |
|                                        |                     |                      |                  |                | Product No.   | Product No.   |
|                                        |                     |                      |                  |                | Black         | Natural       |
| 7.62                                   | 30-110              | 1 3/16-4 5/16        | 350              | 12.19          | 0860 0620 350 | 0860 0610 350 |
|                                        | 30-140              | 1 3/16-5 1/2         | 450              | 12.19          | 0860 0620 450 | 0860 0610 450 |
|                                        | 30-190              | 1 3/16-7 1/2         | 600              | 12.19          | 0860 0620 600 | 0860 0610 600 |
|                                        | 30-240              | 1 3/16-9 7/16        | 760              | 12.19          | 0860 0620 760 | 0860 0610 760 |

## Materials

- Made of 6/6 grade nylon





## ASSORTMENT 270



| ABA ASSORTMENT 270 (ABA NOVA AND ABA ORIGINAL) |                 |                 |          |               |               |
|------------------------------------------------|-----------------|-----------------|----------|---------------|---------------|
|                                                | Clamping ranges | Clamping ranges |          | S10           | S40           |
| Width                                          | (mm)            | (in)            | Quantity | Product No.   | Product No.   |
| <b>NOVA</b>                                    |                 |                 |          |               |               |
| 9                                              | 8 - 14          | 5/16 - 9/16     | 50       | 0819 0026 013 | 0819 0026 040 |
|                                                | 11 - 17         | 7/16 - 11/16    | 50       |               |               |
|                                                | 13 - 20         | 1/2 - 13/16     | 50       |               |               |
| <b>ORIGINAL</b>                                |                 |                 |          |               |               |
| 12                                             | 15 - 24         | 9/16 - 15/16    | 25       |               |               |
|                                                | 19 - 28         | 3/4-11/8        | 25       |               |               |
|                                                | 22 - 32         | 7/8-11/4        | 20       |               |               |
|                                                | 26 - 38         | 1-11/2          | 15       |               |               |
|                                                | 32 - 44         | 11/4-13/4       | 15       |               |               |
|                                                | 38 - 50         | 11/2-2          | 10       |               |               |
| NA                                             | FLEXIDRIVER     | NA              | 1        |               |               |

Assortment box with most common clamp sizes.

**Dimensions and height of the assortment box**

- 123 x 456 x 78 cm
- 9.0 kg

## ASSORTMENT 120



| ABA ASSORTMENT 120 (ABA MINI) |                 |                 |          |               |   |
|-------------------------------|-----------------|-----------------|----------|---------------|---|
|                               | Clamping ranges | Clamping ranges |          | S10           |   |
| Width                         | (mm)            | (in)            | Quantity | Product No.   |   |
| 9                             | 8               | 5/16            | 15       | 0819 0026 014 |   |
|                               | 9               | 3/8             | 15       |               |   |
|                               | 10              | 3/8             | 30       |               |   |
|                               | 11              | 7/16            | 10       |               |   |
|                               | 12              | 1/2             | 30       |               |   |
|                               | 13              | 1/2             | 10       |               |   |
|                               | 14              | 9/16            | 5        |               |   |
|                               | 15              | 9/16            | 5        |               |   |
|                               |                 | FLEXIDRIVER     |          |               | 1 |

Assortment box with most common clamp sizes.

**Dimensions and height of the assortment box**

- 123 x 456 x 78 cm
- 9.0 kg

## ASSORTMENT 335



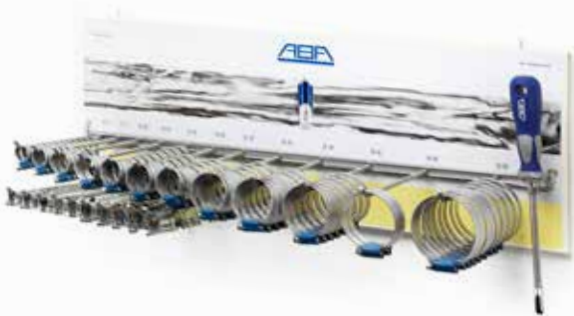
Dispenser with most common clamp sizes.

### Dimensions and height of the dispenser

- 90×24×13.8 cm
- 8.9 kg

| ABA ASSORTMENT 335 (ABA NOVA, ABA ORIGINAL AND ABA MINI) |                      |                      |          |                 |
|----------------------------------------------------------|----------------------|----------------------|----------|-----------------|
| Width                                                    | Clamping ranges (mm) | Clamping ranges (in) | Quantity | SIO Product No. |
| <b>NOVA</b>                                              |                      |                      |          |                 |
| 9                                                        | 8 - 14               | 5/16 - 9/16          | 30       | 0819 0026 011   |
|                                                          | 11 - 17              | 7/16 - 11/16         | 30       |                 |
|                                                          | 13 - 20              | 1/2 - 13/16          | 45       |                 |
| <b>ORIGINAL</b>                                          |                      |                      |          |                 |
| 12                                                       | 15 - 24              | 9/16 - 15/16         | 34       |                 |
|                                                          | 19 - 28              | 3/4-11/8             | 24       |                 |
|                                                          | 22 - 32              | 7/8-11/4             | 12       |                 |
|                                                          | 26 - 38              | 1-11/2               | 12       |                 |
|                                                          | 32 - 44              | 11/4-1 3/4           | 12       |                 |
|                                                          | 38 - 50              | 1 1/2-2              | 12       |                 |
|                                                          | 44 - 56              | 1 3/4-2 3/16         | 12       |                 |
|                                                          | 50 - 65              | 2-2 9/16             | 12       |                 |
| <b>MINI</b>                                              |                      |                      |          |                 |
| 9                                                        | 8                    | 5/16                 | 10       |                 |
|                                                          | 9                    | 3/8                  | 10       |                 |
|                                                          | 10                   | 3/8                  | 10       |                 |
|                                                          | 11                   | 7/16                 | 10       |                 |
|                                                          | 12                   | 1/2                  | 10       |                 |
|                                                          | 13                   | 1/2                  | 10       |                 |
|                                                          | 14                   | 9/16                 | 10       |                 |
|                                                          | 15                   | 9/16                 | 10       |                 |
|                                                          | 16                   | 5/8                  | 10       |                 |
|                                                          | 17                   | 11/16                | 10       |                 |
| NA                                                       | FLEXIDRIVER          | NA                   | 3        |                 |

## ASSORTMENT 244



Dispenser with most common clamp sizes

### Dimensions and height of the dispenser

- 65×15×23.4 cm
- 4.7 kg

| ABA ASSORTMENT 244 (ABA NOVA, ABA ORIGINAL AND ABA MINI) |                      |                      |          |                 |
|----------------------------------------------------------|----------------------|----------------------|----------|-----------------|
| Width                                                    | Clamping ranges (mm) | Clamping ranges (in) | Quantity | SIO Product No. |
| <b>NOVA</b>                                              |                      |                      |          |                 |
| 9                                                        | 8 - 14               | 5/16 - 9/16          | 12       | 0819 0026 009   |
|                                                          | 11 - 17              | 7/16 - 11/16         | 12       |                 |
|                                                          | 13 - 20              | 1/2 - 13/16          | 12       |                 |
| <b>ORIGINAL</b>                                          |                      |                      |          |                 |
| 12                                                       | 15 - 24              | 9/16 - 15/16         | 24       |                 |
|                                                          | 19 - 28              | 3/4-11/8             | 12       |                 |
|                                                          | 22 - 32              | 7/8-11/4             | 12       |                 |
|                                                          | 26 - 38              | 1-11/2               | 12       |                 |
|                                                          | 32 - 44              | 11/4-1 3/4           | 12       |                 |
|                                                          | 38 - 50              | 1 1/2-2              | 12       |                 |
|                                                          | 44 - 56              | 1 3/4-2 3/16         | 12       |                 |
|                                                          | 50 - 65              | 2-2 9/16             | 12       |                 |
| <b>MINI</b>                                              |                      |                      |          |                 |
| 9                                                        | 8                    | 5/16                 | 10       |                 |
|                                                          | 9                    | 3/8                  | 10       |                 |
|                                                          | 10                   | 3/8                  | 10       |                 |
|                                                          | 11                   | 7/16                 | 10       |                 |
|                                                          | 12                   | 1/2                  | 10       |                 |
|                                                          | 13                   | 1/2                  | 10       |                 |
|                                                          | 14                   | 9/16                 | 10       |                 |
|                                                          | 15                   | 9/16                 | 10       |                 |
|                                                          | 16                   | 5/8                  | 10       |                 |
|                                                          | 17                   | 11/16                | 10       |                 |
| NA                                                       | FLEXIDRIVER          | NA                   | 1        |                 |

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## LOW PROFILE CABLE TIE MOUNTING TOOL



- Article number 0860 0510 001

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## LOW PROFILE CABLE TIE DEMOUNTING TOOL



- Article number 0860 0510 002

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## PLIERS FOR STAINLESS STEEL CABLE TIE



- Article number 0827 0305 407

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## FLEXIDRIVER – 25 CM



- Article number 0000 0000 900

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## FLEXIDRIVER – 60 CM



- Article number 0000 0000 901

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## DYNAMOMETRIC SCREWDRIVER



- Article number 0000 0000 902



▷ THE CUSTOMER IN FOCUS





# QUALITY IN PRODUCTS AND SERVICES

**As a customer** of ABA premium hose and pipe clamping and connecting products, you will always enjoy:

- First-class products produced in plants certified to TS 16949:2000. The best steel qualities enable stable processes and provide a high and even product quality.
- Continuous improvement to always exceed the demands of our SS2298 standard. This assures you of products with a high break torque combined with a high clamping force around the hose. ABA Safeseal Technology – our guarantee to you.
- The ABA Original product line. Clamps without welded or riveted housings. Instead, just one purpose-made tube pressed to its final shape in a precision process. All bands have embossed threads that allow a flat band underside to tightly fit against the hose wall.
- Prompt and secure delivery of all our products in this catalogue. Essential in today's industrial sector.
- Technical advice for a variety of applications such as drainage waste water pipes, freshwater pipes, fuel lines, water and air hoses, etc. We also provide you with test data using your own tubes or hoses – free of charge!
- Our products are produced in plants certified to ISO14001 and made entirely with recyclable materials.

- Packaging with a solid design made to satisfy different customer needs.
- Highly-appreciated merchandisers used all over the world as efficient sales tools.
- A wide variety of sales promotion materials and product training for our Distributors.

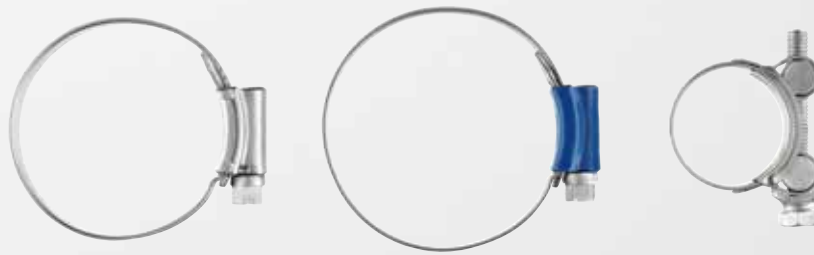
## All summarised in three letters – ABA.

A recent Market Survey confirmed that our customers value the ABA brand and what it stands for very highly. Interviewees rated the ABA brand name as the most important buying criterion, closely followed by the quality of products and services. Product price came third - being important as well.

Our aim is to put our customer first – to continue to develop our product range with improved solutions and services so that we will then always be your first choice!



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ABA clamps are manufactured according to ISO 14001. They can be reused many times thanks to their high and constant quality, which is continuously monitored according to our ISO 9000:2000 and ISO TS 16949 certifications.

As part of Engineered Joining Technology leader NORMA Group, the ABA brand enjoys the benefits of access to a large group working with multiple brands and subsidiaries worldwide.