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Connecting Solutions

Infrastructure | Marine | Oil and Gas



NORMA[®] DISTRIBUTION SERVICES

**NEW:
FIRST-AID
REPAIR CLAMP
& NORMETTA
D-BAND**

www.normagroup.com

NORMA - a NORMA Group brand

About NORMA Group

NORMA Group is a global market and technology leader with strong growth prospects in attractive niche markets for engineered joining technologies. The company manufactures and sells a wide range of high-quality engineered joining technology solutions in three product categories: clamp, connect and fluid. These are often mission-critical for the performance, reliability and quality of the respective customer end products.

Headquartered in Maintal, Germany, NORMA Group has a global network, which includes 19 manufacturing and distribution facilities as well as ten sales and distribution sites across Europe, the Americas and Asia Pacific. The company offers more than 35,000 high-quality products and solutions to approximately 10,000 customers in a wide range of industries, including agricultural machinery, commercial vehicles, construction equipment, engines, aviation, infrastructure/construction/water management, passenger vehicles, railway, white goods, wholesalers and technical distributors.

NORMA Group's infrastructure product range is used for building and bridge drainage, private ground drainage as well as laboratory and industry sewage. In addition, infrastructure products are used to join feed and recovery lines for gases, fluids and solids in plants, ships, filters and devices, in civil engineering, mining as well as in water supply and distribution.

NORMACONNECT™ FGR Pipe couplings

The NORMACONNECT® FGR pipe coupling is a connection suitable to safely join thick- and thin-walled plastic and metal pipes and especially pipes made from stainless steel. It connects plain-ended supply pipes as well as exhaust pipes for solid, liquid or gaseous media in a reliable manner. The connecting elements help to reduce assembly times and costs significantly, because they eliminate the need for additional expenses such as welding, galvanizing or pipe alignment and treatment of pipe ends. Furthermore, NORMACONNECT® FGR is light, reusable, can be used in narrow spaces and resists high vibration loads due to its special geometry.

NORMACONNECT® FGR couplings are used in mechanical engineering and construction, shipbuilding, civil engineering and in hydro technology.

NORMACONNECT™ DCS Drainage connectors

The complete NORMACONNECT® DCS range has been proven a million times when used to achieve both a reliable and economic connection of socketless drainage pipes. Inside buildings, in underground car parks, buried in soil and for drainage systems in bridges, NORMACONNECT® DCS is the ideal connecting solution. A large number of well-known companies have been using our know-how in the development and manufacture of pipe connections for many years. Thus behind many successful brands enjoying a well established reputation you can find the certified quality and the reliability of NORMA® connections. Since the materials for our products are carefully chosen to match their applications and operating conditions, we can assure you that they function safely for a long time – as you would expect from a modern piping system.



INDEX



DCS RAPID



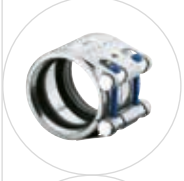
DCS CV/CE



DCS UNIVERSAL CLAW



DCS COMBI CLAW



FGR FLEX



FGR GRIP E-FP



FGR RFP



FGR COMBI GRIP

NEW



FIRST-AID REPAIR CLAMP

| OVERVIEW | | | PAGE |
|----------|--|--|------|
| OVERVIEW | NORMA® Solutions for Oil and Gas | | 6 |
| | NORMA® Solutions for Marine / Shipbuilding | | 8 |
| | NORMA® Solutions for Drainage and Building | | 10 |
| | NORMA® Solutions for Sewage Plants | | 12 |

| PRODUCT FAMILY | PRODUCT CATEGORY | PRODUCT NAME | PAGE | |
|------------------------------------|--|----------------|--|----|
| NORMACONNECT™ | DCS | RAPID | 17 | |
| | | RAPID MSM | 18 | |
| | | CV/CE | 19 | |
| | | SVE | 20 | |
| | | UNIVERSAL CLAW | 21 | |
| | | RECORD CLAW | 22 | |
| | | COMBI CLAW | 23 | |
| | | CONFIX | 24 | |
| | | FGR | FLEX <i>now also available with FKM sealing sleeve</i> | 33 |
| | | | FLEX E | 36 |
| | FLEX 3 | | 38 | |
| | GRIP <i>now also available with FKM sealing sleeve</i> | | 41 | |
| | GRIP E | | 44 | |
| | GRIP E-FP | | 46 | |
| | RFP | | 48 | |
| | PLAST GRIP | | 49 | |
| | PLAST GRIP E | | 50 | |
| | COMBI GRIP | | 51 | |
| | COMBI GRIP E | | 52 | |
| | SUPPORT SLEEVE | 53 | | |
| | REP E | 55 | | |
| NEW: FIRST-AID REPAIR CLAMP | 57 | | | |

INDEX

| PRODUCT FAMILY | PRODUCT CATEGORY | PRODUCT NAME | PAGE |
|------------------|---|---|------|
| NORMACLAMP™ | WORM DRIVE HOSE CLAMPS | TORRO™ | 60 |
| | | TORRO™ WF | 62 |
| | | QUICK LOCK 9 MM | 64 |
| | | QUICK LOCK 12 MM | 66 |
| | HEAVY DUTY CLAMPS | GBS | 67 |
| | RETAINING CLAMPS | S | 69 |
| NORMAFIX™ | RETAINING PRODUCTS | CABLE CLEATS | 72 |
| | BANDING SYSTEMS | NEW: NORMETTA™ D-BAND | 75 |
| NORMAEXTRA™ | TOOLS | NEW: NORMACONNECT™ FGR Mounting aid for REP E | 80 |
| | | NORMACONNECT™ FGR Fitting pliers belt for REP E | 80 |
| | | NORMACLAMP™ TORRO™ Screwdriver | 80 |
| | | NEW: NORMAFIX™ NORMETTA D-Band Clamping and cutting tool | 81 |
| | KITS | NORMACLAMP™ Quick Lock Band-on-roll | 81 |
| ASSORTMENTS | NORMACLAMP™ TORRO™ ASSORTMENT | 82 | |
| DISPLAYS | NORMACLAMP™ TORRO™ Dispenser | 82 | |
| | NORMACLAMP™ TORRO™ Drawer box | 82 | |
| | NORMACLAMP™ TORRO™ Pallet | 83 | |
| | NORMACLAMP™ Quick Lock Band-on-roll dispenser | 83 | |
| USER INFORMATION | | | 86 |

TORRO™



TORRO™ WF



QUICK LOCK



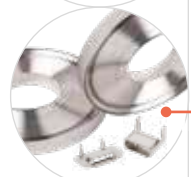
GBS



CABLE CLEAT



NORMETTA™ D-BAND



TOOLS



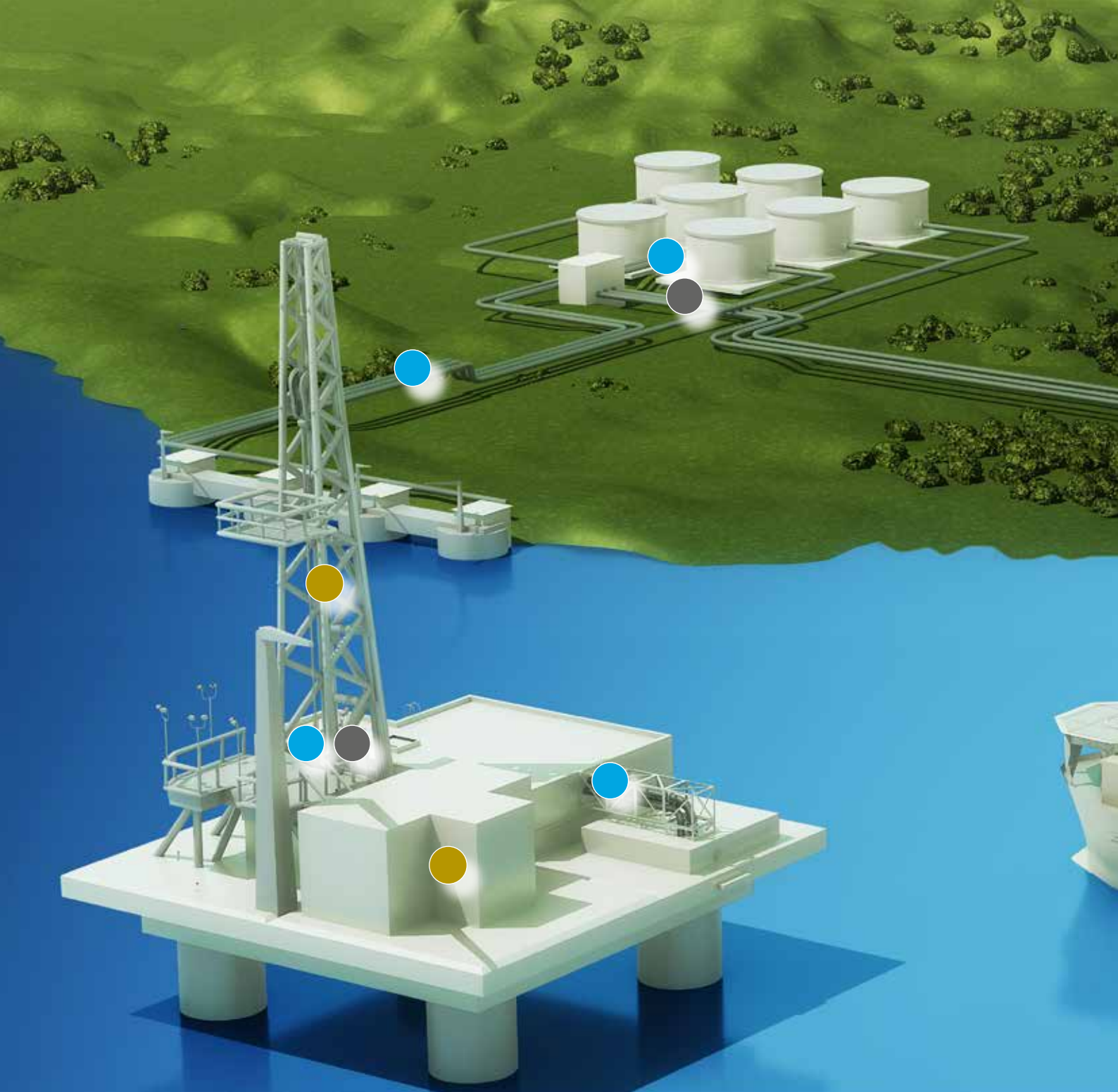
ASSORTMENTS



DISPLAYS



NORMA® Solutions for Oil and Gas



NORMA FGR

- Applications:**
- Gas
 - Fuel / oil
 - Compressed air
 - Acid / waste water
 - Fire hydrant system
 - Ethylene glycol / water (propylene glycol / water)
 - Drinking water / cooling system



TORRO



GBS



S

**NORMA TORRO
NORMA GBS
NORMA S**

- Applications:**
- Water supply
 - Cooling system
 - Compressed air
 - Oil line



NORMA Cable Cleats

- Applications:**
- General fixing
 - Deck
 - Engine room



Nylon Cable Ties



Stainless Steel Cable Ties

**NORMA Nylon Cable Ties
NORMA Stainless Steel Cable Ties**

- Applications:**
- General fixing
 - Deck
 - Cabin
 - Superstructure

NORMA® Solutions for Marine / Shipbuilding



NORMA FGR

- Applications:**
- Black and grey water
 - Fresh water
 - Ballast lines
 - Bilge water
 - Springler systems
 - Discharge lines
 - Charge air lines
 - Lubrication lines



NORMA TORRO

- Applications:**
- Hydraulic lines
 - Lubrication lines
 - Cooling lines
 - Pressure air lines



NORMA FGR RFP

- Applications:**
- Black and grey water
 - Fresh water
 - Ballast lines
 - Bilge water
 - Springler systems
 - Discharge lines
 - Charge air lines
 - Lubrication lines



NORMA Cable Cleats

Applications:
 - Deck
 - Engine room



Nylon
Cable Ties



Stainless Steel
Cable Ties

NORMA Nylon Cable Ties
NORMA Stainless Steel Cable Ties

Applications:
 - General fixing

NORMA® Solutions for Drainage and Building



NORMA FGR

- Applications:**
- Cooling lines
 - Pressurized lines
 - Supply lines
 - Water
 - Gas
 - Hydraulic lines



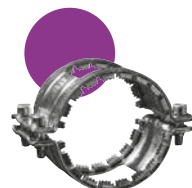
NORMA DCS Rapid

- Applications:**
- Grey water
 - Roof drainage
 - Soil pipe lines
 - Black water



NORMA DCS CV/CE

- Applications:**
- Grey water
 - Soil pipe lines
 - Roof drainage
 - Black water



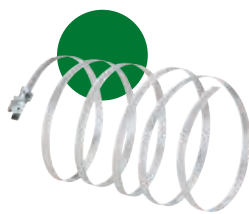
NORMA DCS Combi Claw

- Applications:**
- Roof drainage
 - Waste water lifting device
 - Lifting device



NORMA TORRO

Applications:
- Pressurized lines



NORMA Quick Lock

Applications:
- Air conditioning lines
- Exhaustion lines



Nylon
Cable Ties



Stainless Steel
Cable Ties

NORMA Nylon Cable Ties
NORMA Stainless Steel Cable Ties

Applications:
- General fixing
- Electrical lines

NORMA® Solutions for Sewage Plants



NORMA FGR

Applications:

- Sludge Treatment: composition lines, filtrate lines, sludge lines, water lines, compressor lines, biogas lines
- Biological Cleaning: compressor lines, ventilation lines, air lines
- Mechanical Cleaning: ventilation lines, floating lines, sludge lines, mixing water lines



NORMA TORRO

Applications:

- Hydraulic lines
- Pressurized lines



Nylon
Cable Ties



Stainless Steel
Cable Ties

NORMA Nylon Cable Ties
NORMA Stainless Steel Cable Ties




Applications:
- General fixing

Materials explanation

| MATERIALS EXPLANATION | |
|-----------------------|--|
| W1 | All parts entirely made from galvanized steel |
| W2 | Band and housing: stainless steel AISI 430 Bolt: galvanized steel |
| W2B | Band: stainless steel AISI 430 Ti Screw and housing: galvanized steel |
| W3 | All parts entirely made from stainless steel AISI 430 |
| W4 | All parts entirely made from stainless steel AISI 304 |
| W5 | All parts entirely made from stainless steel AISI 316 |





| Materials International standard designations | | | | | | |
|--|---------------------------|---------|----------|----------------|------|-----|
| | DIN | AISI/AS | BS | AFNOR NF | SS | SUS |
| W1 | Entirely galvanized steel | | | | | |
| Band and housing | | | | | | |
| W2 | 1.4016 | 430 | 430 S 17 | Z8 C17 | 2320 | 430 |
| Bolt | Galvanized steel | | | | | |
| W3 | 1.4016 | 430 | 430 S 17 | Z8 C17 | 2320 | 430 |
| W4 | 1.4301 | 304 | 304 S 15 | Z6 CN 18-09 | 2332 | 304 |
| W5 | 1.4401 | 316 | 316 S 31 | Z3 CND 17-11-1 | 2347 | 316 |
| Spring insert | 1.4310 | 301 | 301 S 22 | Z12 CN 18-09 | 2331 | 301 |

Bolts

| BOLTS | |
|---|----------------------------|
| Bolt type | Meaning |
| M | Bolt thread diameter in mm |
| Sk  | Hexagon-head bolt |
| Sz  | Slotted hexagon-head bolt |
| Zy  | Cylinder-head bolt |

Pictogram explanation

NORMA® offers different tools, kits, assortments and displays to fit the needs of its customers. The drawings below will help you to know, in a quick glance, if the product is available in another packaging type or/and if it has a special tool.

| PICTOGRAM | |
|---|---|
| Pictogram | Meaning |
|  | A tool exists for this product, please refer to the Assortment chapter |
|  | This product is available in a kit, please refer to the Assortment chapter |
|  | This product is available in an assortment box please refer to the Assortment chapter |
|  | This product is available in display please refer to the Assortment chapter |

NORMACONNECT™ DCS – Infrastructure Connectors

The complete NORMACONNECT™ DCS range has been proven a million times when used to achieve both a reliable and economic connection of socketless drainage pipes. Inside buildings, in underground car parks, buried in soil and for drainage systems in bridges, NORMACONNECT™ DCS is the ideal connecting solution. A large number of well-known companies have been using our know-how in the development and manufacture of pipe connections for many years. Thus behind many successful brands enjoying a well established reputation you can find the certified quality and the reliability of NORMA® connections. Since the materials for our products are carefully chosen to match their applications and operating conditions, we can assure you that they function safely for a long time – as you would expect from a modern piping system.



Certificates, Liability, Memberships

Certificates Materialprüfungsamt Nordrhein-Westfalen (MPA NRW)

Liability Product liability: In case of bodily injury and/or material damage.

Memberships IZEG – Informationszentrum Entwässerungstechnik Guss
GEG – Gütergemeinschaft Entwässerungstechnik Guss



Informationszentrum
Entwässerungstechnik Guss e.V.













Materials at a glance

| MATERIALS FOR CONNECTORS AND CLAWS | | | | |
|------------------------------------|-------------|---------------|--------------------------|----------------|
| | COLLAR | CLAMPING UNIT | SCREWS, NUTS, BOLTS | SEALING SLEEVE |
| W1 | | | Steel, protected surface | – |
| W2 | AISI 430 Ti | AISI 304 | Steel, protected surface | EPDM |
| W4 | AISI 304 | AISI 304 | AISI 304 | EPDM |
| W5 | AISI 316 Ti | AISI 316 Ti | AISI 316 | EPDM |

| | COLLAR | CLAMPING UNIT | SCREWS | SEALING SLEEVE |
|----|-------------|--------------------------|--------------------------|----------------|
| W2 | AISI 304 | Steel, protected surface | Steel, protected surface | EPDM |
| W5 | AISI 316 Ti | AISI 316 Ti | AISI 316 | EPDM |

Products and Application at a glance

| TYPE | DN AND PRESSURE [bar] | | | | | | | | | | | | | | | | SEAL TYPE | MATERIAL | APPLICATION | | |
|---|-----------------------|----|----|----|------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|-----------|----------|-------------|---------|------|
| | 40 | 50 | 70 | 75 | 75 S | 75/80 | 100 | 125 | 150 | 200 | 250 | 300 | 400 | 500 | 600 | STANDARD | | | Buildings | Bridges | Soil |
| NON-PULL-OUT RESISTANT CONNECTIONS | | | | | | | | | | | | | | | | | | | | | |
| RAPID  | • | • | • | | | • | • | • | • | • | | | | | | | EPDM | W 2 | • | - | - |
| RAPID  | • | • | • | | | • | • | • | • | • | • | • | | | | | EPDM | W 5 | • | • | • |
| MSM RAPID  | | • | • | | | • | • | • | • | • | | | | | | | EPDM | W 2 | • | - | - |
| CV  | | • | • | | | • | • | • | • | • | • | • | | | | | EPDM | W 2 | • | - | - |
| CE  | | • | • | | | | • | • | • | • | • | • | | | | | EPDM | W 4 | • | - | •* |
| SVE  | | • | | | | • | • | • | • | • | | | | | | | NR-SBR | PP-CO | - | - | • |
| PULL-OUT RESISTANT CONNECTIONS | | | | | | | | | | | | | | | | | | | | | |
| UNIVERSAL Claw **  | | 10 | 10 | | | 10 | 10 | 10 | 5 | 5 | 3 | 3 | | | | | - | W 2 | • | - | - |
| RECORD Claw **  | 10 | 10 | 10 | | | 10 | 10 | 5 | 5 | 3 | | | | | | | - | W 1 | • | - | - |
| COMBI Claw **  | | 10 | 10 | | | 10 | 10 | 5 | 5 | | | | | | | | - | W 1 | • | - | - |
| CHANGEOVER CONNECTORS | | | | | | | | | | | | | | | | | | | | | |
| CONFIX  | | • | • | | | • | • | • | | | | | | | | | EPDM | - | • | - | - |

* Additional protection against corrosion * NBR on request Technical Changes reserved

** The claws are only suitable for open drainage systems. It is not allowed for use in closed pressure systems.



- 1 Hexagonal socket bolt with washer
- 2 Square nut
- 3 Closure unit
- 4 Collar
- 5 Sealing sleeve

The original Rapid with block tightening

The NORMACONNECT™ DCS RAPID with block tightening for non-pull-out resistant connections enables a fast connection. The visible torque control and the single-bolt closure provide for a fast and easy installation.

Materials

| W1 | W2 | W3 | W4 | W5 |
|----|----|----|----|----|
| | x | | | x |

W2

- Material, Collar: AISI 430 Ti
- Material, Clamping unit: AISI 304 / AISI 430 Ti
- Material, Bolts/Nuts: Steel, surface protected
- Material, Sealing sleeve: EPDM

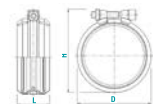
W5

- Material, Collar: AISI 316Ti
- Material, Clamping unit: AISI 316Ti
- Material, Bolts/Nuts: Steel, surface protected
- Material, Sealing sleeve: EPDM

Information

- Resisting axial pull-out forces up to max. 0.5 bar
- DN 40 – DN 200
- Resisting axial pull-out forces up to max 0.3 bar
- DN 250 – DN 300
- Defined locking torque without using a special tool
- Meeting the fire protection requirements

Technical data & Ordering information



| NORMACONNECT® DCS RAPID | | | | | | | | | |
|-------------------------|----------------------------------|--------|--------|--------|-------------|---------------|-----------|----------------|----------------|
| Designation | Max. Dimensions after Assembly ~ | | | | | | | W2 Product No. | W5 Product No. |
| | DN | D (mm) | H (mm) | L (mm) | P max (bar) | Torque (Nm) | Bolt (mm) | | |
| RAPID DN 40 | 40 | 53 | 64 | 50 | 0.5 | Tight-Locking | M 5 | 0245 8254 040 | |
| RAPID DN 50 | 50 | 70 | 80 | 46 | 0.5 | Tight-Locking | M 8 | 0245 8218 050 | 0245 8126 050 |
| RAPID DN 70 | 70 | 90 | 100 | 43 | 0.5 | Tight-Locking | M 8 | 0245 8219 070 | 0245 8127 070 |
| RAPID DN 75 S | 75 | 87 | 97 | 40.5 | 0.5 | Tight-Locking | M 8 | 0245 8265 075 | |
| RAPID DN 80 | 75/80 | 95 | 105 | 40 | 0.5 | Tight-Locking | M 8 | 0245 8220 080 | 0245 8129 075 |
| RAPID DN 100 | 100 | 125 | 135 | 39.0 | 0.5 | Tight-Locking | M 8 | 0245 8221 100 | 0245 8130 100 |
| RAPID DN 125 | 125 | 147 | 162 | 37.0 | 0.5 | Tight-Locking | M 8 | 0245 8222 125 | 0245 8131 125 |
| RAPID DN 150 | 150 | 172 | 187 | 35.5 | 0.5 | Tight-Locking | M 8 | 0245 8223 150 | 0245 8132 150 |
| RAPID DN 200 | 200 | 227 | 244 | 33.5 | 0.5 | Tight-Locking | M 10 | 0245 8224 200 | 0245 8133 200 |
| RAPID DN 250 | 250 | 293 | 306 | 96 | 0.3 | Tight-Locking | M 10 | | 0245 8208 250 |
| RAPID DN 300 | 300 | 345 | 360 | 96 | 0.3 | Tight-Locking | M 10 | | 0245 8209 300 |



- 1 Hexagonal socket bolt with washer
- 2 Square nut
- 3 Closure unit
- 4 Collar
- 5 Sealing sleeve

The fast connection with quick release closure

The NORMACONNECT™ DCS RAPID MSM connection is easy-fitting and thus especially suitable for repair purposes. It is the fast connection with quick release closure for non-pull-out resistant connections.



Materials

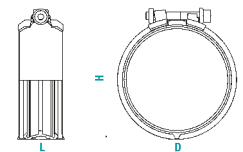
| W1 | W2 | W3 | W4 | W5 |
|----|----|----|----|----|
| | x | | | |

- W2**
- Material, Collar: AISI 430 Ti
 - Material, Clamping unit: AISI 304 / AISI 430 Ti
 - Material, Bolts/Nuts: Steel, surface protected
 - Material, Sealing sleeve: EPDM

Information

- Resisting axial pull-out forces up to max. 0.5 bar
- Defined locking torque without using a special tool
- Meeting the fire protection requirements

Technical data & Ordering information



| NORMACONNECT® DCS RAPID MSM | | | | | | | | |
|-----------------------------|----------------------------------|--------|--------|--------|-------------|---------------|-----------|----------------|
| Designation | Max. Dimensions after Assembly ~ | | | | | | | W2 Product No. |
| | DN | D (mm) | H (mm) | L (mm) | P max (bar) | Torque (Nm) | Bolt (mm) | |
| RAPID DN 50 MSM | 50 | 70 | 80 | 40 | 0.5 | Tight-Locking | M 8 | 0245 8257 050 |
| RAPID DN 70 MSM | 70 | 90 | 100 | 40 | 0.5 | Tight-Locking | M 8 | 0245 8258 070 |
| RAPID DN 80 MSM | 75/80 | 95 | 105 | 40 | 0.5 | Tight-Locking | M 8 | 0245 8260 080 |
| RAPID DN 100 MSM | 100 | 125 | 135 | 46 | 0.5 | Tight-Locking | M 8 | 0245 8261 100 |
| RAPID DN 125 MSM | 125 | 147 | 162 | 55 | 0.5 | Tight-Locking | M 8 | 0245 8262 125 |
| RAPID DN 150 MSM | 150 | 172 | 187 | 55 | 0.5 | Tight-Locking | M 8 | 0245 8263 150 |
| RAPID DN 200 MSM | 200 | 227 | 244 | 70 | 0.5 | Tight-Locking | M 10 | 0245 8264 200 |



- 1 **CV: Slotted hexagonal head bolts**
DN 50 – DN 300: SW 10
CE: Hexagonal head bolts
DN 50, 70, 75/80: SW 10
DN 100 – DN 300: SW 13
- 2 **Guide plate**
- 3 **Threaded plate**
- 4 **Collar**
- 5 **Sealing sleeve**

Phase out

NORMACONNECT™

The proven standard collar

The NORMACONNECT™ DCS CV/CE collar has been proven in all kinds of standard drainage applications. The proven standard collar for non-pull-out connections.

Materials

| W1 | W2 | W3 | W4 | W5 |
|----|----|----|----|----|
| | x | | x | |

- W2**
 - Material, Collar: AISI 430 Ti
- Type CV**
 - Material, Clamping unit: Steel, surface protected
 - Material, Sealing sleeve: EPDM
 - Material, Bolts: Steel, surface protected
- W4**
 - Material, Collar: AISI 304
- Type CE**
 - Material, Clamping unit: AISI 304
 - Material, Sealing sleeve: EPDM
 - Material, Bolts: Steel, surface protected

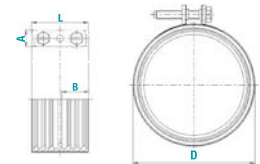
Advantages at a glance

- Fast and easy installation
- Suitable for repair purposes

Important notice

- Product will be phased out
- Please contact your Area Sales Manager to check availability
- Preferred alternative product: NORMACONNECT™ DCS RAPID (see page 15)

Technical data & Ordering information



| NORMACONNECT® DCS CV | | | | | | | | |
|----------------------|-------|--------|--------|--------|--------|-------------|-----------|----------------|
| Designation | DN | A (mm) | B (mm) | D (mm) | L (mm) | Torque (Nm) | Bolt (mm) | W2 Product No. |
| CV DN 50 | 50 | 14 | 22.5 | 65 | 48 | 4-6 | M 6 | 0242 8091 050 |
| CV DN 70 | 70 | 14 | 22.5 | 85 | 48 | 4-6 | M 6 | 0242 8092 070 |
| CV DN 80 | 75/80 | 14 | 22.5 | 90 | 48 | 6-8 | M 6 | 0242 8093 075 |
| CV DN 100 | 100 | 18 | 22.5 | 115 | 54 | 10-12 | M 8 | 0262 8303 100 |
| CV DN 125 | 125 | 18 | 31 | 140 | 65 | 10-12 | M 8 | 0262 8304 125 |
| CV DN 150 | 150 | 18 | 31 | 170 | 65 | 10-12 | M 8 | 0262 8305 150 |
| CV DN 200 | 200 | 18 | 37 | 220 | 78 | 15-20 | M 8 | 0262 8306 200 |
| CV DN 250 | 250 | 18 | 37 | 286 | 78 | 15-20 | M 8 | 0262 8307 250 |
| CV DN 300 | 300 | 18 | 37 | 338 | 78 | 15-20 | M 8 | 0262 8308 300 |

DCS CV is also available with a round hexagonal head bolt on request.

| NORMACONNECT® DCS CE | | | | | | | | |
|----------------------|-----|--------|--------|--------|--------|-------------|-----------|----------------|
| Designation | DN | A (mm) | B (mm) | D (mm) | L (mm) | Torque (Nm) | Bolt (mm) | W4 Product No. |
| CE DN 50 | 50 | 14 | 22.5 | 65 | 48 | 4-6 | M 6 | 0242 8108 050 |
| CE DN 70 | 70 | 14 | 22.5 | 85 | 48 | 4-6 | M 6 | 0242 8109 070 |
| CE DN 100 | 100 | 18 | 22.5 | 115 | 54 | 10-12 | M 8 | 0262 8361 100 |
| CE DN 125 | 125 | 18 | 31 | 140 | 65 | 10-12 | M 8 | 0262 8362 125 |
| CE DN 150 | 150 | 18 | 31 | 170 | 65 | 10-12 | M 8 | 0262 8363 150 |
| CE DN 200 | 200 | 18 | 37 | 220 | 78 | 15-20 | M 8 | 0262 8364 200 |
| CE DN 250 | 250 | 18 | 37 | 286 | 78 | 15-20 | M 8 | 0262 8365 250 |
| CE DN 300 | 300 | 18 | 37 | 338 | 78 | 15-20 | M 8 | 0262 8366 300 |

DCS CE is also available with a round hexagonal head bolt on request.



- 1 Housing
- 2 Sealing lips

Phase out

The collar for buried drainage pipes

Used to achieve fast and easy connection of below ground drainage pipes, while also accommodating larger gaps between pipe ends. The **NORMACONNECT™** DCS SVE collar for buried drainage pipes and other non-pull-out connections is the universal solution for many applications.

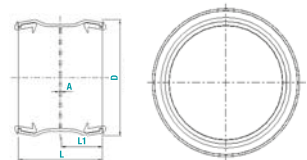
Materials

- Material, Housing: Polypropylene-CO
- Material, Seal: NR-SBR

Information

- Collar made from polypropylene with built-in sealing lips
- Compensates for larger gaps between pipe ends

Technical data & Ordering information



NORMACONNECT® DCS SVE CONNECTION, PP-CO with built-in sealing lips NR-SBR

| Designation | DN | D (mm) | L (mm) | L ¹ (mm) | A (mm) | Polypropylene-CO Product No. |
|----------------|-------|--------|--------|---------------------|--------|------------------------------|
| DCS SVE DN 50 | 50 | 77 | 60 | 29 | 2 | 0245 9500 050 |
| DCS SVE DN 80 | 75/80 | 103.5 | 65.5 | 32 | 2 | 0245 9500 080 |
| DCS SVE DN 100 | 100 | 134 | 82 | 39.5 | 3 | 0245 9500 100 |
| DCS SVE DN 125 | 125 | 161 | 103 | 50 | 3 | 0245 9500 125 |
| DCS SVE DN 150 | 150 | 186 | 103 | 50 | 3 | 0245 9500 150 |
| DCS SVE DN 200 | 200 | 238 | 114 | 55.5 | 3 | 0245 9500 200 |



- 1 Hexagonal socket bolts
- 2 Hollow locking bars
- 3 Housing
- 4 Grip ring insert

The claw which resists high tensile loads

Combined with either DCS RAPID, DCS RAPID MSM or DCS CV/CE standards collars, our NORMACONNECT™ DCS Universal Claw is an axial restraint claw which resists high tensile loads. The grip-type coupling resists high tensile loads for non-pull-out resistant connections.



Materials

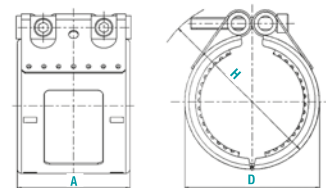
| | | | | |
|----|----|----|----|----|
| W1 | W2 | W3 | W4 | W5 |
| | x | | | |

- W2**
- Material, Housing: AISI 430 Ti
 - Material, Closure unit: Steel, surface protected
 - Material, Grip ring: AISI 301

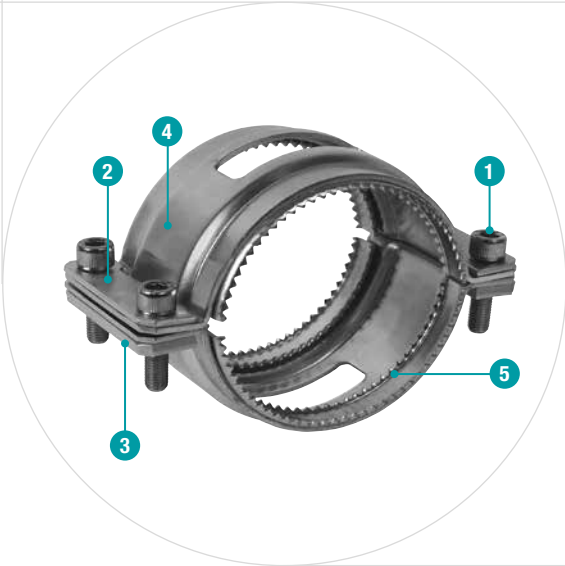
Information

- Recommended for use in combination with types RAPID/RAPID MSM: up to max. 10 bar
- Recommended for use in combination with types CV/CE: up to max. 5 bar (DN 50 – DN 200); up to max. 3 bar (DN 250 – DN 300)

Technical data & Ordering information



| NORMACONNECT® DCS UNIVERSAL CLAW | | | | | | | | | | |
|----------------------------------|-------|--------|--------|--------|-----------|-------------------|-------|---------------|----------------|--|
| Designation | DN | A (mm) | D (mm) | H (mm) | Bolt (mm) | P max (bar) | | Torque (Nm) | W2 Product No. | |
| | | | | | | RAPID / RAPID MSM | CV/CE | | | |
| UNIVERSAL CLAW DN 50 | 50 | 77 | 85 | 105 | M 8 | 10 | 5 | Tight-Locking | 0262 8401 050 | |
| UNIVERSAL CLAW DN 70 | 70 | 77 | 100 | 120 | M 8 | 10 | 5 | Tight-Locking | 0262 8402 070 | |
| UNIVERSAL CLAW DN 75 | 75 | | | | | | | | | |
| UNIVERSAL CLAW DN 80 | 75/80 | 77 | 105 | 125 | M 8 | 10 | 5 | Tight-Locking | 0262 8403 080 | |
| UNIVERSAL CLAW DN 100 | 100 | 97 | 130 | 150 | M 10 | 10 | 5 | Tight-Locking | 0262 8405 100 | |
| UNIVERSAL CLAW DN 125 | 125 | 97 | 165 | 195 | M 10 | 10 | 5 | Tight-Locking | 0262 8406 125 | |
| UNIVERSAL CLAW DN 150 | 150 | 97 | 185 | 215 | M 10 | 5 | 5 | Tight-Locking | 0262 8407 150 | |
| UNIVERSAL CLAW DN 200 | 200 | 113 | 240 | 270 | M 12 | 5 | 5 | Tight-Locking | 0262 8415 200 | |
| UNIVERSAL CLAW DN 250 | 250 | 139 | 305 | 335 | M 12 | 3 | 3 | Tight-Locking | 0262 8416 250 | |
| UNIVERSAL CLAW DN 300 | 300 | 139 | 400 | 490 | M 12 | 3 | 3 | Tight-Locking | 0262 8417 300 | |



- 1 Hexagonal socket bolt with fine pitch thread
- 2 Guiding plate
- 3 Threaded plate
- 4 Housing
- 5 Grip ring insert (hardened)

The powerful add-on claw

Axial restraint safety claw for use with pressurized pump lines in lifting systems as well as for rainwater sewage lines that are at risk of undergoing back pressures, but only in combination with the NORMACONNECT™ DCS RAPID standard collar. The powerful add-on claw for non-pull-out resistant connections.

Materials

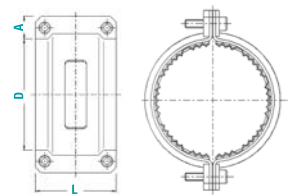
| | | | | |
|----|----|----|----|----|
| W1 | W2 | W3 | W4 | W5 |
| x | | | | |

- W1**
- Material, Housing: Steel, surface protected
 - Material, Closure unit: Steel, surface protected

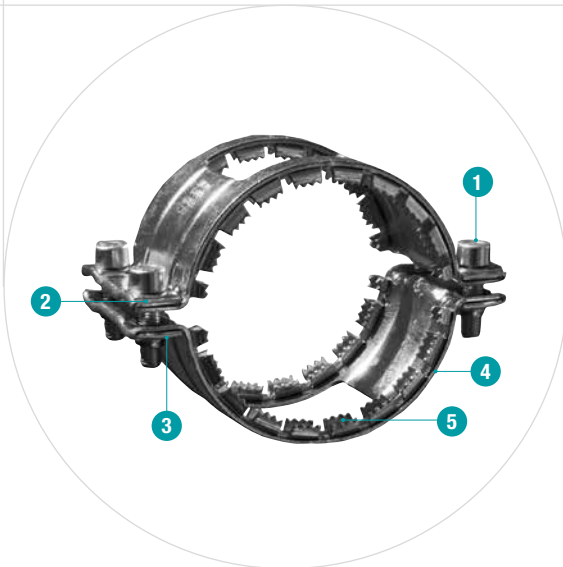
Advantages at a glance

- Two parts (halves) with hardened grip ring inserts
- Strong guiding plates with threaded holes plus four hexagonal socket bolts with fine pitch thread

Technical data & Ordering information



| NORMACONNECT® DCS RECORD CLAW | | | | | | | | |
|-------------------------------|-------|--------|--------|--------|-------------|-----------|-------------|----------------|
| Designation | DN | A (mm) | D (mm) | L (mm) | Torque (Nm) | Bolt (mm) | P max (bar) | W1 Product No. |
| RECORD CLAW DN 40 | 40 | 21 | 65 | 66 | 12-15 | M 8 | up to 10 | 0262 1272 040 |
| RECORD CLAW DN 50 | 50 | 21 | 75 | 69 | 12-15 | M 8 | up to 10 | 0262 1265 050 |
| RECORD CLAW DN 70 | 70 | 21 | 95 | 69 | 12-15 | M 8 | up to 10 | 0262 1266 070 |
| RECORD CLAW DN 80 | 75/80 | 21 | 100 | 69 | 12-15 | M 8 | up to 10 | 0262 1287 080 |
| RECORD CLAW DN 100 | 100 | 25 | 135 | 87 | 25-30 | M 10 | up to 10 | 0262 1246 100 |
| RECORD CLAW DN 125 | 125 | 25 | 160 | 95 | 30-35 | M 10 | up to 5 | 0262 1267 125 |
| RECORD CLAW DN 150 | 150 | 25 | 185 | 95 | 30-35 | M 10 | up to 5 | 0262 1268 150 |
| RECORD CLAW DN 200 | 200 | 30 | 235 | 111 | 60-65 | M 12 | up to 3 | 0262 1269 200 |



- 1 Hexagonal socket bolts
- 2 Guiding side
- 3 Threaded side
- 4 Housing
- 5 Grip ring insert

The powerful add-on claw

Our **NORMACONNECT™** DCS Combi Claw is an axial restraint safety claw for connecting rainwater and sewage lines that are at risk of undergoing back pressures. It is used in combination with **NORMACONNECT™** RAPID/RAPID MSM and **NORMACONNECT™** CV or CE standard collars. The powerful add-on claw for non-pull-out resistant connections.

Materials

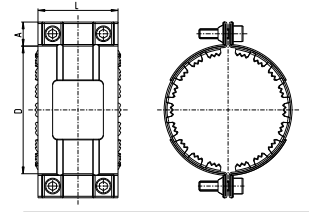
| | | | | |
|----|----|----|----|----|
| W1 | W2 | W3 | W4 | W5 |
| x | | | | |

- W1**
- Material, Housing: Steel, surface protected
 - Material, Closure unit: Steel, surface protected

Information

- Axial restraint up to 10 bar
- Diameters DN 50 up to DN 150

Technical data & Ordering information



| NORMACONNECT® DCS COMBI CLAW | | | | | | | | |
|------------------------------|-----|--------|--------|--------|-------------|-----------|-------------|----------------|
| Designation | DN | A (mm) | D (mm) | L (mm) | Torque (Nm) | Bolt (mm) | P max (bar) | W1 Product No. |
| COMBI CLAW DN 50 | 50 | 22 | 81 | 72 | 18-20 | M 8 | up to 10 | 0262 8590 050 |
| COMBI CLAW DN 70 | 70 | 22 | 102 | 72 | 18-20 | M 8 | up to 10 | 0262 8590 070 |
| COMBI CLAW DN 80 | 80 | 22 | 110 | 72 | 18-20 | M 8 | up to 10 | 0262 8590 080 |
| COMBI CLAW DN 100 | 100 | 22 | 136 | 82 | 28-30 | M 10 | up to 10 | 0262 8591 100 |
| COMBI CLAW DN 125 | 125 | 23.5 | 162 | 93 | 28-30 | M 10 | up to 5 | 0262 8592 125 |
| COMBI CLAW DN 150 | 150 | 23.5 | 189 | 93 | 33-35 | M 10 | up to 5 | 0262 8592 150 |



- 1 Easy handling
- 2 Strong worm-drive hose clamp

The changeover connector with 2 lip seals

Materials

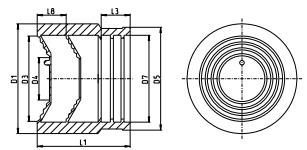
| | | | | |
|----|----|----|----|----|
| W1 | W2 | W3 | W4 | W5 |
| | x | | | |

- Material, Connector: EPDM
- Material, Worm-drive hose clamp band: AISI 430

Main advantage

The connection of feed or suction lines to a pipe – either made of steel or plastics – is easily and safely achieved with the CONFIX connector.

Technical data & Ordering information



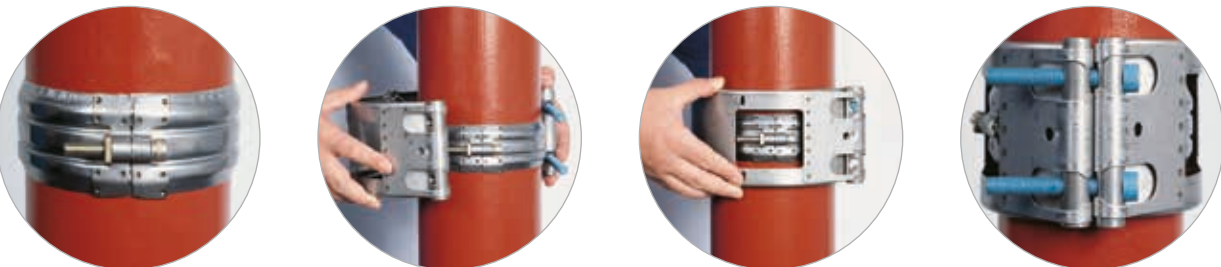
NORMACONNECT® DCS CONFIX, EPDM with TORRO W2, Changeover Connector

| Designation | DN | D1 (mm) | D3 (mm) | D4 (mm) | D5 (mm) | D7 (mm) | L1 (mm) | L3 (mm) | L8 (mm) | W2 Product No. |
|--------------------|-----|---------|---------|---------|---------|---------|---------|---------|---------|----------------|
| CONFIX DN 50 | 50 | 72 | 56 | 30 | 67.5 | 57 | 63 | 19 | 19 | 0245 9003 050 |
| CONFIX DN 70 | 70 | 92 | 75 | 41 | 86.5 | 77 | 77 | 19 | 24 | 0245 9003 070 |
| CONFIX DN 80 56-75 | 80 | 92 | 75 | 41 | 91 | 81 | 77 | 19 | 24 | 0245 9003 075 |
| CONFIX DN 80 75-90 | 80 | 108 | 90 | 58 | 93 | 81 | 88 | 19 | 23 | 0245 9003 080 |
| CONFIX DN 100 | 100 | 128 | 110 | 78 | 118 | 108 | 95 | 21 | 23 | 0245 9003 100 |
| CONFIX DN 125 | 125 | 145 | 126 | 90 | 145 | 132 | 103 | 21 | 27 | 0245 9003 125 |

Dimensions of pipes and fittings to EN 877

| Dimensions of pipes and fittings to EN 877 | | | | |
|--|-----------------------|--------------|----------------|---------------|
| DN | Outside Diameter (OD) | | Wall Thickness | |
| | Nominal value | Tolerances | Nominal value | Minimum value |
| 40 | 48 | +2 -1 | 3.0 | 2.5 |
| 50 | 58 | +2 -1 | 3.5 | 3.0 |
| 70 | 78 | +2 -1 | 3.5 | 3.0 |
| 75/80 | 83 | +2 -1 | 3.5 | 3.0 |
| 100 | 110 | +2 -1 | 3.5 | 3.0 |
| 125 | 135 | +2 -2 | 4.0 | 3.5 |
| 150 | 160 | +2 -2 | 4.0 | 3.5 |
| 200 | 210 | +2.5 -2.5 | 5.0 | 4.0 |
| 250 | 274 | +2.5 -2.5 | 5.5 | 4.5 |
| 300 | 326 | +2.5 -2.5 | 6.0 | 5.0 |
| 400 | 429 | +2 -3 | 6.3 | 5.0 |
| 500 | 532 | +2 -3.5 | 7.0 | 5.2 |
| 600 | 635 | +2 -4 | 7.7 | 5.8 |

Dimensions in mm



NORMACONNECT™

NORMACONNECT™ FGR – Pipe Couplings

The NORMACONNECT™ FGR pipe coupling is a connection suitable to safely join thick- and thin-walled plastic and metal pipes and especially pipes made from stainless steel. It connects plain-ended supply pipes as well as exhaust pipes for solid, liquid or gaseous media in a reliable manner. The connecting elements help to reduce assembly times and costs significantly, because they eliminate the need for additional expenses such as welding, galvanizing or pipe alignment and treatment of pipe ends. Furthermore, NORMACONNECT™ FGR is light, reusable, can be used in narrow spaces and resists high vibration loads due to its special geometry. NORMACONNECT™ FGR couplings are used in mechanical engineering and construction, shipbuilding, civil engineering and in hydro technology.



Our solution for connecting – FGR

NORMACONNECT™



FGR pipe couplings are a compact, economical and reliable means for connecting plain-ended pipes. They are suitable for joining plastic and metal pipes and especially pipes made from stainless steel. They can be used in mechanical engineering and construction, shipbuilding, civil engineering and in hydro technology, water supply and water treatment.

Supply pipes as well as exhaust pipes for solid, liquid or gaseous media can be joined easily and safely in a very short period of time even in narrow spaces. Thanks to the wide range of various types and sizes they are suitable for use both in standard and specialized applications.

Product benefits

FGR pipe couplings are an economical alternative to conventional pipe joining techniques for both plastic and metal pipes. All plain-ended pipes can be joined easily by hand. The ready-to-fit coupling is pushed over the pipe ends and then aligned and rotated to any fitting position. Tightening the two bolts alternately with a torque wrench is all it takes to make a safe fitting.



Range of applications

FGR pipe coupling is a reliable connection for thick- and thin-walled pipes which conforms to the latest DIN Standard 86128. Feed and return lines for liquids, gases and solids (for mechanical engineering and construction, civil

engineering, shipbuilding, pipeline construction, power stations, mining, filters, water technology, etc.) are joined quickly, easily and safely using FGR pipe couplings.



- No welding
- No necessity for prior pipe alignment or treatment of pipe ends
- Up to 80% time saving



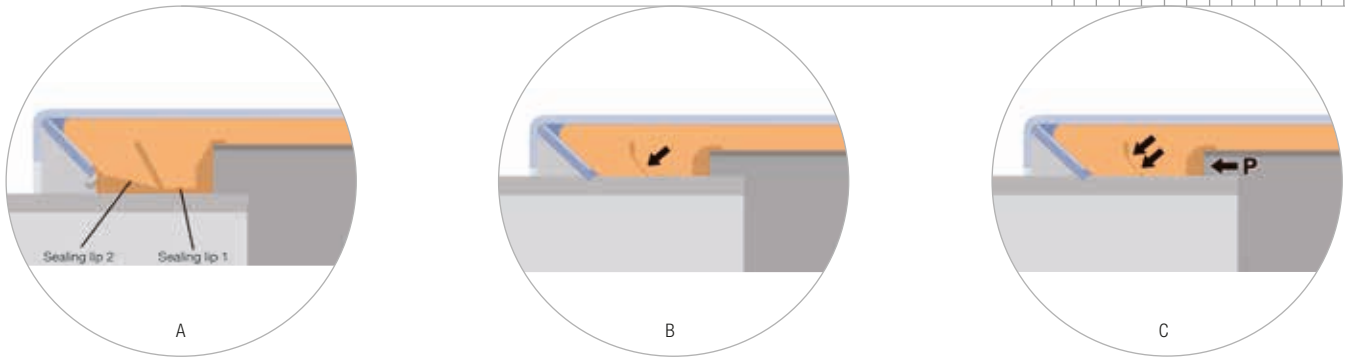
- Compensates for pipe gaps up to 65 mm
- Compensates for axial movements up to 7.5 mm
- Compensates for misalignment up to 3 mm



- 70% less weight



- Compensates for angular deflection up to + or - 2° in total



1. Double-lip sealing system

The patented double-lip sealing system of the FGR pipe couplings offers double safety. It provides maximum sealability at both low and high operating pressures (Fig. A).

When the bolts of the coupling are tightened, sealing lip 1 is pressed onto sealing lip 2, thus providing a highly reliable seal even under conditions of low pressure, vacuum or extreme loads acting on the joint (Fig. B).

The special sealing lip design means that when the internal pressure (P) increases, the sealing lips are pressed more firmly onto the pipe surface ensuring an even stronger seal (Fig. C).

2. Strip insert included as standard

All FGR pipe couplings are factory equipped with the strip insert as standard. The strip insert protects the sealing sleeve from increased mechanical and chemical loads. It also prevents the sealing sleeve from moisture expansion and allows larger gaps between the pipe ends to be connected.

Furthermore, it compensates for larger angular deflections and misalignment. With the strip insert the couplings can also be used for both vacuum and high pressure applications without any problems. The strip inserts are made from plastic material or stainless steel.

3. Heavy duty lock bars

For FGR pipe couplings we use lock bars with a larger diameter. Thus the rigidity of the coupling is increased and the engagement of the threaded end of the locking bolts is considerably improved.

4. Anchoring ring with conically stamped teeth

















The anchoring ring with conically stamped teeth indents into the pipe surface and provides safe and strong axial restraint. Owing to the special design the coupling is able to withstand even high vibration loads.

5. Protection ring

The protection ring protects the sealing sleeve from UV rays, fire, etc., and increases the flexural strength of the coupling.



Approvals

| SHIPBUILDING | | FLEX / FLEX E / RFP | GRIP / GRIP E / Grip E-FP / RFP | CombiGrip / CombiGrip E | PlastGrip / PlastGrip E | Rep E |
|-------------------------------------|---|---------------------|---------------------------------|-------------------------|-------------------------|-------|
| ABS |  | • | • | • | • | |
| Bureau Veritas |  | • | • | • | • | |
| DNV-GL |  | • | • | • | • | |
| LRS |  | • ¹ | • ¹ | • | • | |
| CLASS NK |  | • | • | • | • | |
| RINA |  | • | • | | | |
| RMRS |  | • | • | • | • | |
| PRS |  | • ¹ | • ¹ | | | |
| KRS |  | • | • | • | • | |
| WATER SUPPLY & TREATMENT | | | | | | |
| Elastomer guideline KTW/TZW W270 | | • | • | • | • | • |
| DVGW |  | | | | • ² | |
| GOST |  | • | • | • | • | • |
| NSF |  | • | • | • | • | |
| DQS |  | • | • | • | • | • |
| GAS | | | | | | |
| DVGW / GWI |  | | • | | | |
| BAM |  | | • | | • | |
| SPECIAL APPROVALS | | | | | | |
| DiBT / TÜV south. Germany | | | • | | | |
| BWB | | | • ³ | | | |
| FDA |  | • | • | • | • | |

¹ No approvals for RFP

² From 40.0 mm up to 160 mm

³ German approval for the German marine

Coupling types and suitable applications

| Pipes to be joined | Size (mm) | Flex | Flex E | Flex 3 | REP E from 35 mm |
|--------------------|-----------------|--------------|--------------|-----------------|------------------|
| Metal + Metal | 26.9 to 168.3 | 70 to 32 bar | 70 to 32 bar | - | 60 to 32 bar |
| | 180.0 to 1219.2 | 50 to 7 bar | 30 to 4 bar | - | 30 to 4 bar |
| | 326.0 to 2032.0 | - | - | 16.5 to 1.5 bar | - |
| Plastic + Plastic | 26.9 to 168.3 | 16 bar | 16 bar | - | 16 bar |
| | 180.0 to 1219.2 | 16 to 4 bar | 16 to 4 bar | - | 16 to 4 bar |
| Metal + Plastic | 26.9 to 168.3 | 16 bar | 16 bar | - | - |
| | 180.0 to 1219.2 | 16 to 7 bar | 16 to 7 bar | - | - |

Larger diameters available on request

| Pipes to be joined | Size (mm) | Grip | Grip E | Combi-Grip E | Combi-Grip | Plast-Grip E | Plast-Grip | Grip E-FP |
|--------------------|-----------------------------|--------------|--------------|--------------|-------------|--------------|-------------|--------------|
| Metal + Metal | 26.9 to 168.3 | 70 to 32 bar | 70 to 32 bar | - | - | - | - | 60 to 32 bar |
| | 180.0 to 419.0 | - | 20 to 2 bar | - | - | - | - | 20 to 65 bar |
| | 180.0 to 812.8 | 32 to 1 bar | - | - | - | - | - | - |
| Plastic + Plastic | 40.0 to 168.3 | - | - | - | - | 16 bar | - | - |
| | 200.0 to 406.4 | - | - | - | - | - | 16 to 6 bar | - |
| Metal + Plastic | 38/40 to 160/168.3 | 16 bar | 16 bar | 16 bar | - | - | - | - |
| | 200.0/204.0 to 406.0 /406.4 | - | - | - | 16 to 6 bar | - | - | - |

Larger diameters available on request

Sealing sleeves

Areas of application & temperature resistance

| Material of seal | NEW! | | |
|-------------------|--|---|--|
| | EPDM | NBR | FKM |
| Temperature range | -30 °C up to +125 °C OD 26.9 up to 168.3 mm -20 °C up to +80 °C OD > 180 mm | -20 °C up to +80 °C | -10 °C to + 150 °C* |
| Media | Drinking water Alcohols Compressed air Solids | Water Oils Gases (combustible) Fuels Hydrocarbons | Steam Several gases Hot water Ozone Oxygen Several acids** Several alkalis** Hydrocarbons |

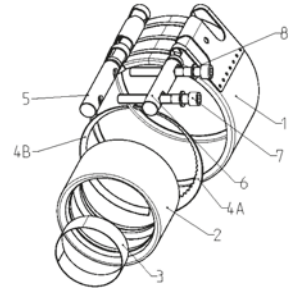
* Higher temperatures possible in some cases

** Case by case approval required. Please check with your sales representative

FGR Materials

Components and materials in accordance with AISI/BS. FGR pipe couplings are available in the materials W2, W4 and W5.

| W2 | | | | |
|-------|--|---------------------|---------------------|-----------------------------|
| No. | Component | Flex/Flex E | Grip/Grip E | Plast Grip/ Plast Grip E |
| 1 | Housing with bridge | 304/304 S31 | 304/304 S31 | 304/304 S31 |
| 2 | Sealing sleeve | EPDM/NBR | EPDM/NBR | EPDM/NBR |
| 3 | Strip insert ¹⁾ | 316Ti/320 S31/PA-GR | 316Ti/320 S31/PA-GR | 316Ti/320 S31/PA-GR |
| 4 A | Anchoring ring for metal pipes ²⁾ | – | 301/301 S21 | – |
| 4 A | Anchoring ring for plastic pipes ²⁾ | – | – | PA-GF-NS ³⁾ |
| 4 B | Protection ring | 316Ti/320 S31 | – | – |
| 5 + 6 | Solid locking trunnions | AISI 1213 | AISI 1213 | AISI 1213 |
| 5 + 6 | Hollow locking trunnions | AISI 1518 | AISI 1518 | AISI 1518 |
| 7 | Locking bolts | 10.9 | 10.9 | 10.9 |
| 8 | Washer | A4-80/316 | A4-80/316 | A4-80/316 |



| W4 | | | | |
|-------|--|---------------------|---------------------|-----------------------------|
| No. | Component | Flex/Flex E | Grip/Grip E | Plast Grip/ Plast Grip E |
| 1 | Housing with bridge | 304/304 S31 | 304/304 S31 | 304/304 S31 |
| 2 | Sealing sleeve | EPDM/NBR | EPDM/NBR | EPDM/NBR |
| 3 | Strip insert ¹⁾ | 316Ti/320 S31/PA-GR | 316Ti/320 S31/PA-GR | 316Ti/320 S31/PA-GR |
| 4 A | Anchoring ring for metal pipes ²⁾ | – | 301/301 S21 | – |
| 4 A | Anchoring ring for plastic pipes ²⁾ | – | – | PA-GF-NS ³⁾ |
| 4 B | Protection ring | 316Ti/320 S31 | 316Ti/320 S31 | – |
| 5 + 6 | Solid locking trunnions | 316L | 316L | 1.4404 |
| 5 + 6 | Hollow locking trunnions | 316Ti/320 S31 | 316Ti/320 S31 | 1.4571 |
| 7 | Locking bolts | A4-80/316 | A4-80/316 | A4-80 |
| 8 | Washer | A4-80/316 | A4-80/316 | A4-80 |

¹⁾ PA-GF plastic strip inserts are only for pipe couplings used in shipbuilding applications.

²⁾ COMBI GRIP couplings are equipped with two different anchoring rings (1 x for the metal end, 1 x for the plastic end).

³⁾ PA-GF: PA reinforced with fiber glass; NS: new silver.

| W5 | | | | | | |
|-------|--|---------------------|---------------------|-----------------------------|-----------------------------|---------------------|
| No. | Component | Flex/Flex E | Grip/Grip E | Combi Grip/ Combi Grip E | Plast Grip/ Plast Grip E | Rep E |
| 1 | Housing | 316Ti/320 S31 | 316Ti/320 S31 | 316Ti/320 S31 | 316Ti/320 S31 | 316Ti/320 S31 |
| 2 | Sealing sleeve | EPDM/NBR/FKM | EPDM/NBR/FKM | EPDM/NBR | EPDM/NBR | EPDM/NBR |
| 3 | Strip insert ¹⁾ | 316Ti/320 S31/PA-GR | 316Ti/320 S31/PA-GR | 316Ti/320 S31/PA-GR | 316Ti/320 S31/PA-GR | 316Ti/320 S31/PA-GR |
| 4 A | Anchoring ring for metal pipes ²⁾ | – | 301/301 S21 | 301/301 S21 301/301 S21 | – | – |
| 4 A | Anchoring ring for plastic pipes ²⁾ | – | – | PA-GF-NS ³⁾ | PA-GF-NS ³⁾ | – |
| 4 B | Protection ring | 316Ti/320 S31 | – | – | – | – |
| 5 + 6 | Solid locking trunnions | 316L | 316L | 316L | 316L | 316L |
| 5 + 6 | Hollow locking trunnions | 316Ti/320 S31 | 316Ti/320 S31 | 316Ti/320 S31 | 316Ti/320 S31 | 316Ti/320 S31 |
| 7 | Locking bolts | A4-80/316 | A4-80/316 | A4-80/316 | A4-80/316 | A4-80/316 |
| 8 | Washer | A4-80/316 | A4-80/316 | A4-80/316 | A4-80/316 | A4-80/316 |

¹⁾ PA-GF plastic strip inserts are only for pipe couplings used in shipbuilding applications.

²⁾ COMBI GRIP couplings are equipped with two different anchoring rings (1 x for the metal end, 1 x for the plastic end).

³⁾ PA-GF: PA reinforced with fiber glass; NS: nickel and silver.



- 1 Double-lip sealing system
- 2 Standard strip insert
- 3 Heavy duty lock bars
- 4 Protection ring

NEW!
Now also available with FKM sealing sleeve

NORMACONNECT™

NEW

The protective pipe coupling

NORMACONNECT™ FLEX /FLEX E are axial non-restraint couplings. They are used for connecting metal pipes, stainless pipes, as well as concrete and plastic pipes. Sealing reliability is ensured even when NORMACONNECT™ FLEX /FLEX E pipe couplings are mounted on pipes with or without a gap and also on compensated pipes.



Advantages at a glance

- Compensates for thermal elongation of the pipes
- Joining all kind of pipe materials is possible, e.g., for steel, plastic, cast iron, etc.

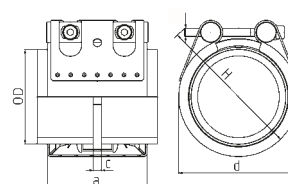
Information

- Sizes: 26.9 mm - 1219.1 mm
- Working pressure: 70.0 - 4.0 bar
- Material: AISI 304, AISI 316 Ti
- EPDM:
 Sizes from 26.9 mm up to 168.3 mm: - 30 °C up to + 125 °C
 Sizes > 180.0 mm: - 20 °C up to + 80 °C
- NBR: from - 20 °C up to + 80 °C
- FKM: -10 °C to + 150 °C (Higher temperatures possible in some cases.)

Materials



| W1 | W2 | W3 | W4 | W5 |
|----|----|----|----|----|
| | X | | X | X |

Technical data & Ordering information



Technical data & Ordering information

NORMACONNECT™ FGR FLEX

| Ø (O.D.) | Designation | Clamping ranges Odmin - Odmax | PN ¹ | WP ² | C | Dimensions (approx.) | | | Weight (approx.) (kg/pc.) | Hex socket locking bolts | |
|-------------|-------------|----------------------------------|---|--|------|----------------------|-----------|-----------|---------------------------------|--------------------------|---------------------------|
| | | | (MAWP ¹ from diameter 180)  [bar] |  [bar] | (mm) | a (mm) | d (mm) | H (mm) | | Thread | Tightening torque (Nm) |
| 26.9 | FLEX 26.9 | 26.4 - 27.5 | 16 | 70 | 3 | 67 | 50 | 70 | 0.39 | M 8 SW 6 | 5 |
| 28.0 | FLEX 28.0 | 27.5 - 28.5 | 16 | 70 | 3 | 67 | 50 | 70 | 0.39 | M 8 SW 6 | 5 |
| 30.0 | FLEX 30.0 | 29.5 - 30.6 | 16 | 70 | 3 | 67 | 50 | 70 | 0.39 | M 8 SW 6 | 5 |
| 33.7 | FLEX 33.7 | 33.0 - 34.3 | 16 | 60 | 3 | 67 | 55 | 75 | 0.4 | M 8 SW 6 | 5 |
| 35.0 | FLEX 35.0 | 34.5 - 35.6 | 16 | 60 | 8 | 63 | 55 | 75 | 0.54 | M 8 SW 6 | 5 |
| 38.0 | FLEX 38.0 | 37.5 - 38.6 | 16 | 60 | 8 | 63 | 60 | 80 | 0.54 | M 8 SW 6 | 5 |
| 42.4 | FLEX 42.4 | 41.7 - 43.0 | 16 | 50 | 8 | 63 | 65 | 85 | 0.56 | M 8 SW 6 | 5 |
| 44.5 | FLEX 44.5 | 44.0 - 45.1 | 16 | 50 | 8 | 63 | 65 | 85 | 0.56 | M 8 SW 6 | 5 |
| 48.3 | FLEX 48.3 | 47.6 - 50.5 | 16 | 50 | 8 | 63 | 70 | 90 | 0.58 | M 8 SW 6 | 5 |
| 54.0 | FLEX 54.0 | 53.3 - 54.6 | 16 | 50 | 17 | 78 | 75 | 95 | 0.76 | M 8 SW 6 | 10 |
| 57.0 | FLEX 57.0 | 56.3 - 57.7 | 16 | 50 | 17 | 78 | 80 | 100 | 0.76 | M 8 SW 6 | 10 |
| 60.3 | FLEX 60.3 | 59.5 - 61.0 | 16 | 40 | 17 | 78 | 85 | 105 | 0.77 | M 8 SW 6 | 10 |
| 63.0 | FLEX 63.0 | 62.2 - 63.9 | 16 | 40 | 17 | 78 | 85 | 105 | 0.77 | M 8 SW 6 | 10 |
| 70.0 | FLEX 70.0 | 69.0 - 71.0 | 16 | 40 | 25 | 98 | 90 | 110 | 1.37 | M 8 SW 6 | 10 |
| 73.0 | FLEX 73.0 | 72.1 - 73.8 | 16 | 40 | 25 | 98 | 95 | 115 | 1.39 | M 8 SW 6 | 10 |
| 76.1 | FLEX 76.1 | 75.2 - 77.0 | 16 | 35 | 25 | 98 | 100 | 120 | 1.39 | M 8 SW 6 | 10 |
| 80.0 | FLEX 80.0 | 79.0 - 80.8 | 16 | 35 | 25 | 98 | 100 | 120 | 1.43 | M 8 SW 6 | 10 |
| 84.0 | FLEX 84.0 | 83.0 - 85.0 | 16 | 35 | 25 | 98 | 105 | 125 | 1.46 | M 8 SW 6 | 10 |
| 88.9 | FLEX 88.9 | 87.0 - 89.9 | 16 | 35 | 25 | 98 | 110 | 130 | 1.47 | M 8 SW 6 | 10 |
| 101.6 | FLEX 101.6 | 100.4 - 102.8 | 16 | 35 | 25 | 98 | 125 | 145 | 1.61 | M 8 SW 6 | 10 |
| 104.0 | FLEX 104.0 | 102.8 - 106.1 | 16 | 35 | 25 | 98 | 125 | 145 | 1.62 | M 8 SW 6 | 10 |
| 108.0 | FLEX 108.0 | 106.8 - 109.2 | 16 | 35 | 25 | 98 | 130 | 150 | 1.64 | M 8 SW 6 | 10 |
| 110.0 | FLEX 110.0 | 108.8 - 111.4 | 16 | 35 | 25 | 98 | 130 | 150 | 1.69 | M 8 SW 6 | 10 |
| 114.3 | FLEX 114.3 | 113.0 - 115.5 | 16 | 35 | 25 | 98 | 135 | 155 | 1.69 | M 8 SW 6 | 15 |
| 129.0 | FLEX 129.0 | 127.6 - 131.1 | 16 | 32 | 35 | 113 | 155 | 185 | 2.41 | M 10 SW 8 | 20 |
| 133.0 | FLEX 133.0 | 131.5 - 134.4 | 16 | 32 | 35 | 113 | 160 | 190 | 2.43 | M 10 SW 8 | 20 |
| 139.7 | FLEX 139.7 | 138.1 - 141.6 | 16 | 32 | 35 | 113 | 165 | 195 | 2.5 | M 10 SW 8 | 25 |
| 141.3 | FLEX 141.3 | 139.6 - 142.8 | 16 | 32 | 35 | 113 | 170 | 200 | 2.5 | M 10 SW 8 | 25 |
| 154.0 | FLEX 154.0 | 152.3 - 156.1 | 16 | 32 | 35 | 113 | 180 | 210 | 2.62 | M 10 SW 8 | 30 |
| 159.0 | FLEX 159.0 | 157.3 - 160.7 | 16 | 32 | 35 | 113 | 185 | 215 | 2.69 | M 10 SW 8 | 30 |
| 168.3 | FLEX 168.3 | 166.5 - 170.1 | 16 | 32 | 35 | 113 | 195 | 225 | 2.75 | M 10 SW 8 | 30 |
| 180.0 | FLEX 180.0 | 178.0 - 182.0 | 23.5 | 50.0 | 35 | 141 | 210 | 240 | 5.4 | M 12 SW 10 | 35 |
| 193.7 | FLEX 193.7 | 192.0 - 196.0 | 23.5 | 46.0 | 35 | 141 | 225 | 255 | 5.6 | M 12 SW 10 | 35 |
| 206.0 | FLEX 206.0 | 202.0 - 208.0 | 20.0 | 43.0 | 35 | 141 | 240 | 270 | 5.8 | M 12 SW 10 | 35 |
| 219.0 | FLEX 219.0 | 216.0 - 221.0 | 18.0 | 40.5 | 35 | 141 | 250 | 280 | 6.0 | M 12 SW 10 | 35 |
| 225.0 | FLEX 225.0 | 222.0 - 227.0 | 18.0 | 40.0 | 35 | 141 | 255 | 285 | 6.1 | M 12 SW 10 | 35 |
| 229.9 | FLEX 229.9 | 228.0 - 232.0 | 18.0 | 39.0 | 35 | 141 | 260 | 290 | 6.2 | M 12 SW 10 | 35 |
| 244.5 | FLEX 244.5 | 242.0 - 247.0 | 18.0 | 37.0 | 35 | 141 | 275 | 305 | 6.4 | M 12 SW 10 | 35 |
| 254.0 | FLEX 254.0 | 250.0 - 256.0 | 18.0 | 35.5 | 35 | 141 | 285 | 315 | 6.5 | M 12 SW 10 | 35 |
| 267.0 | FLEX 267.0 | 264.0 - 269.0 | 18.0 | 33.5 | 35 | 141 | 300 | 330 | 6.7 | M 12 SW 10 | 35 |
| 273.0 | FLEX 273.0 | 270.0 - 275.0 | 17.0 | 33.0 | 35 | 141 | 305 | 335 | 6.8 | M 12 SW 10 | 35 |
| 306.0 | FLEX 306.0 | 302.0 - 308.0 | 15.0 | 29.0 | 35 | 141 | 340 | 370 | 7.4 | M 12 SW 10 | 35 |
| 323.9 | FLEX 323.9 | 320.0 - 327.0 | 15.0 | 28.0 | 35 | 141 | 355 | 385 | 7.6 | M 12 SW 10 | 35 |
| 326.0 | FLEX 326.0 | 322.0 - 329.0 | 13.0 | 27.5 | 35 | 141 | 360 | 390 | 7.7 | M 12 SW 10 | 35 |
| 355.6 | FLEX 355.6 | 352.0 - 359.0 | 13.0 | 25.0 | 35 | 141 | 390 | 420 | 8.1 | M 12 SW 10 | 35 |
| 406.4 | FLEX 406.4 | 402.0 - 410.0 | 10.0 | 22.0 | 35 | 141 | 440 | 470 | 8.9 | M 12 SW 10 | 35 |
| 429.0 | FLEX 429.0 | 426.0 - 431.0 | 7.5 | 21.0 | 35 | 141 | 460 | 490 | 9.3 | M 12 SW 10 | 40 |
| 442.0 | FLEX 442.0 | 439.0 - 444.0 | 7.5 | 20.0 | 35 | 141 | 475 | 505 | 9.5 | M 12 SW 10 | 40 |
| 457.2 | FLEX 457.2 | 454.0 - 459.0 | 7.5 | 19.5 | 35 | 141 | 490 | 520 | 9.7 | M 12 SW 10 | 40 |
| 508.0 | FLEX 508.0 | 505.0 - 510.0 | 7.5 | 17.0 | 35 | 141 | 540 | 570 | 10.5 | M 12 SW 10 | 40 |
| 531.0 | FLEX 531.0 | 528.0 - 534.0 | 7.5 | 16.0 | 35 | 141 | 565 | 595 | 10.9 | M 12 SW 10 | 50 |
| 558.8 | FLEX 558.8 | 556.0 - 562.0 | 7.5 | 15.5 | 35 | 141 | 590 | 620 | 11.3 | M 12 SW 10 | 50 |
| 609.6 | FLEX 609.6 | 606.0 - 613.0 | 6.0 | 14.0 | 35 | 141 | 640 | 670 | 12.1 | M 12 SW 10 | 50 |
| 634.0 | FLEX 634.0 | 631.0 - 637.0 | 5.0 | 13.5 | 35 | 141 | 665 | 695 | 12.5 | M 12 SW 10 | 50 |
| 711.2 | FLEX 711.2 | 707.0 - 715.0 | 5.0 | 12.0 | 35 | 141 | 745 | 775 | 13.7 | M 12 SW 10 | 50 |
| 762.0 | FLEX 762.0 | 758.0 - 766.0 | 4.5 | 11.0 | 35 | 141 | 795 | 885 | 14.5 | M 12 SW 10 | 50 |
| 812.8 | FLEX 812.8 | 808.0 - 817.0 | 4.5 | 10.5 | 35 | 141 | 845 | 935 | 17.2 | M 12 SW 10 | 50 |
| 914.4 | FLEX 914.4 | 909.0 - 919.0 | 3.3 | 9.5 | 35 | 141 | 945 | 1035 | 18.8 | M 12 SW 10 | 60 |
| 1016.0 | FLEX 1016.0 | 1013.0 - 1019.0 | 3.3 | 8.0 | 35 | 141 | 1050 | 1140 | 20.4 | M 12 SW 10 | 60 |
| 1117.5 | FLEX 1117.5 | 1114.0 - 1120.0 | 3.3 | 7.5 | 35 | 141 | 1150 | 1240 | 22.0 | M 12 SW 10 | 60 |
| 1219.2 | FLEX 1219.2 | 1216.0 - 1222.0 | 3.3 | 7.0 | 35 | 141 | 1250 | 1340 | 23.6 | M 12 SW 10 | 60 |

Coupling sizes >800 mm are in 2-parts design! Sizes > 1219.2 on request

PN¹ (Nominal Pressure) is the max. admissible working pressure in shipbuilding, based on a safety factor of ≥ 4.

MAWP¹ (Maximum Allowable Working Pressure) is the max. admissible working pressure in shipbuilding, based on a safety factor of ≥ 4.

WP² is the max. working pressure in industrial applications, with a safety factor as per NORMA specification.

Technical data & Ordering information

| NORMACONNECT™ FGR FLEX | | | | | | | | |
|------------------------|-------------|-------------------|---------------|-------------------|---------------|-------------------|---------------|---------------|
| Ø (O.D.) | Designation | W2 Product No. | | W4 Product No. | | W5 Product No. | | |
| | | EPDM | NBR | EPDM | NBR | EPDM | NBR | FKM |
| 26.9 | FLEX 26.9 | 0573 9100 026 | 0573 8400 026 | 0573 9200 026 | 0573 8500 026 | | | |
| 28.0 | FLEX 28.0 | 0573 9100 028 | 0573 8400 028 | 0573 9200 028 | 0573 8500 028 | | | |
| 30.0 | FLEX 30.0 | 0573 9100 030 | 0573 8400 030 | 0573 9200 030 | 0573 8500 030 | | | |
| 33.7 | FLEX 33.7 | 0573 9100 033 | 0573 8400 033 | 0573 9200 033 | 0573 8500 033 | | | 0573 9900 033 |
| 35.0 | FLEX 35.0 | 0573 9100 035 | 0573 8400 035 | 0573 9200 035 | 0573 8500 035 | | | |
| 38.0 | FLEX 38.0 | 0573 9100 038 | 0573 8400 038 | 0573 9200 038 | 0573 8500 038 | | | 0573 9900 038 |
| 42.4 | FLEX 42.4 | 0573 9100 042 | 0573 8400 042 | 0573 9200 042 | 0573 8500 042 | | | 0573 9900 042 |
| 44.5 | FLEX 44.5 | 0573 9100 044 | 0573 8400 044 | 0573 9200 044 | 0573 8500 044 | | | |
| 48.3 | FLEX 48.3 | 0573 9100 048 | 0573 8400 048 | 0573 9200 048 | 0573 8500 048 | | | 0573 9900 048 |
| 54.0 | FLEX 54.0 | 0573 9100 054 | 0573 8400 054 | 0573 9200 054 | 0573 8500 054 | | | |
| 57.0 | FLEX 57.0 | 0573 9100 057 | 0573 8400 057 | 0573 9200 057 | 0573 8500 057 | | | 0573 9900 057 |
| 60.3 | FLEX 60.3 | 0573 9100 060 | 0573 8400 060 | 0573 9200 060 | 0573 8500 060 | | | 0573 9900 060 |
| 63.0 | FLEX 63.0 | 0573 9100 063 | 0573 8400 063 | 0573 9200 063 | 0573 8500 063 | | | 0573 9900 063 |
| 70.0 | FLEX 70.0 | 0573 9100 070 | 0573 8400 070 | 0573 9200 070 | 0573 8500 070 | | | |
| 73.0 | FLEX 73.0 | 0573 9100 073 | 0573 8400 073 | 0573 9200 073 | 0573 8500 073 | | | |
| 76.1 | FLEX 76.1 | 0573 9100 076 | 0573 8400 076 | 0573 9200 076 | 0573 8500 076 | | | 0573 9900 076 |
| 80.0 | FLEX 80.0 | 0573 9100 080 | 0573 8400 080 | 0573 9200 080 | 0573 8500 080 | | | |
| 84.0 | FLEX 84.0 | 0573 9100 084 | 0573 8400 084 | 0573 9200 084 | 0573 8500 084 | | | |
| 88.9 | FLEX 88.9 | 0573 9100 088 | 0573 8400 088 | 0573 9200 088 | 0573 8500 088 | | | 0573 9900 088 |
| 101.6 | FLEX 101.6 | 0573 9100 101 | 0573 8400 101 | 0573 9200 101 | 0573 8500 101 | | | |
| 104.0 | FLEX 104.0 | 0573 9100 104 | 0573 8400 104 | 0573 9200 104 | 0573 8500 104 | | | |
| 108.0 | FLEX 108.0 | 0573 9100 108 | 0573 8400 108 | 0573 9200 108 | 0573 8500 108 | | | |
| 110.0 | FLEX 110.0 | 0573 9100 110 | 0573 8400 110 | 0573 9200 110 | 0573 8500 110 | | | |
| 114.3 | FLEX 114.3 | 0573 9100 114 | 0573 8400 114 | 0573 9200 114 | 0573 8500 114 | | | 0573 9900 114 |
| 129.0 | FLEX 129.0 | 0573 9100 129 | 0573 8400 129 | 0573 9200 129 | 0573 8500 129 | | | 0573 9900 129 |
| 133.0 | FLEX 133.0 | 0573 9100 133 | 0573 8400 133 | 0573 9200 133 | 0573 8500 133 | | | |
| 139.7 | FLEX 139.7 | 0573 9100 139 | 0573 8400 139 | 0573 9200 139 | 0573 8500 139 | | | 0573 9900 139 |
| 141.3 | FLEX 141.3 | 0573 9100 141 | 0573 8400 141 | 0573 9200 141 | 0573 8500 141 | | | |
| 154.0 | FLEX 154.0 | 0573 9100 154 | 0573 8400 154 | 0573 9200 154 | 0573 8500 154 | | | |
| 159.0 | FLEX 159.0 | 0573 9100 159 | 0573 8400 159 | 0573 9200 159 | 0573 8500 159 | | | |
| 168.3 | FLEX 168.3 | 0573 9100 168 | 0573 8400 168 | 0573 9200 168 | 0573 8500 168 | | | 0573 9900 168 |
| 180.0 | FLEX 180.0 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 193.7 | FLEX 193.7 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 206.0 | FLEX 206.0 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 219.0 | FLEX 219.0 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 225.0 | FLEX 225.0 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 229.9 | FLEX 229.9 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 244.5 | FLEX 244.5 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 254.0 | FLEX 254.0 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 267.0 | FLEX 267.0 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 273.0 | FLEX 273.0 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 306.0 | FLEX 306.0 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 323.9 | FLEX 323.9 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 326.0 | FLEX 326.0 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 355.6 | FLEX 355.6 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 406.4 | FLEX 406.4 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 429.0 | FLEX 429.0 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 442.0 | FLEX 442.0 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 457.2 | FLEX 457.2 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 508.0 | FLEX 508.0 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 531.0 | FLEX 531.0 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 558.8 | FLEX 558.8 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 609.6 | FLEX 609.6 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 634.0 | FLEX 634.0 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 711.2 | FLEX 711.2 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 762.0 | FLEX 762.0 | 0575 8140 ... | 0575 8440 ... | 0575 8240 ... | 0575 8540 ... | 0575 8340 ... | 0575 8640 ... | |
| 812.8 | FLEX 812.8 | 0575 8148 ... | 0575 8448 ... | 0575 8248 ... | 0575 8548 ... | 0575 8348 ... | 0575 8648 ... | |
| 914.4 | FLEX 914.4 | 0575 8148 ... | 0575 8448 ... | 0575 8248 ... | 0575 8548 ... | 0575 8348 ... | 0575 8648 ... | |
| 1016.0 | FLEX 1016.0 | 0575 8148 ... | 0575 8448 ... | 0575 8248 ... | 0575 8548 ... | 0575 8348 ... | 0575 8648 ... | |
| 1117.5 | FLEX 1117.5 | 0575 8148 ... | 0575 8448 ... | 0575 8248 ... | 0575 8548 ... | 0575 8348 ... | 0575 8648 ... | |
| 1219.2 | FLEX 1219.2 | 0575 8148 ... | 0575 8448 ... | 0575 8248 ... | 0575 8548 ... | 0575 8348 ... | 0575 8648 ... | |

... = Ø without decimals in mm

NORMACONNECT™



NORMACONNECT™ FLEX E an axial non-restraint coupling. It is used for connecting metal pipes, stainless pipes, as well as concrete and plastic pipes. This is a hollow trunnions version.

Material
W2, W4, W5

NORMACONNECT™ FGR FLEX E

| Ø (O.D.) | Designation | Clamping ranges | PN ¹ (MAWP ¹ from Ø 180) | WP ² | C max | Dimensions (approx.) | | | Weight (approx.) | Hex socket locking bolts | |
|-------------|---------------|--------------------|---|-----------------|----------|-------------------------|-----------|-----------|---------------------|--------------------------|---------------------------|
| | | Odmin - Odmax | [bar] | [bar] | (mm) | a (mm) | d (mm) | H (mm) | (kg/pc.) | Thread | Tightening torque (Nm) |
| 26.9 | FLEX E 26.9 | 26.4-27.5 | 16 | 70 | 3 | 67 | 50 | 70 | 0.31 | M 8 SW 6 | 5 |
| 28.0 | FLEX E 28.0 | 27.5-28.5 | 16 | 70 | 3 | 67 | 50 | 70 | 0.31 | M 8 SW 6 | 5 |
| 30.0 | FLEX E 30.0 | 29.5-30.6 | 16 | 70 | 3 | 67 | 50 | 70 | 0.31 | M 8 SW 6 | 5 |
| 33.7 | FLEX E 33.7 | 33.0-34.3 | 16 | 60 | 3 | 67 | 55 | 75 | 0.32 | M 8 SW 6 | 5 |
| 35.0 | FLEX E 35.0 | 34.5-35.6 | 16 | 60 | 8 | 63 | 55 | 75 | 0.43 | M 8 SW 6 | 5 |
| 38.0 | FLEX E 38.0 | 37.5-38.6 | 16 | 60 | 8 | 63 | 60 | 80 | 0.43 | M 8 SW 6 | 5 |
| 42.4 | FLEX E 42.4 | 41.7-43.0 | 16 | 50 | 8 | 63 | 65 | 85 | 0.44 | M 8 SW 6 | 5 |
| 44.5 | FLEX E 44.5 | 44.0-45.1 | 16 | 50 | 8 | 63 | 65 | 85 | 0.45 | M 8 SW 6 | 5 |
| 48.3 | FLEX E 48.3 | 47.6-50.5 | 16 | 50 | 8 | 63 | 70 | 90 | 0.46 | M 8 SW 6 | 5 |
| 54.0 | FLEX E 54.0 | 53.3-54.6 | 16 | 50 | 17 | 78 | 75 | 95 | 0.60 | M 8 SW 6 | 10 |
| 57.0 | FLEX E 57.0 | 56.3-57.7 | 16 | 50 | 17 | 78 | 80 | 100 | 0.61 | M 8 SW 6 | 10 |
| 60.3 | FLEX E 60.3 | 59.5-61.0 | 16 | 40 | 17 | 78 | 85 | 105 | 0.62 | M 8 SW 6 | 10 |
| 63.0 | FLEX E 63.0 | 62.2-63.9 | 16 | 40 | 17 | 78 | 85 | 105 | 0.62 | M 8 SW 6 | 10 |
| 70.0 | FLEX E 70.0 | 69.0-71.0 | 16 | 40 | 25 | 98 | 90 | 110 | 1.16 | M 8 SW 6 | 10 |
| 73.0 | FLEX E 73.0 | 72.1-73.8 | 16 | 40 | 25 | 98 | 95 | 115 | 1.18 | M 8 SW 6 | 10 |
| 76.1 | FLEX E 76.1 | 75.2-77.0 | 16 | 35 | 25 | 98 | 100 | 120 | 1.18 | M 8 SW 6 | 10 |
| 80.0 | FLEX E 80.0 | 79.0-80.8 | 16 | 35 | 25 | 98 | 100 | 120 | 1.21 | M 8 SW 6 | 10 |
| 84.0 | FLEX E 84.0 | 83.0-85.0 | 16 | 35 | 25 | 98 | 105 | 125 | 1.24 | M 8 SW 6 | 10 |
| 88.9 | FLEX E 88.9 | 87.0-89.9 | 16 | 35 | 25 | 98 | 110 | 130 | 1.26 | M 8 SW 6 | 10 |
| 101.6 | FLEX E 101.6 | 100.4-102.8 | 16 | 35 | 25 | 98 | 125 | 145 | 1.39 | M 8 SW 6 | 10 |
| 104.0 | FLEX E 104.0 | 102.8-106.1 | 16 | 35 | 25 | 98 | 125 | 145 | 1.40 | M 8 SW 6 | 10 |
| 108.0 | FLEX E 108.0 | 106.8-109.2 | 16 | 35 | 25 | 98 | 130 | 150 | 1.42 | M 8 SW 6 | 10 |
| 110.0 | FLEX E 110.0 | 108.8-111.4 | 16 | 35 | 25 | 98 | 130 | 150 | 1.47 | M 8 SW 6 | 10 |
| 114.3 | FLEX E 114.3 | 113.0-115.5 | 16 | 35 | 25 | 98 | 135 | 155 | 1.47 | M 8 SW 6 | 15 |
| 129.0 | FLEX E 129.0 | 127.6-131.1 | 16 | 32 | 35 | 113 | 155 | 185 | 2.10 | M 10 SW 8 | 20 |
| 133.0 | FLEX E 133.0 | 131.5-134.4 | 16 | 32 | 35 | 113 | 160 | 190 | 2.13 | M 10 SW 8 | 20 |
| 139.7 | FLEX E 139.7 | 138.1-141.6 | 16 | 32 | 35 | 113 | 165 | 195 | 2.19 | M 10 SW 8 | 25 |
| 141.3 | FLEX E 141.3 | 139.6-142.8 | 16 | 32 | 35 | 113 | 170 | 200 | 2.19 | M 10 SW 8 | 25 |
| 154.0 | FLEX E 154.0 | 152.3-156.1 | 16 | 32 | 35 | 113 | 180 | 210 | 2.31 | M 10 SW 8 | 30 |
| 159.0 | FLEX E 159.0 | 157.3-160.7 | 16 | 32 | 35 | 113 | 185 | 215 | 2.38 | M 10 SW 8 | 30 |
| 168.3 | FLEX E 168.3 | 166.5 - 170.1 | 16 | 32 | 35 | 113 | 195 | 225 | 2.43 | M 10 SW 8 | 30 |
| 180.0 | FLEX E 180.0 | 178.0 - 182.0 | 13.5 | 30.0 | 35 | 139 | 210 | 240 | 4.0 | M 12 SW 10 | 25 |
| 193.7 | FLEX E 193.7 | 192.0 - 196.0 | 13.5 | 28.0 | 35 | 139 | 225 | 255 | 4.1 | M 12 SW 10 | 25 |
| 206.0 | FLEX E 206.0 | 202.0 - 208.0 | 13.5 | 26.5 | 35 | 139 | 240 | 270 | 4.3 | M 12 SW 10 | 25 |
| 219.0 | FLEX E 219.0 | 216.0 - 221.0 | 13.5 | 23.0 | 35 | 139 | 250 | 280 | 4.4 | M 12 SW 10 | 25 |
| 225.0 | FLEX E 225.0 | 222.0 - 227.0 | 12.0 | 23.0 | 35 | 139 | 255 | 285 | 4.5 | M 12 SW 10 | 25 |
| 229.9 | FLEX E 229.9 | 228.0 - 232.0 | 12.0 | 23.0 | 35 | 139 | 260 | 290 | 4.5 | M 12 SW 10 | 25 |
| 244.5 | FLEX E 244.5 | 242.0 - 247.0 | 12.0 | 22.0 | 35 | 139 | 275 | 305 | 4.7 | M 12 SW 10 | 25 |
| 254.0 | FLEX E 254.0 | 250.0 - 256.0 | 12.0 | 21.0 | 35 | 139 | 285 | 315 | 4.8 | M 12 SW 10 | 25 |
| 267.0 | FLEX E 267.0 | 264.0 - 269.0 | 12.0 | 20.0 | 35 | 139 | 300 | 330 | 5.0 | M 12 SW 10 | 25 |
| 273.0 | FLEX E 273.0 | 270.0 - 275.0 | 12.0 | 20.0 | 35 | 139 | 305 | 335 | 5.1 | M 12 SW 10 | 25 |
| 306.0 | FLEX E 306.0 | 302.0 - 308.0 | 9.0 | 17.5 | 35 | 139 | 340 | 370 | 5.5 | M 12 SW 10 | 25 |
| 323.9 | FLEX E 323.9 | 320.0 - 327.0 | 9.0 | 17.5 | 35 | 139 | 355 | 385 | 5.7 | M 12 SW 10 | 25 |
| 326.0 | FLEX E 326.0 | 322.0 - 329.0 | 9.0 | 16.5 | 35 | 139 | 360 | 390 | 5.7 | M 12 SW 10 | 25 |
| 355.6 | FLEX E 355.6 | 352.0 - 359.0 | 9.0 | 15.0 | 35 | 139 | 390 | 420 | 6.0 | M 12 SW 10 | 25 |
| 406.4 | FLEX E 406.4 | 402.0 - 410.0 | 7.5 | 14.0 | 35 | 139 | 440 | 470 | 6.7 | M 12 SW 10 | 25 |
| 429.0 | FLEX E 429.0 | 426.0 - 431.0 | 5.5 | 13.0 | 35 | 139 | 460 | 490 | 6.9 | M 12 SW 10 | 40 |
| 442.0 | FLEX E 442.0 | 439.0 - 444.0 | 5.5 | 13.0 | 35 | 139 | 475 | 505 | 7.1 | M 12 SW 10 | 40 |
| 457.2 | FLEX E 457.2 | 454.0 - 459.0 | 5.5 | 12.0 | 35 | 139 | 490 | 520 | 7.3 | M 12 SW 10 | 40 |
| 508.0 | FLEX E 508.0 | 505.0 - 510.0 | 5.5 | 11.0 | 35 | 139 | 540 | 570 | 7.9 | M 12 SW 10 | 40 |
| 531.0 | FLEX E 531.0 | 528.0 - 534.0 | 5.5 | 10.5 | 35 | 139 | 565 | 595 | 8.1 | M 12 SW 10 | 40 |
| 558.8 | FLEX E 558.8 | 556.0 - 562.0 | 5.5 | 10.0 | 35 | 139 | 590 | 620 | 8.5 | M 12 SW 10 | 40 |
| 609.6 | FLEX E 609.6 | 606.0 - 613.0 | 4.5 | 9.0 | 35 | 139 | 640 | 670 | 9.1 | M 12 SW 10 | 40 |
| 634.0 | FLEX E 634.0 | 631.0 - 637.0 | 4.5 | 8.0 | 35 | 139 | 665 | 695 | 9.4 | M 12 SW 10 | 40 |
| 711.2 | FLEX E 711.2 | 707.0 - 715.0 | 4.0 | 7.0 | 35 | 139 | 745 | 775 | 10.3 | M 12 SW 10 | 40 |
| 762.0 | FLEX E 762.0 | 758.0 - 766.0 | 3.2 | 7.0 | 35 | 139 | 795 | 885 | 10.9 | M 12 SW 10 | 40 |
| 812.8 | FLEX E 812.8 | 808.0 - 817.0 | 3.2 | 6.5 | 35 | 139 | 845 | 935 | 12.8 | M 12 SW 10 | 40 |
| 914.4 | FLEX E 914.4 | 909.0 - 919.0 | 2.0 | 5.5 | 35 | 139 | 945 | 1035 | 14.0 | M 12 SW 10 | 45 |
| 1016.0 | FLEX E 1016.0 | 1013.0 - 1019.0 | 2.0 | 5.0 | 35 | 139 | 1050 | 1140 | 15.2 | M 12 SW 10 | 45 |
| 1117.5 | FLEX E 1117.5 | 1114.0 - 1120.0 | 2.0 | 4.5 | 35 | 139 | 1150 | 1240 | 16.4 | M 12 SW 10 | 50 |
| 1219.2 | FLEX E 1219.2 | 1216.0 - 1222.0 | 2.0 | 4.0 | 35 | 139 | 1250 | 1340 | 17.7 | M 12 SW 10 | 50 |

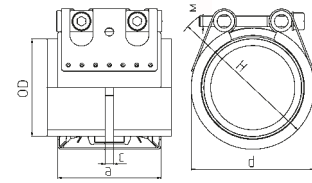
Coupling sizes >800 mm are in 2-parts design! Sizes > 1219.2 on request

PN¹ (Nominal Pressure) is the max. admissible working pressure in shipbuilding, based on a safety factor of ≥ 4.

MAWP¹ (Maximum Allowable Working Pressure) is the max. admissible working pressure in shipbuilding, based on a safety factor of ≥ 4.

WP² is the max. working pressure in industrial applications, with a safety factor as per NORMA specification.

Technical data & Ordering information



| NORMACONNECT™ FGR FLEX E | | | | | | | |
|--------------------------|---------------|-------------------|---------------|-------------------|---------------|-------------------|---------------|
| Ø (O.D.) | Designation | W2 Product No. | | W4 Product No. | | W5 Product No. | |
| | | EPDM | NBR | EPDM | NBR | EPDM | NBR |
| 26.9 | FLEX E 26.9 | 0582 9100 026 | 0582 8400 026 | 0582 9200 026 | 0582 8500 026 | 0582 9300 026 | 0582 8600 026 |
| 28.0 | FLEX E 28.0 | 0582 9100 028 | 0582 8400 028 | 0582 9200 028 | 0582 8500 028 | 0582 9300 028 | 0582 8600 028 |
| 30.0 | FLEX E 30.0 | 0582 9100 030 | 0582 8400 030 | 0582 9200 030 | 0582 8500 030 | 0582 9300 030 | 0582 8600 030 |
| 33.7 | FLEX E 33.7 | 0582 9100 033 | 0582 8400 033 | 0582 9200 033 | 0582 8500 033 | 0582 9300 033 | 0582 8600 033 |
| 35.0 | FLEX E 35.0 | 0582 9100 035 | 0582 8400 035 | 0582 9200 035 | 0582 8500 035 | 0582 9300 035 | 0582 8600 035 |
| 38.0 | FLEX E 38.0 | 0582 9100 038 | 0582 8400 038 | 0582 9200 038 | 0582 8500 038 | 0582 9300 038 | 0582 8600 038 |
| 42.4 | FLEX E 42.4 | 0582 9100 042 | 0582 8400 042 | 0582 9200 042 | 0582 8500 042 | 0582 9300 042 | 0582 8600 042 |
| 44.5 | FLEX E 44.5 | 0582 9100 044 | 0582 8400 044 | 0582 9200 044 | 0582 8500 044 | 0582 9300 044 | 0582 8600 044 |
| 48.3 | FLEX E 48.3 | 0582 9100 048 | 0582 8400 048 | 0582 9200 048 | 0582 8500 048 | 0582 9300 048 | 0582 8600 048 |
| 54.0 | FLEX E 54.0 | 0582 9100 054 | 0582 8400 054 | 0582 9200 054 | 0582 8500 054 | 0582 9300 054 | 0582 8600 054 |
| 57.0 | FLEX E 57.0 | 0582 9100 057 | 0582 8400 057 | 0582 9200 057 | 0582 8500 057 | 0582 9300 057 | 0582 8600 057 |
| 60.3 | FLEX E 60.3 | 0582 9100 060 | 0582 8400 060 | 0582 9200 060 | 0582 8500 060 | 0582 9300 060 | 0582 8600 060 |
| 63.0 | FLEX E 63.0 | 0582 9100 063 | 0582 8400 063 | 0582 9200 063 | 0582 8500 063 | 0582 9300 063 | 0582 8600 063 |
| 70.0 | FLEX E 70.0 | 0582 9100 070 | 0582 8400 070 | 0582 9200 070 | 0582 8500 070 | 0582 9300 070 | 0582 8600 070 |
| 73.0 | FLEX E 73.0 | 0582 9100 073 | 0582 8400 073 | 0582 9200 073 | 0582 8500 073 | 0582 9300 073 | 0582 8600 073 |
| 76.1 | FLEX E 76.1 | 0582 9100 076 | 0582 8400 076 | 0582 9200 076 | 0582 8500 076 | 0582 9300 076 | 0582 8600 076 |
| 80.0 | FLEX E 80.0 | 0582 9100 080 | 0582 8400 080 | 0582 9200 080 | 0582 8500 080 | 0582 9300 080 | 0582 8600 080 |
| 84.0 | FLEX E 84.0 | 0582 9100 084 | 0582 8400 084 | 0582 9200 084 | 0582 8500 084 | 0582 9300 084 | 0582 8600 084 |
| 88.9 | FLEX E 88.9 | 0582 9100 088 | 0582 8400 088 | 0582 9200 088 | 0582 8500 088 | 0582 9300 088 | 0582 8600 088 |
| 101.6 | FLEX E 101.6 | 0582 9100 101 | 0582 8400 101 | 0582 9200 101 | 0582 8500 101 | 0582 9300 101 | 0582 8600 101 |
| 104.0 | FLEX E 104.0 | 0582 9100 104 | 0582 8400 104 | 0582 9200 104 | 0582 8500 104 | 0582 9300 104 | 0582 8600 104 |
| 108.0 | FLEX E 108.0 | 0582 9100 108 | 0582 8400 108 | 0582 9200 108 | 0582 8500 108 | 0582 9300 108 | 0582 8600 108 |
| 110.0 | FLEX E 110.0 | 0582 9100 110 | 0582 8400 110 | 0582 9200 110 | 0582 8500 110 | 0582 9300 110 | 0582 8600 110 |
| 114.3 | FLEX E 114.3 | 0582 9100 114 | 0582 8400 114 | 0582 9200 114 | 0582 8500 114 | 0582 9300 114 | 0582 8600 114 |
| 129.0 | FLEX E 129.0 | 0582 9100 129 | 0582 8400 129 | 0582 9200 129 | 0582 8500 129 | 0582 9300 129 | 0582 8600 129 |
| 133.0 | FLEX E 133.0 | 0582 9100 133 | 0582 8400 133 | 0582 9200 133 | 0582 8500 133 | 0582 9300 133 | 0582 8600 133 |
| 139.7 | FLEX E 139.7 | 0582 9100 139 | 0582 8400 139 | 0582 9200 139 | 0582 8500 139 | 0582 9300 139 | 0582 8600 139 |
| 141.3 | FLEX E 141.3 | 0582 9100 141 | 0582 8400 141 | 0582 9200 141 | 0582 8500 141 | 0582 9300 141 | 0582 8600 141 |
| 154.0 | FLEX E 154.0 | 0582 9100 154 | 0582 8400 154 | 0582 9200 154 | 0582 8500 154 | 0582 9300 154 | 0582 8600 154 |
| 159.0 | FLEX E 159.0 | 0582 9100 159 | 0582 8400 159 | 0582 9200 159 | 0582 8500 159 | 0582 9300 159 | 0582 8600 159 |
| 168.3 | FLEX E 168.3 | 0582 9100 168 | 0582 8400 168 | 0582 9200 168 | 0582 8500 168 | 0582 9300 168 | 0582 8600 168 |
| 180.0 | FLEX E 180.0 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 193.7 | FLEX E 193.7 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 206.0 | FLEX E 206.0 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 219.0 | FLEX E 219.0 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 225.0 | FLEX E 225.0 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 229.9 | FLEX E 229.9 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 244.5 | FLEX E 244.5 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 254.0 | FLEX E 254.0 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 267.0 | FLEX E 267.0 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 273.0 | FLEX E 273.0 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 306.0 | FLEX E 306.0 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 323.9 | FLEX E 323.9 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 326.0 | FLEX E 326.0 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 355.6 | FLEX E 355.6 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 406.4 | FLEX E 406.4 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 429.0 | FLEX E 429.0 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 442.0 | FLEX E 442.0 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 457.2 | FLEX E 457.2 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 508.0 | FLEX E 508.0 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 531.0 | FLEX E 531.0 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 558.8 | FLEX E 558.8 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 609.6 | FLEX E 609.6 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 634.0 | FLEX E 634.0 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 711.2 | FLEX E 711.2 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 762.0 | FLEX E 762.0 | 0583 8120 ... | 0583 8420 ... | 0583 8220 ... | 0583 8520 ... | 0583 8320 ... | 0583 8620 ... |
| 812.8 | FLEX E 812.8 | 0583 8128 ... | 0583 8428 ... | 0583 8228 ... | 0583 8528 ... | 0583 8328 ... | 0583 8628 ... |
| 914.4 | FLEX E 914.4 | 0583 8128 ... | 0583 8428 ... | 0583 8228 ... | 0583 8528 ... | 0583 8328 ... | 0583 8628 ... |
| 1016.0 | FLEX E 1016.0 | 0583 8128 ... | 0583 8428 ... | 0583 8228 ... | 0583 8528 ... | 0583 8328 ... | 0583 8628 ... |
| 1117.5 | FLEX E 1117.5 | 0583 8128 ... | 0583 8428 ... | 0583 8228 ... | 0583 8528 ... | 0583 8328 ... | 0583 8628 ... |
| 1219.2 | FLEX E 1219.2 | 0583 8128 ... | 0583 8428 ... | 0583 8228 ... | 0583 8528 ... | 0583 8328 ... | 0583 8628 ... |

... = Ø without decimals in mm

NORMACONNECT™



- 1 Double-lip sealing system
- 2 Standard strip insert
- 3 Lock bars



NORMACONNECT™ FLEX 3 pipe coupling with extra wide band width of 211 mm

The pipe coupling with extra wide band

NORMACONNECT™ FLEX 3 featuring an extra wide band is an axial non-restraint coupling used to connect metal and/or plastic pipes quickly and safely.



Advantages at a glance

- Easy and quick to assemble
- Pipe end distance up to 65 mm possible
- Compensation of misalignment, angular deflection up to 4° possible

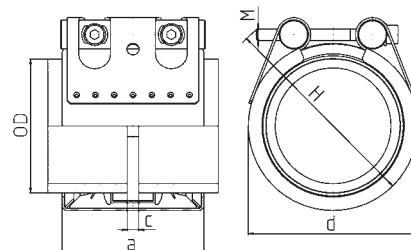
Information

- Sizes: from 326.0 mm to 2032.0 mm
- Working pressure: 16.5 bar - 1.5 bar
- Solid trunnions
- 2 closure units from size > 800.0 mm
- Material: AISI 316 Ti
- EPDM: from - 20 °C up to + 80 °C
- NBR: from - 20 °C up to + 80 °C


Materials

| W1 | W2 | W3 | W4 | W5 |
|----|----|----|----|----|
| | | | | x |

Technical data & Ordering information

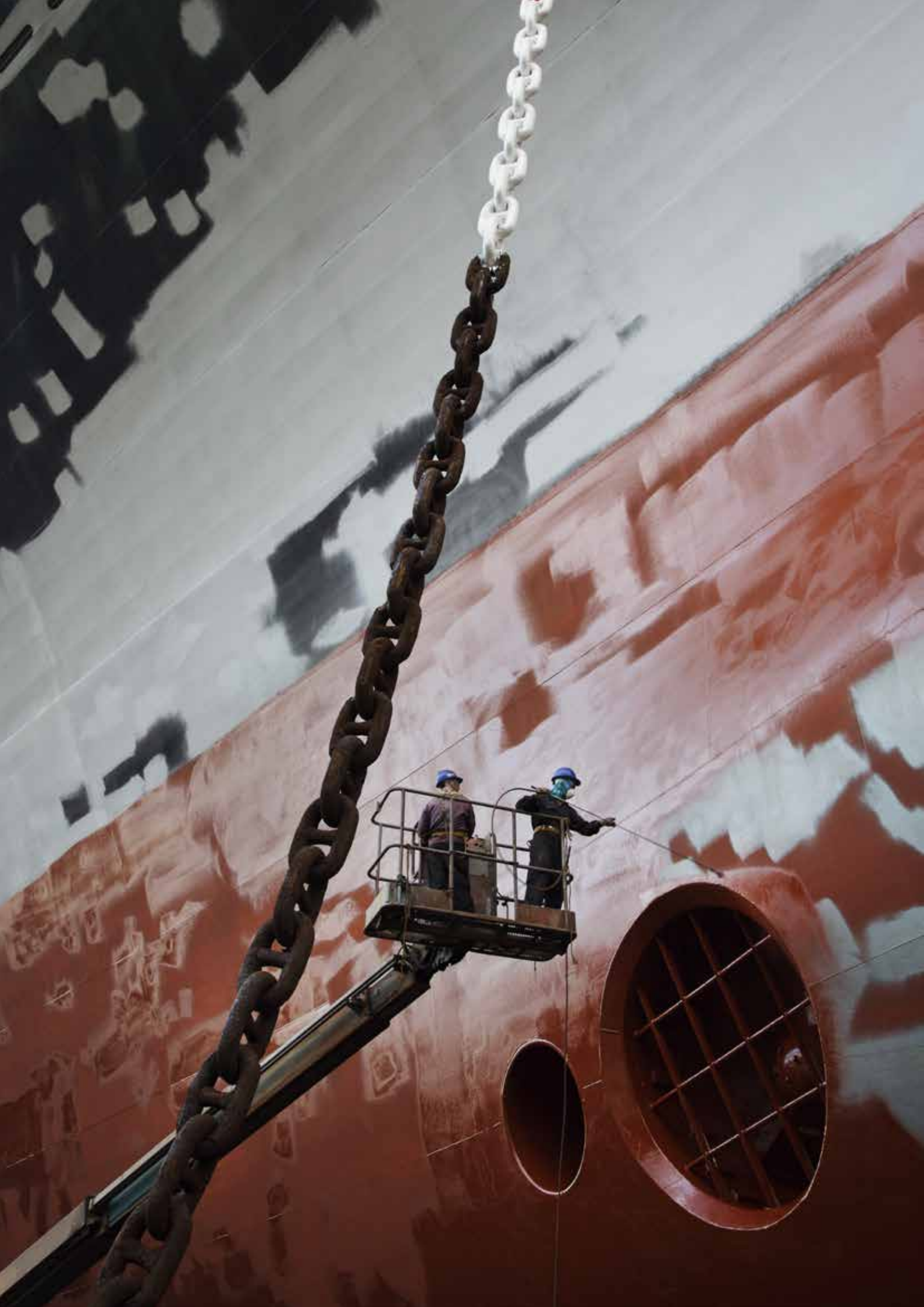


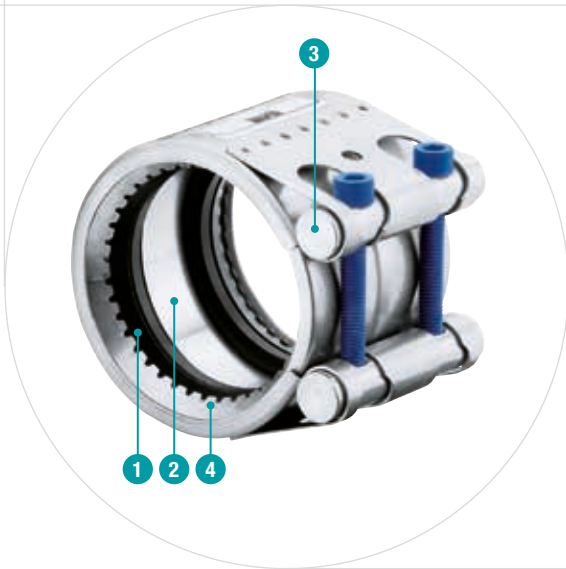
Technical data & Ordering information

| NORMACONNECT™ FGR FLEX 3 | | | | | | | | | | | | |
|--------------------------|---------------|---------------------------------------|---|-------|-------------------------|--------|--------|---------------------|--------------------------|---------------------------|-------------------|---------------|
| Ø (O.D.) | Designation | Clamping ranges | WP ¹ | C max | Dimensions (approx.) | | | Weight (approx.) | Hex socket locking bolts | | W5 Product No. | |
| | | O _{dmin} - O _{dmax} |  [bar] | (mm) | a (mm) | d (mm) | H (mm) | (kg/pc.) | Thread | Tightening torque (Nm) | EPDM | NBR |
| 326.0 | FLEX 3 326.0 | 322.0 - 329.0 | 16.5 | 65 | 211 | 365 | 405 | 11.9 | M 16 SW 14 | 30 | 0571 8330 ... | 0571 8630 ... |
| 355.6 | FLEX 3 355.6 | 352.0 - 259.0 | 15.5 | 65 | 211 | 395 | 435 | 12.4 | M 16 SW 14 | 35 | 0571 8330 ... | 0571 8630 ... |
| 406.4 | FLEX 3 406.4 | 402.0 - 410.0 | 13.5 | 65 | 211 | 445 | 485 | 13.4 | M 16 SW 14 | 35 | 0571 8330 ... | 0571 8630 ... |
| 429.0 | FLEX 3 429.0 | 426.0 - 431.0 | 12.5 | 65 | 211 | 465 | 505 | 13.9 | M 16 SW 14 | 35 | 0571 8330 ... | 0571 8630 ... |
| 442.0 | FLEX 3 442.0 | 439.0 - 444.0 | 12.0 | 65 | 211 | 480 | 520 | 14.1 | M 16 SW 14 | 35 | 0571 8330 ... | 0571 8630 ... |
| 457.2 | FLEX 3 457.2 | 454.0 - 459.0 | 12.0 | 65 | 211 | 495 | 535 | 14.4 | M 16 SW 14 | 35 | 0571 8330 ... | 0571 8630 ... |
| 508.0 | FLEX 3 508.0 | 505.0 - 510.0 | 10.5 | 65 | 211 | 545 | 585 | 15.4 | M 16 SW 14 | 35 | 0571 8330 ... | 0571 8630 ... |
| 531.0 | FLEX 3 531.0 | 528.0 - 534.0 | 10.0 | 65 | 211 | 570 | 610 | 15.9 | M 16 SW 14 | 35 | 0571 8330 ... | 0571 8630 ... |
| 558.8 | FLEX 3 558.8 | 556.0 - 562.0 | 9.5 | 65 | 211 | 595 | 635 | 16.4 | M 16 SW 14 | 35 | 0571 8330 ... | 0571 8630 ... |
| 609.6 | FLEX 3 609.6 | 606.0 - 613.0 | 9.0 | 65 | 211 | 645 | 685 | 17.4 | M 16 SW 14 | 40 | 0571 8330 ... | 0571 8630 ... |
| 634.0 | FLEX 3 634.0 | 631.0 - 637.0 | 8.5 | 65 | 211 | 670 | 710 | 17.9 | M 16 SW 14 | 40 | 0571 8330 ... | 0571 8630 ... |
| 711.2 | FLEX 3 711.2 | 707.0 - 715.0 | 7.5 | 65 | 211 | 750 | 790 | 19.4 | M 16 SW 14 | 40 | 0571 8330 ... | 0571 8630 ... |
| 762.0 | FLEX 3 762.0 | 758.0 - 766.0 | 7.0 | 65 | 211 | 800 | 840 | 20.4 | M 16 SW 14 | 40 | 0571 8330 ... | 0571 8630 ... |
| 812.8 | FLEX 3 812.8 | 808.0 - 817.0 | 6.5 | 65 | 211 | 850 | 890 | 21.4 | M 16 SW 14 | 45 | 0571 8338 ... | 0571 8638 ... |
| 914.4 | FLEX 3 914.4 | 909.0 - 919.0 | 6.0 | 65 | 211 | 950 | 990 | 23.4 | M 16 SW 14 | 45 | 0571 8338 ... | 0571 8638 ... |
| 1016.0 | FLEX 3 1016.0 | 1013.0 - 1019.0 | 5.0 | 65 | 211 | 1055 | 1095 | 25.4 | M 16 SW 14 | 50 | 0571 8338 ... | 0571 8638 ... |
| 1117.5 | FLEX 3 1117.5 | 1114.0 - 1120.0 | 4.5 | 65 | 211 | 1155 | 1195 | 27.4 | M 16 SW 14 | 50 | 0571 8338 ... | 0571 8638 ... |
| 1219.2 | FLEX 3 1219.2 | 1216.0 - 1222.0 | 4.0 | 65 | 211 | 1255 | 1295 | 29.4 | M 16 SW 14 | 55 | 0571 8338 ... | 0571 8638 ... |
| 1320.8 | FLEX 3 1320.8 | 1314.0 - 1328.0 | 3.0 | 65 | 211 | 1360 | 1400 | 31.4 | M 16 SW 14 | 55 | 0571 8338 ... | 0571 8638 ... |
| 1422.4 | FLEX 3 1422.4 | 1415.0 - 1430.0 | 3.0 | 65 | 211 | 1460 | 1500 | 33.4 | M 16 SW 14 | 60 | 0571 8338 ... | 0571 8638 ... |
| 1524.0 | FLEX 3 1524.0 | 1516.0 - 1532.0 | 2.5 | 65 | 211 | 1560 | 1600 | 35.4 | M 16 SW 14 | 60 | 0571 8338 ... | 0571 8638 ... |
| 1625.6 | FLEX 3 1625.6 | 1617.0 - 1634.0 | 2.5 | 65 | 211 | 1665 | 1705 | 37.4 | M 16 SW 14 | 70 | 0571 8338 ... | 0571 8638 ... |
| 1727.2 | FLEX 3 1727.2 | 1718.0 - 1736.0 | 2.0 | 65 | 211 | 1765 | 1805 | 39.4 | M 16 SW 14 | 70 | 0571 8338 ... | 0571 8638 ... |
| 1828.8 | FLEX 3 1828.8 | 1819.0 - 1838.0 | 2.0 | 65 | 211 | 1865 | 1905 | 41.4 | M 16 SW 14 | 80 | 0571 8338 ... | 0571 8638 ... |
| 1930.4 | FLEX 3 1930.4 | 1320.0 - 1940.0 | 2.0 | 65 | 211 | 1970 | 2010 | 43.4 | M 16 SW 14 | 80 | 0571 8338 ... | 0571 8638 ... |
| 2032.0 | FLEX 3 2032.0 | 2021.0 - 2042.0 | 1.5 | 65 | 211 | 2070 | 2110 | 45.4 | M 16 SW 14 | 80 | 0571 8338 ... | 0571 8638 ... |

Coupling sizes >800 mm are in 2-parts design! ... = Ø without decimals in mm
 WP¹ is the max. working pressure in industrial applications, with a safety factor as per NORMA specification.

NORMACONNECT™





- 1 Double-lip sealing system
- 2 Standard strip insert
- 3 Lock bars
- 4 Anchoring ring with conically stamped teeth

NEW!
Now also available with FKM sealing sleeve

NORMACONNECT™

NEW

The strong pipe coupling

NORMACONNECT™ GRIP/GRIP E axial restraint pipe couplings are used to connect metal pipes. The anchoring ring with conically stamped teeth indents into the pipe surface (steel, stainless steel or cast iron) and provides safe and strong axial restraint.

Owing to the special design, the coupling can withstand even high vibration loads.

Advantages at a glance

- Progressive locking effect ensures a trouble- and maintenance-free connection
- Reusable
- Shock resistant
- Space saving connector
- Withstand high vibration loads

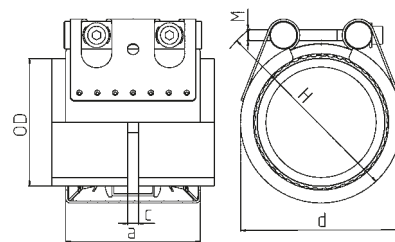
Information

- Sizes: 26.9 mm - 812.8 mm
- Working pressure: 70.0 bar - 1 bar
- Material: AISI 304, AISI 316 Ti
- EPDM:
 Sizes from 26.9 mm up to 168.3 mm: - 30 °C up to + 125 °C
 Sizes > 180.0 mm: from - 20 °C up to + 80 °C
- NBR: from - 20 °C up to + 80 °C
- FKM: -10 °C to + 150 °C (Higher temperatures possible in some cases.)

Materials



| W1 | W2 | W3 | W4 | W5 |
|----|----|----|----|----|
| | x | | x | x |

Technical data & Ordering information



Technical data & Ordering information

NORMACONNECT™ FGR GRIP

| Ø (O.D.) | Designation | Clamping ranges | PN ¹ | WP ² | C max | Dimensions (approx.) | | | Weight (approx.) | Hex socket locking bolts | |
|-------------|-------------|---------------------------------------|--|--|----------|-------------------------|-----------|-----------|---------------------|--------------------------|---------------------------|
| | | O _{dmin} - O _{dmax} |  [bar] |  [bar] | (mm) | a (mm) | d (mm) | H (mm) | (kg/pc.) | Thread | Tightening torque (Nm) |
| 26.9 | GRIP 26.9 | 26.4 - 27.5 | 16 | 70 | 3 | 67 | 50 | 70 | 0.39 | M 8 SW 6 | 10 |
| 28.0 | GRIP 28.0 | 27.5 - 28.5 | 16 | 70 | 3 | 67 | 50 | 70 | 0.39 | M 8 SW 6 | 10 |
| 30.0 | GRIP 30.0 | 29.5 - 30.6 | 16 | 70 | 3 | 67 | 50 | 70 | 0.39 | M 8 SW 6 | 10 |
| 33.7 | GRIP 33.7 | 33.0 - 34.3 | 16 | 60 | 3 | 67 | 55 | 75 | 0.40 | M 8 SW 6 | 10 |
| 35.0 | GRIP 35.0 | 34.5 - 35.6 | 16 | 60 | 8 | 63 | 55 | 75 | 0.55 | M 8 SW 6 | 15 |
| 38.0 | GRIP 38.0 | 37.5 - 38.6 | 16 | 60 | 8 | 63 | 60 | 80 | 0.55 | M 8 SW 6 | 15 |
| 42.4 | GRIP 42.4 | 41.7 - 43.0 | 16 | 50 | 8 | 63 | 65 | 85 | 0.56 | M 8 SW 6 | 15 |
| 44.5 | GRIP 44.5 | 44.0 - 45.1 | 16 | 50 | 8 | 63 | 65 | 85 | 0.57 | M 8 SW 6 | 15 |
| 48.3 | GRIP 48.3 | 47.6 - 50.5 | 16 | 50 | 8 | 63 | 70 | 90 | 0.59 | M 8 SW 6 | 15 |
| 54.0 | GRIP 54.0 | 53.3 - 54.6 | 16 | 50 | 17 | 78 | 75 | 95 | 0.77 | M 8 SW 6 | 15 |
| 57.0 | GRIP 57.0 | 56.3 - 57.7 | 16 | 50 | 17 | 78 | 80 | 100 | 0.77 | M 8 SW 6 | 20 |
| 60.3 | GRIP 60.3 | 59.5 - 61.0 | 16 | 40 | 17 | 78 | 85 | 105 | 0.78 | M 8 SW 6 | 20 |
| 63.0 | GRIP 63.0 | 62.2 - 63.9 | 16 | 40 | 17 | 78 | 85 | 105 | 0.78 | M 8 SW 6 | 20 |
| 70.0 | GRIP 70.0 | 69.0 - 71.0 | 16 | 40 | 25 | 98 | 90 | 110 | 1.38 | M 10 SW 8 | 30 |
| 73.0 | GRIP 73.0 | 72.1 - 73.8 | 16 | 40 | 25 | 98 | 95 | 115 | 1.40 | M 10 SW 8 | 30 |
| 76.1 | GRIP 76.1 | 75.2 - 77.0 | 16 | 35 | 25 | 98 | 100 | 120 | 1.40 | M 10 SW 8 | 30 |
| 80.0 | GRIP 80.0 | 79.0 - 80.8 | 16 | 35 | 25 | 98 | 100 | 120 | 1.44 | M 10 SW 8 | 30 |
| 84.0 | GRIP 84.0 | 83.0 - 85.0 | 16 | 35 | 25 | 98 | 105 | 125 | 1.46 | M 10 SW 8 | 30 |
| 88.9 | GRIP 88.9 | 87.0 - 89.9 | 16 | 35 | 25 | 98 | 110 | 130 | 1.48 | M 10 SW 8 | 30 |
| 101.6 | GRIP 101.6 | 100.4 - 102.8 | 16 | 35 | 25 | 98 | 125 | 145 | 1.62 | M 10 SW 8 | 30 |
| 104.0 | GRIP 104.0 | 102.8 - 106.1 | 16 | 35 | 25 | 98 | 125 | 145 | 1.63 | M 10 SW 8 | 30 |
| 108.0 | GRIP 108.0 | 106.8 - 109.2 | 16 | 35 | 25 | 98 | 130 | 150 | 1.66 | M 10 SW 8 | 30 |
| 110.0 | GRIP 110.0 | 108.8 - 111.4 | 16 | 35 | 25 | 98 | 130 | 150 | 1.71 | M 10 SW 8 | 30 |
| 114.3 | GRIP 114.3 | 113.0 - 115.5 | 16 | 35 | 25 | 98 | 135 | 155 | 1.71 | M 10 SW 8 | 50 |
| 129.0 | GRIP 129.0 | 127.6 - 131.1 | 16 | 32 | 35 | 115 | 155 | 185 | 3.06 | M 12 SW 10 | 50 |
| 133.0 | GRIP 133.0 | 131.5 - 134.4 | 16 | 32 | 35 | 115 | 160 | 190 | 3.16 | M 12 SW 10 | 50 |
| 139.7 | GRIP 139.7 | 138.1 - 141.6 | 16 | 32 | 35 | 115 | 165 | 195 | 3.27 | M 12 SW 10 | 50 |
| 141.3 | GRIP 141.3 | 139.6 - 142.8 | 16 | 32 | 35 | 115 | 170 | 200 | 3.27 | M 12 SW 10 | 50 |
| 154.0 | GRIP 154.0 | 152.3 - 156.1 | 16 | 32 | 35 | 115 | 180 | 210 | 3.39 | M 12 SW 10 | 60 |
| 159.0 | GRIP 159.0 | 157.3 - 160.7 | 16 | 32 | 35 | 115 | 185 | 215 | 3.51 | M 12 SW 10 | 60 |
| 168.3 | GRIP 168.3 | 166.5 - 170.1 | 16 | 32 | 35 | 115 | 195 | 225 | 3.57 | M 12 SW 10 | 60 |
| 193.7 | GRIP 193.7 | 192.0 - 196.0 | 16 | 32 | 35 | 142 | 225 | 255 | 6.8 | M 16 SW 14 | 150 |
| 206.0 | GRIP 206.0 | 202.0 - 208.0 | 16 | 32 | 35 | 142 | 240 | 270 | 7.0 | M 16 SW 14 | 150 |
| 219.1 | GRIP 219.1 | 216.0 - 221.0 | 16 | 32 | 35 | 142 | 250 | 280 | 7.3 | M 16 SW 14 | 150 |
| 225.0 | GRIP 225.0 | 222.0 - 227.0 | 13 | 26.5 | 35 | 142 | 255 | 285 | 7.4 | M 16 SW 14 | 180 |
| 229.9 | GRIP 229.9 | 228.0 - 232.0 | 13 | 26 | 35 | 142 | 260 | 290 | 7.5 | M 16 SW 14 | 180 |
| 244.5 | GRIP 244.5 | 242.0 - 247.0 | 12 | 24.5 | 35 | 142 | 275 | 305 | 7.7 | M 16 SW 14 | 180 |
| 254.0 | GRIP 254.0 | 250.0 - 256.0 | 11.5 | 22.5 | 35 | 142 | 285 | 315 | 7.9 | M 16 SW 14 | 180 |
| 267.0 | GRIP 267.0 | 264.0 - 269.0 | 11 | 22.5 | 35 | 142 | 300 | 330 | 8.2 | M 16 SW 14 | 180 |
| 273.0 | GRIP 273.0 | 270.0 - 275.0 | 11 | 22 | 35 | 142 | 305 | 335 | 8.3 | M 16 SW 14 | 180 |
| 306.0 | GRIP 306.0 | 302.0 - 308.0 | 9.5 | 19.5 | 35 | 142 | 340 | 370 | 8.9 | M 16 SW 14 | 180 |
| 323.9 | GRIP 323.9 | 320.0 - 327.0 | 6.5 | 13 | 35 | 142 | 355 | 385 | 9.2 | M 16 SW 14 | 180 |
| 326.0 | GRIP 326.0 | 322.0 - 329.0 | 6.5 | 13 | 35 | 142 | 360 | 390 | 9.3 | M 16 SW 14 | 180 |
| 355.6 | GRIP 355.6 | 352.0 - 359.0 | 6 | 12 | 35 | 142 | 390 | 420 | 9.8 | M 16 SW 14 | 180 |
| 406.4 | GRIP 406.4 | 402.0 - 410.0 | 4.5 | 9 | 35 | 142 | 440 | 470 | 10.8 | M 16 SW 14 | 180 |
| 429.0 | GRIP 429.0 | 426.0 - 431.0 | 4 | 8.5 | 35 | 142 | 460 | 490 | 11.3 | M 16 SW 14 | 180 |
| 442.0 | GRIP 442.0 | 439.0 - 444.0 | 4 | 8 | 35 | 142 | 475 | 505 | 11.5 | M 16 SW 14 | 180 |
| 457.2 | GRIP 457.2 | 454.0 - 459.0 | 4 | 8 | 35 | 142 | 490 | 520 | 11.8 | M 16 SW 14 | 180 |
| 508.0 | GRIP 508.0 | 505.0 - 510.0 | 2.5 | 5 | 35 | 142 | 540 | 570 | 12.7 | M 16 SW 14 | 180 |
| 531.0 | GRIP 531.0 | 528.0 - 534.0 | 2.5 | 5 | 35 | 142 | 565 | 595 | 13.2 | M 16 SW 14 | 180 |
| 558.8 | GRIP 558.8 | 556.0 - 562.0 | 2 | 4.5 | 35 | 142 | 590 | 620 | 13.7 | M 16 SW 14 | 180 |
| 609.6 | GRIP 609.6 | 606.0 - 613.0 | 1.5 | 3 | 35 | 142 | 640 | 670 | 14.7 | M 16 SW 14 | 180 |
| 634.0 | GRIP 634.0 | 631.0 - 637.0 | 1.5 | 3 | 35 | 142 | 665 | 695 | 15.1 | M 16 SW 14 | 200 |
| 711.2 | GRIP 711.2 | 707.0 - 715.0 | 1.5 | 2.5 | 35 | 142 | 745 | 775 | 16.6 | M 16 Sw 14 | 200 |

PN¹ (Nominal Pressure) is the max. admissible working pressure in shipbuilding, based on a safety factor of ≥ 4.
 WP² is the max. working pressure in industrial applications, with a safety factor as per NORMA specification.

NORMACONNECT™

Technical data & Ordering information

| NORMACONNECT™ FGR GRIP | | | | | | | | |
|------------------------|-------------|-------------------|---------------|-------------------|---------------|-------------------|---------------|---------------|
| Ø (O.D.) | Designation | W2 Product No. | | W4 Product No. | | W5 Product No. | | |
| | | EPDM | NBR | EPDM | NBR | EPDM | NBR | FKM |
| 26.9 | GRIP 26.9 | 0578 9100 026 | 0578 8400 026 | 0578 9200 026 | 0578 8500 026 | 0578 9300 026 | 0578 8600 026 | |
| 28.0 | GRIP 28.0 | 0578 9100 028 | 0578 8400 028 | 0578 9200 028 | 0578 8500 028 | 0578 9300 028 | 0578 8600 028 | |
| 30.0 | GRIP 30.0 | 0578 9100 030 | 0578 8400 030 | 0578 9200 030 | 0578 8500 030 | 0578 9300 030 | 0578 8600 030 | |
| 33.7 | GRIP 33.7 | 0578 9100 033 | 0578 8400 033 | 0578 9200 033 | 0578 8500 033 | 0578 9300 033 | 0578 8600 033 | 0578 9900 033 |
| 35.0 | GRIP 35.0 | 0578 9100 035 | 0578 8400 035 | 0578 9200 035 | 0578 8500 035 | 0578 9300 035 | 0578 8600 035 | |
| 38.0 | GRIP 38.0 | 0578 9100 038 | 0578 8400 038 | 0578 9200 038 | 0578 8500 038 | 0578 9300 038 | 0578 8600 038 | 0578 9900 038 |
| 42.4 | GRIP 42.4 | 0578 9100 042 | 0578 8400 042 | 0578 9200 042 | 0578 8500 042 | 0578 9300 042 | 0578 8600 042 | 0578 9900 042 |
| 44.5 | GRIP 44.5 | 0578 9100 044 | 0578 8400 044 | 0578 9200 044 | 0578 8500 044 | 0578 9300 044 | 0578 8600 044 | |
| 48.3 | GRIP 48.3 | 0578 9100 048 | 0578 8400 048 | 0578 9200 048 | 0578 8500 048 | 0578 9300 048 | 0578 8600 048 | 0578 9900 048 |
| 54.0 | GRIP 54.0 | 0578 9100 054 | 0578 8400 054 | 0578 9200 054 | 0578 8500 054 | 0578 9300 054 | 0578 8600 054 | |
| 57.0 | GRIP 57.0 | 0578 9100 057 | 0578 8400 057 | 0578 9200 057 | 0578 8500 057 | 0578 9300 057 | 0578 8600 057 | 0578 9900 057 |
| 60.3 | GRIP 60.3 | 0578 9100 060 | 0578 8400 060 | 0578 9200 060 | 0578 8500 060 | 0578 9300 060 | 0578 8600 060 | 0578 9900 060 |
| 63.0 | GRIP 63.0 | 0578 9100 063 | 0578 8400 063 | 0578 9200 063 | 0578 8500 063 | 0578 9300 063 | 0578 8600 063 | 0578 9900 063 |
| 70.0 | GRIP 70.0 | 0578 9100 070 | 0578 8400 070 | 0578 9200 070 | 0578 8500 070 | 0578 9300 070 | 0578 8600 070 | |
| 73.0 | GRIP 73.0 | 0578 9100 073 | 0578 8400 073 | 0578 9200 073 | 0578 8500 073 | 0578 9300 073 | 0578 8600 073 | |
| 76.1 | GRIP 76.1 | 0578 9100 076 | 0578 8400 076 | 0578 9200 076 | 0578 8500 076 | 0578 9300 076 | 0578 8600 076 | 0578 9900 076 |
| 80.0 | GRIP 80.0 | 0578 9100 080 | 0578 8400 080 | 0578 9200 080 | 0578 8500 080 | 0578 9300 080 | 0578 8600 080 | |
| 84.0 | GRIP 84.0 | 0578 9100 084 | 0578 8400 084 | 0578 9200 084 | 0578 8500 084 | 0578 9300 084 | 0578 8600 084 | |
| 88.9 | GRIP 88.9 | 0578 9100 088 | 0578 8400 088 | 0578 9200 088 | 0578 8500 088 | 0578 9300 088 | 0578 8600 088 | 0578 9900 088 |
| 101.6 | GRIP 101.6 | 0578 9100 101 | 0578 8400 101 | 0578 9200 101 | 0578 8500 101 | 0578 9300 101 | 0578 8600 101 | |
| 104.0 | GRIP 104.0 | 0578 9100 104 | 0578 8400 104 | 0578 9200 104 | 0578 8500 104 | 0578 9300 104 | 0578 8600 104 | |
| 108.0 | GRIP 108.0 | 0578 9100 108 | 0578 8400 108 | 0578 9200 108 | 0578 8500 108 | 0578 9300 108 | 0578 8600 108 | |
| 110.0 | GRIP 110.0 | 0578 9100 110 | 0578 8400 110 | 0578 9200 110 | 0578 8500 110 | 0578 9300 110 | 0578 8600 110 | |
| 114.3 | GRIP 114.3 | 0578 9100 114 | 0578 8400 114 | 0578 9200 114 | 0578 8500 114 | 0578 9300 114 | 0578 8600 114 | 0578 9900 114 |
| 129.0 | GRIP 129.0 | 0578 9100 129 | 0578 8400 129 | 0578 9200 129 | 0578 8500 129 | 0578 9300 129 | 0578 8600 129 | 0578 9900 129 |
| 133.0 | GRIP 133.0 | 0578 9100 133 | 0578 8400 133 | 0578 9200 133 | 0578 8500 133 | 0578 9300 133 | 0578 8600 133 | |
| 139.7 | GRIP 139.7 | 0578 9100 139 | 0578 8400 139 | 0578 9200 139 | 0578 8500 139 | 0578 9300 139 | 0578 8600 139 | 0578 9900 139 |
| 141.3 | GRIP 141.3 | 0578 9100 141 | 0578 8400 141 | 0578 9200 141 | 0578 8500 141 | 0578 9300 141 | 0578 8600 141 | |
| 154.0 | GRIP 154.0 | 0578 9100 154 | 0578 8400 154 | 0578 9200 154 | 0578 8500 154 | 0578 9300 154 | 0578 8600 154 | |
| 159.0 | GRIP 159.0 | 0578 9100 159 | 0578 8400 159 | 0578 9200 159 | 0578 8500 159 | 0578 9300 159 | 0578 8600 159 | |
| 168.3 | GRIP 168.3 | 0578 9100 168 | 0578 8400 168 | 0578 9200 168 | 0578 8500 168 | 0578 9300 168 | 0578 8600 168 | 0578 9900 168 |
| 193.7 | GRIP 193.7 | 0577 8100 ... | 0577 8400 ... | 0577 8200 ... | 0577 8500 ... | 0577 8300 ... | 0577 8600 ... | |
| 206.0 | GRIP 206.0 | 0577 8100 ... | 0577 8400 ... | 0577 8200 ... | 0577 8500 ... | 0577 8300 ... | 0577 8600 ... | |
| 219.1 | GRIP 219.1 | 0577 8100 ... | 0577 8400 ... | 0577 8200 ... | 0577 8500 ... | 0577 8300 ... | 0577 3600 ... | |
| 225.0 | GRIP 225.0 | 0577 8100 ... | 0577 8400 ... | 0577 8200 ... | 0577 8500 ... | 0577 8300 ... | 0577 8600 ... | |
| 229.9 | GRIP 229.9 | 0577 8100 ... | 0577 8400 ... | 0577 8200 ... | 0577 8500 ... | 0577 8300 ... | 0577 8600 ... | |
| 244.5 | GRIP 244.5 | 0577 8100 ... | 0577 8400 ... | 0577 8200 ... | 0577 8500 ... | 0577 8300 ... | 0577 8600 ... | |
| 254.0 | GRIP 254.0 | 0577 8100 ... | 0577 8400 ... | 0577 8200 ... | 0577 8500 ... | 0577 8300 ... | 0577 8600 ... | |
| 267.0 | GRIP 267.0 | 0577 8100 ... | 0577 8400 ... | 0577 8200 ... | 0577 8500 ... | 0577 8300 ... | 0577 8600 ... | |
| 273.0 | GRIP 273.0 | 0577 8100 ... | 0577 8400 ... | 0577 8200 ... | 0577 8500 ... | 0577 8300 ... | 0577 3600 ... | |
| 306.0 | GRIP 306.0 | 0577 8100 ... | 0577 8400 ... | 0577 8200 ... | 0577 8500 ... | 0577 8300 ... | 0577 8600 ... | |
| 323.9 | GRIP 323.9 | 0577 8100 ... | 0577 8400 ... | 0577 8200 ... | 0577 8500 ... | 0577 8300 ... | 0577 8600 ... | |
| 326.0 | GRIP 326.0 | 0577 8100 ... | 0577 8400 ... | 0577 8200 ... | 0577 8500 ... | 0577 8300 ... | 0577 8600 ... | |
| 355.6 | GRIP 355.6 | 0577 8100 ... | 0577 8400 ... | 0577 8200 ... | 0577 8500 ... | 0577 8300 ... | 0577 8600 ... | |
| 406.4 | GRIP 406.4 | 0577 8100 ... | 0577 8400 ... | 0577 8200 ... | 0577 8500 ... | 0577 8300 ... | 0577 8600 ... | |
| 429.0 | GRIP 429.0 | 0577 8100 ... | 0577 8400 ... | 0577 8200 ... | 0577 8500 ... | 0577 8300 ... | 0577 8600 ... | |
| 442.0 | GRIP 442.0 | 0577 8100 ... | 0577 8400 ... | 0577 8200 ... | 0577 8500 ... | 0577 8300 ... | 0577 8600 ... | |
| 457.2 | GRIP 457.2 | 0577 8100 ... | 0577 8400 ... | 0577 8200 ... | 0577 8500 ... | 0577 8300 ... | 0577 8600 ... | |
| 508.0 | GRIP 508.0 | 0577 8100 ... | 0577 8400 ... | 0577 8200 ... | 0577 8500 ... | 0577 8300 ... | 0577 8600 ... | |
| 531.0 | GRIP 531.0 | 0577 8100 ... | 0577 8400 ... | 0577 8200 ... | 0577 8500 ... | 0577 8300 ... | 0577 8600 ... | |
| 558.8 | GRIP 558.8 | 0577 8100 ... | 0577 8400 ... | 0577 8200 ... | 0577 8500 ... | 0577 8300 ... | 0577 8600 ... | |
| 609.6 | GRIP 609.6 | 0577 8100 ... | 0577 8400 ... | 0577 8200 ... | 0577 8500 ... | 0577 8300 ... | 0577 8600 ... | |
| 634.0 | GRIP 634.0 | 0577 8100 ... | 0577 8400 ... | 0577 8200 ... | 0577 8500 ... | 0577 8300 ... | 0577 8600 ... | |
| 711.2 | GRIP 711.2 | 0577 8100 ... | 0577 8400 ... | 0577 8200 ... | 0577 8500 ... | 0577 8300 ... | 0577 8600 ... | |

... = Ø without decimals in mm

NORMACONNECT™

GRIP E

NORMACONNECT™ GRIP E axial restraint pipe couplings are used to connect metal pipes.



Material
W2, W5

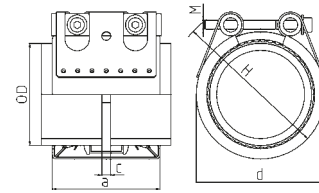
NORMACONNECT™

NORMACONNECT™ FGR GRIP E

| Ø (O.D.) | Designation | Clamping ranges | PN ¹ | WP ² | C max | Dimensions (approx.) | | | Weight (approx.) | Hex socket locking bolts | |
|-------------|--------------|-----------------|-----------------|-----------------|----------|-------------------------|-----------|-----------|---------------------|--------------------------|---------------------------|
| | | Odmin - Odmax | [bar] | [bar] | (mm) | a (mm) | d (mm) | H (mm) | (kg/pc.) | Thread | Tightening torque (Nm) |
| 26.9 | GRIP E 26.9 | 26.4 - 27.5 | 16 | 70 | 3 | 67 | 50 | 70 | 0.32 | M 8 SW 6 | 10 |
| 28.0 | GRIP E 28.0 | 27.5 - 28.5 | 16 | 70 | 3 | 67 | 50 | 70 | 0.32 | M 8 SW 6 | 10 |
| 30.0 | GRIP E 30.0 | 29.5 - 30.6 | 16 | 70 | 3 | 67 | 50 | 70 | 0.32 | M 8 SW 6 | 10 |
| 33.7 | GRIP E 33.7 | 33.0 - 34.3 | 16 | 60 | 3 | 67 | 55 | 75 | 0.33 | M 8 SW 6 | 10 |
| 35.0 | GRIP E 35.0 | 34.5 - 35.6 | 16 | 60 | 8 | 63 | 55 | 75 | 0.45 | M 8 SW 6 | 15 |
| 38.0 | GRIP E 38.0 | 37.5 - 38.6 | 16 | 60 | 8 | 63 | 60 | 80 | 0.45 | M 8 SW 6 | 15 |
| 42.4 | GRIP E 42.4 | 41.7 - 43.0 | 16 | 50 | 8 | 63 | 65 | 85 | 0.46 | M 8 SW 6 | 15 |
| 44.5 | GRIP E 44.5 | 44.0 - 45.1 | 16 | 50 | 8 | 63 | 65 | 85 | 0.47 | M 8 SW 6 | 15 |
| 48.3 | GRIP E 48.3 | 47.6 - 50.5 | 16 | 50 | 8 | 63 | 70 | 90 | 0.48 | M 8 SW 6 | 15 |
| 54.0 | GRIP E 54.0 | 53.3 - 54.6 | 16 | 50 | 17 | 78 | 75 | 95 | 0.62 | M 8 SW 6 | 15 |
| 57.0 | GRIP E 57.0 | 56.3 - 57.7 | 16 | 50 | 17 | 78 | 80 | 100 | 0.63 | M 8 SW 6 | 20 |
| 60.3 | GRIP E 60.3 | 59.5 - 61.0 | 16 | 40 | 17 | 78 | 85 | 105 | 0.64 | M 8 SW 6 | 20 |
| 70.0 | GRIP E 70.0 | 69.0 - 71.0 | 16 | 40 | 25 | 98 | 90 | 110 | 1.21 | M 10 SW 8 | 30 |
| 73.0 | GRIP E 73.0 | 72.1 - 73.8 | 16 | 40 | 25 | 98 | 95 | 115 | 1.23 | M 10 SW 8 | 30 |
| 76.1 | GRIP E 76.1 | 75.2 - 77.0 | 16 | 35 | 25 | 98 | 100 | 120 | 1.23 | M 10 SW 8 | 30 |
| 80.0 | GRIP E 80.0 | 79.0 - 80.8 | 16 | 35 | 25 | 98 | 100 | 120 | 1.27 | M 10 SW 8 | 30 |
| 84.0 | GRIP E 84.0 | 83.0 - 85.0 | 16 | 35 | 25 | 98 | 105 | 125 | 1.29 | M 10 SW 8 | 30 |
| 88.9 | GRIP E 88.9 | 87.0 - 89.9 | 16 | 35 | 25 | 98 | 110 | 130 | 1.31 | M 10 SW 8 | 30 |
| 101.6 | GRIP E 101.6 | 100.4 - 102.8 | 16 | 35 | 25 | 98 | 125 | 145 | 1.45 | M 10 SW 8 | 30 |
| 104.0 | GRIP E 104.0 | 102.8 - 106.1 | 16 | 35 | 25 | 98 | 125 | 145 | 1.46 | M 10 SW 8 | 30 |
| 108.0 | GRIP E 108.0 | 106.8 - 109.2 | 16 | 35 | 25 | 98 | 130 | 150 | 1.49 | M 10 SW 8 | 30 |
| 110.0 | GRIP E 110.0 | 108.8 - 111.4 | 16 | 35 | 25 | 98 | 130 | 150 | 1.54 | M 10 SW 8 | 30 |
| 114.3 | GRIP E 114.3 | 113.0 - 115.5 | 16 | 35 | 25 | 98 | 135 | 155 | 1.54 | M 10 SW 8 | 50 |
| 129.0 | GRIP E 129.0 | 127.6 - 131.1 | 16 | 32 | 35 | 115 | 155 | 185 | 2.83 | M 12 SW 10 | 50 |
| 133.0 | GRIP E 133.0 | 131.5 - 134.4 | 16 | 32 | 35 | 115 | 160 | 190 | 2.93 | M 12 SW 10 | 50 |
| 139.7 | GRIP E 139.7 | 138.1 - 141.6 | 16 | 32 | 35 | 115 | 165 | 195 | 3.04 | M 12 SW 10 | 50 |
| 141.3 | GRIP E 141.3 | 139.6 - 142.8 | 16 | 32 | 35 | 115 | 170 | 200 | 3.04 | M 12 SW 10 | 50 |
| 154.0 | GRIP E 154.0 | 152.3 - 156.1 | 16 | 32 | 35 | 115 | 180 | 210 | 3.17 | M 12 SW 10 | 60 |
| 159.0 | GRIP E 159.0 | 157.3 - 160.7 | 16 | 32 | 35 | 115 | 185 | 215 | 3.28 | M 12 SW 10 | 60 |
| 168.3 | GRIP E 168.3 | 166.5 - 170.1 | 16 | 32 | 35 | 115 | 195 | 225 | 3.35 | M 12 SW 10 | 60 |
| 193.7 | GRIP E 193.7 | 192.0 - 196.0 | 10 | 20 | 35 | 141 | 225 | 255 | 6.2 | M 16 SW 14 | 100 |
| 206.0 | GRIP E 206.0 | 202.0 - 208.0 | 10 | 20 | 35 | 141 | 240 | 270 | 6.5 | M 16 SW 14 | 100 |
| 219.1 | GRIP E 219.1 | 216.0 - 221.0 | 10 | 20 | 35 | 141 | 250 | 280 | 6.7 | M 16 SW 14 | 100 |
| 225.0 | GRIP E 225.0 | 222.0 - 227.0 | 10 | 16 | 35 | 140 | 255 | 285 | 6.2 | M 16 SW 14 | 100 |
| 229.9 | GRIP E 229.9 | 228.0 - 232.0 | 5.5 | 16 | 35 | 140 | 260 | 290 | 6.3 | M 16 SW 14 | 100 |
| 244.5 | GRIP E 244.5 | 242.0 - 247.0 | 5.5 | 15 | 35 | 140 | 275 | 305 | 6.5 | M 16 SW 14 | 100 |
| 254.0 | GRIP E 254.0 | 250.0 - 256.0 | 5.5 | 14 | 35 | 140 | 285 | 315 | 6.6 | M 16 SW 14 | 100 |
| 267.0 | GRIP E 267.0 | 264.0 - 269.0 | 5.5 | 13.5 | 35 | 140 | 300 | 330 | 6.8 | M 16 SW 14 | 100 |
| 273.0 | GRIP E 273.0 | 270.0 - 275.0 | 5.5 | 13 | 35 | 140 | 305 | 335 | 6.9 | M 16 SW 14 | 100 |
| 306.0 | GRIP E 306.0 | 302.0 - 308.0 | 5.5 | 10.5 | 35 | 140 | 340 | 370 | 7.4 | M 16 SW 14 | 120 |
| 323.9 | GRIP E 323.9 | 320.0 - 327.0 | 3 | 9.5 | 35 | 140 | 355 | 385 | 7.7 | M 16 SW 14 | 120 |
| 326.0 | GRIP E 326.0 | 322.0 - 329.0 | 3 | 9.5 | 35 | 140 | 360 | 390 | 7.7 | M 16 SW 14 | 120 |
| 355.6 | GRIP E 355.6 | 352.0 - 359.0 | 2.7 | 8.5 | 35 | 140 | 390 | 420 | 8.2 | M 16 SW 14 | 120 |
| 406.4 | GRIP E 406.4 | 402.0 - 410.0 | 2.5 | 7.0 | 35 | 140 | 440 | 470 | 8.9 | M 16 SW 14 | 120 |
| 429.0 | GRIP E 429.0 | 426.0 - 431.0 | 2.5 | 6.5 | 35 | 140 | 460 | 490 | 9.3 | M 16 SW 14 | 120 |
| 442.0 | GRIP E 442.0 | 439.0 - 444.0 | 2.5 | 6.5 | 35 | 140 | 475 | 505 | 9.5 | M 16 SW 14 | 140 |
| 457.2 | GRIP E 457.2 | 454.0 - 459.0 | 2.5 | 6.0 | 35 | 140 | 490 | 520 | 9.7 | M 16 SW 14 | 140 |
| 508.0 | GRIP E 508.0 | 505.0 - 510.0 | 2 | 4.0 | 35 | 140 | 540 | 570 | 10.5 | M 16 SW 14 | 140 |
| 531.0 | GRIP E 531.0 | 528.0 - 534.0 | 1.5 | 4.0 | 35 | 140 | 565 | 595 | 10.8 | M 16 SW 14 | 140 |
| 558.8 | GRIP E 558.8 | 556.0 - 562.0 | 1.5 | 3.5 | 35 | 140 | 590 | 620 | 11.3 | M 16 SW 14 | 140 |
| 609.6 | GRIP E 609.6 | 606.0 - 613.0 | 1 | 2.0 | 35 | 140 | 640 | 670 | 12.0 | M 16 SW 14 | 140 |

PN¹ (Nominal Pressure) is the max. admissible working pressure in shipbuilding, based on a safety factor of ≥ 4.
WP² is the max. working pressure in industrial applications, with a safety factor as per NORMA specification.

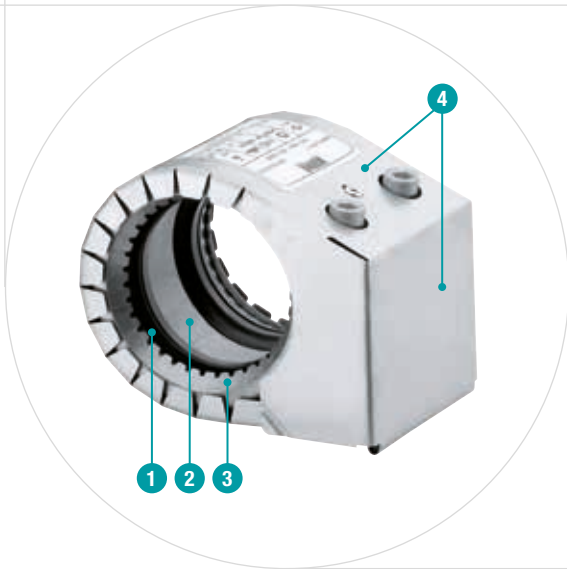
Technical data & Ordering information



NORMACONNECT™

| NORMACONNECT™ FGR GRIP E | | | | | | | |
|--------------------------|--------------|-------------------|---------------|-------------------|---------------|-------------------|---------------|
| Ø (O.D.) | Designation | W2 Product No. | | W4 Product No. | | W5 Product No. | |
| | | EPDM | NBR | EPDM | NBR | EPDM | NBR |
| 26.9 | GRIP E 26.9 | 0579 9100 026 | 0579 8400 026 | 0579 9200 026 | 0579 8500 026 | 0579 9300 026 | 0579 8600 026 |
| 28.0 | GRIP E 28.0 | 0579 9100 028 | 0579 8400 028 | 0579 9200 028 | 0579 8500 028 | 0579 9300 028 | 0579 8600 028 |
| 30.0 | GRIP E 30.0 | 0579 9100 030 | 0579 8400 030 | 0579 9200 030 | 0579 8500 030 | 0579 9300 030 | 0579 8600 030 |
| 33.7 | GRIP E 33.7 | 0579 9100 033 | 0579 8400 033 | 0579 9200 033 | 0579 8500 033 | 0579 9300 033 | 0579 8600 033 |
| 35.0 | GRIP E 35.0 | 0579 9100 035 | 0579 8400 035 | 0579 9200 035 | 0579 8500 035 | 0579 9300 035 | 0579 8600 035 |
| 38.0 | GRIP E 38.0 | 0579 9100 038 | 0579 8400 038 | 0579 9200 038 | 0579 8500 038 | 0579 9300 038 | 0579 8600 038 |
| 42.4 | GRIP E 42.4 | 0579 9100 042 | 0579 8400 042 | 0579 9200 042 | 0579 8500 042 | 0579 9300 042 | 0579 8600 042 |
| 44.5 | GRIP E 44.5 | 0579 9100 044 | 0579 8400 044 | 0579 9200 044 | 0579 8500 044 | 0579 9300 044 | 0579 8600 044 |
| 48.3 | GRIP E 48.3 | 0579 9100 048 | 0579 8400 048 | 0579 9200 048 | 0579 8500 048 | 0579 9300 048 | 0579 8600 048 |
| 54.0 | GRIP E 54.0 | 0579 9100 054 | 0579 8400 054 | 0579 9200 054 | 0579 8500 054 | 0579 9300 054 | 0579 8600 054 |
| 57.0 | GRIP E 57.0 | 0579 9100 057 | 0579 8400 057 | 0579 9200 057 | 0579 8500 057 | 0579 9300 057 | 0579 8600 057 |
| 60.3 | GRIP E 60.3 | 0579 9100 060 | 0579 8400 060 | 0579 9200 060 | 0579 8500 060 | 0579 9300 060 | 0579 8600 060 |
| 70.0 | GRIP E 70.0 | 0579 9100 070 | 0579 8400 070 | 0579 9200 070 | 0579 8500 070 | 0579 9300 070 | 0579 8600 070 |
| 73.0 | GRIP E 73.0 | 0579 9100 073 | 0579 8400 073 | 0579 9200 073 | 0579 8500 073 | 0579 9300 073 | 0579 8600 073 |
| 76.1 | GRIP E 76.1 | 0579 9100 076 | 0579 8400 076 | 0579 9200 076 | 0579 8500 076 | 0579 9300 076 | 0579 8600 076 |
| 80.0 | GRIP E 80.0 | 0579 9100 080 | 0579 8400 080 | 0579 9200 080 | 0579 8500 080 | 0579 9300 080 | 0579 8600 080 |
| 84.0 | GRIP E 84.0 | 0579 9100 084 | 0579 8400 084 | 0579 9200 084 | 0579 8500 084 | 0579 9300 084 | 0579 8600 084 |
| 88.9 | GRIP E 88.9 | 0579 9100 088 | 0579 8400 088 | 0579 9200 088 | 0579 8500 088 | 0579 9300 088 | 0579 8600 088 |
| 101.6 | GRIP E 101.6 | 0579 9100 101 | 0579 8400 101 | 0579 9200 101 | 0579 8500 101 | 0579 9300 101 | 0579 8600 101 |
| 104.0 | GRIP E 104.0 | 0579 9100 104 | 0579 8400 104 | 0579 9200 104 | 0579 8500 104 | 0579 9300 104 | 0579 8600 104 |
| 108.0 | GRIP E 108.0 | 0579 9100 108 | 0579 8400 108 | 0579 9200 108 | 0579 8500 108 | 0579 9300 108 | 0579 8600 108 |
| 110.0 | GRIP E 110.0 | 0579 9100 110 | 0579 8400 110 | 0579 9200 110 | 0579 8500 110 | 0579 9300 110 | 0579 8600 110 |
| 114.3 | GRIP E 114.3 | 0579 9100 114 | 0579 8400 114 | 0579 9200 114 | 0579 8500 114 | 0579 9300 114 | 0579 8600 114 |
| 129.0 | GRIP E 129.0 | 0579 9100 129 | 0579 8400 129 | 0579 9200 129 | 0579 8500 129 | 0579 9300 129 | 0579 8600 129 |
| 133.0 | GRIP E 133.0 | 0579 9100 133 | 0579 8400 133 | 0579 9200 133 | 0579 8500 133 | 0579 9300 133 | 0579 8600 133 |
| 139.7 | GRIP E 139.7 | 0579 9100 139 | 0579 8400 139 | 0579 9200 139 | 0579 8500 139 | 0579 9300 139 | 0579 8600 139 |
| 141.3 | GRIP E 141.3 | 0579 9100 141 | 0579 8400 141 | 0579 9200 141 | 0579 8500 141 | 0579 9300 141 | 0579 8600 141 |
| 154.0 | GRIP E 154.0 | 0579 9100 154 | 0579 8400 154 | 0579 9200 154 | 0579 8500 154 | 0579 9300 154 | 0579 8600 154 |
| 159.0 | GRIP E 159.0 | 0579 9100 159 | 0579 8400 159 | 0579 9200 159 | 0579 8500 159 | 0579 9300 159 | 0579 8600 159 |
| 168.3 | GRIP E 168.3 | 0579 9100 168 | 0579 8400 168 | 0579 9200 168 | 0579 8500 168 | 0579 9300 168 | 0579 8600 168 |
| 193.7 | GRIP E 193.7 | 0574 8100 ... | 0574 8400 ... | 0574 8200 ... | 0574 8500 ... | 0574 8300 ... | 0574 8600 ... |
| 206.0 | GRIP E 206.0 | 0574 8100 ... | 0574 8400 ... | 0574 8200 ... | 0574 8500 ... | 0574 8300 ... | 0574 8600 ... |
| 219.1 | GRIP E 219.1 | 0574 8100 ... | 0574 8400 ... | 0574 8200 ... | 0574 8500 ... | 0574 8300 ... | 0574 8600 ... |
| 225.0 | GRIP E 225.0 | 0574 8100 ... | 0574 8400 ... | 0574 8200 ... | 0574 8500 ... | 0574 8300 ... | 0574 8600 ... |
| 229.9 | GRIP E 229.9 | 0574 8100 ... | 0574 8400 ... | 0574 8200 ... | 0574 8500 ... | 0574 8300 ... | 0574 8600 ... |
| 244.5 | GRIP E 244.5 | 0574 8100 ... | 0574 8400 ... | 0574 8200 ... | 0574 8500 ... | 0574 8300 ... | 0574 8600 ... |
| 254.0 | GRIP E 254.0 | 0574 8100 ... | 0574 8400 ... | 0574 8200 ... | 0574 8500 ... | 0574 8300 ... | 0574 8600 ... |
| 267.0 | GRIP E 267.0 | 0574 8100 ... | 0574 8400 ... | 0574 8200 ... | 0574 8500 ... | 0574 8300 ... | 0574 8600 ... |
| 273.0 | GRIP E 273.0 | 0574 8100 ... | 0574 8400 ... | 0574 8200 ... | 0574 8500 ... | 0574 8300 ... | 0574 8600 ... |
| 306.0 | GRIP E 306.0 | 0574 8100 ... | 0574 8400 ... | 0574 8200 ... | 0574 8500 ... | 0574 8300 ... | 0574 8600 ... |
| 323.9 | GRIP E 323.9 | 0574 8100 ... | 0574 8400 ... | 0574 8200 ... | 0574 8500 ... | 0574 8300 ... | 0574 8600 ... |
| 326.0 | GRIP E 326.0 | 0574 8100 ... | 0574 8400 ... | 0574 8200 ... | 0574 8500 ... | 0574 8300 ... | 0574 8600 ... |
| 355.6 | GRIP E 355.6 | 0574 8100 ... | 0574 8400 ... | 0574 8200 ... | 0574 8500 ... | 0574 8300 ... | 0574 8600 ... |
| 406.4 | GRIP E 406.4 | 0574 8100 ... | 0574 8400 ... | 0574 8200 ... | 0574 8500 ... | 0574 8300 ... | 0574 8600 ... |
| 429.0 | GRIP E 429.0 | 0574 8100 ... | 0574 8400 ... | 0574 8200 ... | 0574 8500 ... | 0574 8300 ... | 0574 8600 ... |
| 442.0 | GRIP E 442.0 | 0574 8100 ... | 0574 8400 ... | 0574 8200 ... | 0574 8500 ... | 0574 8300 ... | 0574 8600 ... |
| 457.2 | GRIP E 457.2 | 0574 8100 ... | 0574 8400 ... | 0574 8200 ... | 0574 8500 ... | 0574 8300 ... | 0574 8600 ... |
| 508.0 | GRIP E 508.0 | 0574 8100 ... | 0574 8400 ... | 0574 8200 ... | 0574 8500 ... | 0574 8300 ... | 0574 8600 ... |
| 531.0 | GRIP E 531.0 | 0574 8100 ... | 0574 8400 ... | 0574 8200 ... | 0574 8500 ... | 0574 8300 ... | 0574 8600 ... |
| 558.8 | GRIP E 558.8 | 0574 8100 ... | 0574 8400 ... | 0574 8200 ... | 0574 8500 ... | 0574 8300 ... | 0574 8600 ... |
| 609.6 | GRIP E 609.6 | 0574 8100 ... | 0574 8400 ... | 0574 8200 ... | 0574 8500 ... | 0574 8300 ... | 0574 8600 ... |

... = Ø without decimals in mm



- 1 Double-lip sealing system
- 2 Standard strip insert
- 3 Conically stamped anchoring ring
- 4 Flame protection housing

The fire resistant coupling

NORMACONNECT™ GRIP E-FP pipe couplings with integrated flame protection are used with applications in the marine sector (civil and military) as well as in sprinkler systems. For this purpose the GRIP E type has been equipped with an additional housing made from stainless steel plus a fire-resistant lining which can resist temperatures of 850 °C and upwards.

Advantages at a glance

- Dampens absorbing vibrations, pressure surges
- Weight saving
- Tension free
- Ready to install

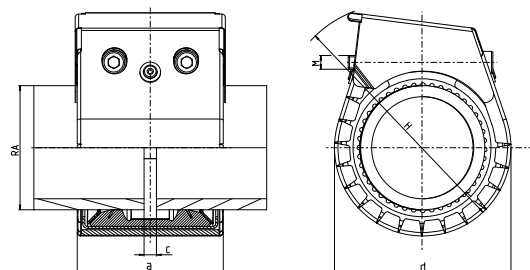
Information

- Sizes: 40.0 mm - 406.0 mm
- Working pressure: 16.0 - 6.0 bar
- Material: AISI 304, AISI 316 Ti
- EPDM:
 Sizes from 26.9 mm up to 168.3 mm: - 30 °C up to + 125 °C
 Sizes > 180.0 mm: from - 20 °C up to + 80 °C
- NBR: from - 20 °C up to + 80 °C

Materials

| W1 | W2 | W3 | W4 | W5 |
|----|----|----|----|----|
| | | | | x |

Technical data & ordering information



Technical data & Ordering information

| NORMACONNECT™ FGR GRIP E-FP | | | | | | | | | | | | | |
|-----------------------------|-----------------|--------------------|--|-----------------|-------|-------------------------|-----------|-----------|---------------------|--------------------------|----------|-------------------|---------------------------|
| Ø (O.D.) | Designation | Clamping ranges | PN ¹ (MAWP ¹ from diameter 180) | WP ² | C max | Dimensions (approx.) | | | Weight (approx.) | Hex socket locking bolts | | W5 Product No. | |
| | | | [bar] | | | [bar] | a (mm) | d (mm) | | H (mm) | (kg/pc.) | Thread | Tightening torque (Nm) |
| 26.9 | GRIP E-FP 26.9 | 26.4 - 27.5 | 16 | 70 | 3 | 67 | 60 | 110 | 0.42 | M 8 SW 6 | 10 | 0579 9370 026 | 0579 8670 026 |
| 28.0 | GRIP E-FP 28.0 | 27.5 - 28.5 | 16 | 70 | 3 | 67 | 60 | 110 | 0.42 | M 8 SW 6 | 10 | 0579 9370 028 | 0579 8670 028 |
| 30.0 | GRIP E-FP 30.0 | 29.5 - 30.6 | 16 | 70 | 3 | 67 | 60 | 110 | 0.42 | M 8 SW 6 | 10 | 0579 9370 030 | 0579 8670 030 |
| 33.7 | GRIP E-FP 33.7 | 33.0 - 34.3 | 16 | 60 | 3 | 67 | 65 | 115 | 0.43 | M 8 SW 6 | 10 | 0579 9370 033 | 0579 8670 033 |
| 35.0 | GRIP E-FP 35.0 | 34.5 - 35.6 | 16 | 60 | 8 | 75 | 65 | 115 | 0.58 | M 8 SW 6 | 15 | 0579 9370 035 | 0579 8670 035 |
| 38.0 | GRIP E-FP 38.0 | 37.5 - 38.6 | 16 | 60 | 8 | 75 | 70 | 120 | 0.58 | M 8 SW 6 | 15 | 0579 9370 038 | 0579 8670 038 |
| 42.4 | GRIP E-FP 42.4 | 41.7 - 43.0 | 16 | 50 | 8 | 75 | 75 | 125 | 0.59 | M 8 SW 6 | 15 | 0579 9370 042 | 0579 8670 042 |
| 44.5 | GRIP E-FP 44.5 | 44.0 - 45.1 | 16 | 50 | 8 | 75 | 75 | 125 | 0.60 | M 8 SW 6 | 15 | 0579 9370 044 | 0579 8670 044 |
| 48.3 | GRIP E-FP 48.3 | 47.6 - 50.5 | 16 | 50 | 8 | 75 | 80 | 130 | 0.61 | M 8 SW 6 | 15 | 0579 9370 048 | 0579 8670 048 |
| 54.0 | GRIP E-FP 54.0 | 53.3 - 54.6 | 16 | 50 | 17 | 90 | 85 | 135 | 0.92 | M 8 SW 6 | 15 | 0579 9370 054 | 0579 8670 054 |
| 57.0 | GRIP E-FP 57.0 | 56.3 - 57.7 | 16 | 50 | 17 | 90 | 90 | 140 | 0.93 | M 8 SW 6 | 20 | 0579 9370 057 | 0579 8670 057 |
| 60.3 | GRIP E-FP 60.3 | 59.5 - 61.0 | 16 | 40 | 17 | 90 | 95 | 145 | 0.94 | M 8 SW 6 | 20 | 0579 9370 060 | 0579 8670 060 |
| 73.0 | GRIP E-FP 73.0 | 72.1 - 73.8 | 16 | 40 | 17 | 90 | 95 | 145 | 0.94 | M 10 SW 8 | 30 | 0579 9370 073 | 0579 8670 073 |
| 76.1 | GRIP E-FP 76.1 | 75.2 - 77.0 | 16 | 35 | 25 | 110 | 105 | 155 | 1.49 | M 10 SW 8 | 30 | 0579 9370 076 | 0579 8670 076 |
| 84.0 | GRIP E-FP 84.0 | 83.0 - 85.0 | 16 | 35 | 25 | 110 | 110 | 160 | 1.49 | M 10 SW 8 | 30 | 0579 9370 084 | 0579 8670 084 |
| 88.9 | GRIP E-FP 88.9 | 87.0 - 89.9 | 16 | 35 | 25 | 110 | 115 | 165 | 1.56 | M 10 SW 8 | 30 | 0579 9370 088 | 0579 8670 088 |
| 101.6 | GRIP E-FP 101.6 | 100.4 - 102.8 | 16 | 35 | 25 | 110 | 120 | 170 | 1.59 | M 10 SW 8 | 30 | 0579 9370 101 | 0579 8670 101 |
| 104.0 | GRIP E-FP 104.0 | 102.8 - 106.1 | 16 | 35 | 25 | 110 | 135 | 185 | 1.75 | M 10 SW 8 | 30 | 0579 9370 104 | 0579 8670 104 |
| 108.0 | GRIP E-FP 108.0 | 106.8 - 109.2 | 16 | 35 | 25 | 110 | 135 | 185 | 1.76 | M 10 SW 8 | 30 | 0579 9370 108 | 0579 8670 108 |
| 110.0 | GRIP E-FP 110.0 | 108.8 - 111.4 | 16 | 35 | 25 | 110 | 140 | 190 | 1.79 | M 10 SW 8 | 30 | 0579 9370 110 | 0579 8670 110 |
| 114.3 | GRIP E-FP 114.3 | 113.0 - 115.5 | 16 | 35 | 25 | 110 | 145 | 195 | 1.89 | M 10 SW 8 | 40 | 0579 9370 114 | 0579 8670 114 |
| 129.0 | GRIP E-FP 129.0 | 127.6 - 131.1 | 16 | 32 | 35 | 125 | 165 | 215 | 3.25 | M 12 SW 10 | 50 | 0579 9370 129 | 0579 8670 129 |
| 133.0 | GRIP E-FP 133.0 | 131.5 - 134.4 | 16 | 32 | 35 | 125 | 170 | 220 | 3.36 | M 12 SW 10 | 50 | 0579 9370 133 | 0579 8670 133 |
| 139.7 | GRIP E-FP 139.7 | 138.1 - 141.6 | 16 | 32 | 35 | 125 | 175 | 225 | 3.48 | M 12 SW 10 | 50 | 0579 9370 139 | 0579 8670 139 |
| 141.3 | GRIP E-FP 141.3 | 139.6 - 142.8 | 16 | 32 | 35 | 125 | 180 | 230 | 3.48 | M 12 SW 10 | 50 | 0579 9370 141 | 0579 8670 141 |
| 154.0 | GRIP E-FP 154.0 | 152.3 - 156.1 | 16 | 32 | 35 | 125 | 190 | 240 | 3.63 | M 12 SW 10 | 60 | 0579 9370 154 | 0579 8670 154 |
| 159.0 | GRIP E-FP 159.0 | 157.3 - 160.7 | 16 | 32 | 35 | 125 | 195 | 245 | 3.75 | M 12 SW 10 | 60 | 0579 9370 159 | 0579 8670 159 |
| 168.3 | GRIP E-FP 168.3 | 166.5 - 170.1 | 16 | 32 | 35 | 125 | 205 | 255 | 3.83 | M 12 SW 10 | 60 | 0579 9370 168 | 0579 8670 168 |
| 193.7 | GRIP E-FP 193.7 | 192.0 - 196.0 | 10 | 20 | 35 | 125 | 235 | 285 | 6.9 | M 16 SW 14 | 100 | 0579 9370 193 | 0579 8670 193 |
| 206.0 | GRIP E-FP 206.0 | 202.0 - 208.0 | 10 | 20 | 35 | 125 | 250 | 300 | 7.2 | M 16 SW 14 | 100 | 0579 9370 206 | 0579 8670 206 |
| 219.1 | GRIP E-FP 219.1 | 216.0 - 221.0 | 10 | 20 | 35 | 125 | 260 | 310 | 7.4 | M 16 SW 14 | 100 | 0574 8370 219 | 0574 8670 219 |
| 225.0 | GRIP E-FP 225.0 | 222.0 - 227.0 | 10 | 16 | 35 | 155 | 265 | 315 | 7.0 | M 16 SW 14 | 100 | 0579 9370 225 | 0579 8670 225 |
| 229.9 | GRIP E-FP 229.9 | 228.0 - 232.0 | 5.5 | 16 | 35 | 155 | 270 | 320 | 7.0 | M 16 SW 14 | 100 | 0579 9370 229 | 0579 8670 229 |
| 244.5 | GRIP E-FP 244.5 | 242.0 - 247.0 | 5.5 | 15 | 35 | 155 | 285 | 335 | 7.3 | M 16 SW 14 | 100 | 0579 9370 244 | 0579 8670 244 |
| 254.5 | GRIP E-FP 254.5 | 250.0 - 256.0 | 5.5 | 14 | 35 | 155 | 285 | 335 | 7.5 | M 16 SW 14 | 100 | 0579 9370 254 | 0579 8670 254 |
| 267.0 | GRIP E-FP 267.0 | 264.0 - 269.0 | 5.5 | 13.5 | 35 | 155 | 310 | 360 | 7.7 | M 16 SW 14 | 100 | 0579 9370 267 | 0579 8670 267 |
| 273.0 | GRIP E-FP 273.0 | 270.0 - 275.0 | 5.5 | 13 | 35 | 155 | 315 | 365 | 7.8 | M 16 SW 14 | 100 | 0579 9370 273 | 0579 8670 273 |
| 306.0 | GRIP E-FP 306.0 | 302.0 - 308.0 | 5.5 | 10.5 | 35 | 155 | 350 | 400 | 8.4 | M 16 SW 14 | 120 | 0579 9370 306 | 0579 8670 306 |
| 323.9 | GRIP E-FP 323.9 | 320.0 - 327.0 | 3 | 9.5 | 35 | 155 | 365 | 415 | 8.7 | M 16 SW 14 | 120 | 0579 9370 323 | 0579 8670 323 |
| 326.0 | GRIP E-FP 326.0 | 322.0 - 329.0 | 3 | 9.5 | 35 | 155 | 370 | 420 | 8.8 | M 16 SW 14 | 120 | 0579 9370 326 | 0579 8670 326 |
| 355.6 | GRIP E-FP 355.6 | 352.0 - 359.0 | 2.7 | 8.5 | 35 | 155 | 400 | 450 | 9.3 | M 16 SW 14 | 120 | 0579 9370 355 | 0579 8670 355 |
| 406.4 | GRIP E-FP 406.4 | 402.0 - 410.0 | 2.5 | 7.0 | 35 | 155 | 450 | 500 | 10.2 | M 16 SW 14 | 120 | 0579 9370 406 | 0579 8670 406 |
| 419.0 | GRIP E-FP 419.0 | 415.0 - 422.0 | 2.5 | 6.5 | 35 | 155 | 460 | 510 | 10.4 | M 16 SW 14 | 180 | 0579 9370 419 | 0579 8670 419 |

PN¹ (Nominal Pressure) is the max. admissible working pressure in shipbuilding, based on a safety factor of ≥ 4. ... = Ø without decimals in mm
 MAWP¹ (Maximum Allowable Working Pressure) is the max. admissible working pressure in shipbuilding, based on a safety factor of ≥ 4.
 WP² is the max. working pressure in industrial applications, with a safety factor as per NORMA specification.

NORMACONNECT™



- 1 Metal housing made from AISI 316 Ti**
- 2 Environmentally-friendly – No use of chemicals**
- 3 Shoulders of the coupling are flame protected**



Double-locked safeguards prevent accidental dismantling

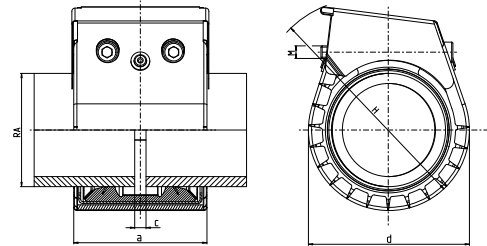
RFP for application at shipbuilding

The NORMACONNECT™ RFP is a retrofittable flame protector housing that has been specially designed for use with all NORMACONNECT™ FLEX and GRIP pipe couplings. Its low weight and straightforward design allows quick, easy assembly without any tools. The built-in flame resistant mineral fiber mat provides a premium level of flame protection. The Retrofit Flame Protector (RFP) housing has been extensively tested and is approved by several international classification societies.

Advantages at a glance

- Retrofittable
- Easy assembly without tooling
- Low weight
- Meets current IACS requirements
- No chemicals in flame protection mat
- High flexibility
- Clear identification whether coupling is flame protected or not
- Mechanical stress resistant
- Less warehouse costs

Technical data & Ordering information



NORMACONNECT™ FGR RFP

| Ø (O.D.) | Designation | Dimensions (approx.) | | | Weight of RFP (approx.) | W5 Product No. |
|----------|---------------------|----------------------|--------|---------|-------------------------|----------------|
| | | a (mm) | d (mm) | H* (mm) | (kg/piece) | |
| 26.9 | NC RFP W5 RFP 26.9 | 69 | 60 | 110 | 0.09 | 0573 0000 026 |
| 28.0 | NC RFP W5 RFP 28.0 | 69 | 60 | 110 | 0.09 | 0573 0000 028 |
| 30.0 | NC RFP W5 RFP 30.0 | 69 | 60 | 110 | 0.10 | 0573 0000 030 |
| 33.7 | NC RFP W5 RFP 33.7 | 69 | 65 | 115 | 0.10 | 0573 0000 033 |
| 38.0 | NC RFP W5 RFP 38.0 | 75 | 70 | 120 | 0.11 | 0573 0000 038 |
| 42.4 | NC RFP W5 RFP 42.4 | 75 | 75 | 125 | 0.12 | 0573 0000 042 |
| 44.5 | NC RFP W5 RFP 44.5 | 75 | 75 | 125 | 0.12 | 0573 0000 044 |
| 48.3 | NC RFP W5 RFP 48.3 | 75 | 80 | 130 | 0.13 | 0573 0000 048 |
| 54.0 | NC RFP W5 RFP 54.0 | 90 | 90 | 135 | 0.14 | 0573 0000 054 |
| 57.0 | NC RFP W5 RFP 57.0 | 90 | 90 | 140 | 0.16 | 0573 0000 057 |
| 60.3 | NC RFP W5 RFP 60.3 | 90 | 95 | 145 | 0.16 | 0573 0000 060 |
| 76.1 | NC RFP W5 RFP 76.1 | 110 | 110 | 160 | 0.24 | 0573 0000 076 |
| 88.9 | NC RFP W5 RFP 88.9 | 110 | 120 | 170 | 0.26 | 0573 0000 088 |
| 101.6 | NC RFP W5 RFP 101.6 | 110 | 135 | 185 | 0.28 | 0573 0000 101 |
| 104.0 | NC RFP W5 RFP 104.0 | 110 | 135 | 185 | 0.29 | 0573 0000 104 |
| 108.0 | NC RFP W5 RFP 108.0 | 110 | 140 | 190 | 0.30 | 0573 0000 108 |
| 114.3 | NC RFP W5 RFP 114.3 | 110 | 145 | 195 | 0.31 | 0573 0000 114 |
| 133.0 | NC RFP W5 RFP 133.0 | 125 | 170 | 220 | 0.41 | 0573 0000 133 |
| 139.7 | NC RFP W5 RFP 139.7 | 125 | 175 | 225 | 0.43 | 0573 0000 139 |
| 154.0 | NC RFP W5 RFP 154.0 | 125 | 190 | 240 | 0.45 | 0573 0000 154 |
| 159.0 | NC RFP W5 RFP 159.0 | 125 | 195 | 245 | 0.49 | 0573 0000 159 |
| 168.3 | NC RFP W5 RFP 168.3 | 125 | 205 | 255 | 0.50 | 0573 0000 168 |
| 219.1 | NC RFP W5 RFP 219.1 | 155 | 260 | 310 | 0.73 | 0573 0000 219 |
| 273.0 | NC RFP W5 RFP 273.0 | 155 | 315 | 365 | 0.87 | 0573 0000 273 |

* Dimensions of the housing are given as assembled on a NORMACONNECT Grip/ Grip E/ Flex/ Flex E pipe coupling. Further sizes available on request.

Information

Sizes from 26.9 mm up to 406,4 mm

Materials

| | | | | |
|----|----|----|----|----|
| W1 | W2 | W3 | W4 | W5 |
| | | | | x |



- 1 Double-lip sealing system
- 2 Standard strip insert
- 3 Anchoring ring

The coupling for plastic pipes

NORMACONNECT™ PLAST GRIP/PLAST GRIP E axial restraint pipe couplings are used to connect plastic pipes.

The specially designed anchoring ring, featuring flat rows of teeth, engages into the pipe surface without damaging the plastic material. The force applied is distributed evenly across the pipe surface.

Advantages at a glance

- Also usable for weak plastic pipes, PP, PE
- Also available with hollow trunnions for weight-saving

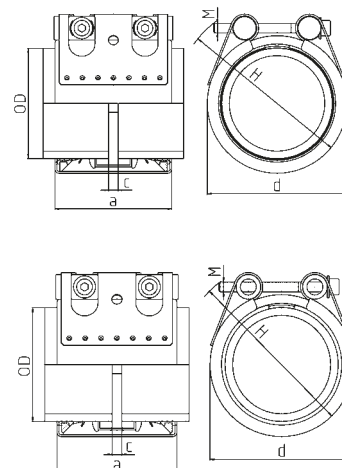
Information

- Sizes: 40.0 mm - 406.0 mm
- Working pressure: 16.0 - 6.0 bar
- Material: AISI 304, AISI 316 Ti
- EPDM:
 - Sizes from 26.9 mm up to 168.3 mm - 30 °C up to + 125 °C
 - Sizes > 180.0 mm: - 20 °C up to + 80 °C
- NBR: - 20 °C up to + 80 °C

Materials

| W1 | W2 | W3 | W4 | W5 |
|----|----|----|----|----|
| | | | | x |

Technical data & ordering information





PLAST GRIP/PLAST GRIP E





Technical data & Ordering information

NORMACONNECT™ FGR PLAST GRIP E

| Ø (O.D.) | Designation | Clamping ranges | PN ¹ | WP ² | C max | Dimensions (approx.) | | | Weight (approx.) | Hex socket locking bolts | | W5 Product No. | |
|-------------|---------------------|--|---|---|----------|-------------------------|-----------|-----------|---------------------|--------------------------|---------------------------|-------------------|---------------|
| | | O _{dmin} - O _{dmax} |  [bar] |  [bar] | (mm) | a (mm) | d (mm) | H (mm) | (kg/pc.) | Thread | Tightening torque (Nm) | EPDM | NBR |
| 40.0 | PLAST GRIP E W5 40 | 39.0 - 40.5 | 10 | 16 | 8 | 62 | 60 | 80 | 0.48 | M 8 SW 6 | 15 | 0581 9360 040 | 0581 8660 040 |
| 42.4 | PLAST GRIP E W5 42 | 41.7 - 43.0 | 10 | 16 | 8 | 62 | 65 | 85 | 0.48 | M 8 SW 6 | 15 | 0581 9360 042 | 0581 8660 042 |
| 44.5 | PLAST GRIP E W5 44 | 42.0 - 46.0 | 10 | 16 | 8 | 62 | 70 | 90 | 0.5 | M 8 SW 6 | 15 | 0581 9360 044 | 0581 8660 044 |
| 48.3 | PLAST GRIP E W5 48 | 47.6 - 49.5 | 10 | 16 | 8 | 62 | 70 | 90 | 0.52 | M 8 SW 6 | 15 | 0581 9360 048 | 0581 8660 048 |
| 50.0 | PLAST GRIP E W5 50 | 49.0 - 50.5 | 10 | 16 | 8 | 62 | 70 | 90 | 0.52 | M 8 SW 6 | 15 | 0581 9360 050 | 0581 8660 050 |
| 60.3 | PLAST GRIP E W5 60 | 59.5 - 61.0 | 10 | 16 | 17 | 78 | 85 | 105 | 0.67 | M 8 SW 6 | 20 | 0581 9360 060 | 0581 8660 060 |
| 63.0 | PLAST GRIP E W5 63 | 62.0 - 63.5 | 10 | 16 | 17 | 78 | 85 | 105 | 0.67 | M 8 SW 6 | 20 | 0581 9360 063 | 0581 8660 063 |
| 75.0 | PLAST GRIP E W5 75 | 74.0 - 76.0 | 10 | 16 | 25 | 98 | 100 | 120 | 1.33 | M 10 SW 8 | 30 | 0581 9360 075 | 0581 8660 075 |
| 76.1 | PLAST GRIP E W5 76 | 75.0 - 77.0 | 10 | 16 | 25 | 98 | 100 | 120 | 1.33 | M 10 SW 8 | 30 | 0581 9360 076 | 0581 8660 076 |
| 88.9 | PLAST GRIP E W5 88 | 88.0 - 90.0 | 10 | 16 | 25 | 98 | 110 | 130 | 1.42 | M 10 SW 8 | 30 | 0581 9360 088 | 0581 8660 088 |
| 90.0 | PLAST GRIP E W5 90 | 89.0 - 91.0 | 10 | 16 | 25 | 98 | 110 | 130 | 1.42 | M 10 SW 8 | 30 | 0581 9360 090 | 0581 8660 090 |
| 101.3 | PLAST GRIP E W5 101 | 100.4 - 102.8 | 10 | 16 | 25 | 98 | 125 | 145 | 1.58 | M 10 SW 8 | 30 | 0581 9360 101 | 0581 8660 101 |
| 104.0 | PLAST GRIP E W5 104 | 102.8 - 106.1 | 10 | 16 | 25 | 98 | 125 | 145 | 1.6 | M 10 SW 8 | 30 | 0581 9360 104 | 0581 8660 104 |
| 108.0 | PLAST GRIP E W5 108 | 108.8 - 111.4 | 10 | 16 | 25 | 98 | 130 | 150 | 1.62 | M 10 SW 8 | 30 | 0581 9360 108 | 0581 8660 108 |
| 110.0 | PLAST GRIP E W5 110 | 109.0 - 111.0 | 10 | 16 | 25 | 98 | 130 | 150 | 1.66 | M 10 SW 8 | 30 | 0581 9360 110 | 0581 8660 110 |
| 114.3 | PLAST GRIP E W5 114 | 113.0 - 115.5 | 10 | 16 | 25 | 98 | 135 | 155 | 1.66 | M 12 SW 10 | 40 | 0581 9360 114 | 0581 8660 114 |
| 125.0 | PLAST GRIP E W5 125 | 124.0 - 126.0 | 10 | 16 | 35 | 115 | 140 | 160 | 2.42 | M 12 SW 10 | 40 | 0581 9360 125 | 0581 8660 125 |
| 129.0 | PLAST GRIP E W5 129 | 127.6 - 131.1 | 10 | 16 | 35 | 115 | 140 | 160 | 3.06 | M 12 SW 10 | 40 | 0581 9360 129 | 0581 8660 129 |
| 133.0 | PLAST GRIP E W5 133 | 131.5 - 134.4 | 10 | 16 | 35 | 115 | 150 | 170 | 3.16 | M 12 SW 10 | 40 | 0581 9360 133 | 0581 8660 133 |
| 140.0 | PLAST GRIP E W5 140 | 139.0 - 141.0 | 10 | 16 | 35 | 115 | 160 | 180 | 3.18 | M 12 SW 10 | 50 | 0581 9360 140 | 0581 8660 140 |
| 154.0 | PLAST GRIP E W5 154 | 152.3 - 156.1 | 10 | 16 | 35 | 115 | 170 | 190 | 3.27 | M 12 SW 10 | 50 | 0581 9360 154 | 0581 8660 154 |
| 159.0 | PLAST GRIP E W5 159 | 157.3 - 160.7 | 10 | 16 | 35 | 115 | 180 | 200 | 3.39 | M 12 SW 10 | 50 | 0581 9360 159 | 0581 8660 159 |
| 160.0 | PLAST GRIP E W5 160 | 159.0 - 162.0 | 10 | 16 | 35 | 115 | 180 | 200 | 3.45 | M 12 SW 10 | 60 | 0581 9360 160 | 0581 8660 160 |
| 168.3 | PLAST GRIP E W5 168 | 166.5 - 170.1 | 10 | 16 | 35 | 115 | 190 | 200 | 3.48 | M 12 SW 10 | 60 | 0581 9360 168 | 0581 8660 168 |

NORMACONNECT™ FGR PLAST GRIP

| Ø (O.D.) | Designation | Clamping ranges | PN ¹ | WP ² | C max | Dimensions (approx.) | | | Weight (approx.) | Hex socket locking bolts | | W5 Product No. | |
|-------------|---------------------|--|---|---|----------|-------------------------|-----------|-----------|---------------------|--------------------------|---------------------------|-------------------|---------------|
| | | O _{dmin} - O _{dmax} |  [bar] |  [bar] | (mm) | a (mm) | d (mm) | H (mm) | (kg/pc.) | Thread | Tightening torque (Nm) | EPDM | NBR |
| 180.0 | PLAST GRIP W5 180 | 178.0 - 182.0 | - | 16 | 35 | 142 | 210 | 240 | 7.6 | M 12 SW 10 | 60 | 0581 8350 180 | 0581 8650 180 |
| 200.0 | PLAST GRIP W5 200 | 198.0 - 202.0 | - | 16 | 35 | 142 | 230 | 260 | 8.1 | M 12 SW 10 | 60 | 0581 8350 200 | 0581 8650 200 |
| 219.1 | PLAST GRIP W5 219 | 217.0 - 222.0 | - | 16 | 35 | 142 | 250 | 280 | 8.6 | M 12 SW 10 | 60 | 0581 8350 219 | 0581 8650 219 |
| 225.0 | PLAST GRIP W5 225 | 222.0 - 227.0 | - | 10 | 35 | 142 | 255 | 285 | 8.7 | M 12 SW 10 | 60 | 0581 8350 225 | 0581 8650 225 |
| 250.0 | PLAST GRIP W5 250 | 247.0 - 253.0 | - | 10 | 35 | 142 | 280 | 310 | 9.4 | M 12 SW 10 | 80 | 0581 8350 250 | 0581 8650 250 |
| 273.0 | PLAST GRIP W5 273 | 271.0 - 276.0 | - | 10 | 35 | 142 | 305 | 335 | 9.9 | M 16 SW 14 | 100 | 0581 8350 273 | 0581 8650 273 |
| 280.0 | PLAST GRIP W5 280 | 277.0 - 283.0 | - | 10 | 35 | 142 | 310 | 340 | 10.1 | M 16 SW 14 | 100 | 0581 8350 280 | 0581 8650 280 |
| 315.0 | PLAST GRIP W5 315 | 311.0 - 318.0 | - | 10 | 35 | 142 | 345 | 375 | 11 | M 16 SW 14 | 100 | 0581 8350 315 | 0581 8650 315 |
| 323.9 | PLAST GRIP W5 323 | 320.0 - 327.0 | - | 6 | 35 | 142 | 355 | 385 | 11.2 | M 16 SW 14 | 100 | 0581 8350 323 | 0581 8650 323 |
| 355.0 | PLAST GRIP W5 355 | 352.0 - 359.0 | - | 6 | 35 | 142 | 385 | 415 | 12 | M 16 SW 14 | 120 | 0581 8350 355 | 0581 8650 355 |
| 400.0 | PLAST GRIP W5 400 | 396.0 - 404.0 | - | 6 | 35 | 142 | 430 | 460 | 13.1 | M 16 SW 14 | 120 | 0581 8350 400 | 0581 8650 400 |
| 406.4 | PLAST GRIP W5 406.4 | 402.0 - 410.0 | - | 6 | 35 | 142 | 440 | 470 | 13.3 | M 16 SW 14 | 120 | 0581 8350 406 | 0581 8650 406 |

PN¹ (Nominal Pressure) is the max. admissible working pressure in shipbuilding, based on a safety factor of ≥ 4.
 WP² is the max. working pressure in industrial applications, with a safety factor as per NORMA specification.



- 1 Double-lip sealing system
- 2 Standard strip insert
- 3 Anchoring ring

The combining pipe coupling

NORMACONNECT™ COMBI GRIP/COMBI GRIP E axial restraint pipe couplings are used to connect plastic pipes with metal pipes.

On the side connecting the plastic pipe, the coupling has a special anchoring ring with rows of flat teeth which are pressed into the pipe surface without damaging the material. At the same time the force applied is distributed evenly across the pipe surface.

On the side connecting the metal pipe, the coupling has a different anchoring ring with conically stamped teeth which grip into the pipe surface. Due to the special design of the anchoring ring the coupling can withstand even high vibration loads. NORMACONNECT™ COMBI GRIP E has hollow trunnions (smaller diameters). NORMACONNECT™ COMBI GRIP has solid trunnions (larger diameters).

Advantages at a glance

- Corrosion resistant
- No welding
- No special tools necessary
- Installation and working in every kind of weather (hot and cold)
- Reusable

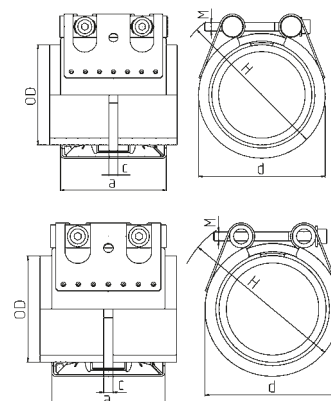
Information

- Sizes: from 38/40.0 mm to 406.0/406.0 mm
- Working pressure: 16.0 - 6.0 bar
- Material: AISI 304, AISI 316 Ti
- EPDM:
 - Sizes from 26.9 mm up to 168.3 mm: - 30 °C up to + 125 °C
 - Sizes > 180.0 mm: - 20 °C up to + 80 °C
- NBR: from - 20 °C up to + 80 °C

Materials

| W1 | W2 | W3 | W4 | W5 |
|----|----|----|----|----|
| | | | | x |

Technical data & Ordering information



COMBI GRIP/COMBI GRIP E



NORMACONNECT™ COMBI GRIP/COMBI GRIP E axial restraint pipe couplings are used to connect plastic pipes with metal pipes.

Advantages at a glance

- COMBI GRIP E has hollow trunnions (smaller diameters)
- COMBI GRIP has solid trunnions (larger diameters)

Material

W5

Technical data & Ordering information

NORMACONNECT™ FGR COMBI GRIP E

| Ø (O.D.) | Designation | Clamping ranges O _{dmin} - O _{dmax} (mm) | | PN ¹ [bar] | WP ² [bar] | C max (mm) | Dimensions (approx.) | | | Weight (approx.) (kg/pc.) | Hex socket locking bolts | | W5 Product No. | |
|---------------|----------------------------|---|-------------|--------------------------|--------------------------|------------------|-------------------------|-----------|-----------|---------------------------------|-----------------------------|------------------------------|-------------------|---------------|
| | | Plastic | Metal | | | | a (mm) | d (mm) | H (mm) | | Thread | Tightening torque (Nm) | EPDM | NBR |
| 40.0 / 38.0 | COMBI GRIP E 40.0 / 38.0 | 39.0-40.5 | 37.5-38.6 | 10 | 16 | 8 | 62 | 60 | 80 | 0.46 | M 8 SW 6 | 15 | 0584 9360 038 | 0584 8660 038 |
| 40.0 / 42.4 | COMBI GRIP E 40.0 / 42.4 | 39.0-40.5 | 41.7-43.0 | 10 | 16 | 8 | 62 | 65 | 85 | 0.47 | M 8 SW 6 | 15 | 0584 9360 042 | 0584 8660 042 |
| 42.4 / 42.4 | COMBI GRIP E 42.4 / 42.4 | 41.7-43.0 | 41.7-43.0 | 10 | 16 | 8 | 62 | 65 | 85 | 0.47 | M 8 SW 6 | 15 | 0584 9360 043 | 0584 8660 043 |
| 48.3 / 48.3 | COMBI GRIP E 48.3 / 48.3 | 47.6-50.5 | 53.3-54.6 | 10 | 16 | 17 | 78 | 70 | 90 | 0.5 | M 8 SW 6 | 15 | 0584 9360 046 | 0584 8660 046 |
| 50.0 / 48.3 | COMBI GRIP E 50.0 / 48.3 | 47.6-51.0 | 47.6-50.5 | 10 | 16 | 8 | 62 | 70 | 90 | 0.5 | M 8 SW 6 | 15 | 0584 9360 048 | 0584 8660 048 |
| 56.0 / 54.0* | COMBI GRIP E 56.0 / 54.0 | 55.0-56.5 | 53.3-54.6 | - | 5* | 17 | 78 | 80 | 100 | 0.62 | M 8 SW 6 | 15 | 0584 9360 054 | 0584 8660 054 |
| 60.3 / 60.3 | COMBI GRIP E 60.3 / 60.3 | 59.5-61.0 | 59.5-61.0 | 10 | 16 | 17 | 78 | 85 | 105 | 0.65 | M 8 SW 6 | 20 | 0584 9360 061 | 0584 8660 061 |
| 63.0 / 60.3 | COMBI GRIP E 63.0 / 60.3 | 62.0-63.5 | 59.5-61.0 | 10 | 16 | 17 | 78 | 85 | 105 | 0.65 | M 8 SW 6 | 20 | 0584 9360 060 | 0584 8660 060 |
| 73.0 / 73.0 | COMBI GRIP E 73.0 / 73.0 | 72.0-74.0 | 72.1-73.8 | 10 | 16 | 25 | 98 | 95 | 115 | 1.3 | M 10 SW 8 | 30 | 0584 9360 073 | 0584 8660 073 |
| 75.0 / 76.1 | COMBI GRIP E 75.0 / 76.1 | 74.0-76.0 | 75.2-77.0 | 10 | 16 | 25 | 98 | 100 | 120 | 1.3 | M 10 SW 8 | 30 | 0584 9360 076 | 0584 8660 076 |
| 88.9 / 88.9 | COMBI GRIP E 88.9 / 90.0 | 88.0-90.0 | 87.0-89.9 | 10 | 16 | 25 | 98 | 110 | 130 | 1.39 | M 10 SW 8 | 30 | 0584 9360 086 | 0584 8660 086 |
| 90.0 / 88.9 | COMBI GRIP E 90.0 / 88.9 | 89.0-91.0 | 87.0-89.9 | 10 | 16 | 25 | 98 | 110 | 130 | 1.39 | M 10 SW 8 | 30 | 0584 9360 088 | 0584 8660 088 |
| 101.6 / 101.6 | COMBI GRIP E 101.6 / 101.6 | 100.4-102.8 | 100.4-102.8 | 10 | 16 | 25 | 98 | 125 | 145 | 1.54 | M 10 SW 8 | 30 | 0584 9360 101 | 0584 8660 101 |
| 110.0 / 108.0 | COMBI GRIP E 110.0 / 108.0 | 109.0-111.0 | 106.8-109.2 | 10 | 16 | 25 | 98 | 130 | 150 | 1.58 | M 10 SW 8 | 40 | 0584 9360 108 | 0584 8660 108 |
| 110.0 / 114.3 | COMBI GRIP E 110.0 / 114.3 | 109.0-111.0 | 113.0-115.5 | 10 | 16 | 25 | 98 | 135 | 155 | 1.62 | M 10 SW 8 | 40 | 0584 9360 110 | 0584 8660 110 |
| 114.3 / 114.3 | COMBI GRIP E 114.3 / 114.3 | 113.0-115.5 | 113.0-115.5 | 10 | 16 | 25 | 98 | 135 | 155 | 1.62 | M 12 SW 10 | 40 | 0584 9360 114 | 0584 8660 114 |
| 140.0 / 139.7 | COMBI GRIP E 140.0 / 139.7 | 139.0-141.0 | 138.1-141.6 | 10 | 16 | 35 | 115 | 160 | 180 | 3.14 | M 12 SW 10 | 50 | 0584 9360 139 | 0584 8660 139 |
| 141.3 / 141.3 | COMBI GRIP E 141.3 / 141.3 | 138.1-141.6 | 139.6-142.8 | 10 | 16 | 25 | 115 | 165 | 185 | 3.14 | M 12 SW 10 | 50 | 0584 9360 141 | 0584 8660 141 |
| 160.0 / 159.0 | COMBI GRIP E 159.0 / 160.0 | 159.0-162.0 | 157.3-160.7 | 10 | 16 | 35 | 115 | 180 | 200 | 3.45 | M 12 SW 10 | 60 | 0584 9360 159 | 0584 8660 159 |
| 168.3 / 168.3 | COMBI GRIP E 168.3 / 168.3 | 166.0-170.1 | 166.5-170.1 | 10 | 16 | 35 | 115 | 190 | 210 | 3.48 | M 12 SW 10 | 60 | 0584 9360 168 | 0584 8660 168 |

NORMACONNECT™ FGR COMBI GRIP

| Ø (O.D.) | Designation | Clamping ranges O _{dmin} - O _{dmax} (mm) | | PN ¹ [bar] | WP ² [bar] | C max (mm) | Dimensions (approx.) | | | Weight (approx.) (kg/pc.) | Hex socket locking bolts | | W5 Product No. | |
|---------------|--------------------------|---|-------------|--------------------------|--------------------------|------------------|-------------------------|-----------|-----------|---------------------------------|-----------------------------|------------------------------|-------------------|---------------|
| | | Plastic | Metal | | | | a (mm) | d (mm) | H (mm) | | Thread | Tightening torque (Nm) | EPDM | NBR |
| 200.0 / 204.0 | COMBI GRIP 200.0 / 204.0 | 198.0-202.0 | 202.0-206.0 | - | 16 | 35 | 142 | 235 | 265 | 7.5 | M 12 SW 10 | 60 | 0584 8350 204 | 0584 8650 204 |
| 219.1 / 219.1 | COMBI GRIP 219.1 / 219.1 | 217.0-222.0 | 216.0-221.0 | - | 16 | 35 | 142 | 250 | 280 | 7.9 | M 12 SW 10 | 60 | 0584 8350 219 | 0584 8650 219 |
| 225.0 / 219.1 | COMBI GRIP 225.0 / 219.1 | 222.0-227.0 | 216.0-221.0 | - | 10 | 35 | 142 | 255 | 285 | 8.1 | M 12 SW 10 | 60 | 0584 8350 220 | 0584 8650 220 |
| 225.0 / 222.0 | COMBI GRIP 225.0 / 222.0 | 222.0-227.0 | 220.0-224.0 | - | 10 | 35 | 142 | 255 | 285 | 8.1 | M 12 SW 10 | 60 | 0584 8350 222 | 0584 8650 222 |
| 250.0 / 254.0 | COMBI GRIP 250.0 / 254.0 | 247.0-253.0 | 250.0-256.0 | - | 10 | 35 | 142 | 285 | 315 | 8.6 | M 12 SW 10 | 80 | 0584 8350 254 | 0584 8650 254 |
| 273.0 / 273.0 | COMBI GRIP 273.0 / 273.0 | 271.0-276.0 | 270.0-275.0 | - | 10 | 35 | 142 | 305 | 335 | 9.1 | M 16 SW 14 | 100 | 0584 8350 272 | 0584 8650 272 |
| 280.0 / 273.0 | COMBI GRIP 280.0 / 273.0 | 277.0-283.0 | 270.0-275.0 | - | 10 | 35 | 142 | 310 | 340 | 9.3 | M 16 SW 14 | 100 | 0584 8350 273 | 0584 8650 273 |
| 323.9 / 323.9 | COMBI GRIP 323.9 / 323.9 | 320.0-327.0 | 320.0-327.0 | - | 6 | 35 | 142 | 355 | 385 | 10.2 | M 16 SW 14 | 100 | 0584 8350 323 | 0584 8650 323 |
| 355.0 / 355.6 | COMBI GRIP 355.0 / 355.6 | 351.0-359.0 | 352.0-359.0 | - | 6 | 35 | 142 | 390 | 420 | 10.9 | M 16 SW 14 | 120 | 0584 8350 355 | 0584 8650 355 |
| 400.0 / 406.4 | COMBI GRIP 400.0 / 406.4 | 396.0-404.0 | 402.0-410.0 | - | 6 | 35 | 142 | 440 | 470 | 11.9 | M 16 SW 14 | 120 | 0584 8350 400 | 0584 8650 400 |
| 406.0 / 406.4 | COMBI GRIP 406.0 / 406.4 | 396.0-404.0 | 402.0-410.0 | - | 6 | 35 | 142 | 440 | 470 | 12 | M 16 SW 14 | 120 | 0584 8350 406 | 0584 8650 406 |

PN¹ (Nominal Pressure) is the max. admissible working pressure in shipbuilding, based on a safety factor of ≥ 4.

WP² is the max. working pressure in industrial applications, with a safety factor as per NORMA specification.

*Special coupling for joining metal pipes with PE-HD drainage pipes



Support sleeve to be used with NORMACONNECT® PLAST GRIP/PLAST GRIP E, COMBIGRIP/COMBI GRIP E in W5 (1.4571) material.

For copper and CuNiFe pipes an optional support sleeve made from brass is available on request.

Optional support sleeve

When joining plastic pipes made from PE and PP a support sleeve must be used. If the pipes to be joined are made from soft thermoplastic (e.g., PE) the use of a support sleeve is mandatory. The support sleeve is inserted into the pipe end within the area to be joined and thus protects the pipe from being deformed.

Technical data & Ordering information

| INTERNAL SUPPORT SLEEVE FOR PLAST GRIP / PLAST GRIP E IN W5 (316TI)* | | | | | | | | | | | | |
|--|---------------|-------|---------------|-------|---------------|-------|---------------|-------|---------------|-------|---------------|-------|
| PE | SDR 6 | | SDR 7,4 | | SDR 9 | | SDR 11 | | SDR 13,6 | | SDR 17 | |
| Ø OD mm | Product No. | Ø mm | Product No. | Ø mm | Product No. | Ø mm | Product No. | Ø mm | Product No. | Ø mm | Product No. | Ø mm |
| 40 | 0581 0006 040 | 26,6 | 0581 0007 040 | 29,0 | 0581 0009 040 | 31,0 | 0581 0011 040 | 32,6 | 0581 0013 040 | 34,0 | 0581 0017 040 | 35,2 |
| 50 | 0581 0006 050 | 33,4 | 0581 0007 050 | 36,2 | 0581 0009 050 | 38,8 | 0581 0011 050 | 40,8 | 0581 0013 050 | 42,6 | 0581 0017 050 | 44,0 |
| 63 | 0581 0006 063 | 42,0 | 0581 0007 063 | 45,8 | 0581 0009 063 | 48,8 | 0581 0011 063 | 51,4 | 0581 0013 063 | 53,6 | 0581 0017 063 | 55,4 |
| 75 | 0581 0006 075 | 50,0 | 0581 0007 075 | 54,4 | 0581 0009 075 | 58,2 | 0581 0011 075 | 61,4 | 0581 0013 075 | 63,8 | 0581 0017 075 | 66,0 |
| 90 | 0581 0006 090 | 60,0 | 0581 0007 090 | 65,4 | 0581 0009 090 | 69,8 | 0581 0011 090 | 73,6 | 0581 0013 090 | 76,6 | 0581 0017 090 | 79,2 |
| 110 | 0581 0006 110 | 73,4 | 0581 0007 110 | 79,8 | 0581 0009 110 | 85,4 | 0581 0011 110 | 90,0 | 0581 0013 110 | 93,8 | 0581 0017 110 | 96,8 |
| 125 | 0581 0006 125 | 83,4 | 0581 0007 125 | 90,8 | 0581 0009 125 | 97,0 | 0581 0011 125 | 102,2 | 0581 0013 125 | 106,6 | 0581 0017 125 | 110,2 |
| 140 | 0581 0006 140 | 93,4 | 0581 0007 140 | 101,6 | 0581 0009 140 | 108,6 | 0581 0011 140 | 114,6 | 0581 0013 140 | 119,4 | 0581 0017 140 | 123,4 |
| 160 | 0581 0006 160 | 106,8 | 0581 0007 160 | 116,2 | 0581 0009 160 | 124,2 | 0581 0011 160 | 130,8 | 0581 0013 160 | 136,4 | 0581 0017 160 | 141,0 |
| 180 | 0581 0006 180 | 120,2 | 0581 0007 180 | 130,8 | 0581 0009 180 | 139,8 | 0581 0011 180 | 147,2 | 0581 0013 180 | 153,4 | 0581 0017 180 | 158,6 |
| 200 | 0581 0006 200 | 133,6 | 0581 0007 200 | 145,2 | 0581 0009 200 | 155,2 | 0581 0011 200 | 163,6 | 0581 0013 200 | 170,6 | 0581 0017 200 | 176,2 |
| 225 | 0581 0006 225 | 150,2 | 0581 0007 225 | 163,4 | 0581 0009 225 | 174,6 | 0581 0011 225 | 184,0 | 0581 0013 225 | 191,8 | 0581 0017 225 | 198,2 |
| 250 | 0581 0006 250 | 167,0 | 0581 0007 250 | 181,6 | 0581 0009 250 | 194,2 | 0581 0011 250 | 204,6 | 0581 0013 250 | 213,2 | 0581 0017 250 | 220,4 |
| 280 | 0581 0006 280 | 187,0 | 0581 0007 280 | 203,4 | 0581 0009 280 | 217,4 | 0581 0011 280 | 229,2 | 0581 0013 280 | 238,8 | 0581 0017 280 | 246,8 |
| 315 | 0581 0006 315 | 210,4 | 0581 0007 315 | 228,8 | 0581 0009 315 | 244,6 | 0581 0011 315 | 257,8 | 0581 0013 315 | 268,6 | 0581 0017 315 | 277,6 |
| 355 | 0581 0006 355 | 237,0 | 0581 0007 355 | 258,0 | 0581 0009 355 | 275,6 | 0581 0011 355 | 290,6 | 0581 0013 355 | 302,8 | 0581 0017 355 | 312,8 |
| 400 | 0581 0006 400 | 267,0 | 0581 0007 400 | 290,6 | 0581 0003 400 | 310,6 | 0581 0011 400 | 327,4 | 0581 0013 400 | 341,2 | 0581 0017 400 | 352,6 |
| 450 | - | | 0581 0007 450 | | 0581 0009 450 | | 0581 0011 450 | | 0581 0013 450 | | 0581 0017 450 | |

Table continues on next page
 * SDR 5 available on request

Technical data & Ordering information

| INTERNAL SUPPORT SLEEVE FOR PLAST GRIP / PLAST GRIP E IN W5 (316TI) | | | | | | | | | | | | | | | | | | |
|---|---------------|-------|---------------|--------|---------------|-------|---------------|-------|---------------|--------|---------------|-------|---------------|-------|-------------|------|-------------|------|
| PE | SDR 17.6 | | | SDR 21 | | | SDR 22 | | | SDR 26 | | | SDR 33 | | SDR 41 | | SDR 51 | |
| Ø OD mm | Product No. | Ø mm | Product No. | Ø mm | Product No. | Ø mm | Product No. | Ø mm | Product No. | Ø mm | Product No. | Ø mm | Product No. | Ø mm | Product No. | Ø mm | Product No. | Ø mm |
| 40 | 0581 0018 040 | 35,4 | 0581 0021 040 | 36,0 | 0581 0022 040 | 36,2 | 0581 0026 040 | 36,4 | - | - | - | - | - | - | - | - | - | - |
| 50 | 0581 0018 050 | 44,2 | 0581 0021 050 | 45,2 | 0581 0022 050 | 45,4 | 0581 0026 050 | 46 | 0581 0033 050 | 46,4 | - | - | - | - | - | - | - | - |
| 63 | 0581 0018 063 | 55,8 | 0581 0021 063 | 57,0 | 0581 0022 063 | 57,2 | 0581 0026 063 | 58 | 0581 0033 063 | 59 | 0581 0041 063 | 59,4 | - | - | - | - | - | - |
| 75 | 0581 0018 075 | 66,4 | 0581 0021 075 | 67,8 | 0581 0022 075 | 68,0 | 0581 0026 075 | 69,2 | 0581 0033 075 | 70,4 | 0581 0041 075 | 71,2 | 0581 0051 075 | 71,4 | - | - | - | - |
| 90 | 0581 0018 090 | 79,8 | 0581 0021 090 | 81,4 | 0581 0022 090 | 81,8 | 0581 0026 090 | 83,0 | 0581 0033 090 | 84,4 | 0581 0041 090 | 85,6 | 0581 0051 090 | 86,4 | - | - | - | - |
| 110 | 0581 0018 110 | 97,4 | 0581 0021 110 | 99,4 | 0581 0022 110 | 100,0 | 0581 0026 110 | 101,6 | 0581 0033 110 | 103,2 | 0581 0041 110 | 104,6 | 0581 0051 110 | 105,6 | - | - | - | - |
| 125 | 0581 0018 125 | 110,8 | 0581 0021 125 | 113,0 | 0581 0022 125 | 113,6 | 0581 0026 125 | 115,4 | 0581 0033 125 | 117,2 | 0581 0041 125 | 118,8 | 0581 0051 125 | 120,0 | - | - | - | - |
| 140 | 0581 0018 140 | 124,0 | 0581 0021 140 | 126,6 | 0581 0022 140 | 127,2 | 0581 0026 140 | 129,2 | 0581 0033 140 | 131,4 | 0581 0041 140 | 133,0 | 0581 0051 140 | 134,4 | - | - | - | - |
| 160 | 0581 0018 160 | 141,8 | 0581 0021 160 | 144,6 | 0581 0022 160 | 145,4 | 0581 0026 160 | 147,6 | 0581 0033 160 | 150,2 | 0581 0041 160 | 152,0 | 0581 0051 160 | 153,6 | - | - | - | - |
| 180 | 0581 0018 180 | 159,6 | 0581 0021 180 | 162,8 | 0581 0022 180 | 163,6 | 0581 0026 180 | 166,2 | 0581 0033 180 | 169,0 | 0581 0041 180 | 171,2 | 0581 0051 180 | 172,8 | - | - | - | - |
| 200 | 0581 0018 200 | 177,2 | 0581 0021 200 | 180,8 | 0581 0022 200 | 181,8 | 0581 0026 200 | 184,6 | 0581 0033 200 | 187,6 | 0581 0041 200 | 190,2 | 0581 0051 200 | 192,2 | - | - | - | - |
| 225 | 0581 0018 225 | 199,4 | 0581 0021 225 | 203,4 | 0581 0022 225 | 204,4 | 0581 0026 225 | 207,8 | 0581 0033 225 | 211,2 | 0581 0041 225 | 214,0 | 0581 0051 225 | 216,2 | - | - | - | - |
| 250 | 0581 0018 250 | 221,6 | 0581 0021 250 | 226,2 | 0581 0022 250 | 227,2 | 0581 0026 250 | 230,8 | 0581 0033 250 | 234,6 | 0581 0041 250 | 237,6 | 0581 0051 250 | 240,2 | - | - | - | - |
| 280 | 0581 0018 280 | 248,2 | 0581 0021 280 | 253,2 | 0581 0022 280 | 254,4 | 0581 0026 280 | 258,6 | 0581 0033 280 | 262,8 | 0581 0041 280 | 266,2 | 0581 0051 280 | 269,0 | - | - | - | - |
| 315 | 0581 0018 315 | 279,2 | 0581 0021 315 | 285,0 | 0581 0022 315 | 286,2 | 0581 0026 315 | 290,8 | 0581 0033 315 | 295,6 | 0581 0041 315 | 299,6 | 0581 0051 315 | 302,6 | - | - | - | - |
| 355 | 0581 0018 355 | 314,8 | 0581 0021 355 | 321,2 | 0581 0022 350 | 322,6 | 0581 0026 355 | 327,8 | 0581 0033 355 | 333,2 | 0581 0041 355 | 337,6 | 0581 0051 355 | 341,0 | - | - | - | - |
| 400 | 0581 0018 400 | 354,6 | 0581 0021 400 | 361,8 | 0581 0022 400 | 363,6 | 0581 0026 400 | 369,4 | 0581 0033 400 | 375,4 | 0581 0041 400 | 380,4 | 0581 0051 400 | 384,2 | - | - | - | - |
| 450 | 0581 0018 450 | 399,0 | 0581 0021 450 | 407,0 | 0581 0022 450 | 409,0 | 0581 0026 450 | 415,6 | 0581 0033 450 | 422,4 | 0581 0041 450 | 428,0 | 0581 0051 450 | 432,4 | - | - | - | - |

| INTERNAL SUPPORT SLEEVE FOR PLAST GRIP / PLAST GRIP E IN W5 (316TI)* | | | | | | | | |
|--|---------------|-------|---------------|-------|---------------|-------|---------------|-------|
| PP | SDR 6 | | SDR 7,4 | | SDR 9 | | SDR 11 | |
| Ø OD mm | Product No. | Ø mm | Product No. | Ø mm | Product No. | Ø mm | Product No. | Ø mm |
| 40 | 0581 1006 040 | 26,6 | 0581 1007 040 | 29,0 | 0581 1009 040 | 31,0 | 0581 1011 040 | 32,6 |
| 50 | 0581 1006 050 | 33,4 | 0581 1007 050 | 36,2 | 0581 1009 050 | 38,8 | 0581 1011 050 | 40,8 |
| 63 | 0581 1006 063 | 42,0 | 0581 1007 063 | 45,8 | 0581 1009 063 | 48,8 | 0581 1011 063 | 51,4 |
| 75 | 0581 1006 075 | 50,0 | 0581 1007 075 | 54,4 | 0581 1009 075 | 58,2 | 0581 1011 075 | 61,4 |
| 90 | 0581 1006 090 | 60,0 | 0581 1007 090 | 65,4 | 0581 1009 090 | 69,8 | 0581 1011 090 | 73,6 |
| 110 | 0581 1006 110 | 73,4 | 0581 1007 110 | 79,8 | 0581 1009 110 | 85,4 | 0581 1011 110 | 90,0 |
| 125 | 0581 1006 125 | 83,4 | 0581 1007 125 | 90,8 | 0581 1009 125 | 97,0 | 0581 1011 125 | 102,2 |
| 140 | 0581 1006 140 | 93,4 | 0581 1007 140 | 101,6 | 0581 1009 140 | 108,6 | 0581 1011 140 | 114,6 |
| 160 | 0581 1006 160 | 106,8 | 0581 1007 160 | 116,2 | 0581 1009 160 | 124,2 | 0581 1011 160 | 130,8 |
| 180 | 0581 1006 180 | 122,0 | 0581 1007 180 | 130,8 | 0581 1009 180 | 139,8 | 0581 1011 180 | 147,2 |
| 200 | 0581 1006 200 | 133,6 | 0581 1007 200 | 145,2 | 0581 1009 200 | 155,2 | 0581 1011 200 | 163,6 |
| 225 | 0581 1006 225 | 150,2 | 0581 1007 225 | 163,4 | 0581 1009 225 | 174,6 | 0581 1011 225 | 184,0 |
| 250 | - | - | 0581 1007 250 | 181,6 | 0581 1009 250 | 194,2 | 0581 1011 250 | 204,6 |
| 280 | - | - | 0581 1007 280 | 203,4 | 0581 1009 280 | 217,4 | 0581 1011 280 | 229,2 |
| 315 | - | - | - | - | 0581 1009 315 | 244,6 | 0581 1011 315 | 257,8 |
| 355 | - | - | - | - | 0581 1009 355 | 275,6 | 0581 1011 355 | 290,6 |
| 400 | - | - | - | - | - | - | 0581 1011 400 | 327,4 |
| 450 | - | - | - | - | - | - | 0581 1011 450 | 368,2 |

* SDR 5 available on request

| INTERNAL SUPPORT SLEEVE FOR PLAST GRIP / PLAST GRIP E IN W5 (316TI) | | | | | | | | | | |
|---|---------------|-------|---------------|-------|---------------|-------|---------------|-------|---------------|-------|
| PP | SDR 17 | | SDR 17,6 | | SDR 26 | | SDR 33 | | SDR 41 | |
| Ø OD mm | Product No. | Ø mm | Product No. | Ø mm | Product No. | Ø mm | Product No. | Ø mm | Product No. | Ø mm |
| 40 | 0581 1017 040 | 35,2 | 0581 1018 040 | 35,4 | 0581 1026 040 | 36,4 | - | - | - | - |
| 50 | 0581 1017 050 | 44,0 | 0581 1018 050 | 44,2 | 0581 1026 050 | 46,0 | 0581 1033 050 | 46,4 | - | - |
| 63 | 0581 1017 063 | 55,4 | 0581 1018 063 | 55,8 | 0581 1026 063 | 58,0 | 0581 1033 063 | 59,0 | 0581 1041 063 | 59,4 |
| 75 | 0581 1017 075 | 66,0 | 0581 1018 075 | 66,4 | 0581 1026 075 | 69,2 | 0581 1033 075 | 70,4 | 0581 1041 075 | 71,2 |
| 90 | 0581 1017 090 | 79,2 | 0581 1018 090 | 79,8 | 0581 1026 090 | 83,0 | 0581 1033 090 | 84,4 | 0581 1041 090 | 85,6 |
| 110 | 0581 1017 110 | 96,8 | 0581 1018 110 | 97,4 | 0581 1026 110 | 101,6 | 0581 1033 110 | 103,2 | 0581 1041 110 | 104,6 |
| 125 | 0581 1017 125 | 110,2 | 0581 1018 125 | 110,8 | 0581 1026 125 | 115,4 | 0581 1033 125 | 117,2 | 0581 1041 125 | 118,8 |
| 140 | 0581 1017 140 | 123,4 | 0581 1018 140 | 124,0 | 0581 1026 140 | 129,2 | 0581 1033 140 | 131,4 | 0581 1041 140 | 133,0 |
| 160 | 0581 1017 160 | 141,0 | 0581 1018 160 | 141,8 | 0581 1026 160 | 147,6 | 0581 1033 160 | 150,2 | 0581 1041 160 | 152,0 |
| 180 | 0581 1017 180 | 158,6 | 0581 1018 180 | 159,6 | 0581 1026 180 | 166,2 | 0581 1033 180 | 169,0 | 0581 1041 180 | 171,2 |
| 200 | 0581 1017 200 | 176,2 | 0581 1018 200 | 177,2 | 0581 1026 200 | 184,6 | 0581 1033 200 | 187,6 | 0581 1041 200 | 190,2 |
| 225 | 0581 1017 225 | 198,2 | 0581 1018 225 | 199,4 | 0581 1026 225 | 207,8 | 0581 1033 225 | 211,2 | 0581 1041 225 | 214,0 |
| 250 | 0581 1017 250 | 220,4 | 0581 1018 250 | 221,6 | 0581 1026 250 | 230,8 | 0581 1033 250 | 234,6 | 0581 1041 250 | 237,6 |
| 280 | 0581 1017 280 | 246,8 | 0581 1018 280 | 248,2 | 0581 1026 280 | 258,6 | 0581 1033 280 | 262,8 | 0581 1041 280 | 266,2 |
| 315 | 0581 1017 315 | 277,6 | 0581 1018 315 | 279,2 | 0581 1026 315 | 290,8 | 0581 1033 315 | 295,6 | 0581 1041 315 | 299,6 |
| 355 | 0581 1017 355 | 312,8 | 0581 1018 355 | 314,8 | 0581 1026 355 | 327,8 | 0581 1033 355 | 333,2 | 0581 1041 355 | 337,6 |
| 400 | 0581 1017 400 | 352,6 | 0581 1018 400 | 354,6 | 0581 1026 400 | 369,4 | 0581 1033 400 | 375,4 | 0581 1041 400 | 380,4 |
| 450 | 0581 1017 450 | 396,6 | 0581 1018 450 | 399,0 | 0581 1026 450 | 415,6 | 0581 1033 450 | 422,4 | 0581 1041 450 | 428,0 |

NORMACONNECT™



- 1 Double-lip sealing system
- 2 Standard strip insert

The repair coupling

NORMACONNECT™ REP E are non-restraint repair couplings. They are used to seal damaged metal and plastic pipes. They also enable repairs to be carried out easily, quickly and safely without the need to dismantle the pipes.

Advantages at a glance

- Ensures a reliable, safe, leakage-free connection
- Enables easy, quick and safe repair without dismantling the pipes
- Easy to install without special tools

Information

- Sizes: from 35.0 mm to 1219.1 mm
- Working pressure: from 60.0 bar to 4.0 bar
- Material: AISI 316 Ti
- EPDM:
 - Sizes from 26.9 mm up to 168.3 mm: - 30 °C up to + 125 °C
 - Sizes > 180.0 mm: - 20 °C up to + 80 °C
- NBR : from - 20 °C up to + 80 °C

Materials

| W1 | W2 | W3 | W4 | W5 |
|----|----|----|----|----|
| | | | | x |

Technical data & Ordering information



Technical data & Ordering information

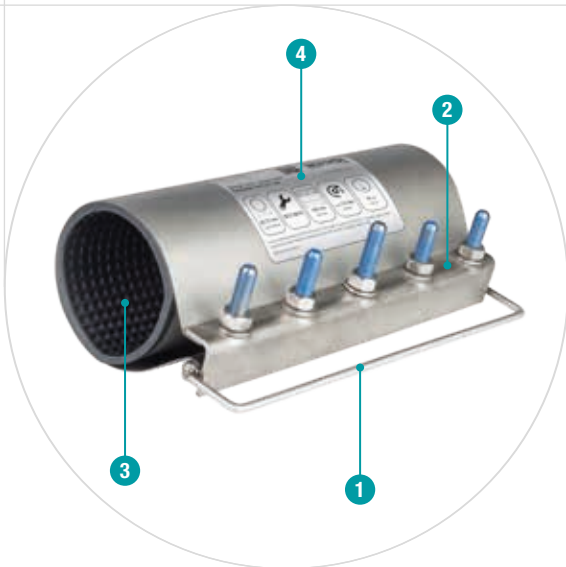
NORMACONNECT™

| NORMACONNECT™ FGR REP E | | | | | | | | | | | | | |
|-------------------------|-----------------|---------------------------------------|-----------------|-------|-------------------------|--------|--------|---------------------|--------------------------|---------------------------|-------------------|---------------|--|
| Ø (O.D.) | Designation | Clamping ranges | WP ¹ | C max | Dimensions (approx.) | | | Weight (approx.) | Hex socket locking bolts | | W5 Product No. | | |
| | | O _{dmin} - O _{dmax} | [bar] | (mm) | a (mm) | d (mm) | H (mm) | (kg/pc.) | Thread | Tightening torque (Nm) | EPDM | NBR | |
| 35.0 | REP E W5 35.0 | 34.5 - 35.6 | 60 | 8 | 63 | 55 | 75 | 0.41 | M 8 SW 6 | 5 | 0572 9360 035 | 0572 8660 035 | |
| 38.0 | REP E W5 38.0 | 37.5 - 38.6 | 60 | 8 | 63 | 60 | 80 | 0.41 | M 8 SW 6 | 5 | 0572 9360 038 | 0572 8660 038 | |
| 42.4 | REP E W5 42.4 | 41.7 - 43.0 | 50 | 8 | 63 | 65 | 85 | 0.42 | M 8 SW 6 | 5 | 0572 9360 042 | 0572 8660 042 | |
| 44.5 | REP E W5 44.5 | 44.0 - 45.1 | 50 | 8 | 63 | 65 | 85 | 0.43 | M 8 SW 6 | 5 | 0572 9360 044 | 0572 8660 044 | |
| 48.3 | REP E W5 48.3 | 47.6 - 50.5 | 50 | 8 | 63 | 70 | 90 | 0.44 | M 8 SW 6 | 5 | 0572 9360 048 | 0572 8660 048 | |
| 54.0 | REP E W5 54.0 | 53.3 - 54.6 | 50 | 17 | 78 | 75 | 95 | 0.58 | M 8 SW 6 | 10 | 0572 9360 054 | 0572 8660 054 | |
| 57.0 | REP E W5 57.0 | 56.3 - 57.7 | 50 | 17 | 78 | 80 | 100 | 0.58 | M 8 SW 6 | 10 | 0572 9360 057 | 0572 8660 057 | |
| 60.3 | REP E W5 60.3 | 59.5 - 61.0 | 40 | 17 | 78 | 85 | 105 | 0.59 | M 8 SW 6 | 10 | 0572 9360 060 | 0572 8660 060 | |
| 70.0 | REP E W5 70.0 | 69.0 - 71.0 | 40 | 25 | 98 | 90 | 110 | 0.59 | M 8 SW 6 | 10 | 0572 9360 070 | 0572 8660 070 | |
| 73.0 | REP E W5 73.0 | 72.1 - 73.8 | 40 | 25 | 98 | 95 | 115 | 1.13 | M 8 SW 6 | 10 | 0572 9360 073 | 0572 8660 073 | |
| 76.1 | REP E W5 76.1 | 75.2 - 77.0 | 35 | 25 | 98 | 100 | 120 | 1.13 | M 8 SW 6 | 10 | 0572 9360 076 | 0572 8660 076 | |
| 78.0 | REP E W5 78.0 | 77.1 - 78.9 | 35 | 25 | 98 | 100 | 120 | 1.14 | M 8 SW 6 | 15 | 0572 9360 078 | 0572 8660 078 | |
| 80.0 | REP E W5 80.0 | 79.0 - 80.8 | 35 | 25 | 98 | 100 | 120 | 1.16 | M 8 SW 6 | 15 | 0572 9360 080 | 0572 8660 080 | |
| 84.0 | REP E W5 84.0 | 83.0 - 85.0 | 35 | 25 | 98 | 105 | 125 | 1.18 | M 8 SW 6 | 15 | 0572 9360 084 | 0572 8660 084 | |
| 88.9 | REP E W5 88.9 | 87.0 - 89.9 | 35 | 25 | 98 | 110 | 130 | 1.20 | M 8 SW 6 | 15 | 0572 9360 088 | 0572 8660 088 | |
| 98.0 | REP E W5 98.0 | 96.9 - 99.0 | 35 | 25 | 98 | 120 | 140 | 1.32 | M 8 SW 6 | 15 | 0572 9360 098 | 0572 8660 098 | |
| 101.6 | REP E W5 101.6 | 100.4 - 102.8 | 35 | 25 | 98 | 125 | 145 | 1.33 | M 8 SW 6 | 15 | 0572 9360 101 | 0572 8660 101 | |
| 104.0 | REP E W5 104.0 | 102.8 - 106.1 | 35 | 25 | 98 | 125 | 145 | 1.36 | M 8 SW 6 | 15 | 0572 9360 104 | 0572 8660 104 | |
| 108.0 | REP E W5 108.0 | 106.8 - 109.2 | 35 | 25 | 98 | 130 | 150 | 1.40 | M 8 SW 6 | 15 | 0572 9360 108 | 0572 8660 108 | |
| 110.0 | REP E W5 110.0 | 108.8 - 111.4 | 35 | 25 | 98 | 130 | 150 | 1.40 | M 8 SW 6 | 20 | 0572 9360 110 | 0572 8660 110 | |
| 114.3 | REP E W5 114.0 | 113.0 - 115.5 | 35 | 25 | 98 | 135 | 155 | 1.99 | M 8 SW 6 | 30 | 0572 9360 114 | 0572 8660 114 | |
| 129.0 | REP E W5 129.0 | 127.6 - 131.1 | 32 | 35 | 113 | 155 | 185 | 2.00 | M 10 SW 8 | 30 | 0572 9360 129 | 0572 8660 129 | |
| 133.0 | REP E W5 133.0 | 131.5 - 134.4 | 32 | 35 | 113 | 160 | 190 | 2.03 | M 10 SW 8 | 30 | 0572 9360 133 | 0572 8660 133 | |
| 139.7 | REP E W5 139.7 | 138.1 - 141.6 | 32 | 35 | 113 | 165 | 195 | 2.08 | M 10 SW 8 | 30 | 0572 9360 139 | 0572 8660 139 | |
| 141.3 | REP E W5 141.3 | 139.6 - 142.8 | 32 | 35 | 113 | 170 | 200 | 2.09 | M 10 SW 8 | 35 | 0572 9360 141 | 0572 8660 141 | |
| 154.0 | REP E W5 154.0 | 152.3 - 156.1 | 32 | 35 | 113 | 180 | 210 | 2.19 | M 10 SW 8 | 50 | 0572 9360 154 | 0572 8660 154 | |
| 159.0 | REP E W5 159.0 | 157.3 - 160.7 | 32 | 35 | 113 | 185 | 215 | 2.26 | M 10 SW 8 | 50 | 0572 9360 159 | 0572 8660 159 | |
| 168.3 | REP E W5 168.0 | 166.5 - 170.1 | 32 | 35 | 113 | 195 | 225 | 2.31 | M 10 SW 8 | 50 | 0572 9360 168 | 0572 8660 168 | |
| 180.0 | REP E W5 180.0 | 178.0 - 182.0 | 30.0 | 35 | 139 | 210 | 240 | 4.0 | M 12 SW 10 | 25 | 0576 8360 ... | 0576 8660 ... | |
| 193.7 | REP E W5 193.7 | 192.0 - 196.0 | 28.0 | 35 | 139 | 225 | 255 | 4.1 | M 12 SW 10 | 25 | 0576 8360 ... | 0576 8660 ... | |
| 206.0 | REP E W5 206.0 | 202.0 - 208.0 | 26.5 | 35 | 139 | 240 | 270 | 4.3 | M 12 SW 10 | 25 | 0576 8360 ... | 0576 8660 ... | |
| 219.0 | REP E W5 219.0 | 216.0 - 221.0 | 23.0 | 35 | 139 | 250 | 280 | 4.4 | M 12 SW 10 | 25 | 0576 8360 ... | 0576 8660 ... | |
| 225.0 | REP E W5 225.0 | 222.0 - 227.0 | 23.0 | 35 | 139 | 255 | 285 | 4.5 | M 12 SW 10 | 25 | 0576 8360 ... | 0576 8660 ... | |
| 229.9 | REP E W5 229.9 | 228.0 - 232.0 | 23.0 | 35 | 139 | 260 | 290 | 4.5 | M 12 SW 10 | 25 | 0576 8360 ... | 0576 8660 ... | |
| 244.5 | REP E W5 244.5 | 242.0 - 247.0 | 22.0 | 35 | 139 | 275 | 305 | 4.7 | M 12 SW 10 | 25 | 0576 8360 ... | 0576 8660 ... | |
| 254.0 | REP E W5 254.0 | 250.0 - 256.0 | 21.0 | 35 | 139 | 285 | 315 | 4.8 | M 12 SW 10 | 25 | 0576 8360 ... | 0576 8660 ... | |
| 267.0 | REP E W5 267.0 | 264.0 - 269.0 | 20.0 | 35 | 139 | 300 | 330 | 5.0 | M 12 SW 10 | 25 | 0576 8360 ... | 0576 8660 ... | |
| 273.0 | REP E W5 273.0 | 270.0 - 275.0 | 20.0 | 35 | 139 | 305 | 335 | 5.1 | M 12 SW 10 | 25 | 0576 8360 ... | 0576 8660 ... | |
| 306.0 | REP E W5 306.0 | 302.0 - 308.0 | 17.5 | 35 | 139 | 340 | 370 | 5.5 | M 12 SW 10 | 25 | 0576 8360 ... | 0576 8660 ... | |
| 323.9 | REP E W5 323.9 | 320.0 - 327.0 | 17.5 | 35 | 139 | 355 | 385 | 5.7 | M 12 SW 10 | 25 | 0576 8360 ... | 0576 8660 ... | |
| 326.0 | REP E W5 326.0 | 322.0 - 329.0 | 16.5 | 35 | 139 | 360 | 390 | 5.7 | M 12 SW 10 | 25 | 0576 8360 ... | 0576 8660 ... | |
| 355.6 | REP E W5 355.6 | 352.0 - 359.0 | 15.0 | 35 | 139 | 390 | 420 | 6.0 | M 12 SW 10 | 25 | 0576 8360 ... | 0576 8660 ... | |
| 406.4 | REP E W5 406.4 | 402.0 - 410.0 | 14.0 | 35 | 139 | 440 | 470 | 6.6 | M 12 SW 10 | 25 | 0576 8360 ... | 0576 8660 ... | |
| 429.0 | REP E W5 429.0 | 426.0 - 431.0 | 13.0 | 35 | 139 | 460 | 490 | 6.9 | M 12 SW 10 | 40 | 0576 8360 ... | 0576 8660 ... | |
| 442.0 | REP E W5 442.0 | 439.0 - 444.0 | 13.0 | 35 | 139 | 475 | 505 | 7.1 | M 12 SW 10 | 40 | 0576 8360 ... | 0576 8660 ... | |
| 457.2 | REP E W5 457.2 | 454.0 - 459.0 | 12.0 | 35 | 139 | 490 | 520 | 7.3 | M 12 SW 10 | 40 | 0576 8360 ... | 0576 8660 ... | |
| 508.0 | REP E W5 508.0 | 505.0 - 510.0 | 11.0 | 35 | 139 | 540 | 570 | 7.9 | M 12 SW 10 | 40 | 0576 8360 ... | 0576 8660 ... | |
| 531.0 | REP E W5 531.0 | 528.0 - 534.0 | 10.5 | 35 | 139 | 565 | 595 | 8.1 | M 12 SW 10 | 40 | 0576 8360 ... | 0576 8660 ... | |
| 558.8 | REP E W5 558.8 | 556.0 - 562.0 | 10.0 | 35 | 139 | 590 | 620 | 8.5 | M 12 SW 10 | 40 | 0576 8360 ... | 0576 8660 ... | |
| 609.6 | REP E W5 609.6 | 606.0 - 613.0 | 9.0 | 35 | 139 | 640 | 670 | 9.1 | M 12 SW 10 | 40 | 0576 8360 ... | 0576 8660 ... | |
| 634.0 | REP E W5 634.0 | 631.0 - 637.0 | 8.0 | 35 | 139 | 665 | 695 | 9.4 | M 12 SW 10 | 40 | 0576 8360 ... | 0576 8660 ... | |
| 711.2 | REP E W5 711.2 | 707.0 - 715.0 | 7.0 | 35 | 139 | 745 | 775 | 10.3 | M 12 SW 10 | 40 | 0576 8360 ... | 0576 8660 ... | |
| 762.0 | REP E W5 762.0 | 758.0 - 766.0 | 7.0 | 35 | 139 | 795 | 825 | 10.9 | M 12 SW 10 | 40 | 0576 8360 ... | 0576 8660 ... | |
| 812.8 | REP E W5 812.8 | 808.0 - 817.0 | 6.5 | 35 | 139 | 845 | 875 | 11.5 | M 12 SW 10 | 40 | 0576 8360 ... | 0576 8660 ... | |
| 914.4 | REP E W5 914.4 | 909.0 - 919.0 | 5.5 | 35 | 139 | 945 | 975 | 12.7 | M 12 SW 10 | 45 | 0576 8360 ... | 0576 8660 ... | |
| 1016.0 | REP E W5 1016.0 | 1013.0 - 1019.0 | 5.0 | 35 | 139 | 1050 | 1080 | 13.9 | M 12 SW 10 | 45 | 0576 8360 ... | 0576 8660 ... | |
| 1117.5 | REP E W5 1117.5 | 1114.0 - 1120.0 | 4.5 | 35 | 139 | 1150 | 1180 | 15.1 | M 12 SW 10 | 50 | 0576 8360 ... | 0576 8660 ... | |
| 1219.2 | REP E W5 1219.2 | 1216.0 - 1222.0 | 4.0 | 35 | 139 | 1250 | 1280 | 16.3 | M 12 SW 10 | 50 | 0576 8360 ... | 0576 8660 ... | |

Coupling sizes >800 mm are in 2-parts design! Sizes > 1219.2 on request
 ... = Ø without decimals in mm



Refer to page 80.



- 1** Installation handle
- 2** SS Bridge
- 3** EPDM Gasket
- 4** SS Housing

NEW!

NORMACONNECT™
NEW

First-Aid for damaged pipes

The NORMACONNECT™ First-Aid Repair Clamp is ideal for repairing pipes damaged with cracks, holes, splits, pin holes etc. in all kinds of steel, cast iron, copper, plastic and concrete pipes, transporting liquid media and non-flammable gases up to 115 °C.

Advantages at a glance

- Quick installation - Minimizes down time for damaged water pipes and pressurized mains
- Durable materials - Corrosion-resistant stainless steel with full circle EPDM rubber gasket
- Versatile fittings – Sophisticated design ensures that each size can securely seal a range of pipe sizes and materials
- Economical – Faster and more cost-effective than replacing entire sections of pipe immediately
- Certifications – Pressure tested according to DVGW W336 norms, EPDM gasket according to DIN EN 681.1 standard, gasket tested according to European Elastomer specification (former KTW and W270 standard)

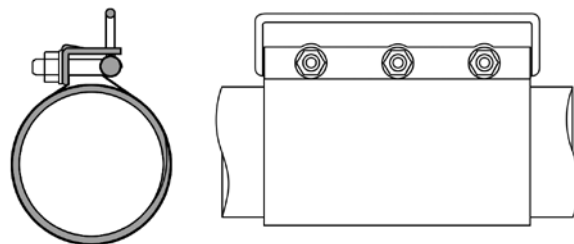
Materials

| | | | | |
|----|----|----|----|----|
| W1 | W2 | W3 | W4 | W5 |
| | | | x | |

Information

- Sizes: 59-70 mm up to 396-407 mm
- Working pressure: 10-16 bar
- Materials: Housing AISI 304, Gasket EPDM
- Working temperature: Up to 115 °C

Technical data & Ordering information



NORMA® FIRST-AID REPAIR CLAMP

| Designation | Clamping ranges | Length (mm) | PN (bar) | Bolt diameter | Max. tightening torque (Nm) | Weight (kg/pc.) | W4 Product No. |
|------------------------------|-----------------|-------------|----------|---------------|-----------------------------|-----------------|----------------|
| FIRST-AID REPAIR CLAMP K-63 | 59-70 | 100 | 16 | M12 SW19 | 100 | 0,8 | 0572 2211 063 |
| FIRST-AID REPAIR CLAMP M-63 | 59-70 | 200 | 16 | M12 SW19 | 100 | 1,6 | 0572 2212 063 |
| FIRST-AID REPAIR CLAMP K-68 | 63-72 | 100 | 16 | M12 SW19 | 100 | 0,8 | 0572 2211 068 |
| FIRST-AID REPAIR CLAMP M-68 | 63-72 | 200 | 16 | M12 SW19 | 100 | 1,7 | 0572 2212 068 |
| FIRST-AID REPAIR CLAMP K-75 | 70-81 | 100 | 16 | M12 SW19 | 100 | 0,9 | 0572 2211 075 |
| FIRST-AID REPAIR CLAMP M-75 | 70-81 | 200 | 16 | M12 SW19 | 100 | 1,7 | 0572 2212 075 |
| FIRST-AID REPAIR CLAMP K-82 | 82-91 | 100 | 16 | M12 SW19 | 100 | 1,0 | 0572 2211 082 |
| FIRST-AID REPAIR CLAMP M-82 | 82-91 | 200 | 16 | M12 SW19 | 100 | 1,8 | 0572 2212 082 |
| FIRST-AID REPAIR CLAMP K-104 | 104-114 | 100 | 16 | M12 SW19 | 100 | 1,2 | 0572 2211 104 |
| FIRST-AID REPAIR CLAMP M-104 | 104-114 | 210 | 16 | M12 SW19 | 100 | 2,1 | 0572 2212 104 |
| FIRST-AID REPAIR CLAMP L-104 | 104-114 | 315 | 16 | M12 SW19 | 100 | 3,4 | 0572 2213 104 |
| FIRST-AID REPAIR CLAMP K-131 | 128-140 | 200 | 16 | M16 SW24 | 130 | 2,8 | 0572 2211 131 |
| FIRST-AID REPAIR CLAMP M-131 | 128-140 | 250 | 16 | M16 SW24 | 130 | 3,7 | 0572 2212 131 |
| FIRST-AID REPAIR CLAMP L-131 | 128-140 | 315 | 16 | M16 SW24 | 130 | 4,7 | 0572 2213 131 |
| FIRST-AID REPAIR CLAMP K-140 | 138-150 | 200 | 16 | M16 SW24 | 130 | 3,1 | 0572 2211 140 |
| FIRST-AID REPAIR CLAMP M-140 | 138-150 | 250 | 16 | M16 SW24 | 130 | 4,0 | 0572 2212 140 |
| FIRST-AID REPAIR CLAMP L-140 | 138-150 | 315 | 16 | M16 SW24 | 130 | 5,0 | 0572 2213 140 |
| FIRST-AID REPAIR CLAMP K-151 | 150-162 | 200 | 16 | M16 SW24 | 130 | 3,2 | 0572 2211 151 |
| FIRST-AID REPAIR CLAMP M-151 | 150-162 | 250 | 16 | M16 SW24 | 130 | 4,2 | 0572 2212 151 |
| FIRST-AID REPAIR CLAMP L-151 | 150-162 | 315 | 16 | M16 SW24 | 130 | 5,2 | 0572 2213 151 |
| FIRST-AID REPAIR CLAMP K-166 | 163-175 | 200 | 16 | M16 SW24 | 130 | 3,4 | 0572 2211 166 |
| FIRST-AID REPAIR CLAMP M-166 | 163-175 | 250 | 16 | M16 SW24 | 130 | 4,4 | 0572 2212 166 |
| FIRST-AID REPAIR CLAMP L-166 | 163-175 | 315 | 16 | M16 SW24 | 130 | 5,4 | 0572 2213 166 |
| FIRST-AID REPAIR CLAMP K-178 | 178-192 | 200 | 16 | M16 SW24 | 130 | 3,5 | 0572 2211 178 |
| FIRST-AID REPAIR CLAMP M-178 | 178-192 | 250 | 16 | M16 SW24 | 130 | 4,5 | 0572 2212 178 |
| FIRST-AID REPAIR CLAMP L-178 | 178-192 | 315 | 16 | M16 SW24 | 130 | 5,6 | 0572 2213 178 |
| FIRST-AID REPAIR CLAMP K-190 | 191-202 | 200 | 10 | M16 SW24 | 130 | 3,5 | 0572 2211 190 |
| FIRST-AID REPAIR CLAMP M-190 | 191-202 | 250 | 10 | M16 SW24 | 130 | 4,6 | 0572 2212 190 |
| FIRST-AID REPAIR CLAMP L-190 | 191-202 | 315 | 10 | M16 SW24 | 130 | 5,8 | 0572 2213 190 |
| FIRST-AID REPAIR CLAMP M-215 | 215-226 | 250 | 10 | M16 SW24 | 130 | 4,7 | 0572 2212 215 |
| FIRST-AID REPAIR CLAMP L-215 | 215-226 | 315 | 10 | M16 SW24 | 130 | 6,2 | 0572 2213 215 |
| FIRST-AID REPAIR CLAMP M-225 | 220-230 | 250 | 10 | M16 SW24 | 130 | 5,2 | 0572 2212 225 |
| FIRST-AID REPAIR CLAMP L-225 | 220-230 | 315 | 10 | M16 SW24 | 130 | 6,5 | 0572 2213 225 |
| FIRST-AID REPAIR CLAMP M-260 | 251-261 | 250 | 10 | M16 SW24 | 130 | 5,6 | 0572 2212 260 |
| FIRST-AID REPAIR CLAMP L-260 | 251-261 | 315 | 10 | M16 SW24 | 130 | 7,0 | 0572 2213 260 |
| FIRST-AID REPAIR CLAMP M-269 | 269-281 | 250 | 10 | M16 SW24 | 130 | 5,4 | 0572 2212 269 |
| FIRST-AID REPAIR CLAMP M-306 | 306-316 | 315 | 10 | M16 SW24 | 130 | 7,2 | 0572 2212 306 |
| FIRST-AID REPAIR CLAMP L-306 | 306-316 | 575 | 10 | M16 SW24 | 130 | 13,1 | 0572 2213 306 |
| FIRST-AID REPAIR CLAMP M-315 | 314-325 | 315 | 10 | M16 SW24 | 130 | 7,4 | 0572 2212 315 |
| FIRST-AID REPAIR CLAMP L-315 | 314-325 | 575 | 10 | M16 SW24 | 130 | 13,3 | 0572 2213 315 |
| FIRST-AID REPAIR CLAMP M-345 | 345-357 | 315 | 10 | M16 SW24 | 130 | 7,8 | 0572 2212 345 |
| FIRST-AID REPAIR CLAMP L-345 | 345-357 | 575 | 10 | M16 SW24 | 130 | 14,2 | 0572 2213 345 |
| FIRST-AID REPAIR CLAMP M-400 | 396-407 | 315 | 10 | M16 SW24 | 130 | 8,5 | 0572 2212 400 |
| FIRST-AID REPAIR CLAMP L-400 | 396-407 | 575 | 10 | M16 SW24 | 130 | 15,5 | 0572 2213 400 |

The maximum tightening torque should not be exceeded. The bolts should be tightened until the leakage is visibly sealed.

NORMACLAMP™ – Hose Clamps

A reliable system thanks to optimized components

Whether you're looking for static hose clamps without springs or dynamic ones with springs, single-range or multi-range clamps, with NORMACLAMP™ you'll find the perfect solution for any application.





- 1 Improved asymmetric housing**
– even distribution of forces and safe assembly
- 2 Screw support**
– ease of assembly due to the safe guidance of the emerging band end
- 3 Material and clamping range stamped on the band**
– prevention of errors
- 4 Asymmetric extension**
– prevents the housing from tilting over when the clamp is tightened
- 5 Short housing saddle**
– even contact pressure
- 6 Smooth or stamped inside of band**
– optimal hose protection

Worm drive hose clamps in accordance with DIN 3017

NORMACLAMP™ TORRO™ multi-range hose clamps are ideally suited to applications with high mechanical loads. Thanks to the continuous developments these products have undergone, they remain the benchmark within modern clamp construction. Within the NORMACLAMP™ range, only the TORRO™ has its trademark asymmetrical construction.



The asymmetric housing provides high force, superior torque and even distribution of clamping pressure. Clamp aligns perfectly on the hose and ensures the optimal sealing of the connection.

Advantages at a glance

- Multi-range hose clamp
- No chromium(VI) used for coating purposes
- Clamping ranges in acc. with DIN 3017: 8-12 mm to 140-160 mm
- Larger diameters available on request

Applications

- Joining cooling water lines
- Depressurized and pressurized fuel lines and ventilation systems
- Oil lines
- Joining lines in sanitary applications
- Joining lines in machine building applications
- Lines in the household appliance industry
- Hose lines in the commercial vehicle industries

Materials

| W1* | W2 | W3 | W4 | W5 |
|-----|----|----|----|----|
| X | X | X | X | X |

* No chromium(VI) used for the coating on the closure components

| Material | Corrosion resistance in salt spray testing |
|----------|--|
| W1 | Min. 144 h |
| W2 | Min. 72 h |
| W3 | Min. 200 h* |
| W4 | Min. 400 h |
| W5 | Min. 1000 h |

*Max 10% base metal corrosion permissible

Types of clamp band and screw

| | W1 | W2 | W3 | W4 | W5 |
|---------------------|----|----|----|----|----|
| Phillips head SW 7* | • | • | | | |
| Slotted head SW 7 | | | • | • | • |

* Band width 7.5 mm = SW 6

Band width 7.5 mm

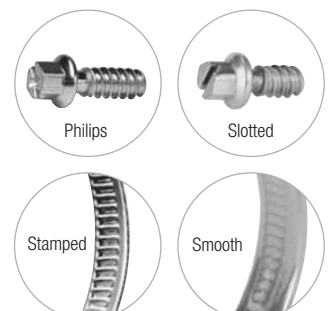
- W2, W3 with smooth inside

Band width 9 mm

- W1 with smooth inside
- W2, W3, W4, W5 with stamped inside

Band width 12 mm

- W1, W2, W3 with smooth inside
- W4, W5 with stamped inside



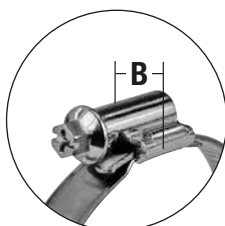
Technical data & Ordering information

| NORMACLAMP™ TORRO™ | | | | | | | | | | | | | |
|--------------------|-----------------------|-----------------|----------------|------|------|------|------|---------------|----------------|----------------|----------------|----------------|----------------|
| Width | Designation | Clamping ranges | | B | h | L | s | S (W1 only) | W1 Product No. | W2 Product No. | W3 Product No. | W4 Product No. | W5 Product No. |
| | | in mm | in inches | | | | | | | | | | |
| 7.5 | TORRO 8-12/7.5 | 8-12 | 5/16-1/2" | 11.5 | 9 | 17 | 0.6 | | | 0116 7602 010 | 0116 7603 010 | | |
| | TORRO 10-16/7.5 | 10-16 | 3/8-5/8" | 11.5 | 9 | 17 | 0.6 | | | 0116 7602 013 | 0116 7603 013 | | |
| | TORRO 12-18/7.5 | 12-18 | 1/2-11/16" | 11.5 | 9 | 17 | 0.6 | | | 0116 7602 015 | 0116 7603 015 | | |
| | TORRO 12-22/7.5 | 12-22 | 1/2-7/8" | 11.5 | 9 | 17 | 0.6 | | | 0116 7602 017 | 0116 7603 017 | | |
| | TORRO 16-27/7.5 | 16-27 | 5/8-1 1/16" | 11.5 | 9 | 17 | 0.6 | | | 0116 7602 021 | 0116 7603 021 | | |
| 9 | TORRO 8-12/9 | 8-12 | 5/16-1/2" | 13.0 | 11.0 | 21.0 | 0.65 | 0.8 | 0126 7565 010 | 0126 7702 010 | 0126 7703 010 | 0126 7704 010 | |
| | TORRO 10-16/9 | 10-16 | 5/16-5/8" | 13.0 | 11.0 | 21.0 | 0.65 | 0.8 | 0126 7565 013 | 0126 7702 013 | 0126 7703 013 | 0126 7704 013 | 0126 7705 013 |
| | TORRO 12-22/9 | 12-22 | 1/2-7/8" | 13.0 | 11.0 | 24.0 | 0.65 | 0.8 | 0126 7565 017 | 0126 7702 017 | 0126 7703 017 | 0126 7704 017 | 0126 7705 017 |
| | TORRO 16-27/9 | 16-27 | 5/8-1 1/16" | 13.0 | 11.0 | 24.0 | 0.65 | 0.8 | 0126 7565 021 | 0126 7702 021 | 0126 7703 021 | 0126 7704 021 | 0126 7705 021 |
| | TORRO 20-32/9 | 20-32 | 13/16-1 1/4" | 13.0 | 11.0 | 24.0 | 0.65 | 0.8 | 0126 7565 026 | 0126 7702 026 | 0126 7703 026 | 0126 7704 026 | 0126 7705 026 |
| | TORRO 23-35/9 | 23-35 | 15/16-1 3/8" | 13.0 | 11.0 | 24.0 | 0.65 | 0.8 | 0126 7565 029 | 0126 7702 029 | 0126 7703 029 | 0126 7704 029 | 0126 7705 029 |
| | TORRO 25-40/9 | 25-40 | 1-1 9/16" | 13.0 | 11.0 | 26.0 | 0.65 | 0.8 | 0126 7565 032 | 0126 7702 032 | 0126 7703 032 | 0126 7704 032 | 0126 7705 032 |
| | TORRO 30-45/9 | 30-45 | 1 3/16-1 3/4" | 13.0 | 11.0 | 26.0 | 0.65 | 0.8 | 0126 7565 037 | 0126 7702 037 | 0126 7703 037 | 0126 7704 037 | 0126 7705 037 |
| | TORRO 35-50/9 (32-50) | 35-50 | 1 3/8-2" | 13.0 | 11.0 | 26.0 | 0.65 | 0.8 | 0126 7565 043 | 0126 7702 041 | 0126 7703 041 | 0126 7704 041 | 0126 7705 041 |
| | TORRO 40-60/9 | 40-60 | 1 9/16-2 3/8" | 13.0 | 11.0 | 26.0 | 0.65 | 0.8 | 0126 7565 050 | 0126 7702 050 | 0126 7703 050 | 0126 7704 050 | 0126 7705 050 |
| | TORRO 50-70/9 | 50-70 | 2-2 3/4" | 13.0 | 11.0 | 26.0 | 0.65 | 0.8 | 0126 7565 060 | 0126 7702 060 | 0126 7703 060 | 0126 7704 060 | 0126 7705 060 |
| | TORRO 60-80/9 | 60-80 | 2 3/8-3 1/8" | 13.0 | 11.0 | 26.0 | 0.65 | 0.8 | 0126 7565 070 | 0126 7702 070 | 0126 7703 070 | 0126 7704 070 | 0126 7705 070 |
| | TORRO 70-90/9 | 70-90 | 2 3/4-3 9/16" | 13.0 | 11.0 | 26.0 | 0.65 | 0.8 | 0126 7565 080 | 0126 7702 080 | 0126 7703 080 | 0126 7704 080 | 0126 7705 080 |
| | TORRO 80-100/9 | 80-100 | 3 1/8-3 15/16" | 13.0 | 11.0 | 26.0 | 0.65 | 0.8 | 0126 7565 090 | 0126 7702 090 | 0126 7703 090 | 0126 7704 090 | 0126 7705 090 |
| | TORRO 90-110/9 | 90-110 | 3 9/16-4 5/16" | 13.0 | 11.0 | 26.0 | 0.65 | 0.8 | 0126 7565 100 | 0126 7702 100 | 0126 7703 100 | 0126 7704 100 | 0126 7705 100 |
| | TORRO 100-120/9 | 100-120 | 3 15/16-4 3/4" | 13.0 | 11.0 | 26.0 | 0.65 | 0.8 | 0126 6565 110 | 0126 6702 110 | 0126 6703 110 | 0126 6704 110 | 0126 6705 110 |
| | TORRO 110-130/9 | 110-130 | 4 5/16-5 1/8" | 13.0 | 11.0 | 26.0 | 0.65 | 0.8 | 0126 6565 120 | 0126 6702 120 | 0126 6703 120 | 0126 6704 120 | 0126 6705 120 |
| | TORRO 120-140/9 | 120-140 | 4 3/4-5 1/2" | 13.0 | 11.0 | 26.0 | 0.65 | 0.8 | 0126 6565 130 | 0126 6702 130 | 0126 6703 130 | 0126 6704 130 | 0126 6705 130 |
| | TORRO 130-150/9 | 130-150 | 5 1/8-5 15/16" | 13.0 | 11.0 | 26.0 | 0.65 | 0.8 | 0126 6565 140 | 0126 6702 140 | 0126 6703 140 | 0126 6704 140 | 0126 6705 140 |
| | TORRO 140-160/9 | 140-160 | 5 1/2-6 5/16" | 13.0 | 11.0 | 26.0 | 0.65 | 0.8 | 0126 6565 150 | 0126 6702 150 | 0126 6703 150 | 0126 6704 150 | 0126 6705 150 |
| 12 | TORRO 16-27/12 | 16-27 | 5/8-1 1/16" | 14.6 | 12.5 | 30.0 | 0.8 | 0.8 | 0136 7352 021 | 0136 7702 021 | 0136 7703 021 | 0136 7704 021 | 0136 7705 021 |
| | TORRO 20-32/12 | 20-32 | 13/16-1 1/4" | 14.6 | 12.5 | 30.0 | 0.8 | 0.8 | 0136 7352 026 | 0136 7702 026 | 0136 7703 026 | 0136 7704 026 | 0136 7705 026 |
| | TORRO 23-35/12 | 23-35 | 15/16-1 3/8" | 14.6 | 12.5 | 30.0 | 0.8 | 0.8 | 0136 7352 029 | 0136 7702 029 | 0136 7703 029 | 0136 7704 029 | 0136 7705 029 |
| | TORRO 25-40/12 | 25-40 | 1-1 9/16" | 14.6 | 12.5 | 30.0 | 0.8 | 1.0 | 0136 7352 032 | 0136 7702 032 | 0136 7703 032 | 0136 7704 032 | 0136 7705 032 |
| | TORRO 30-45/12 | 30-45 | 1 3/16-1 3/4" | 14.6 | 12.5 | 30.0 | 0.8 | 1.0 | 0136 7352 037 | 0136 7702 037 | 0136 7703 037 | 0136 7704 037 | 0136 7705 037 |
| | TORRO 35-50/12 | 35-50 | 1 3/8-2" | 14.6 | 12.5 | 30.0 | 0.8 | 1.0 | 0136 7352 043 | 0136 7702 043 | 0136 7703 043 | 0136 7704 043 | 0136 7705 043 |
| | TORRO 40-60/12 | 40-60 | 1 9/16-2 3/8" | 14.6 | 12.5 | 30.0 | 0.8 | 1.0 | 0136 7352 050 | 0136 7702 050 | 0136 7703 050 | 0136 7704 050 | 0136 7705 050 |
| | TORRO 50-70/12 | 50-70 | 2-2 3/4" | 14.6 | 12.5 | 30.0 | 0.8 | 1.0 | 0136 7352 060 | 0136 7702 060 | 0136 7703 060 | 0136 7704 060 | 0136 7705 060 |
| | TORRO 60-80/12 | 60-80 | 2 3/8-3 1/8" | 14.6 | 12.5 | 30.0 | 0.8 | 1.0 | 0136 7352 070 | 0136 7702 070 | 0136 7703 070 | 0136 7704 070 | 0136 7705 070 |
| | TORRO 70-90/12 | 70-90 | 2 3/4-3 9/16" | 14.6 | 12.5 | 36.0 | 0.8 | 1.0 | 0136 7352 080 | 0136 7702 080 | 0136 7703 080 | 0136 7704 080 | 0136 7705 080 |
| | TORRO 80-100/12 | 80-100 | 3 1/8-3 15/16" | 14.6 | 12.5 | 36.0 | 0.8 | 1.0 | 0136 7352 090 | 0136 7702 090 | 0136 7703 090 | 0136 7704 090 | 0136 7705 090 |
| | TORRO 90-110/12 | 90-110 | 3 9/16-4 5/16" | 14.6 | 12.5 | 36.0 | 0.8 | 1.0 | 0136 7352 100 | 0136 7702 100 | 0136 7703 100 | 0136 7704 100 | 0136 7705 100 |
| | TORRO 100-120/12 | 100-120 | 3 15/16-4 3/4" | 14.6 | 12.5 | 36.0 | 0.8 | 1.0 | 0136 6352 110 | 0136 6702 110 | 0136 6703 110 | 0136 6704 110 | 0136 6705 110 |
| | TORRO 110-130/12 | 110-130 | 4 5/16-5 1/8" | 14.6 | 12.5 | 36.0 | 0.8 | 1.0 | 0136 6352 120 | 0136 6702 120 | 0136 6703 120 | 0136 6704 120 | 0136 6705 120 |
| | TORRO 120-140/12 | 120-140 | 4 3/4-5 1/2" | 14.6 | 12.5 | 36.0 | 0.8 | 1.0 | 0136 6352 130 | 0136 6702 130 | 0136 6703 130 | 0136 6704 130 | 0136 6705 130 |
| TORRO 130-150/12 | 130-150 | 5 1/8-5 15/16" | 14.6 | 12.5 | 36.0 | 0.8 | 1.0 | 0136 6352 140 | 0136 6702 140 | 0136 6703 140 | 0136 6704 140 | 0136 6705 140 | |
| TORRO 140-160/12 | 140-160 | 5 1/2-6 5/16" | 14.6 | 12.5 | 36.0 | 0.8 | 1.0 | 0136 6352 150 | 0136 6702 150 | 0136 6703 150 | 0136 6704 150 | 0136 6705 150 | |

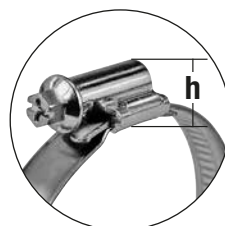
Additional diameters on request (up to 700 mm)



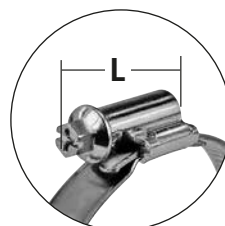
Refer to pages 80 and 82.



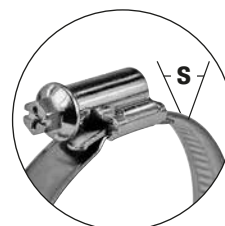
B = overall width
housing



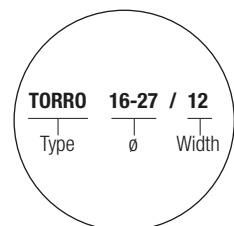
h = overall height
bolt and housing



L = overall length
bolt and housing



s = band thickness
clamp band



Name structure
clamp band



The TORRO™ WF clamp is fitted with a wave spring which automatically re-tensions to ensure optimal radial clamping force. The TORRO™ WF is the ideal choice for applications under extreme temperature changes (e.g. charged air), under extremely low temperatures or for the retention of hoses with a tendency of “creeping”/ hose relaxation.

Advantages at a glance

- Automatic re-tensioning effect in the event of hose relaxation
- Increased sealing reliability across a wide temperature range



Materials

W3, W4

| NORMACLAMP® TORRO® WF | | | | | | | | | |
|-----------------------|--------------------|-----------------|----------------|------|------|------|---------------|-------------------|-------------------|
| Width | Designation | Clamping ranges | | B | h | L | s | W3 Product No. | W4 Product No. |
| | | in mm | in inches | | | | | | |
| 9 | TORRO WF 10-16/9 | 10-16 | 3/8 - 5/8" | 13.0 | 11.0 | 21.0 | 0.65 | 0127 7708 013 | 0127 7711 013 |
| | TORRO WF 12-18/9 | 12-18 | 1/2-11/16" | 13.0 | 11.0 | 24.0 | 0.65 | 0127 7708 018 | 0127 7711 015 |
| | TORRO WF 12-20/9 | 12-20 | 1/2-13/16" | 13.0 | 11.0 | 24.0 | 0.65 | 0127 7708 016 | 0127 7711 016 |
| | TORRO WF 12-22/9 | 12-22 | 1/2-7/8" | 13.0 | 11.0 | 24.0 | 0.65 | 0127 7708 017 | 0127 7711 017 |
| | TORRO WF 16-25/9 | 16-25 | 5/8-1" | 13.0 | 11.0 | 24.0 | 0.65 | 0127 7708 020 | 0127 7711 020 |
| | TORRO WF 16-27/9 | 16-27 | 5/8-1 1/16" | 13.0 | 11.0 | 24.0 | 0.65 | 0127 7708 021 | 0127 7711 021 |
| | TORRO WF 20-32/9 | 20-32 | 13/16-1 1/4" | 13.0 | 11.0 | 24.0 | 0.65 | 0127 7708 026 | 0127 7711 026 |
| | TORRO WF 23-35/9 | 23-35 | 15/16-1 3/8" | 13.0 | 11.0 | 24.0 | 0.65 | 0127 7708 029 | 0127 7711 029 |
| | TORRO WF 25-40/9 | 25-40 | 1-1 9/16" | 13.0 | 11.0 | 26.0 | 0.65 | 0127 7708 032 | 0127 7711 032 |
| | TORRO WF 30-45/9 | 30-45 | 1 3/16-1 3/4" | 13.0 | 11.0 | 26.0 | 0.65 | 0127 7708 037 | 0127 7711 037 |
| | TORRO WF 32-50/9 | 32-50 | 1 3/8-2" | 13.0 | 11.0 | 26.0 | 0.65 | 0127 7708 041 | 0127 7711 041 |
| | TORRO WF 40-60/9 | 40-60 | 1 9/16-2 3/8" | 13.0 | 11.0 | 26.0 | 0.65 | 0127 7708 050 | 0127 7711 050 |
| | TORRO WF 45-65/9 | 45-65 | 1 3/4-2 9/16" | 13.0 | 11.0 | 26.0 | 0.65 | 0127 7708 055 | 0127 7711 055 |
| | TORRO WF 50-70/9 | 50-70 | 2-2 3/4" | 13.0 | 11.0 | 26.0 | 0.65 | 0127 7708 060 | 0127 7711 060 |
| | TORRO WF 60-80/9 | 60-80 | 2 3/8-3 1/8" | 13.0 | 11.0 | 26.0 | 0.65 | 0127 7708 070 | 0127 7711 070 |
| | TORRO WF 70-90/9 | 70-90 | 2 3/4-3 9/16" | 13.0 | 11.0 | 26.0 | 0.65 | 0127 7708 080 | 0127 7711 080 |
| | TORRO WF 80-100/9 | 80-100 | 3 1/8-3 15/16" | 13.0 | 11.0 | 26.0 | 0.65 | 0127 7708 090 | 0127 7711 090 |
| | TORRO WF 90-110/9 | 90-110 | 3 9/16-4 5/16" | 13.0 | 11.0 | 26.0 | 0.65 | 0127 7708 100 | 0127 7711 100 |
| TORRO WF 100-120/9 | 100-120 | 3 15/16-4 3/4" | 13.0 | 11.0 | 26.0 | 0.65 | 0127 7708 110 | 0127 7711 110 | |
| TORRO WF 110-130/9 | 110-130 | 4 3/8-5 1/8" | 13.0 | 11.0 | 26.0 | 0.65 | 0127 7708 120 | 0127 7711 120 | |
| 12 | TORRO WF 16-27/12 | 16-27 | 5/8-1 1/16" | 14.6 | 12.5 | 30.0 | 0.8 | 0137 7708 021 | 0137 7711 021 |
| | TORRO WF 20-32/12 | 20-32 | 13/16-1 1/4" | 14.6 | 12.5 | 30.0 | 0.8 | 0137 7708 026 | 0137 7711 026 |
| | TORRO WF 25-40/12 | 25-40 | 1-1 9/16" | 14.6 | 12.5 | 30.0 | 0.8 | 0137 7708 032 | 0137 7711 032 |
| | TORRO WF 30-45/12 | 30-45 | 1 3/16-1 3/4" | 14.6 | 12.5 | 30.0 | 0.8 | 0137 7708 037 | 0137 7711 037 |
| | TORRO WF 35-50/12 | 35-50 | 1 3/8-2" | 14.6 | 12.5 | 30.0 | 0.8 | 0137 7708 043 | 0137 7711 043 |
| | TORRO WF 40-60/12 | 40-60 | 1 9/16-2 3/8" | 14.6 | 12.5 | 30.0 | 0.8 | 0137 7708 050 | 0137 7711 050 |
| | TORRO WF 50-70/12 | 50-70 | 2-2 3/4" | 14.6 | 12.5 | 30.0 | 0.8 | 0137 7708 060 | 0137 7711 060 |
| | TORRO WF 60-80/12 | 60-80 | 2 3/8-3 1/8" | 14.6 | 12.5 | 30.0 | 0.8 | 0137 7708 070 | 0137 7711 070 |
| | TORRO WF 70-90/12 | 70-90 | 2 3/4-3 9/16" | 14.6 | 12.5 | 36.0 | 0.8 | 0137 7708 080 | 0137 7711 080 |
| | TORRO WF 80-100/12 | 80-100 | 3 1/8-3 15/16" | 14.6 | 12.5 | 36.0 | 0.8 | 0137 7708 090 | 0137 7711 090 |
| | TORRO WF 90-110/12 | 90-110 | 3 9/16-4 5/16" | 14.6 | 12.5 | 36.0 | 0.8 | 0137 7708 100 | 0137 7711 100 |

Available in W2 on request



Refer to page 80.

Table of torques

| TORRO 7.5 W2-W3 | | | | | | | | | | |
|------------------------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Diameter | 8-12 | 10-16 | 12-18 | 12-22 | 16-27 | 20-32 | 25-40 | 30-45 | 35-50 | 40-60 |
| TT | max 1.5 | max 1.5 | max 1.5 | max 1.5 | max 1.5 | | | | | |
| FRT max | | | | | | | | | | |
| TORRO 9 W1 | | | | | | | | | | |
| Diameter | 8-12 | 10-16 | 12-18 | 12-22 | 16-27 | 20-32 | 25-40 | 30-45 | 35-50 | 40-60 |
| TT | 2.5 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 |
| FRT max | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| Diameter | 50-70 | 60-80 | 70-90 | 80-100 | 90-110 | 100-120 | 110-130 | 120-140 | 130-150 | 140-160 |
| TT | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 |
| FRT max | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| TORRO 9 W2 | | | | | | | | | | |
| Diameter | 8-12 | 10-16 | 12-18 | 12-22 | 16-27 | 20-32 | 25-40 | 30-45 | 35-50 | 40-60 |
| TT | | 2 +0.5 | | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 |
| FRT max | | 0.7 | | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| Diameter | 50-70 | 60-80 | 70-90 | 80-100 | 90-110 | 100-120 | 110-130 | 120-140 | 130-150 | 140-160 |
| TT | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 |
| FRT max | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| TORRO 9 W3-W5 | | | | | | | | | | |
| Diameter | 8-12 | 10-16 | 12-18 | 12-22 | 16-27 | 20-32 | 25-40 | 30-45 | 35-50 | 40-60 |
| TT | | 2 +0.5 | | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 |
| FRT max | | 0.7 | | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| Diameter | 50-70 | 60-80 | 70-90 | 80-100 | 90-110 | 100-120 | 110-130 | 120-140 | 130-150 | 140-160 |
| TT | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 | 3 +0.5 |
| FRT max | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| TORRO 12 W1 | | | | | | | | | | |
| Diameter | 8-12 | 10-16 | 12-18 | 12-22 | 16-27 | 20-32 | 25-40 | 30-45 | 35-50 | 40-60 |
| TT | | | | | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 |
| FRT max | | | | | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| Diameter | 50-70 | 60-80 | 70-90 | 80-100 | 90-110 | 100-120 | 110-130 | 120-140 | 130-150 | 140-160 |
| TT | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 |
| FRT max | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| TORRO 12 W2/W3 | | | | | | | | | | |
| Diameter | 8-12 | 10-16 | 12-18 | 12-22 | 16-27 | 20-32 | 25-40 | 30-45 | 35-50 | 40-60 |
| TT | | | | | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 |
| LD max | | | | | 1 | 1 | 1 | 1 | 1 | 1 |
| Diameter | 50-70 | 60-80 | 70-90 | 80-100 | 90-110 | 100-120 | 110-130 | 120-140 | 130-150 | 140-160 |
| TT | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 |
| FRT max | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| TORRO 12 W4/W5 | | | | | | | | | | |
| Diameter | 8-12 | 10-16 | 12-18 | 12-22 | 16-27 | 20-32 | 25-40 | 30-45 | 35-50 | 40-60 |
| TT | | | | | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 |
| FRT max | | | | | 1 | 1 | 1 | 1 | 1 | 1 |
| Diameter | 50-70 | 60-80 | 70-90 | 80-100 | 90-110 | 100-120 | 110-130 | 120-140 | 130-150 | 140-160 |
| TT | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 | 5 +0.5 |
| FRT max | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

TT = Tightening Torque
 FRT = Free Running Torque



- 1 Quick Lock Housing**
- 2 Smooth inner band**
- 3 Smooth edges to prevent damage to the pipe**

Quick locking clamp

NORMACLAMP™ Quick Lock 9 mm is manufactured from a continuously threaded band with smooth edges to prevent damage to the pipe. The Quick Lock housing allows easy and quick application, as the band can

be adjusted to the right diameter of the pipe, before securing the lock with the screw. Band thickness 0.6 mm for band width 9 mm.

Advantages at a glance

- Easy and quick application
- Safe joint with the hose
- Flexibility
- Clamping range from 25-40 up to 60-1300 mm

Applications

- Water industry
- Air conditioning
- Construction
- Sanitary

Materials

| W1 | W2 (B) * | W3 | W4 | W5 |
|----|----------|----|----|----|
| | x | | x | |

*W2 (B): Band in stainless steel (W3)
 Screw and housing in galvanized steel (W1)
 W2 (B) is a combination of W1 and W3 materials

Torques

| Band width | Tightening torque | Tightening speed |
|------------|-------------------|------------------|
| 9 | 2.5 +0.5 Nm | Max. 50 RPM |

Technical data & Ordering information

| NORMACLAMP™ QUICK LOCK 9 MM | | | | | |
|-----------------------------|---------------------|-----------------|------------------|-----------------------|-------------------|
| Width | Designation | Clamping ranges | | W2 (B) Product No. | W4 Product No. |
| | | in mm | in inches | | |
| 9 | QUICK LOCK 25-40/9 | 25-40 | 1-1 9/16" | 0815 6120 040 | |
| | QUICK LOCK 25-45/9 | 25-45 | 1-1 3/4" | 0815 6120 045 | |
| | QUICK LOCK 32-50/9 | 32-50 | 1 1/4-2" | 0815 6120 050 | |
| | QUICK LOCK 40-60/9 | 40-60 | 1 9/16-2 3/8" | 0815 6120 060 | |
| | QUICK LOCK 50-70/9 | 50-70 | 2-2 3/4" | 0815 6120 070 | |
| | QUICK LOCK 60-80/9 | 60-80 | 2 3/8-3 1/8" | 0815 6120 080 | |
| | QUICK LOCK 60-90/9 | 60-90 | 2 3/8-3 9/16" | 0815 6120 090 | |
| | QUICK LOCK 60-100/9 | 60-100 | 2 3/8-3 15/16" | 0815 6120 100 | |
| | QUICK LOCK 60-110/9 | 60-110 | 2 3/8-4 5/16" | 0815 6120 110 | 0815 6130 110 |
| | QUICK LOCK 60-125/9 | 60-125 | 2 3/8-4 15/16" | 0815 6120 125 | |
| | QUICK LOCK 60-135/9 | 60-135 | 2 3/8-5 5/16" | 0815 6120 135 | 0815 6130 135 |
| | QUICK LOCK 60-145/9 | 60-145 | 2 3/8-5 11/16" | 0815 6120 145 | 0815 6130 145 |
| | QUICK LOCK 60-165/9 | 60-165 | 2 3/8-6 1/2" | 0815 6120 165 | |
| | QUICK LOCK 60-170/9 | 60-170 | 2 3/8-6 11/16" | | 0815 6130 170 |
| | QUICK LOCK 60-175/9 | 60-175 | 2 3/8-6 7/8" | 0815 6120 175 | |
| | QUICK LOCK 60-215/9 | 60-215 | 2 3/8-8 7/16" | 0815 6120 215 | 0815 6130 215 |
| | QUICK LOCK 60-270/9 | 60-270 | 2 3/8-10 5/8" | 0815 6120 270 | 0815 6130 270 |
| | QUICK LOCK 60-280/9 | 60-280 | 2 3/8-11" | 0815 6120 280 | |
| | QUICK LOCK 60-290/9 | 60-290 | 2 3/8-11 7/16" | 0815 6120 290 | |
| | QUICK LOCK 60-325/9 | 60-325 | 2 3/8-12 13/16" | 0815 6120 325 | 0815 6130 325 |
| | QUICK LOCK 60-370/9 | 60-370 | 2 3/8-14 9/16" | 0815 6120 370 | |
| | QUICK LOCK 60-380/9 | 60-380 | 2 3/8- 14 15/16" | 0815 6120 380 | 0815 6130 380 |
| | QUICK LOCK 60-425/9 | 60-425 | 2 3/8-16 3/4" | 0815 6120 425 | 0815 6130 425 |
| | QUICK LOCK 60-525/9 | 60-525 | 2 3/8-20 11/16" | 0815 6120 525 | 0815 6130 525 |
| | QUICK LOCK 60-630/9 | 60-630 | 2 3/8-24 13/16" | 0815 6120 630 | |
| | QUICK LOCK 60-660/9 | 60-660 | 2 3/8-26" | 0815 6120 660 | 0815 6130 660 |
| QUICK LOCK 60-1050/9 | 60-1050 | 2 3/8-41 5/16" | 0815 6121 050 | | |
| QUICK LOCK 60-1300/9 | 60-1300 | 2 3/8-51 3/16" | 0815 6121 300 | | |

Additional diameters available on request



Refer to page 80 and 83.



- 1 Tilting housing with screw – Quick lock system
- 2 Perforated band to provide an ideal contact surface for the hose

The clamp for large hoses

NORMACLAMP™ Quick lock 12 mm is designed for quick-lock tightening and releasing of large diameter hoses and supplied in a perforated band, to provide an ideal contact surface for the hose. This clamp is the ideal solution for larger hose diameters over 100 mm. Band thickness 0.7 mm for band width 12 mm assures a very flexible clamp.

Advantages at a glance

- The quick lock housing eases the assembly of the clamp
- Safe joint with the hose
- Flexibility
- Wide clamping range

Applications

- Water industry
- Air conditioning
- Construction
- Sanitary

Materials

| | | | | |
|----|----------|----|----|----|
| W1 | W2 (B) * | W3 | W4 | W5 |
| | x | | | |

*W2 (B): Band in stainless steel (W3)
Screw and housing in galvanized steel (W1)
W2 (B) is a combination of W1 and W3 materials

Technical data & Ordering information

| NORMACLAMP™ QUICK LOCK 12 MM | | | | |
|------------------------------|----------------------|-----------------|------------|-----------------------|
| Width | Designation | Clamping ranges | | W2 (B) Product No. |
| | | in mm | in inches | |
| 12 | QUICK LOCK 50-110/12 | 50-110 | 2-4 5/16 | 0815 6020 080 |
| | QUICK LOCK 50-130/12 | 50-130 | 2-5 1/8 | 0815 6020 090 |
| | QUICK LOCK 50-145/12 | 50-145 | 2-5 11/16 | 0815 6020 098 |
| | QUICK LOCK 50-165/12 | 50-165 | 2-6 1/2 | 0815 6020 108 |
| | QUICK LOCK 50-175/12 | 50-175 | 2-6 7/8 | 0815 6020 113 |
| | QUICK LOCK 50-215/12 | 50-215 | 2-8 7/16 | 0815 6020 133 |
| | QUICK LOCK 50-280/12 | 50-280 | 2-11 | 0815 6020 165 |
| | QUICK LOCK 50-325/12 | 50-325 | 2-12 13/16 | 0815 6020 188 |
| | QUICK LOCK 50-370/12 | 50-370 | 2-14 9/16 | 0815 6020 210 |
| | QUICK LOCK 50-425/12 | 50-425 | 2-16 3/4 | 0815 6020 238 |
| | QUICK LOCK 60-525/12 | 60-525 | 2-20 11/16 | 0815 6020 293 |
| | QUICK LOCK 70-625/12 | 70-625 | 2-24 5/8 | 0815 6020 348 |



Refer to pages 83.



- 1 Bolt**
– New specially designed bolt with integrated spacer and improved performance. The W5 version has a socket head cap bolt
- 2 Reinforced band loops**
– ability to withstand much higher torques
- 3 Mechanically locked closure**
– no welding spots and no contact corrosion
- 4 Bridge**
– hose protection
- 5 Robust band with rounded edges**
– prevents injuries and damage to hoses
- 6 Hollow trunnions**
– reduces the tensile forces on the bolt and the mechanical lock

Heavy-duty clamps for multiple applications

NORMACLAMP™ GBS is designed primarily for use in applications where hose clamps must meet stringent requirements. In particular if suction and pressure hoses - complete with plastic or steel inserts and high shore hardness values - are to be connected and attached. They are particularly suitable for use on commercial and special vehicles. NORMACLAMP™ GBS clamps' ability to withstand exceptionally high levels of band tensile force is an outstanding feature. They are also extremely easy to install, whether you're using manual, pneumatic or electrical standard tools.



Advantages at a glance

- Failure torques improved by a factor of two
- Band tensile force levels improved by a factor of three

Applications

- Machine building
- Chemical industry
- Irrigation systems
- Ship manufacturing
- Railway industry
- Agricultural machines
- Building machines
- Engine manufacturing
- Pump and filter
- Mining Industry

Materials

| W1 | W2 | W3 | W4 | W5 |
|----|----|----|----|----|
| x | x | | x | x |

| Material | Corrosion resistance in salt spray testing |
|----------|--|
| W1 | Min. 72 h |
| W2 | Min. 72 h |
| W4 | Min. 240 h |
| W5 | Min. 400 h |

| NORMACLAMP™ GBS | | | | | | |
|-----------------|--------------------------|-----|-----|-----|----|----|
| Band width | Material thickness in mm | | | | | |
| | W1 | W2 | W4 | W5 | M | SW |
| 18 | 0.8 | 0.6 | 0.6 | 0.6 | 6 | 8 |
| 20 | 1.0 | 0.8 | 0.8 | 0.8 | 7 | 10 |
| 25 | 1.0 | 1.0 | 1.0 | 1.0 | 8 | 13 |
| 30 | 1.3 | 1.0 | 1.0 | 1.0 | 10 | 17 |

Band tensile force

Numerous test results underline the technical superiority of NORMACLAMP™ GBS products over their competitors':

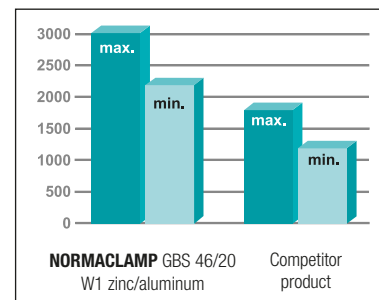


Table of torques

| NORMACLAMP™ GBS | | | | | | NORMACLAMP™ GBS RUBBER INSERT | | | | |
|-----------------|-----------------------------|----|----|----|----------------------------------|-------------------------------|-----------------------------|----|----------------------------------|--|
| Band width | Failure torque (minimum) Nm | | | | Recommended tightening torque Nm | Band width | Failure torque (minimum) Nm | | Recommended tightening torque Nm | |
| | W1 | W2 | W4 | W5 | | | W1 | W2 | | |
| 18 | 15 | 15 | 15 | 15 | 8 | 18 | 10 | 10 | 6 | |
| 20 | 25 | 20 | 20 | 20 | 10 | 20 | 15 | 15 | 8 | |
| 25 | 35 | 30 | 30 | 30 | 20 | 25 | 25 | 25 | 18 | |
| 30 | 50 | 45 | 45 | 45 | 25 | 30 | 40 | 40 | 22 | |

* the recommended tightening speed should not exceed 250 rpm

Technical data & Ordering information

| NORMACLAMP™ GBS HOLLOW TRUNNION | | | | | | | |
|---------------------------------|--------------------|--------------------|-------------------|-------------------|-------------------|-------------------|---------------------|
| Width | Designation | Clamping ranges | | W1 Product No. | W2 Product No. | W4 Product No. | W5** Product No. |
| | | in mm | in inches | | | | |
| 18 | GBS M17-19/18 Sk* | 17-19 | 11/16-3/4" | 0591 7181 018 | 0591 7182 018 | 0591 7184 018 | 0591 7185 018 |
| | GBS M19-21/18 Sk* | 19-21 | 3/4-13/16" | 0591 7181 020 | 0591 7182 020 | 0591 7184 020 | 0591 7185 020 |
| | GBS M21-23/18 Sk* | 21-23 | 13/16-15/16" | 0591 7181 022 | 0591 7182 022 | 0591 7184 022 | 0591 7185 022 |
| | GBS M23-25/18 Sk* | 23-25 | 15/16-1" | 0591 7181 024 | 0591 7182 024 | 0591 7184 024 | 0591 7185 024 |
| | GBS M25-27/18 Sk | 25-27 | 1-1 1/16" | 0591 7181 026 | 0591 7182 026 | 0591 7184 026 | 0591 7185 026 |
| | GBS M27-29/18 Sk | 27-29 | 1 1/16-1 1/8" | 0591 7181 028 | 0591 7182 028 | 0591 7184 028 | 0591 7185 028 |
| | GBS M29-31/18 Sk | 29-31 | 1 1/8-1 1/4" | 0591 7181 030 | 0591 7182 030 | 0591 7184 030 | 0591 7185 030 |
| | GBS M31-34/18 Sk | 31-34 | 1 1/4-1 5/16" | 0591 7181 033 | 0591 7182 033 | 0591 7184 033 | 0591 7185 033 |
| | GBS M34-37/18 Sk | 34-37 | 1 5/16-1 7/16" | 0591 7181 036 | 0591 7182 036 | 0591 7184 036 | 0591 7185 036 |
| | GBS M37-40/18 Sk | 37-40 | 1 7/16-1 9/16" | 0591 7181 039 | 0591 7182 039 | 0591 7184 039 | 0591 7185 039 |
| GBS M40-43/18 Sk | 40-43 | 1 9/16-1 11/16" | 0591 7181 042 | 0591 7182 042 | 0591 7184 042 | 0591 7185 042 | |
| 20 | GBS M43-47/20 Sk | 43-47 | 1 11/16-1 7/8" | 0591 7201 045 | 0591 7202 045 | 0591 7204 045 | 0591 7205 045 |
| | GBS M47-51/20 Sk | 47-51 | 1 7/8-2" | 0591 7201 049 | 0591 7202 049 | 0591 7204 049 | 0591 7205 049 |
| | GBS M51-55/20 Sk | 51-55 | 2-2 3/16" | 0591 7201 053 | 0591 7202 053 | 0591 7204 053 | 0591 7205 053 |
| | GBS M55-59/20 Sk | 55-59 | 2 3/16-2 5/16" | 0591 7201 057 | 0591 7202 057 | 0591 7204 057 | 0591 7205 057 |
| | GBS M59-63/20 Sk | 59-63 | 2 5/16-2 1/2" | 0591 7201 061 | 0591 7202 061 | 0591 7204 061 | 0591 7205 061 |
| | GBS M63-68/20 Sk | 63-68 | 2 1/2-2 11/16" | 0591 7201 066 | 0591 7202 066 | 0591 7204 066 | 0591 7205 066 |
| 25 | GBS M68-73/25 Sk | 68-73 | 2 11/16-2 7/8" | 0591 7251 071 | 0591 7252 071 | 0591 7254 071 | 0591 7255 071 |
| | GBS M73-79/25 Sk | 73-79 | 2 7/8-3 1/8" | 0591 7251 076 | 0591 7252 076 | 0591 7254 076 | 0591 7255 076 |
| | GBS M79-85/25 Sk | 79-85 | 3 1/8-3 3/8" | 0591 7251 082 | 0591 7252 082 | 0591 7254 082 | 0591 7255 082 |
| | GBS M85-91/25 Sk | 85-91 | 3 3/8-3 9/16" | 0591 7251 088 | 0591 7252 088 | 0591 7254 088 | 0591 7255 088 |
| | GBS M91-97/25 Sk | 91-97 | 3 9/16-3 13/16" | 0591 7251 094 | 0591 7252 094 | 0591 7254 094 | 0591 7255 094 |
| | GBS M97-104/25 Sk | 97-104 | 3 13/16-4 1/16" | 0591 7251 101 | 0591 7252 101 | 0591 7254 101 | 0591 7255 101 |
| | GBS M104-112/25 Sk | 104-112 | 4 1/16-4 7/16" | 0591 7251 108 | 0591 7252 108 | 0591 7254 108 | 0591 7255 108 |
| | GBS M112-121/25 Sk | 112-121 | 4 7/16-4 3/4" | 0591 7251 117 | 0591 7252 117 | 0591 7254 117 | 0591 7255 117 |
| | GBS M121-130/25 Sk | 121-130 | 4 3/4-5 1/8" | 0591 7251 126 | 0591 7252 126 | 0591 7254 126 | 0591 7255 126 |
| | 30 | GBS M130-140/30 Sk | 130-140 | 5 1/8-5 1/2" | 0591 7301 135 | 0591 7302 135 | 0591 7304 135 |
| GBS M140-150/30 Sk | | 140-150 | 5 1/2-5 15/16" | 0591 7301 145 | 0591 7302 145 | 0591 7304 145 | 0591 7305 145 |
| GBS M150-162/30 Sk | | 150-162 | 5 15/16-6 3/8" | 0591 7301 156 | 0591 7302 156 | 0591 7304 156 | 0591 7305 156 |
| GBS M162-174/30 Sk | | 162-174 | 6 3/8-6 7/8" | 0591 7301 168 | 0591 7302 168 | 0591 7304 168 | 0591 7305 168 |
| GBS M174-187/30 Sk | | 174-187 | 6 7/8-7 3/8" | 0591 7301 181 | 0591 7302 181 | 0591 7304 181 | 0591 7305 181 |
| GBS M187-200/30 Sk | | 187-200 | 7 3/8-7 7/8" | 0591 7301 194 | 0591 7302 194 | 0591 7304 194 | 0591 7305 194 |
| GBS M200-213/30 Sk | | 200-213 | 7 7/8-8 3/8" | 0591 7301 207 | 0591 7302 207 | 0591 7304 207 | 0591 7305 207 |
| GBS M213-226/30 Sk | | 213-226 | 8 3/8-8 7/8" | 0591 7301 220 | 0591 7302 220 | 0591 7304 220 | 0591 7305 220 |
| GBS M226-239/30 Sk | | 226-239 | 8 7/8-9 7/16" | 0591 7301 233 | 0591 7302 233 | 0591 7304 233 | 0591 7305 233 |
| GBS M239-252/30 Sk | | 239-252 | 9 7/16-9 15/16" | 0591 7301 246 | 0591 7302 246 | 0591 7304 246 | 0591 7305 246 |
| GBS M252-265/30 Sk | | 252-265 | 9 15/16-10 7/16" | 0591 7301 259 | 0591 7302 259 | 0591 7304 259 | 0591 7305 259 |
| GBS M265-278/30 Sk | | 265-278 | 10 7/16-10 15/16" | 0591 7301 272 | 0591 7302 272 | 0591 7304 272 | 0591 7305 272 |
| GBS M279-291/30 Sk | | 279-291 | 11-11 7/16" | 0591 7301 285 | 0591 7302 285 | 0591 7304 285 | 0591 7305 285 |
| GBS M292-304/30 Sk | | 292-304 | 11 1/2-12" | 0591 7301 298 | 0591 7302 298 | 0591 7304 298 | 0591 7305 298 |

* These diameters are full trunnions and do not feature a mechanically locked closure, they are spot-welded.

** ISK bolt for W5 material



1 Powerful clamping brackets structure

Bridge

2

DIN 3016, DIN 3017

Thanks to their robust clamping brackets structure featuring metric bolts, NORMACLAMP™ S/SP clamps provide a high level of clamping force. The two-part version is recommended for exceptionally high pressure and tensile loads.



Advantages at a glance

- High level of clamping force
- Even contact pressure
- Elbow fittings, brackets or lugs can be attached
- Clamps can be fitted with a rubber profile to absorb vibrations and protect against the ingress of creeping water

Applications

- Machine building
- Chemical industry
- Irrigation systems
- Ship manufacturing
- Railway industry
- Agricultural machines
- Building machines
- Engine manufacturing
- Pump and filter

Materials

| | | | | |
|----|----|----|----|----|
| W1 | W2 | W3 | W4 | W5 |
| x | | | x* | x |

*Only for the 30 mm band width

| Material | Corrosion resistance in salt spray testing |
|----------|--|
| W1 | Min. 72 h |
| W5 | Min. 400 h |

| NORMACLAMP™ S/SP | | | | | |
|------------------------------|--------------------|--------------------------|-----|--------------------------------------|-----|
| Band width b ₁ | Minimum Ø in mm | Material thickness in mm | | | |
| | | S | | SP | |
| | | W1 | W5 | W1 | W5 |
| 5 | 5 | 0.2 | – | 0.2 | – |
| 7 | 6 | 0.3/0.4 | 0.4 | 0.4 | 0.4 |
| 9 | 9 | 0.4 | 0.4 | 0.6 | 0.4 |
| 12 | 12 | 0.5 | 0.5 | 0.7 | 0.5 |
| 15 | 20 | 0.6 | 0.6 | 0.8 | 0.6 |
| 20 | 25 | 1.0 | 0.8 | (up to ø 47) 1.0 (from ø 48) 1.25 | 0.8 |
| 25 | 50 | 1.25 | 1.0 | 1.25/1.5 | 1 |

Bolts

| NORMACLAMP™ S/SP | | | |
|------------------|--------|----------|---------|
| Band width mm | Zy | Sz | Sk |
| 5 | M 2x12 | | |
| 7 | M 3x16 | | |
| 9 | M 4x22 | M 4 x 20 | |
| 12 | | M 5x25 | |
| 15 | | M 6x30 | |
| 20 | | M 8x40 | |
| 25 | | | M 10x45 |

Static torques

| NORMACLAMP™ S/SP | | |
|------------------------------------|-----------------------------------|--------------------------|
| Band width b ₁ mm | Static tightening torque Nm | Static test torque Nm |
| | max. | |
| 7 | 0.5 | 0.6 |
| 9 | 1.2 | 1.5 |
| 12 | 1.5 | 1.8 |
| 15 | 4 | 4.8 |
| 20 | 12 | 14.5 |
| 25 | 30 | 36 |

Static torques according to DIN 3017-2

Technical data & Ordering information

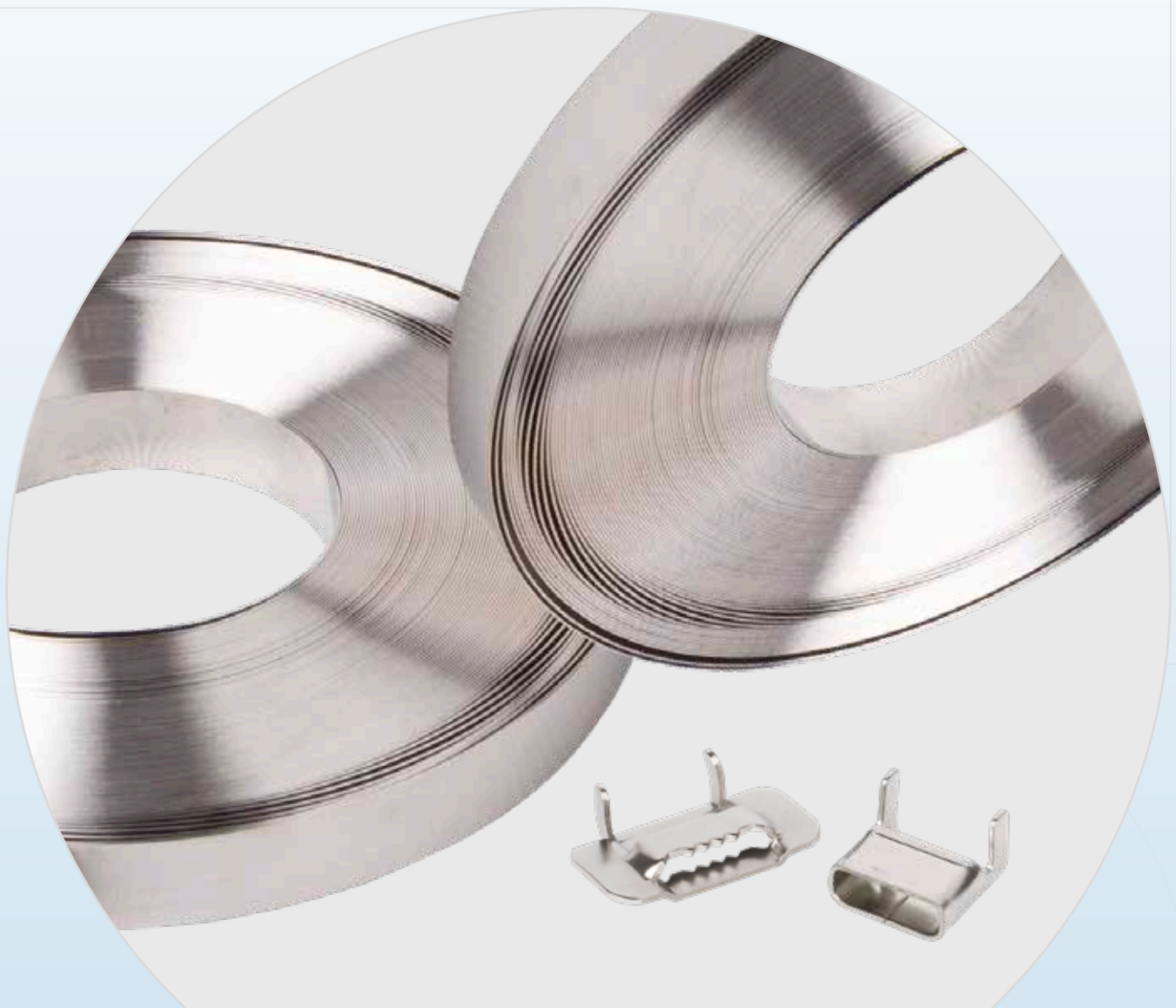
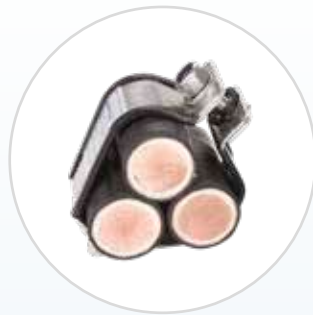
| NORMACLAMP™ S | | | | | | | | | | | | | | | |
|-----------------------------|-------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|---------------|---------------|---------------|
| Clamping diameter, mm | W1 Product No. | | | | | | | | W4 Product No. | W5 Product No. | | | | | |
| | Band width | | | | | | | | Band width | Band width | | | | | |
| | 5 mm Zy | 7 mm Zy | 9 mm Zy | 12 mm Sz | 15 mm Sz | 20 mm Sz | 25 mm Sz | 30 mm Sz | 30 mm Sz | 7 mm Zy | 9 mm Zy | 12 mm Sz | 15 mm Sz | 20 mm Sz | 25 mm Sz |
| up to 9 | 0100 8980 ... | | | | | | | | | | | | | | |
| up to 10 | | 0110 8980 ... | 0120 8980 ... | | | | | | | 0110 0700 ... | 0120 0700 ... | | | | |
| from 15 | | | 0120 8980 ... | 0130 0005 ... | 0140 0000 ... | | | | | | 0120 0700 ... | 0130 0705 ... | 0140 0700 ... | | |
| up to 20 | | | 0120 8980 ... | 0130 0005 ... | 0140 0000 ... | | | | | | 0120 0700 ... | 0130 0705 ... | 0140 0700 ... | | |
| up to 28 | | | 0120 8980 ... | 0130 0005 ... | 0140 0000 ... | | | | | | 0120 0700 ... | 0130 0705 ... | 0140 0700 ... | | |
| up to 30 | | | 0120 8980 ... | | 0140 0000 ... | | | | | | 0120 0700 ... | | 0140 0700 ... | | |
| from 36 | | | 0120 8980 ... | | 0140 0000 ... | 0150 0000 ... | | | | | 0120 0700 ... | | 0140 0700 ... | 0150 0700 ... | |
| up to 40 | | | 0120 8980 ... | | 0140 0000 ... | 0150 0000 ... | | | | | 0120 0700 ... | | 0140 0700 ... | 0150 0700 ... | |
| up to 50 | | | 0120 8980 ... | | 0140 0000 ... | 0150 0000 ... | 0160 0000 ... | | | | 0120 0700 ... | | 0140 0700 ... | 0150 0700 ... | 0160 0700 ... |
| up to 60 | | | 0120 8980 ... | | 0140 0000 ... | 0150 0000 ... | 0160 0000 ... | | | | 0120 0700 ... | | 0140 0700 ... | 0150 0700 ... | 0160 0700 ... |
| up to 70 | | | 0120 8980 ... | | 0140 0000 ... | 0150 0000 ... | 0160 0000 ... | | | | 0120 0700 ... | | 0140 0700 ... | 0150 0700 ... | 0160 0700 ... |
| up to 75 | | | 0120 8980 ... | | 0140 0000 ... | 0150 0000 ... | 0160 0000 ... | 0180 0000 ... | 0180 0700 ... | | 0120 0700 ... | | 0140 0700 ... | 0150 0700 ... | 0160 0700 ... |
| up to 80 | | | | | 0140 0000 ... | 0150 0000 ... | 0160 0000 ... | 0180 0000 ... | 0180 0700 ... | | | | 0140 0700 ... | 0150 0700 ... | 0160 0700 ... |
| up to 90 | | | | | 0140 0000 ... | 0150 0000 ... | 0160 0000 ... | 0180 0000 ... | 0180 0700 ... | | | | 0140 0700 ... | 0150 0700 ... | 0160 0700 ... |
| up to 100 | | | | | 0140 0000 ... | 0150 0000 ... | 0160 0000 ... | 0180 0000 ... | 0180 0700 ... | | | | 0140 0700 ... | 0150 0700 ... | 0160 0700 ... |
| up to 110 | | | | | | 0150 0000 ... | 0160 0000 ... | 0180 0000 ... | 0180 0700 ... | | | | | 0150 0700 ... | 0160 0700 ... |
| up to 120 | | | | | | 0150 0000 ... | 0160 0000 ... | 0180 0000 ... | 0180 0700 ... | | | | | 0150 0700 ... | 0160 0700 ... |
| up to 130 | | | | | | 0150 0000 ... | | 0180 0000 ... | 0180 0700 ... | | | | | 0150 0700 ... | |
| up to 140 | | | | | | 0150 0000 ... | | 0180 0000 ... | 0180 0700 ... | | | | | 0150 0700 ... | |
| up to 150 | | | | | | 0150 0000 ... | | 0180 0000 ... | 0180 0700 ... | | | | | 0150 0700 ... | |
| up to 160 | | | | | | 0150 0000 ... | | 0180 0000 ... | 0180 0700 ... | | | | | 0150 0700 ... | |
| up to 170 | | | | | | 0150 0000 ... | | 0180 0000 ... | 0180 0700 ... | | | | | 0150 0700 ... | |
| up to 180 | | | | | | 0150 0000 ... | | 0180 0000 ... | 0180 0700 ... | | | | | 0150 0700 ... | |
| up to 190 | | | | | | 0150 0000 ... | | 0180 0000 ... | 0180 0700 ... | | | | | 0150 0700 ... | |
| up to 200 | | | | | | 0150 0000 ... | | 0180 0000 ... | 0180 0700 ... | | | | | 0150 0700 ... | |

... = Ø without decimals in mm
Additional diameters available on request

NORMAFIX™ – Retaining Products

Versatile products for a whole host of applications

The NORMAFIX® range of clamps, clips and systems for retaining pipes, cables, cable harnesses and hoses are ready for action wherever they're needed – walls, ceilings or car bodies.





NORMAFIX™ Cable Cleats are approved by DNV(Det Norske Veritas) and ABS(American Bureau of Shipping).

Cable Cleats are designed to support and retain the cables and conductors within the cable tray system, reducing the mechanical load exerted to them in every conditions. Most importantly, they prevent the damage in short circuit condition. Unfortunately, short circuit always happens, and when it does, it is destructive and dangerous to the cables and cable system. Cable Cleats are one of the first lines of defense to help protect the personnel, the cables and the cable system. They are designed for use within industrial and hazardous areas, as well as specialist applications such as oil and gas, shipbuilding, petrochemical, railway and underground, etc.

Electrical and Mechanical Characteristics

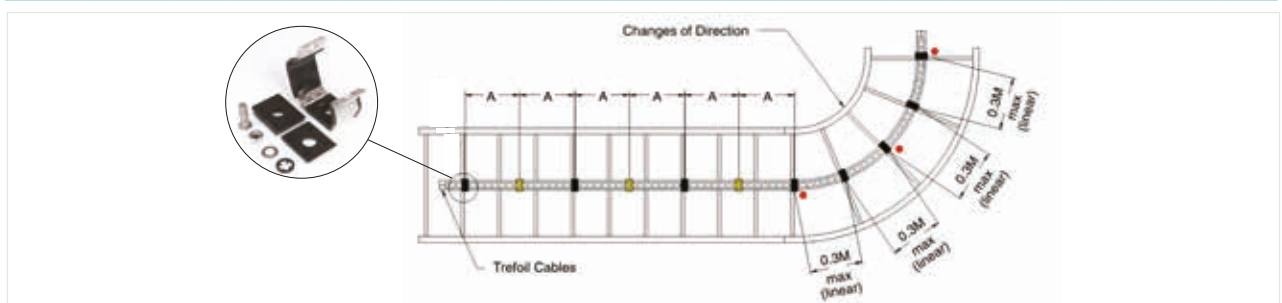
| | | | |
|------------------|---|---------------------------------------|---|
| Cleat Material | Composite | Resistance to Electromechanical Force | 230kA Peak 300mm Spacing 180kA Peak 600mm Spacing 100kA Peak 1200mm Spacing |
| Frame | 54mm*2.0mm, marine grade, Non-magnetic 316L | Lateral Load Test | Average 25kg |
| Closure Hardware | 316SS M8 or M10 bolt and Nylon Lock Nut | Axial Load Test | Pass |
| Integral Pad | Low Smoke, Low Fume, Halogen Free | Max and Min Temperature | -40°C~120°C |
| Tools Required | Wrench | Resistance to Impact | Pass |
| Mounting Bolt | Provided with the Cable Cleat | Needle Flame Test | 30 Seconds |
| | | Resistant to UV light Test | 1000 hours |

How to select Cable Cleats

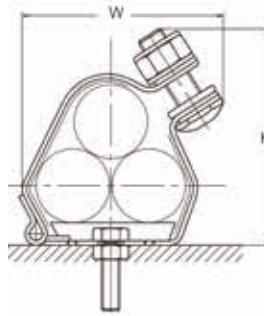
- Know the Cables**
 - Which type of cable, Single or Multi-Conductor?
 - What is the outer diameter of cable?
 - What is the available short circuit current (RMS or IP Peak) of the cable?
 - If ground wire is installed in cleats, what is the outer diameter of ground wire?
- Know the Cable System**
 - What is the cable formation, Single or Trefoil?
 - What type of the cable tray is installed?

Determine the distance between Cable Cleats for installation

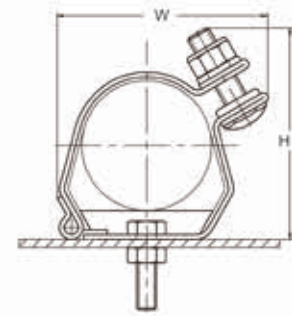
| Max. Cable Cleat Spacing(A) | | Spacing Between Conductor Centers (mm) | | | | | | | | | | | | | | | | | | | |
|-----------------------------|-------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| mm | inch | 23 | 25 | 27 | 29 | 31 | 33 | 35 | 37 | 39 | 41 | 43 | 45 | 47 | 49 | 51 | 53 | 55 | 57 | 59 | 61 |
| 225 | 8.858 | 179 | 187 | 194 | 203 | 209 | 216 | 220 | 229 | 234 | 240 | 246 | 250 | 255 | 261 | 266 | 271 | 276 | 281 | 286 | 291 |
| 300 | 11.81 | 155 | 163 | 168 | 174 | 181 | 187 | 192 | 198 | 203 | 209 | 214 | 215 | 220 | 225 | 230 | 235 | 239 | 244 | 248 | 252 |
| 450 | 17.72 | 128 | 133 | 137 | 144 | 148 | 152 | 157 | 161 | 165 | 170 | 174 | 178 | 180 | 184 | 188 | 192 | 195 | 199 | 202 | 206 |
| 600 | 23.62 | 110 | 115 | 119 | 124 | 128 | 132 | 135 | 139 | 143 | 148 | 150 | 153 | 156 | 160 | 163 | 166 | 169 | 172 | 175 | 178 |
| 675 | 26.57 | 104 | 108 | 113 | 117 | 121 | 124 | 128 | 132 | 135 | 139 | 143 | 147 | 147 | 150 | 154 | 156 | 159 | 162 | 165 | 168 |
| 900 | 35.43 | 89 | 93 | 97 | 102 | 105 | 108 | 110 | 115 | 117 | 121 | 124 | 127 | 128 | 130 | 133 | 135 | 138 | 140 | 143 | 145 |



Technical data & Ordering information



TREFOIL



SINGLE

| NORMAFIX™ CABLE CLEATS – TREFOIL | | | | | | | | |
|----------------------------------|-------------|------|-----------|------|------------|------|-----|------|
| Part Number | Cable Range | | | | Dimensions | | | |
| | Min. Dia. | | Max. Dia. | | H | | W | |
| | mm | inch | mm | inch | mm | inch | mm | inch |
| FF-T1323 | 13 | 0.51 | 23 | 0.91 | 73 | 2.87 | 68 | 2.68 |
| FF-T2125 | 21 | 0.83 | 25 | 0.98 | 75 | 2.95 | 72 | 2.83 |
| FF-T2329 | 23 | 0.91 | 29 | 1.14 | 80 | 3.15 | 79 | 3.11 |
| FF-T2531 | 25 | 0.98 | 31 | 1.22 | 83 | 3.27 | 82 | 3.23 |
| FF-T2733 | 27 | 1.06 | 33 | 1.30 | 84 | 3.31 | 85 | 3.35 |
| FF-T2935 | 29 | 1.14 | 35 | 1.38 | 89 | 3.50 | 90 | 3.54 |
| FF-T3238 | 32 | 1.26 | 38 | 1.50 | 92 | 3.62 | 96 | 3.78 |
| FF-T3541 | 35 | 1.38 | 41 | 1.61 | 98 | 3.86 | 100 | 3.94 |
| FF-T3844 | 38 | 1.50 | 44 | 1.73 | 100 | 3.94 | 106 | 4.17 |
| FF-T4248 | 42 | 1.65 | 48 | 1.89 | 104 | 4.09 | 113 | 4.45 |
| FF-T4551 | 45 | 1.77 | 51 | 2.01 | 107 | 4.21 | 120 | 4.72 |
| FF-T4753 | 47 | 1.85 | 53 | 2.09 | 110 | 4.33 | 122 | 4.80 |
| FF-T4955 | 49 | 1.93 | 55 | 2.17 | 113 | 4.45 | 125 | 4.92 |
| FF-T5157 | 51 | 2.01 | 57 | 2.24 | 115 | 4.53 | 127 | 5.00 |
| FF-T5359 | 53 | 2.09 | 59 | 2.32 | 118 | 4.65 | 135 | 5.31 |
| FF-T5561 | 55 | 2.17 | 61 | 2.40 | 122 | 4.80 | 138 | 5.43 |
| FF-T5763 | 57 | 2.24 | 63 | 2.48 | 125 | 4.92 | 141 | 5.55 |
| FF-T5965 | 59 | 2.32 | 65 | 2.56 | 126 | 4.96 | 145 | 5.71 |

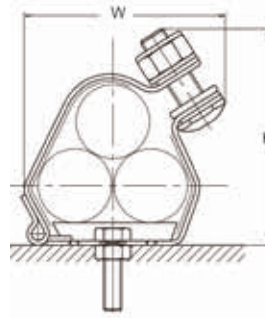
| NORMAFIX™ CABLE CLEATS – TREFOIL | | | | | | | | |
|----------------------------------|-------------|------|-----------|------|------------|------|-----|------|
| Part Number | Cable Range | | | | Dimensions | | | |
| | Min. Dia. | | Max. Dia. | | H | | W | |
| | mm | inch | mm | inch | mm | inch | mm | inch |
| FF-T6167 | 61 | 2.40 | 67 | 2.64 | 131 | 5.16 | 148 | 5.83 |
| FF-T6369 | 63 | 2.48 | 69 | 2.72 | 134 | 5.28 | 153 | 6.02 |
| FF-T6571 | 65 | 2.56 | 71 | 2.80 | 139 | 5.47 | 155 | 6.10 |
| FF-T6773 | 67 | 2.64 | 73 | 2.87 | 143 | 5.63 | 156 | 6.14 |
| FF-T6975 | 69 | 2.72 | 75 | 2.95 | 146 | 5.75 | 161 | 6.34 |
| FF-T7177 | 71 | 2.80 | 77 | 3.03 | 150 | 5.91 | 164 | 6.46 |
| FF-T7379 | 73 | 2.87 | 79 | 3.11 | 154 | 6.06 | 166 | 6.54 |
| FF-T7581 | 75 | 2.95 | 81 | 3.19 | 157 | 6.18 | 170 | 6.69 |
| FF-T7783 | 77 | 3.03 | 83 | 3.27 | 160 | 6.30 | 174 | 6.85 |
| FF-T7985 | 79 | 3.11 | 85 | 3.35 | 162 | 6.38 | 178 | 7.01 |
| FF-T8187 | 81 | 3.19 | 87 | 3.43 | 168 | 6.61 | 181 | 7.13 |
| FF-T8389 | 83 | 3.27 | 89 | 3.50 | 172 | 6.77 | 185 | 7.28 |
| FF-T8896 | 88 | 3.46 | 96 | 3.78 | 180 | 7.09 | 195 | 7.68 |
| FF-T96103 | 96 | 3.78 | 103 | 4.06 | 189 | 7.44 | 203 | 7.99 |
| FF-T103111 | 103 | 4.06 | 111 | 4.37 | 198 | 7.80 | 206 | 8.11 |
| FF-T111119 | 111 | 4.37 | 119 | 4.69 | 207 | 8.15 | 215 | 8.46 |
| FF-T119128 | 119 | 4.69 | 128 | 5.04 | 216 | 8.50 | 223 | 8.78 |

| NORMAFIX™ CABLE CLEATS – SINGLE | | | | | | | | |
|---------------------------------|-------------|------|-----------|------|------------|------|----|------|
| Part Number | Cable Range | | | | Dimensions | | | |
| | Min. Dia. | | Max. Dia. | | H | | W | |
| | mm | inch | mm | inch | mm | inch | mm | inch |
| FF-S2832 | 28 | 1.10 | 32 | 1.26 | 60 | 2.36 | 57 | 2.24 |
| FF-S3034 | 30 | 1.18 | 34 | 1.34 | 61 | 2.40 | 59 | 2.32 |
| FF-S3236 | 32 | 1.26 | 36 | 1.42 | 63 | 2.48 | 61 | 2.40 |
| FF-S3438 | 34 | 1.34 | 38 | 1.50 | 65 | 2.56 | 63 | 2.48 |
| FF-S3640 | 36 | 1.42 | 40 | 1.57 | 67 | 2.64 | 64 | 2.52 |
| FF-S3842 | 38 | 1.50 | 42 | 1.65 | 69 | 2.72 | 65 | 2.56 |
| FF-S4044 | 40 | 1.57 | 44 | 1.73 | 70 | 2.76 | 68 | 2.68 |
| FF-S4246 | 42 | 1.65 | 46 | 1.81 | 71 | 2.80 | 69 | 2.72 |
| FF-S4448 | 44 | 1.73 | 48 | 1.89 | 73 | 2.87 | 72 | 2.83 |
| FF-S4650 | 46 | 1.81 | 50 | 1.97 | 74 | 2.91 | 73 | 2.87 |
| FF-S4852 | 48 | 1.89 | 52 | 2.05 | 75 | 2.95 | 77 | 3.03 |
| FF-S5054 | 50 | 1.97 | 54 | 2.13 | 78 | 3.07 | 78 | 3.07 |
| FF-S5256 | 52 | 2.05 | 56 | 2.20 | 79 | 3.11 | 80 | 3.15 |
| FF-S5458 | 54 | 2.13 | 58 | 2.28 | 80 | 3.15 | 82 | 3.23 |
| FF-S5660 | 56 | 2.20 | 60 | 2.36 | 81 | 3.19 | 85 | 3.35 |
| FF-S5862 | 58 | 2.28 | 62 | 2.44 | 82 | 3.23 | 87 | 3.43 |
| FF-S6064 | 60 | 2.36 | 64 | 2.52 | 85 | 3.35 | 88 | 3.46 |

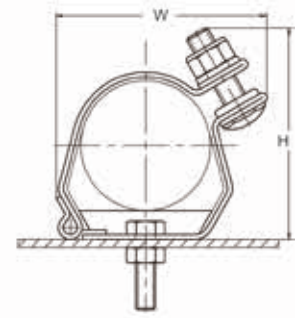
| NORMAFIX™ CABLE CLEATS – SINGLE | | | | | | | | |
|---------------------------------|-------------|------|-----------|------|------------|------|-----|------|
| Part Number | Cable Range | | | | Dimensions | | | |
| | Min. Dia. | | Max. Dia. | | H | | W | |
| | mm | inch | mm | inch | mm | inch | mm | inch |
| FF-S6266 | 62 | 2.44 | 66 | 2.60 | 87 | 3.43 | 90 | 3.54 |
| FF-S6468 | 64 | 2.52 | 68 | 2.68 | 89 | 3.50 | 91 | 3.58 |
| FF-S6670 | 66 | 2.60 | 70 | 2.76 | 90 | 3.54 | 92 | 3.62 |
| FF-S6872 | 68 | 2.68 | 72 | 2.83 | 92 | 3.62 | 94 | 3.70 |
| FF-S7074 | 70 | 2.76 | 74 | 2.91 | 95 | 3.74 | 97 | 3.82 |
| FF-S7276 | 72 | 2.83 | 76 | 2.99 | 97 | 3.82 | 99 | 3.90 |
| FF-S7478 | 74 | 2.91 | 78 | 3.07 | 98 | 3.86 | 102 | 4.02 |
| FF-S7680 | 76 | 2.99 | 80 | 3.15 | 100 | 3.94 | 104 | 4.09 |
| FF-S7882 | 78 | 2.99 | 82 | 3.23 | 102 | 4.02 | 106 | 4.17 |
| FF-S8084 | 80 | 3.15 | 84 | 3.31 | 105 | 4.13 | 107 | 4.21 |
| FF-S8286 | 82 | 3.23 | 86 | 3.39 | 107 | 4.21 | 110 | 4.33 |
| FF-S8488 | 84 | 3.31 | 88 | 3.46 | 109 | 4.29 | 111 | 4.37 |
| FF-S8690 | 86 | 3.39 | 90 | 3.54 | 110 | 4.33 | 113 | 4.45 |
| FF-S9094 | 90 | 3.54 | 94 | 3.70 | 115 | 4.53 | 121 | 4.76 |
| FF-S94118 | 94 | 3.70 | 118 | 4.65 | 133 | 5.24 | 139 | 5.47 |
| FF-S118130 | 118 | 4.65 | 130 | 5.12 | 140 | 5.51 | 144 | 5.67 |
| FF-S127150 | 127 | 5.00 | 150 | 5.91 | 161 | 6.34 | 166 | 6.54 |

NORMAFIX™

Technical data & Ordering information



TREFOIL



SINGLE

| NORMAFIX™ CABLE CLEATS – TREFOIL | | | | | | | | |
|----------------------------------|-------------|------|-----------|------|------------|------|-----|------|
| Part Number | Cable Range | | | | Dimensions | | | |
| | Min. Dia. | | Max. Dia. | | H | | W | |
| | mm | inch | mm | inch | mm | inch | mm | inch |
| FF-T1323 | 13 | 0.51 | 23 | 0.91 | 73 | 2.87 | 68 | 2.68 |
| FF-T2125 | 21 | 0.83 | 25 | 0.98 | 75 | 2.95 | 72 | 2.83 |
| FF-T2329 | 23 | 0.91 | 29 | 1.14 | 80 | 3.15 | 79 | 3.11 |
| FF-T2531 | 25 | 0.98 | 31 | 1.22 | 83 | 3.27 | 82 | 3.23 |
| FF-T2733 | 27 | 1.06 | 33 | 1.30 | 84 | 3.31 | 85 | 3.35 |
| FF-T2935 | 29 | 1.14 | 35 | 1.38 | 89 | 3.50 | 90 | 3.54 |
| FF-T3238 | 32 | 1.26 | 38 | 1.50 | 92 | 3.62 | 96 | 3.78 |
| FF-T3541 | 35 | 1.38 | 41 | 1.61 | 98 | 3.86 | 100 | 3.94 |
| FF-T3844 | 38 | 1.50 | 44 | 1.73 | 100 | 3.94 | 106 | 4.17 |
| FF-T4248 | 42 | 1.65 | 48 | 1.89 | 104 | 4.09 | 113 | 4.45 |
| FF-T4551 | 45 | 1.77 | 51 | 2.01 | 107 | 4.21 | 120 | 4.72 |
| FF-T4753 | 47 | 1.85 | 53 | 2.09 | 110 | 4.33 | 122 | 4.80 |
| FF-T4955 | 49 | 1.93 | 55 | 2.17 | 113 | 4.45 | 125 | 4.92 |
| FF-T5157 | 51 | 2.01 | 57 | 2.24 | 115 | 4.53 | 127 | 5.00 |
| FF-T5359 | 53 | 2.09 | 59 | 2.32 | 118 | 4.65 | 135 | 5.31 |
| FF-T5561 | 55 | 2.17 | 61 | 2.40 | 122 | 4.80 | 138 | 5.43 |
| FF-T5763 | 57 | 2.24 | 63 | 2.48 | 125 | 4.92 | 141 | 5.55 |
| FF-T5965 | 59 | 2.32 | 65 | 2.56 | 126 | 4.96 | 145 | 5.71 |

| NORMAFIX™ CABLE CLEATS – TREFOIL | | | | | | | | |
|----------------------------------|-------------|------|-----------|------|------------|------|-----|------|
| Part Number | Cable Range | | | | Dimensions | | | |
| | Min. Dia. | | Max. Dia. | | H | | W | |
| | mm | inch | mm | inch | mm | inch | mm | inch |
| FF-T6167 | 61 | 2.40 | 67 | 2.64 | 131 | 5.16 | 148 | 5.83 |
| FF-T6369 | 63 | 2.48 | 69 | 2.72 | 134 | 5.28 | 153 | 6.02 |
| FF-T6571 | 65 | 2.56 | 71 | 2.80 | 139 | 5.47 | 155 | 6.10 |
| FF-T6773 | 67 | 2.64 | 73 | 2.87 | 143 | 5.63 | 156 | 6.14 |
| FF-T6975 | 69 | 2.72 | 75 | 2.95 | 146 | 5.75 | 161 | 6.34 |
| FF-T7177 | 71 | 2.80 | 77 | 3.03 | 150 | 5.91 | 164 | 6.46 |
| FF-T7379 | 73 | 2.87 | 79 | 3.11 | 154 | 6.06 | 166 | 6.54 |
| FF-T7581 | 75 | 2.95 | 81 | 3.19 | 157 | 6.18 | 170 | 6.69 |
| FF-T7783 | 77 | 3.03 | 83 | 3.27 | 160 | 6.30 | 174 | 6.85 |
| FF-T7985 | 79 | 3.11 | 85 | 3.35 | 162 | 6.38 | 178 | 7.01 |
| FF-T8187 | 81 | 3.19 | 87 | 3.43 | 168 | 6.61 | 181 | 7.13 |
| FF-T8389 | 83 | 3.27 | 89 | 3.50 | 172 | 6.77 | 185 | 7.28 |
| FF-T8896 | 88 | 3.46 | 96 | 3.78 | 180 | 7.09 | 195 | 7.68 |
| FF-T96103 | 96 | 3.78 | 103 | 4.06 | 189 | 7.44 | 203 | 7.99 |
| FF-T103111 | 103 | 4.06 | 111 | 4.37 | 198 | 7.80 | 206 | 8.11 |
| FF-T111119 | 111 | 4.37 | 119 | 4.69 | 207 | 8.15 | 215 | 8.46 |
| FF-T119128 | 119 | 4.69 | 128 | 5.04 | 216 | 8.50 | 223 | 8.78 |

| NORMAFIX™ CABLE CLEATS – SINGLE | | | | | | | | |
|---------------------------------|-------------|------|-----------|------|------------|------|----|------|
| Part Number | Cable Range | | | | Dimensions | | | |
| | Min. Dia. | | Max. Dia. | | H | | W | |
| | mm | inch | mm | inch | mm | inch | mm | inch |
| FF-S2832 | 28 | 1.10 | 32 | 1.26 | 60 | 2.36 | 57 | 2.24 |
| FF-S3034 | 30 | 1.18 | 34 | 1.34 | 61 | 2.40 | 59 | 2.32 |
| FF-S3236 | 32 | 1.26 | 36 | 1.42 | 63 | 2.48 | 61 | 2.40 |
| FF-S3438 | 34 | 1.34 | 38 | 1.50 | 65 | 2.56 | 63 | 2.48 |
| FF-S3640 | 36 | 1.42 | 40 | 1.57 | 67 | 2.64 | 64 | 2.52 |
| FF-S3842 | 38 | 1.50 | 42 | 1.65 | 69 | 2.72 | 65 | 2.56 |
| FF-S4044 | 40 | 1.57 | 44 | 1.73 | 70 | 2.76 | 68 | 2.68 |
| FF-S4246 | 42 | 1.65 | 46 | 1.81 | 71 | 2.80 | 69 | 2.72 |
| FF-S4448 | 44 | 1.73 | 48 | 1.89 | 73 | 2.87 | 72 | 2.83 |
| FF-S4650 | 46 | 1.81 | 50 | 1.97 | 74 | 2.91 | 73 | 2.87 |
| FF-S4852 | 48 | 1.89 | 52 | 2.05 | 75 | 2.95 | 77 | 3.03 |
| FF-S5054 | 50 | 1.97 | 54 | 2.13 | 78 | 3.07 | 78 | 3.07 |
| FF-S5256 | 52 | 2.05 | 56 | 2.20 | 79 | 3.11 | 80 | 3.15 |
| FF-S5458 | 54 | 2.13 | 58 | 2.28 | 80 | 3.15 | 82 | 3.23 |
| FF-S5660 | 56 | 2.20 | 60 | 2.36 | 81 | 3.19 | 85 | 3.35 |
| FF-S5862 | 58 | 2.28 | 62 | 2.44 | 82 | 3.23 | 87 | 3.43 |
| FF-S6064 | 60 | 2.36 | 64 | 2.52 | 85 | 3.35 | 88 | 3.46 |

| NORMAFIX™ CABLE CLEATS – SINGLE | | | | | | | | |
|---------------------------------|-------------|------|-----------|------|------------|------|-----|------|
| Part Number | Cable Range | | | | Dimensions | | | |
| | Min. Dia. | | Max. Dia. | | H | | W | |
| | mm | inch | mm | inch | mm | inch | mm | inch |
| FF-S6266 | 62 | 2.44 | 66 | 2.60 | 87 | 3.43 | 90 | 3.54 |
| FF-S6468 | 64 | 2.52 | 68 | 2.68 | 89 | 3.50 | 91 | 3.58 |
| FF-S6670 | 66 | 2.60 | 70 | 2.76 | 90 | 3.54 | 92 | 3.62 |
| FF-S6872 | 68 | 2.68 | 72 | 2.83 | 92 | 3.62 | 94 | 3.70 |
| FF-S7074 | 70 | 2.76 | 74 | 2.91 | 95 | 3.74 | 97 | 3.82 |
| FF-S7276 | 72 | 2.83 | 76 | 2.99 | 97 | 3.82 | 99 | 3.90 |
| FF-S7478 | 74 | 2.91 | 78 | 3.07 | 98 | 3.86 | 102 | 4.02 |
| FF-S7680 | 76 | 2.99 | 80 | 3.15 | 100 | 3.94 | 104 | 4.09 |
| FF-S7882 | 78 | 2.99 | 82 | 3.23 | 102 | 4.02 | 106 | 4.17 |
| FF-S8084 | 80 | 3.15 | 84 | 3.31 | 105 | 4.13 | 107 | 4.21 |
| FF-S8286 | 82 | 3.23 | 86 | 3.39 | 107 | 4.21 | 110 | 4.33 |
| FF-S8488 | 84 | 3.31 | 88 | 3.46 | 109 | 4.29 | 111 | 4.37 |
| FF-S8690 | 86 | 3.39 | 90 | 3.54 | 110 | 4.33 | 113 | 4.45 |
| FF-S9094 | 90 | 3.54 | 94 | 3.70 | 115 | 4.53 | 121 | 4.76 |
| FF-S94118 | 94 | 3.70 | 118 | 4.65 | 133 | 5.24 | 139 | 5.47 |
| FF-S118130 | 118 | 4.65 | 130 | 5.12 | 140 | 5.51 | 144 | 5.67 |
| FF-S127150 | 127 | 5.00 | 150 | 5.91 | 161 | 6.34 | 166 | 6.54 |



- 1 Continuous band in smooth version
- 2 Deburred edges prevents workers from getting cut or injured
- 3 2 different closure types to suit different applications

NEW!

Continuous band clamping system

Consisting of a continuous band, the NORMAFIX NORMETTA D-Band system is able to adapt itself to the shape and size of various objects. 2 different types of closure are available to choose from. The deburred edges minimize the injury risk for workers. The system is particularly suitable for carrying out retaining and repair work under difficult and extreme conditions.

Product and closure types

The continuous band is available in a 30 m roll and as smooth version with a range of band widths. It can also be supplied in different material grades.

NORMAFIX™

NEW

Advantages at a glance

- Flexible and versatile
- Can be installed under difficult conditions

Applications

- Irrigation systems
- Railway industry
- Building machines
- Pump and filter
- Attaching signs and containers
- Binding hoses
- Retaining applications; sealing pipes during repair work

Materials

| 202 | W1 | W2 | W3 | W4 | W5 |
|-----|----|----|----|----|----|
| x | | | | x | x |

Working temperature: -80°C to +538°C

Technical data & Ordering information



To be used with the buckle
NB-D



NORMAFIX™ NORMETTA SMOOTH D-BAND

| Width in mm | Length in m | Designation | Thickness in mm | Average breaking strength in kg | Tool | Material | | |
|----------------|----------------|---------------------------------|--------------------|--|---------|--------------------|-------------------|-------------------|
| | | | | | | 202 Product No. | W4 Product No. | W5 Product No. |
| 6.4 | 30 | NORMETTA D-BAND 30M/6.4 202 | 0.51 | 218 | DQH/DQL | 0870 5004 006 | | |
| 9.6 | 30 | NORMETTA D-BAND 30M/9.6 202 | 0.64 | 404 | DQH/DQL | 0870 5004 009 | | |
| 12.7 | 30 | NORMETTA D-BAND 30M/12.7 202 | 0.76 | 666 | DQH/DQL | 0870 5004 013 | | |
| 15.8 | 30 | NORMETTA D-BAND 30M/15.8 202 | 0.76 | 927 | DQH/DQL | 0870 5004 016 | | |
| 19 | 30 | NORMETTA D-BAND 30M/19 202 | 0.76 | 1021 | DQH/DQL | 0870 5004 019 | | |
| 9.6 | 30 | NORMETTA D-BAND 30M/9.6 W4 | 0.6 | 439 | DQH/DQL | | 0870 5005 009 | |
| 12.7 | 30 | NORMETTA D-BAND 30M/12.7 W4 | 0.7 | 560 | DQH/DQL | | 0870 5005 013 | |
| 15.8 | 30 | NORMETTA D-BAND 30M/15.8 W4 | 0.7 | 719 | DQH/DQL | | 0870 5005 016 | |
| 19.1 | 30 | NORMETTA D-BAND 30M/19.1 W4 | 0.7 | 833 | DQH/DQL | | 0870 5005 019 | |
| 9.6 | 30 | NORMETTA D-BAND 30M/9.6 W5 | 0.6 | 388 | DQH/DQL | | | 0870 5006 009 |
| 12.7 | 30 | NORMETTA D-BAND 30M/12.7 W5 | 0.76 | 569 | DQH/DQL | | | 0870 5006 013 |
| 15.9 | 30 | NORMETTA D-BAND 30M/15.9 W5 | 0.76 | 781 | DQH/DQL | | | 0870 5006 016 |
| 19.05 | 30 | NORMETTA D-BAND 30M/19.05 W5 | 0.76 | 912 | DQH/DQL | | | 0870 5006 019 |
| 19.1 | 30 | NORMETTA D-BAND 30M/19.1 202 HD | 1.12 | 1416 | DQH/DQL | 0870 5004 119 | | |
| 25.4 | 30 | NORMETTA D-BAND 30M/25.4 202 HD | 1.12 | 1905 | DQH/DQL | 0870 5004 125 | | |
| 31.8 | 30 | NORMETTA D-BAND 30M/31.8 202 HD | 1.12 | 5194 | DQH/DQL | 0870 5004 132 | | |



Refer to page 81.

Technical data & Ordering information



To be used with the buckle
NB-L



NORMAFIX™ NORMETTA SMOOTH D-BAND

| Width in mm | Length in m | Designation | Thickness in mm | Average breaking strength in kg | Tool | Material | | |
|-------------|-------------|--------------------------------|-----------------|---------------------------------|------|-----------------|----------------|----------------|
| | | | | | | 202 Product No. | W4 Product No. | W5 Product No. |
| 9.6 | 30 | NORMETTA D-BAND 30M/9.6 W4 L | 0.38 | 249 | LQD | | 0870 5005 209 | |
| 12.7 | 30 | NORMETTA D-BAND 30M/12.7 W4 L | 0.4 | 343 | LQD | | 0870 5005 213 | |
| 15.9 | 30 | NORMETTA D-BAND 30M/15.9 W4 L | 0.35 | 400 | LQD | | 0870 5005 216 | |
| 19.05 | 30 | NORMETTA D-BAND 30M/19.05 W4 L | 0.38 | 484 | LQD | | 0870 5005 219 | |



Refer to page 81.



To be used with the buckle
NB-D



NORMAFIX™ NORMETTA SMOOTH D-BAND

| Width in mm | Length in m | Designation | Thickness in mm | Average breaking strength in kg | Tool | Material | | |
|-------------|-------------|----------------------------------|-----------------|---------------------------------|---------|-----------------|----------------|----------------|
| | | | | | | 202 Product No. | W4 Product No. | W5 Product No. |
| 9.6 | 30 | NORMETTA D-BAND DIS 30M/9.6 202 | 0.64 | 404 | DQH/DQL | 0870 5104 009 | | |
| 12.7 | 30 | NORMETTA D-BAND DIS 30M/12.7 202 | 0.76 | 666 | DQH/DQL | 0870 5104 013 | | |
| 15.8 | 30 | NORMETTA D-BAND DIS 30M/15.8 202 | 0.76 | 927 | DQH/DQL | 0870 5104 016 | | |
| 19 | 30 | NORMETTA D-BAND DIS 30M/19 202 | 0.76 | 1021 | DQH/DQL | 0870 5104 019 | | |
| 9.6 | 30 | NORMETTA D-BAND DIS 30M/9.6 W5 | 0.6 | 388 | DQH/DQL | | | 0870 5106 009 |
| 12.7 | 30 | NORMETTA D-BAND DIS 30M/12.7 W5 | 0.76 | 569 | DQH/DQL | | | 0870 5106 013 |
| 15.9 | 30 | NORMETTA D-BAND DIS 30M/15.9 W5 | 0.76 | 781 | DQH/DQL | | | 0870 5106 016 |
| 19.05 | 30 | NORMETTA D-BAND DIS 30M/19.05 W5 | 0.76 | 912 | DQH/DQL | | | 0870 5106 019 |



Refer to page 81.

Technical data & Ordering information



| NORMAFIX™ NB-D | | | | | |
|----------------|-------------------|-----------------|-----------------|----------------|----------------|
| Width in mm | Designation | Thickness in mm | Material | | |
| | | | 202 Product No. | W4 Product No. | W5 Product No. |
| 6.4 | NB-D/6.4 202 | 1.0 | 0870 5014 006 | | |
| 9.6 | NB-D/9.6 202 | 1.0 | 0870 5014 009 | | |
| 12.7 | NB-D/12.7 202 | 1.0 | 0870 5014 013 | | |
| 15.8 | NB-D/15.8 202 | 1.0 | 0870 5014 016 | | |
| 19.1 | NB-D/19.1 202 | 1.5 | 0870 5014 019 | | |
| 9.6 | NB-D/9.6 W4 | 1.0 | | 0870 5015 009 | |
| 12.7 | NB-D/12.7 W4 | 1.0 | | 0870 5015 013 | |
| 15.8 | NB-D/15.8 W4 | 1.0 | | 0870 5015 016 | |
| 19.1 | NB-D/19.1 W4 | 1.5 | | 0870 5015 019 | |
| 9.6 | NB-D/9.6 W5 | 1.0 | | | 0870 5016 009 |
| 12.7 | NB-D/12.7 W5 | 1.0 | | | 0870 5016 013 |
| 15.8 | NB-D/15.8 W5 | 1.0 | | | 0870 5016 016 |
| 19.1 | NB-D/19.1 W5 | 1.5 | | | 0870 5016 019 |
| 19.1 | NB-D/19.1 202 HD | 2.4 | 0870 5014 119 | | |
| 25.4 | NB-D/25.4 202 HD | 2.4 | 0870 5014 125 | | |
| 31.75 | NB-D/31.75 202 HD | 2.4 | 0870 5014 132 | | |



| NORMAFIX™ NB-L | | | |
|----------------|-------------|-----------------|----------------|
| Width in mm | Designation | Thickness in mm | Material |
| | | | W4 Product No. |
| 10 | NB-L/10 W4 | 0.6 | 0870 5014 210 |
| 13 | NB-L/13 W4 | 0.7 | 0870 5014 213 |
| 16 | NB-L/16 W4 | 0.8 | 0870 5014 216 |
| 19 | NB-L/19 W4 | 0.9 | 0870 5014 219 |

NORMAFIX™

NORMA**EXTRA**[™] - Kits, Assortments, Displays, Tools and Accessories

A wide range of assortments, displays, dispensers and tools

NORMA assortments section offers the possibility of having several clamp diameters in one package. All the accessories and the tools mentioned in this chapter are proposed to enable simple and easy installation of the NORMA products.



NORMACONNECT™ FGR
Mounting aid for REP E



NEW!

NORMACONNECT™ FGR MOUNTING AID FOR REP E

| Designation | Product No. |
|-------------------------|---------------|
| FGR, REP E MOUNTING AID | 0572 0000 001 |

NORMACONNECT™ FGR
Fitting pliers belt for REP E



NORMACONNECT™ FGR FITTING PLIERS BELT FOR REP E

| Designation | Product No. |
|--|---------------|
| FITTING PLIERS FOR DIAMETER 38 - 168.3 | 0573 8000 007 |
| FITTING PLIERS FOR DIAMETER 180 - 1200 | 0575 8000 049 |

NORMACLAMP™ TORRO™ Screwdriver
SW6, SW7, SW6/7, SW8

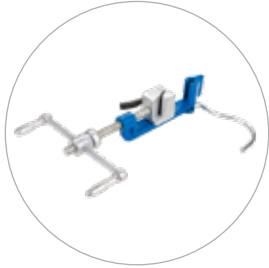


NORMACLAMP™ TORRO™ SCREWDRIVER SW6, SW7, SW6/7, SW8

| Designation | Product No. |
|-------------|---------------|
| SW6 | 0000 0000 899 |
| SW7 | 0000 0000 898 |
| SW6/7 | 0000 0000 894 |
| SW8 | 0000 0000 897 |

NORMAEXTRA™

NORMAFIX™ NORMETTA D-BAND
Clamping and cutting tool



NEW!

NORMAFIX™ NORMETTA D-BAND CLAMPING AND CUTTING TOOL

| Designation | Band Width | Description | Product No. |
|-------------|-------------|--|---------------|
| DQL | 8mm to 19mm | Provide tensile force of approximately 2,400 lbs | 0870 5000 200 |

NORMAFIX™ NORMETTA D-BAND
Clamping and cutting tool



NEW!

NORMAFIX™ NORMETTA D-BAND CLAMPING AND CUTTING TOOL

| Designation | Band Width | Description | Product No. |
|-------------|---------------|---|---------------|
| LQD | 4.6mm to 19mm | Unique 3-way handle for tight areas with minimal access | 0870 5000 300 |

NORMACLAMP™ Quick Lock
Band-on-roll

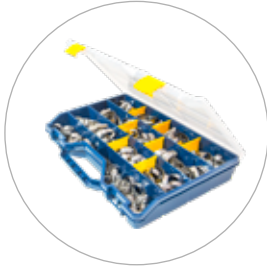


NORMACLAMP™ QUICK LOCK BAND-ON-ROLL

| Width | Designation | Length in m | Number of closures | W2 Product No. | W4 Product No. |
|-------|-----------------|-------------|--------------------|----------------|----------------|
| 9 | BAND-ON-ROLL 3M | 3 | 8 | 0815 7121 001 | 0815 7131 001 |
| | BAND-ON-ROLL 5M | 5 | 8 | 0815 7121 003 | 0815 7131 003 |
| 12 | BAND-ON-ROLL 3M | 3 | 6 | 0815 6007 002 | |
| | BAND-ON-ROLL 5M | 5 | 6 | 0815 6007 004 | |

NORMAEXTRA™

NORMACLAMP™ TORRO™ Assortment type 120 pcs



| NORMACLAMP™ TORRO™ ASSORTMENT TYPE 120 PCS | | | | | |
|--|-----------------|----------------|----------|----------------|----------------|
| Width | Designation | Clamping range | Quantity | W1 Product No. | W4 Product No. |
| 9 | TORRO 8 - 16 /9 | 8 - 16 | 40 | 0126 5005 012 | 0126 5005 014 |
| | TORRO 12 - 22/9 | 12 - 22 | 25 | | |
| | TORRO 16 - 27/9 | 16 - 27 | 20 | | |
| | TORRO 20 - 32/9 | 20 - 32 | 15 | | |
| | TORRO 25 - 40/9 | 25 - 40 | 10 | | |
| | TORRO 35 - 50/9 | 35 - 50 | 10 | | |
| NA | FLEXIDRIVER | NA | 1 | | |

NORMACLAMP™ TORRO™ Dispenser



| NORMACLAMP™ TORRO™ DISPENSER | | | | |
|------------------------------|------------------|----------------|----------|----------------|
| Width | Designation | Clamping range | Quantity | W2 Product No. |
| 7.5 | TORRO 8 - 12/7.5 | 8 - 12 | 10 | 0126 9702 010 |
| 9 | TORRO 8 - 16/9 | 8 - 16 | 10 | |
| | TORRO 12 - 22/9 | 12 - 22 | 10 | |
| | TORRO 16 - 27/9 | 16 - 27 | 10 | |
| | TORRO 20 - 32/9 | 20 - 32 | 10 | |
| | TORRO 25 - 40/9 | 25 - 40 | 10 | |
| | TORRO 32 - 50/9 | 32 - 50 | 10 | |
| | TORRO 40 - 60/9 | 40 - 60 | 10 | |
| | TORRO 50 - 70/9 | 50 - 70 | 10 | |
| | TORRO 60 - 80/9 | 60 - 80 | 10 | |

NORMACLAMP™ TORRO™ Drawer box



| NORMACLAMP® TORRO DRAWER BOX | | | | |
|------------------------------|-----------------|----------------|----------|----------------|
| Width | Designation | Clamping range | Quantity | W2 Product No. |
| 9 | TORRO 8 - 16/9 | 8 - 16 | 155 | 0126 9702 450 |
| | TORRO 12 - 22/9 | 12 - 22 | 60 | |
| | TORRO 16 - 27/9 | 16 - 27 | 100 | |
| | TORRO 20 - 32/9 | 20 - 32 | 50 | |
| | TORRO 25 - 40/9 | 25 - 40 | 50 | |
| | TORRO 32 - 50/9 | 32 - 50 | 15 | |
| | TORRO 50 - 70/9 | 50 - 70 | 20 | |

NORMACLAMP™ TORRO™ Pallet



NORMACLAMP® TORRO PALLET

| Width | Designation | Clamping range | Quantity | W1 Product No. | W4 Product No. |
|-------|-----------------|----------------|----------|----------------|----------------|
| 9 | TORRO 8 - 16/9 | 8 - 16 | 40 | 0126 5006 012 | 0126 5006 015 |
| | TORRO 12 - 22/9 | 12 - 22 | 25 | | |
| | TORRO 16 - 27/9 | 16 - 27 | 20 | | |
| | TORRO 20 - 32/9 | 20 - 32 | 15 | | |
| | TORRO 25 - 40/9 | 25 - 40 | 10 | | |
| NA | FLEXIDRIVER | NA | 1 | | |

**NORMACLAMP™ Quick lock
Band-on-roll dispenser**



NORMACLAMP™ QUICK LOCK BAND-ON-ROLL DISPENSER

| Width | Designation | Length in m | W2 Product No. | W4 Product No. |
|-------|-----------------|-------------|----------------|----------------|
| 9 | BAND-ON-ROLL 3M | 3 | 0815 5007 015 | 0815 5007 014 |
| | BAND-ON-ROLL 5M | 5 | 0815 5007 017 | 0815 5007 016 |



NOTES

A series of horizontal dotted lines for writing notes, spanning the width of the page.

NORMA – User Information

Installation instructions

You can download the assembly instructions for our NORMACONNECT® FGR range on our NORMA website:

http://www.normagroup.com/norma.nsf/id/Downloads_EN_EM_NORMA



Technical glossary

Tightening torque

The tightening torque describes the recommended torque which should be used to tighten a worm drive clamp. In most cases this is the torque that is specified by DIN 3017. It is very easy to measure this torque using a torque wrench.

It is important to note that, in addition to the structure of the clamp (form closure), the band tensile force (clamping force) is chiefly responsible for the sealing properties of a hose clamp connection. The level of this force can only be determined explicitly as a numerical value using appropriate measuring devices. Indirect methods such as measuring the pull-off force or burst pressure of certain connections may be used for comparative purposes. This means that the band tensile force (clamping force) of a clamp cannot be determined directly on the basis of the clamp tightening torque. Therefore, it is necessary to use appropriate structural measures in order to keep the spread of this clamping force to a minimum when a particular tightening torque is applied. This will ensure the components installed are appropriately secure and maintain the connection's sealing properties.

At NORMA Group, we are able to measure these band tensile forces precisely. We draw up band tensile force diagrams in which we enter the initial tightening torque converted into the band tensile force directly as a means of measuring efficiency levels. This allows us to determine the efficiency of the clamp being measured. This data is represented in the band tensile force specification at the nominal torque.

A higher band tensile force at the nominal torque will produce a more effective hose clamp!

Band tensile force

The band tensile force is the level which produces optimum mechanical adhesion and sealing properties in a particular connection (consisting of a hose, spigot and clamp). (See also the information under "Tightening torque.")

As part of the ongoing development of TORRO™ products, the clamps have been optimized so that particularly high band tensile forces can be achieved.

Failure and destruction torque

The failure or destruction torque denotes the torque that has to be applied to the clamp in order to destroy it. Like the test torque, this torque provides an indication of how robust the clamp is and is viewed as particularly significant in the commercial vehicle sector, as torque tools are not always available for installing or removing clamps in service. In this kind of scenario, installing hose clamps simply based on what feels correct (rather than using precise tools) must not result in damage to the clamps.

A high failure or destruction torque means a high level of robustness.

Idling torque

The idling torque refers to the torque that is required for turning a screw/bolt without generating clamping force. An extremely low idling torque and little spread create the ideal conditions for making the clamp easy to handle during installation.

Test torque

The test torque, which is usually around 30% above the tightening torque, denotes the torque that can be applied to the clamp without causing permanent damage to it.

A high test torque means a high level of robustness.



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NORMACONNECT™

NORMAFIX™

NORMAEXTRA™

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