

Connecting solutions

for construction, sanitary,
sewage plants and ship building



NORMA[®] INFRASTRUCTURE

**NEW:
FIRST-AID
REPAIR
CLAMP**

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 operates a global network of 30 production facilities as well as numerous sales and distribution sites across Europe, the Americas, and Asia-Pacific. The company offers more than 40,000 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.



Central Europe



Burkhard Nowack – Area Sales Manager
Phone: +49 6181 403504
Mobile: +49 172 3966576
Email: Burkhard.Nowack@normagroup.com



Marlene Brown – Account Manager
Phone: +49 6181 403251
Email: Marlene.Brown@normagroup.com



Joy Coulton – Account Manager
Phone: +49 6181 4036856
Email: Joy.Coulton@normagroup.com

Spain & Portugal



Sydney Bercy – Area Sales Manager
Phone: +34 934 329 955
Mobile: +34 617 283 160
Email: Sydney.Bercy@normagroup.com

Eastern Europe



Martin Hruban – Area Sales Manager
Phone: +420 519 440 320
Mobile: +420 739 314 929
Email: Martin.Hruban@normagroup.com

Northern Europe

Please contact us:
Mobile: +48 691 541296
Mobile: +48 605 896400

Middle East & Africa



Ahmad Zakaria – Area Sales Manager
Phone: +42 051 9440326
Mobile: +42 073 7253786
Email: Ahmad.Zakaria@normagroup.com

Marine & Offshore EMEA



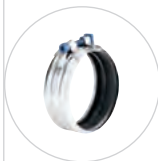
**Tomasz Walaszczyk – Area Sales Manager
EMEA
Marine & Offshore**
Mobile: +48 691 541296
Email: Tomasz.Walaszczyk@normagroup.com

DIRECTOR INFRASTRUCTURE EUROPE, MIDDLE EAST & AFRICA



Jakub Bzowka
Mobile: +48 605896400
Email: Jakub.Bzowka@normagroup.com

INDEX



DCS RAPID



DCS COMBI RESTRAINT COLLAR



FGR FLEX



FGR GRIP E-FP

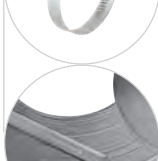


FGR COMBI GRIP

NEW



FIRST-AID REPAIR CLAMP

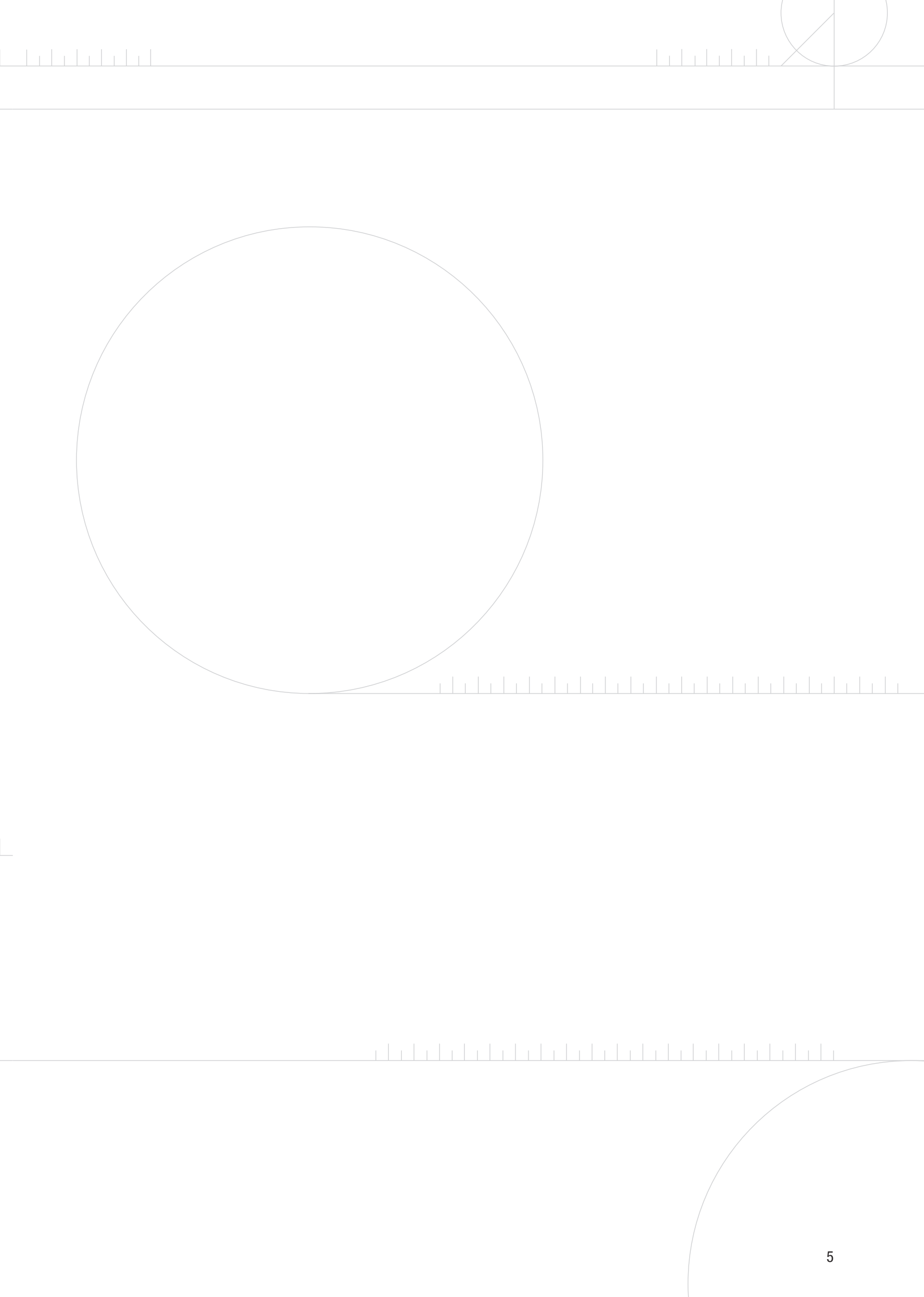


TORRO



NORMETTA

			PAGE	
OVERVIEW	NORMA solutions for drainage and building		6 – 7	
	NORMA solutions for sewage plants		8 – 9	
	NORMA solutions for shipbuilding		10 – 11	
PRODUCT FAMILY	PRODUCT CATEGORY	PRODUCT NAME	PAGE	
NORMACONNECT®	DCS	RAPID	15	
		RAPID MSM	16	
		CV/CE	17	
		SVE	18	
		UNIVERSAL CLAW	19	
		RECORD CLAW	20	
		COMBI CLAW	21	
		CONFIX	22	
		FGR	FLEX <i>now also available with FKM sealing sleeve</i>	31 – 33
			FLEX E	34 – 35
	FLEX 3		36 – 37	
	GRIP <i>now also available with FKM sealing sleeve</i>		38 – 40	
	GRIP E		41 – 42	
	GRIP E-FP		43 – 44	
	RFP		45	
	PLAST GRIP		46	
	PLAST GRIP E		47	
	COMBI GRIP		48	
	COMBI GRIP E		49	
	SUPPORT SLEEVE	50 – 51		
	REP E	52 – 53		
NEW: FIRST-AID REPAIR CLAMP	54 – 55			
NORMACLAMP®	TORRO®	58 – 60		
	QUICK LOCK 9 MM	61 – 62		
	QUICK LOCK 12 MM	63		
	GBS	64 – 65		
NORMAFIX®	NORMETTA	68 – 71		
	CABLE TIES	72 – 73		
KITS, ASSORTMENTS AND TOOLS		75 – 77		
USER INFORMATION		78		



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



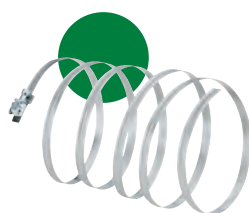
NORMA® DCS Combi Claw

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



NORMA® TORRO®

Applications:
- Pressurized lines



NORMA® Quick Lock

Applications:
- Air conditioning lines
- Exhaustion lines



NORMA® 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



NORMA® Cable Ties

Applications:
- General fixing



NORMA® First-Aid Repair Clamp

Applications:
- For repairs of cracks, holes, splits, pin holes etc. in all kinds of steel, cast iron, copper, plastic and concrete pipes

NORMA® solutions for 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 Ties





- Applications:**
- General fixing

Materials explanation

MATERIALS EXPLANATION	
W1	All parts entirely made from galvanized steel
W2	NORMACLAMP® TORRO®: Band and housing stainless steel AISI 430; Screw: Galvanized mild steel W2B AISI 430 (without TI) NORMACLAMP® GBS: Band and housing stainless steel AISI 439; Bolt: Galvanized mild steel NORMACONNECT® FGR/DCS: see pages 14 and 30
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 (or comparable)
W5	All parts entirely made from stainless steel AISI 316 (or comparable)





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 	Hexagonal-head bolt
Sz 	Slotted hexagonal-head bolt
Zy 	Cylinder-head bolt
Isk 	Inside hexagonal screw

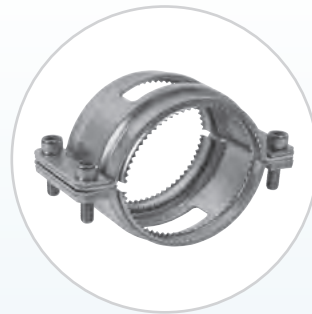
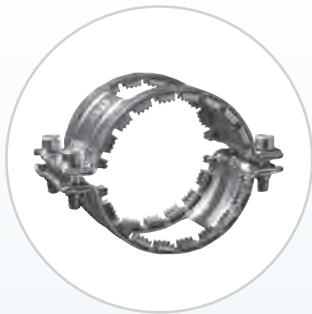
Pictogram explanation

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













Entwässerungstechnik
Guss

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

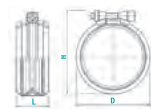
W5

- 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

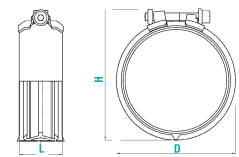
W1	W2	W3	W4	W5
	x			

- 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

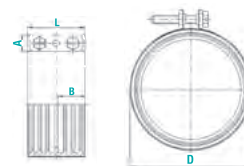
Advantages at a glance

- 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

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.

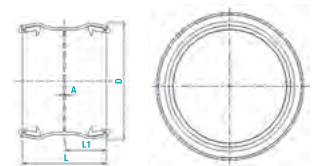
Materials

- 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

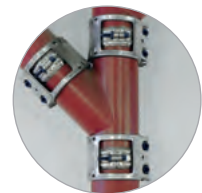
Designation	DN	D (mm)	L (mm)	L' (mm)	A (mm)	Polypropylene-CO Product No.
DCS SVE DN 50	50	77	60	29	2	0245 9500 050
DCS SVE DN 80	75/80	103.5	65.5	32	2	0245 9500 080
DCS SVE DN 100	100	134	82	39.5	3	0245 9500 100
DCS SVE DN 125	125	161	103	50	3	0245 9500 125
DCS SVE DN 150	150	186	103	50	3	0245 9500 150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

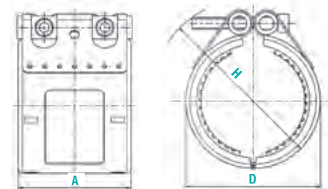
W1	W2	W3	W4	W5
	x			

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

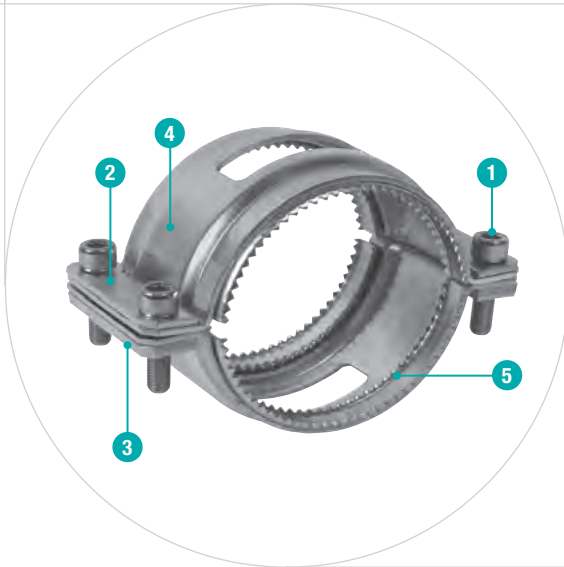
Information

- 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

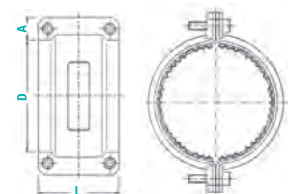
W1	W2	W3	W4	W5
x				

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

Advantages at a glance

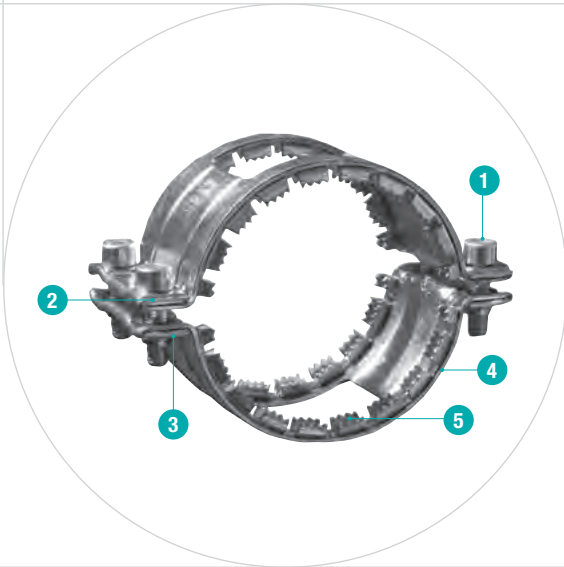
- Two parts (halves) with hardened grip ring inserts
- Strong guiding plates with threaded holes plus four hexagonal socket bolts with fine pitch thread

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 RAPID/RAPID MSM and CV or CE standard collars. The powerful add-on claw for non-pull-out resistant connections.

Materials

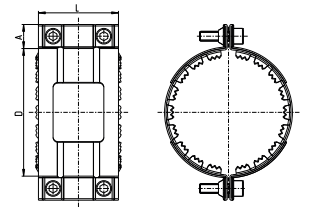
W1	W2	W3	W4	W5
x				

- 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

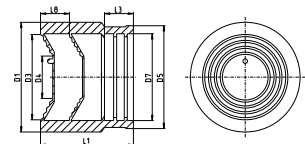
W1	W2	W3	W4	W5
	x			

- 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



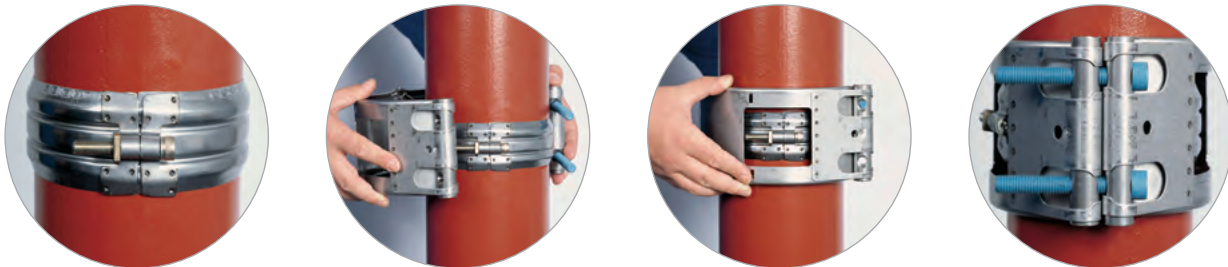
NORMACONNECT® DCS CONFIX, EPDM with TORRO W2, Changeover Connector

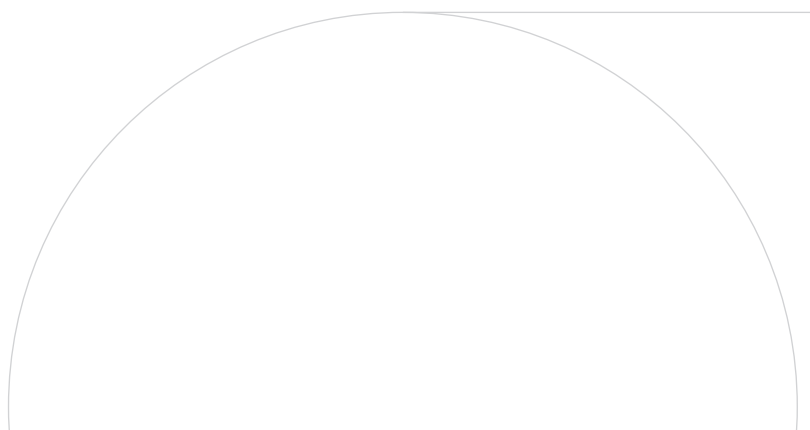
Designation	DN	D1 (mm)	D3 (mm)	D4 (mm)	D5 (mm)	D7 (mm)	L1 (mm)	L3 (mm)	L8 (mm)	W2 Product No.
CONFIX DN 50	50	72	56	30	67.5	57	63	19	19	0245 9003 050
CONFIX DN 70	70	92	75	41	86.5	77	77	19	24	0245 9003 070
CONFIX DN 80 56-75	80	92	75	41	91	81	77	19	24	0245 9003 075
CONFIX DN 80 75-90	80	108	90	58	93	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® 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



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



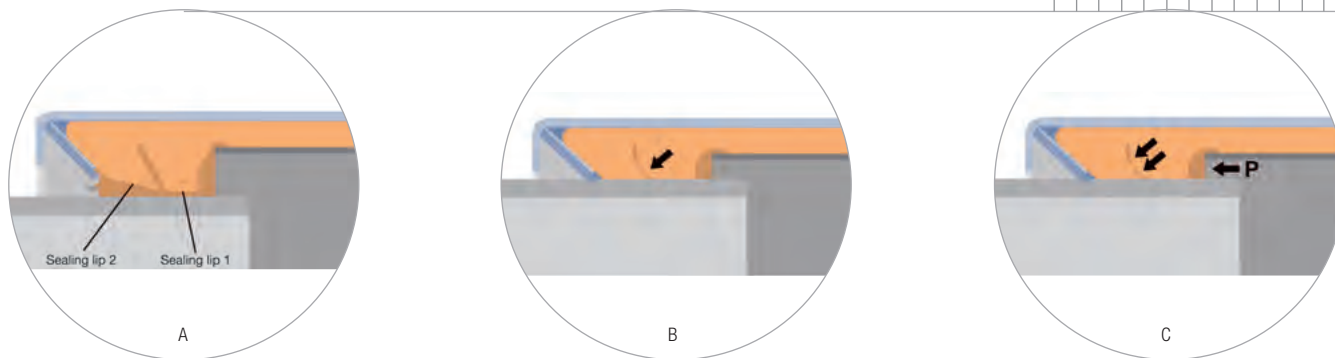
- Compensates for pipe gaps up to 65 mm
- Compensates for axial movements up to 7.5 mm
- Compensates for misalignment up to 3 mm



- 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

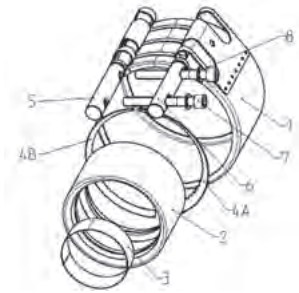
* Higher temperatures possible in some cases

** 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 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.

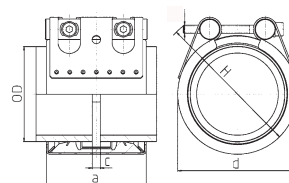
Information

- 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 (up to 180 °C for liquid media on request.)



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	PN ¹ (MAWP ¹ from diameter 180)	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	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® 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®

NORMACONNECT® FGR FLEX E											
Ø (O.D.)	Designation	Clamping ranges Odmin - Odmax	PN¹ (MAWP¹ from Ø 180) [bar]	WP² [bar]	C max (mm)	Dimensions (approx.)			Weight (approx.) (kg/pc.)	Hex socket locking bolts	
						a (mm)	d (mm)	H (mm)		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

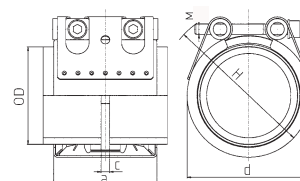
Coupling sizes >800 mm are in 2-parts design! Sizes > 1219.2 on request

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

MAWP¹ (Maximun 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®

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 048
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



- 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

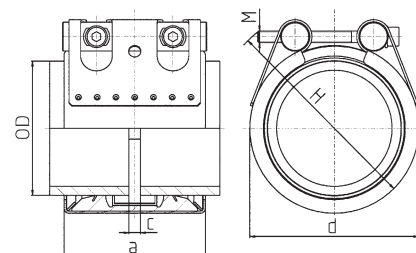
Information

- 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

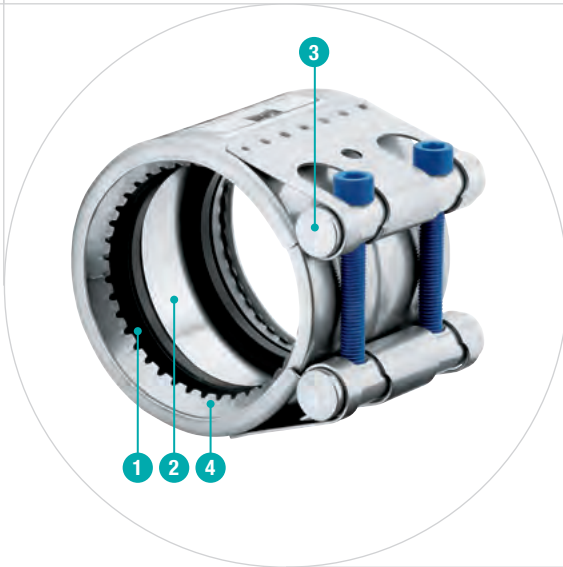
NORMACONNECT® FGR FLEX 3

Ø (O.D.)	Designation	Clamping ranges	WP ¹	C max	Dimensions (approx.)			Weight (approx.)	Hex socket locking bolts		W5 Product No.	
		Odmin - Odmax	 [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	114.0 - 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!

WP¹ is the max. working pressure in industrial applications, with a safety factor as per NORMA specification.

... = Ø without decimals in mm



- 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

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

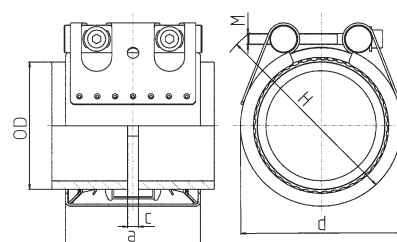
Information

- 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 (up to 180 °C for liquid media on request.)

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 _{min} - 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.

... = Ø without decimals in mm

Technical data & Ordering information

NORMACONNECT®

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 ...	

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.

... = Ø without decimals in mm

GRIP E

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



Material
W2, W5

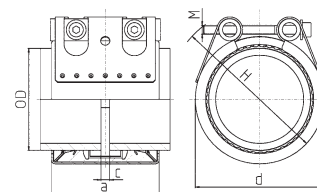
NORMACONNECT® FGR GRIP E

Ø (O.D.)	Designation	Clamping ranges	PN ¹	WP ²	C max	Dimensions (approx.)			Weight (approx.)	Hex socket locking bolts	
		O _{min} - O _{max}	[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.

... = Ø without decimals in mm

Technical data & Ordering information



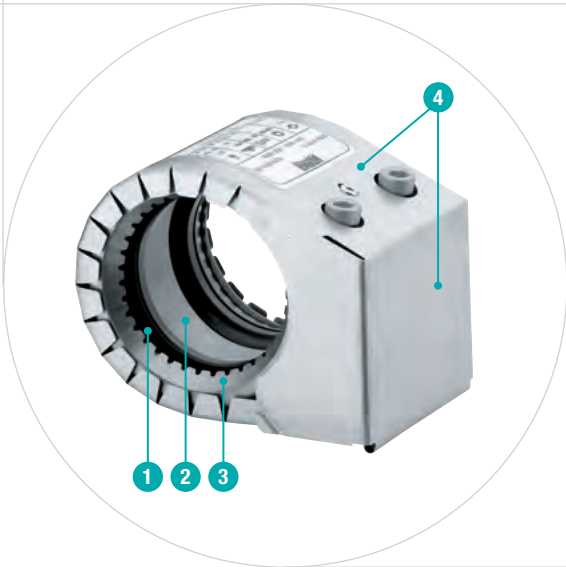
NORMACONNECT®

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 ...

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

... = Ø without decimals in mm

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 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

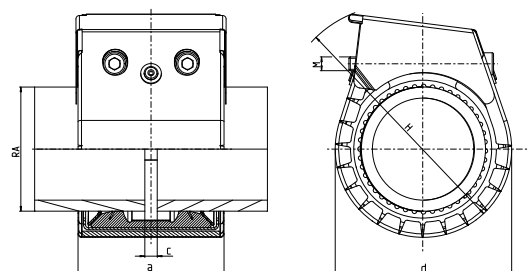
Information

- 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®

NORMACONNECT® FGR GRIP E-FP

Ø (O.D.)	Designation	Clamping ranges Oadmin - Od-max	PN ¹ (MAWP ¹ from diameter 180) [bar]	WP ² [bar]	C max (mm)	Dimensions (approx.)			Weight (approx.) (kg/pc.)	Hex socket locking bolts		W5 Product No.	
						a (mm)	d (mm)	H (mm)		Thread	Tightening torque (Nm)	EPDM	NBR
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.



- 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

NORMACONNECT®

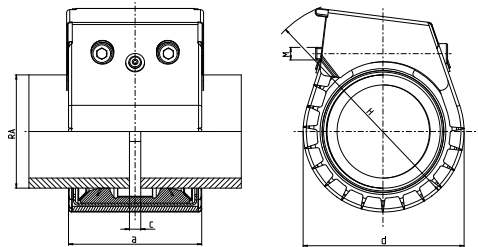
RFP for application at shipbuilding

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

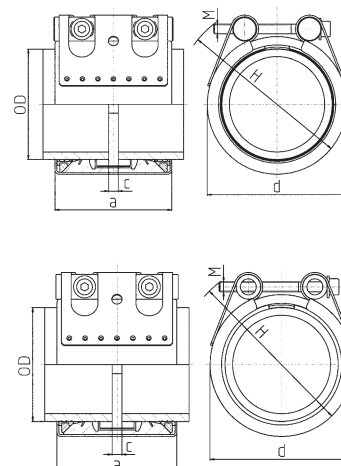
Information

- 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

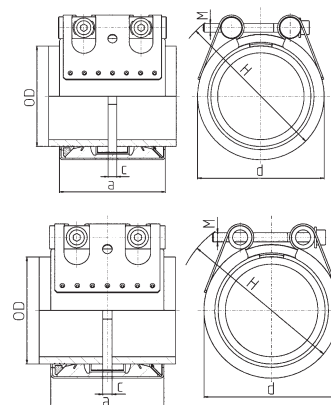
Information

- 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.

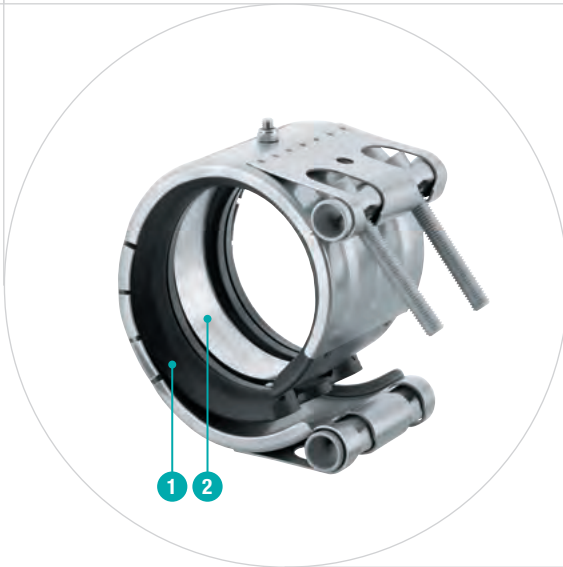
Optional support sleeve

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



- 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

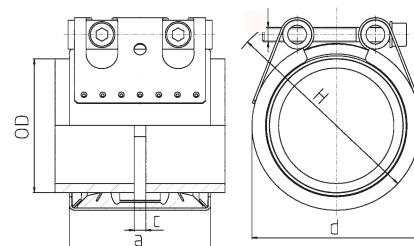
Information

- 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® FGR REP E

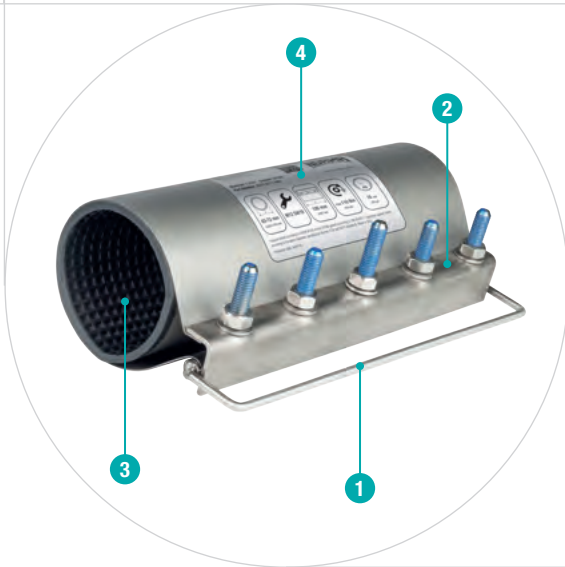
Ø (O.D.)	Designation	Clamping ranges	WP ¹	C max	Dimensions (approx.)			Weight (approx.)	Hex socket locking bolts		W5 Product No.	
		O _{min} - O _{max}	 [bar]	(mm)	a (mm)	d (mm)	H (mm)	(kg/pc.)	Thread	Tightening torque (Nm)	EPDM	NBR
35.0	REP E W5 35.0	34.5 - 35.6	60	8	63	55	75	0.41	M 8 SW 6	5	0572 9360 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 76.

NORMACONNECT®



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



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)

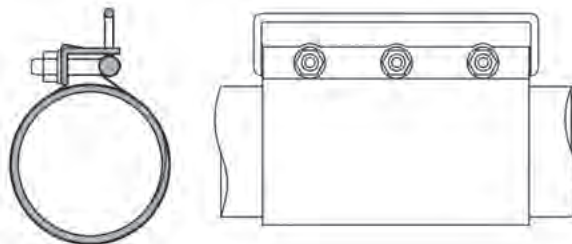
Materials

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

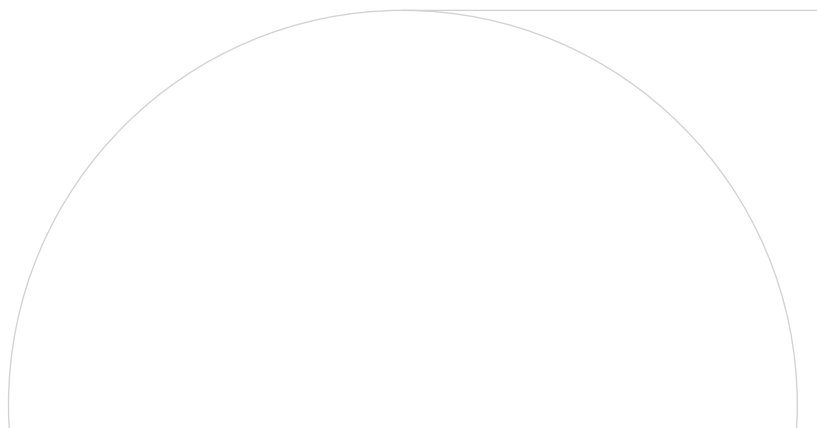
Technical data & Ordering information



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

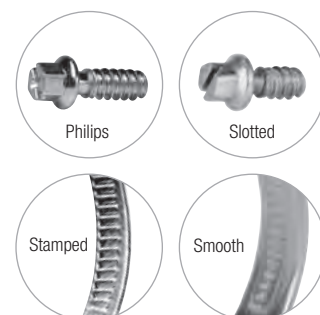
- W2, W3 with smooth inside

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



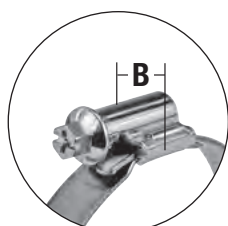
Technical data & Ordering information

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	

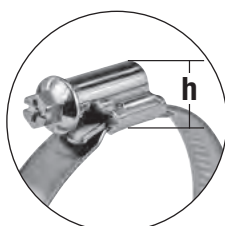
Additional diameters on request (up to 700 mm)



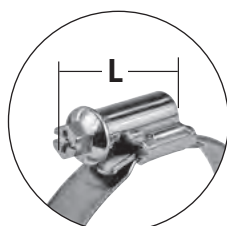
Refer to page 191, 193, 194 and 199 of NORMA Distribution Services catalogue.



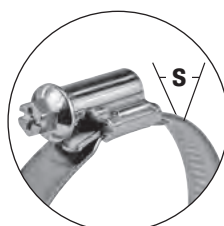
B = overall width
housing



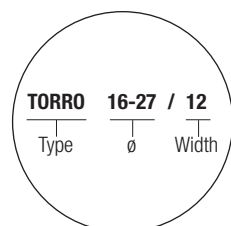
h = overall height
bolt and housing



L = overall length
bolt and housing



s = band thickness
clamp band



Name structure
clamp band

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

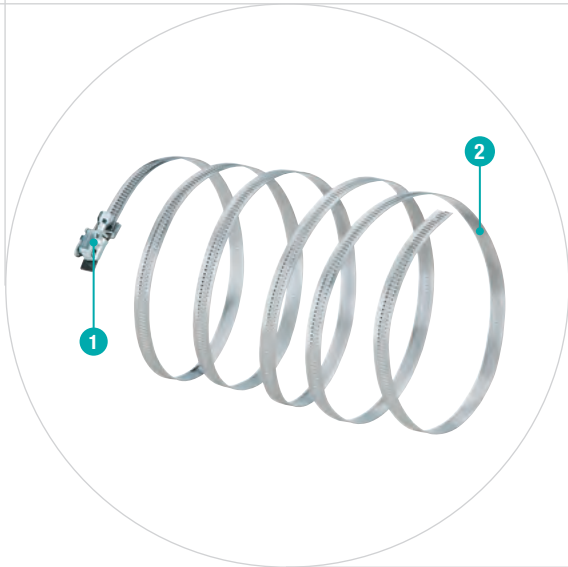
Technical data & Ordering information

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 190 and 194 of NORMA Distribution Services catalogue.



- 1 Quick Lock Housing
- 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 page 190 of NORMA Distribution Services catalogue.



- 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':

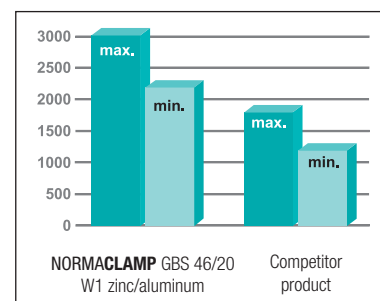


Table of torques

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

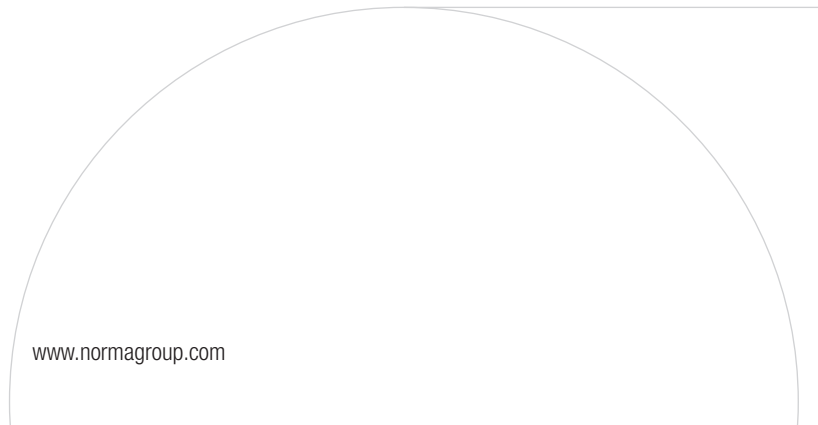
* the recommended tightening speed should not exceed 250 rpm

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	1 1/16-3/4"	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
	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 1/6"	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	0591 7305 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.

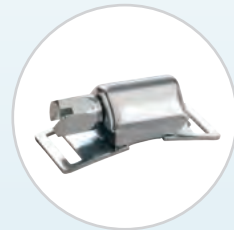
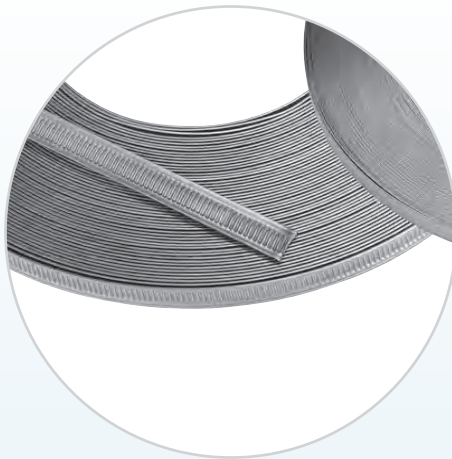
** ISK bolt for W5 material

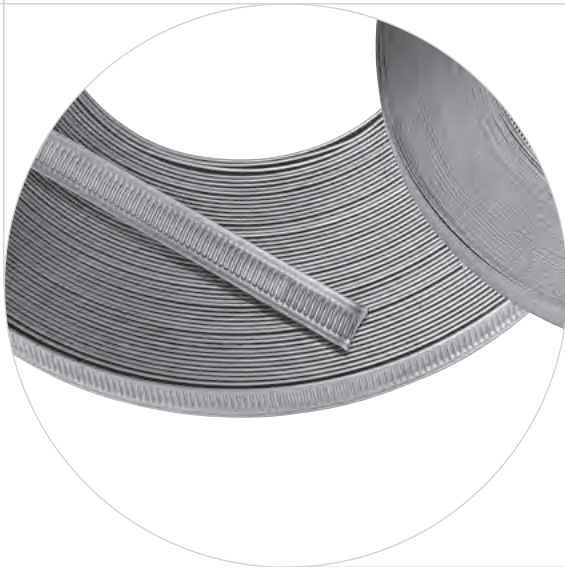


NORMAFIX® – Retaining Products

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.





Continuous band available in smooth version or with thread stamping throughout

5 different closure types to suit a huge variety of applications



Continuous band clamping system

Consisting of a continuous band, the **NORMAFIX®** **NORMETTA®** system is able to adapt itself to the shape and size of various objects. 5 different types of closure are available to choose from. The system is particularly suitable for carrying out retaining and repair work under difficult and extreme conditions.



Advantages at a glance

- Flexible and versatile
- Can be installed under difficult conditions

Applications

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

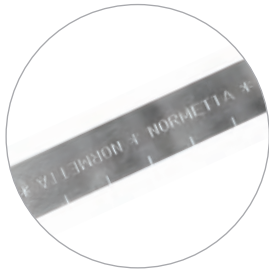
Materials

W1	W2	W3	W4	W5
x	x	x	x	

Product and closure types

The continuous band is available in a 30 m roll and as either a smooth version with a range of band widths or a version with thread stamping throughout (with 12 mm band width only). It can also be supplied in different material grades.

To be used with the buckles NB-A W1, NB-D W4 and NB-H W4.



NORMAFIX® NORMETTA SMOOTH BAND

Width	Thickness	Designation	Length in m	W1 Product No.	W4 Product No.
5	0.35	NORMETTA SMOOTH BAND 30M/5 W1	30	0560 8500 004	
9	0.44	NORMETTA SMOOTH BAND 30M/9 W1	30	0560 8500 001	
	0.5	NORMETTA SMOOTH BAND 30M/9 W4	30		0560 5000 009
13	0.7	NORMETTA SMOOTH BAND 30M/13 W4	30		0560 5000 013
16	0.7	NORMETTA SMOOTH BAND 30M/16 W4	30		0560 5000 016
19	0.7	NORMETTA SMOOTH BAND 30M/19 W4	30		0560 5000 019



Refer to pages 190 and 196 of NORMA Distribution Services catalogue.

Stamped band

To be used with the buckles NB-G W3



NORMAFIX® NORMETTA STAMPED BAND

Width	Thickness	Designation	Length in m	Resistance to traction in N	W3 Product No.
12	0.8	NORMETTA STAMPED BAND 30M/12 W3	30	2600 N	0560 8566 003



Refer to page 196 of NORMA Distribution Services catalogue.

Perforated Band

To be used with buckles NB-K W2.



NORMAFIX® NORMETTA PERFORATED BAND

Width	Thickness	Designation	Length in m	Resistance to traction in N	W2 Product No.	W4 Product No.
8	0.6	NORMETTA PERFORATED BAND 25M/8 W2	25	790 N	0817 7020 001	
	0.6	NORMETTA PERFORATED BAND 25M/8 W4	25	790 N		0817 7022 001
13	0.6	NORMETTA PERFORATED BAND 25M/13 W4	25	850 N		0817 7022 002
14	0.6	NORMETTA PERFORATED BAND 25M/14 W2	25	850 N	0817 7020 002	



Refer to page 196 of NORMA Distribution Services catalogue.

NB-A



Closure type NB-A

Suitable for less demanding applications such as attaching signs and sealing low-pressure hoses. Can be re-used.

For bands: 5, 9 mm

Required tools: Steel pin, angled screwdriver or pliers, plate shears

NORMAFIX® NB-A		
For Band width	Designation	W1 Product No.
5	NB-A5	0560 8520 002
9	NB-A9	0560 8520 000

NORMAFIX®

NB-D



Closure type NB-D

Suitable for attaching signs and containers to pipes and hoses as well as binding hoses.

For bands: 9, 13, 16, 19 mm

Required tools: Clamping and cutting tool; hammer

NORMAFIX® NB-D		
For Band width	Designation	W4 Product No.
9	NB-D/9	0560 8550 009
13	NB-D/13	0560 8550 013
16	NB-D/16	0560 8550 016
19	NB-D/19	0560 8550 019



Refer to page 196 of NORMA Distribution Services catalogue.

NB-G



Closure type NB-G

Suitable for applications with cramped installation conditions.

Can be re-used.

For stamped bands.

Required tools: Screwdriver or SW7 socket wrench and plate shears

NORMAFIX® NB-G		
For Band width	Designation	W3 Product No.
12	NB-G/12	0560 8565 003

NB-H



Closure type NB-H

An adjustable quick-release closure that enables fast and easy installation and removal. Can be re-used.

For bands: 16, 19 mm

Required tools: Screwdriver and plate shears

NORMAFIX® NB-H			
For Band width	Maximum diameter in mm	Designation	W1 Product No.
16 / 19	124	NB-H/124	0560 8558 124
	400	NB-H/400	0560 8558 400
	800	NB-H/800	0560 8558 800

NB-K



Closure type NB-K

Suitable for fixing suspended ventilation tubes.

For bands: 8, 13, 14 mm

Required tools: Screwdriver

NORMAFIX® NB-K			
For Band width	Designation	W2 Product No.	W4 Product No.
8	NB-K/8	0817 7019 003	0817 7021 003
13	NB-K/13		0817 7021 004
14	NB-K/14	0817 7019 004	



Smooth round edges

– easier to handle and safer to install

Variety of colors

– available in: black, white, red, yellow, green, blue

“Carbon Black” added in Black cable tie flange

– increased resistance to UV rays
– suitable for outdoor use

Quick and safe securing of cables in material PA 6.6

NORMAFIX® Cable tie for securing cables in electrical installations, industrial wiring, automotive, etc. Made of polyamide 6.6. Resistant to extreme temperatures and numerous external agents. Quick and safe assembly. The black cable tie offers excellent resistance to UV rays thanks to added “carbon black.”



Advantages at a glance

- Made of Polyamide 6.6 for optimum resistance to extreme temperatures, bases, oils, greases, etc.
- Bent rounded tip allows easier insertion through the head of the cable ties
- Low-friction material coefficient allows a faster installation

Applications

- Electrical installations
- Industrial cabling
- Automotive cabling
- Marine cabling
- Panel building
- Special applications

Materials

Material Polyamide 6.6

Characteristics of raw material polyamide PA 6.6

Working temperature: -45°C to 85°C
 Tightening temperature: -10°C to 60°C
 Max admissible point: 120°C*
 Melting temperature: 256°C
 Limiting Oxygen Index (LOI): 27%
 Recovery of moisture: 2.7% to 50% relative humidity
 Halogen free: Evaluated according to EN 50146. Flame retardancy according to UL 94-V2
 *(for a short time)

Resistance to external agents

Excellent resistance to aromatic solvents, bases, oils, fat, petroleum products
 Maintain limited contact with acid
 Not resistant to phenol and chlorinated solvents
 Resistance to UV (black colored cable ties)*

*The black cable ties are loaded with carbon black. Therefore they possess UV resistance according to standard ISO QUV-B 4892 (150 hours), equivalent to 3 years of exposure to sunlight. They are also particularly recommended for external applications.

Information

EC directives

The material used to produce our cable ties complies with the following EC directives:

- 2000/53/EC (VHU)
- 2002/65/UE (RoHS)
- 2002/96/EC (DEEE)
- 2006/95/EC

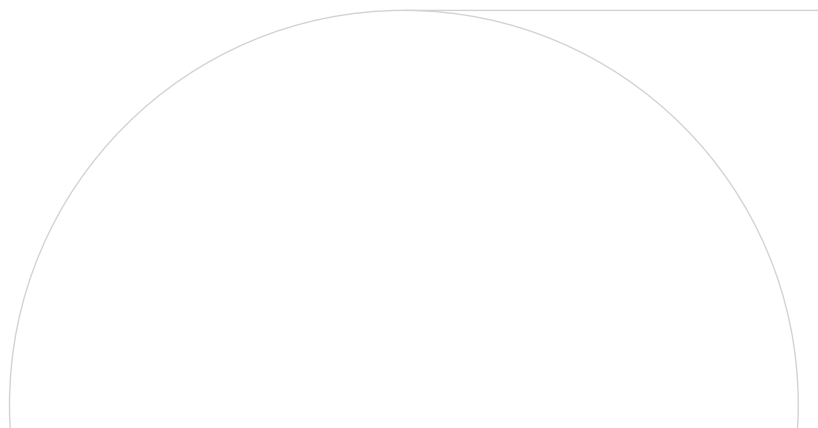
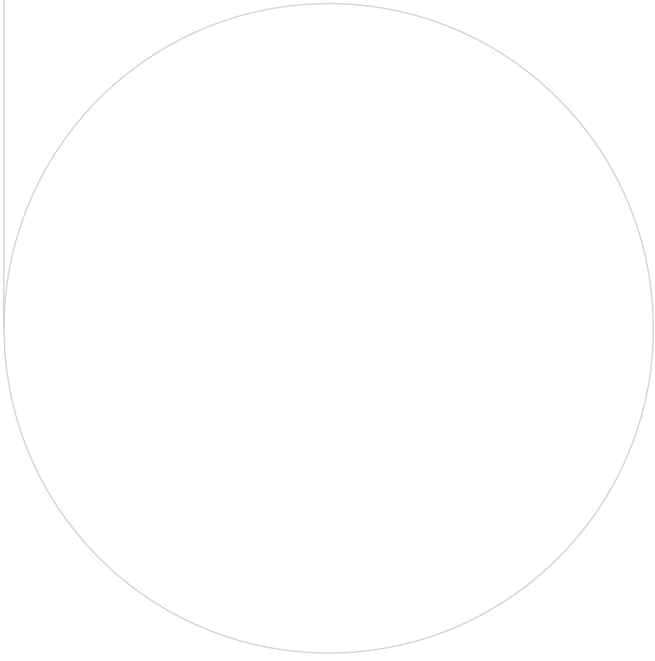
Technical data & Ordering information

NORMAFIX® CABLE TIES

Width	Designation	Length in mm	Maximum diameter in mm	Resistance to traction in Kgs	White Product No.	Black Product No.	Red Product No.	Yellow Product No.	Green Product No.	Blue Product No.
2.5	CABLE TIE 2.5 x 98	98	21	8	0860 0110 201	0860 0210 201	0860 0310 201	0860 0320 201	0860 0330 201	0860 0340 201
2.6	CABLE TIE 2.6 x 160	160	40	8	0860 0110 302	0860 0210 302				
3.5	CABLE TIE 3.5 x 140	140	35	13	0860 0110 401	0860 0210 401	0860 0310 401	0860 0320 401	0860 0330 401	0860 0340 401
	CABLE TIE 3.5 x 200	200	50	13	0860 0110 402	0860 0210 402	0860 0310 402	0860 0320 402	0860 0330 402	0860 0340 402
	CABLE TIE 3.5 x 290	290	80	13	0860 0110 403	0860 0210 403				
4.5	CABLE TIE 3.5 x 370	370	103	13	0860 0110 404	0860 0210 404				
	CABLE TIE 4.5 x 120	120	24	20	0860 0110 501	0860 0210 501				
	CABLE TIE 4.5 x 160	160	40	20	0860 0110 502	0860 0210 502				
4.8	CABLE TIE 4.5 x 200	200	50	22	0860 0110 602	0860 0210 602	0860 0310 601	0860 0320 601	0860 0330 601	0860 0340 601
	CABLE TIE 4.8 x 178	178	45	22	0860 0110 601	0860 0210 601				
	CABLE TIE 4.8 x 250	250	68	22	0860 0110 603	0860 0210 603				
4.5	CABLE TIE 4.5 x 290	290	79	22	0860 0110 604	0860 0210 604	0860 0310 602	0860 0320 602	0860 0330 602	0860 0340 602
	CABLE TIE 4.5 x 360	360	103	22	0860 0110 605	0860 0210 605				
4.8	CABLE TIE 4.8 x 390	390	106	22	0860 0110 606	0860 0210 606				
4.5	CABLE TIE 4.5 x 430	430	115	22	0860 0110 607	0860 0210 607				
7.8	CABLE TIE 7.8 x 180	180	45	55	0860 0110 702	0860 0210 702				
	CABLE TIE 7.8 x 240	240	63	55	0860 0110 703	0860 0210 703				
	CABLE TIE 7.8 x 300	300	80	55	0860 0110 704	0860 0210 704				
7.5	CABLE TIE 7.5 x 365	365	100	55	0860 0110 705	0860 0210 705				
	CABLE TIE 7.5 x 450	450	130	55	0860 0110 706	0860 0210 706				
	CABLE TIE 7.5 x 540	540	158	55	0860 0110 707	0860 0210 707				
	CABLE TIE 7.5 x 750	750	200	55	0860 0110 708	0860 0210 708				
9	CABLE TIE 9 x 780	780	233	77	0860 0110 801	0860 0210 801				
12.5	CABLE TIE 12.5 x 500	500	143	110	0860 0110 902	0860 0210 902				
	CABLE TIE 12.5 x 1000	1000	302	110	0860 0110 905	0860 0210 905				



Refer to pages 196 and 201 of NORMA Distribution Services catalogue.



A wide range of assortments, displays, dispenser and tools

NORMA assortments section offers the possibility of having several clamp diameters in one package.



NORMAFIX® NORMETTA® Mini repair kits



NORMAFIX® NORMETTA® MINI REPAIR KITS					
Width	Designation	Length in m	Number of closures	Closure type	W1 Product No.
5	MINI REPAIR KIT 8/5	8	25	NB-A5	0560 8520 003
9	MINI REPAIR KIT 8/9	8	25	NB-A9	0560 8520 001

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	

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

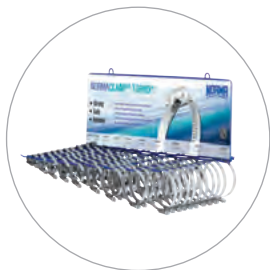
**NORMACLAMP® Quick lock
Band-on-roll dispenser**



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

NORMACLAMP® TORRO® Dispenser



NORMACLAMP® TORRO DISPENSER

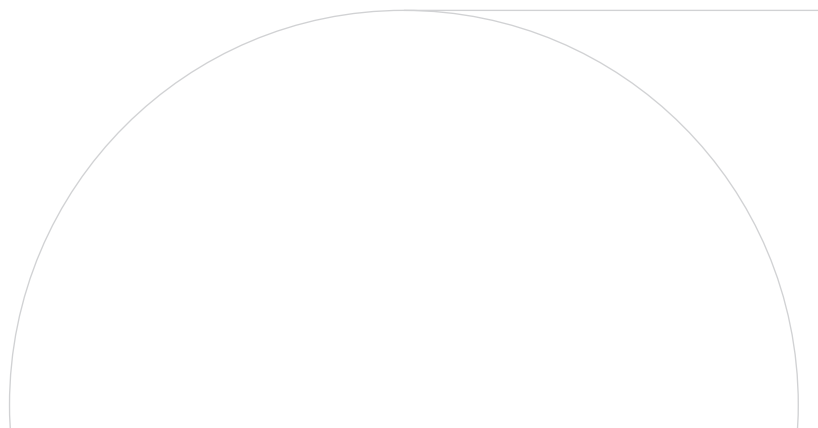
Width	Designation	Clamping range	Quantity	W2 Product No.
7.5	TORRO 8 - 12/7.5	8 - 12	10	0126 9702 010
9	TORRO 8 - 16/9	8 - 16	10	
	TORRO 12 - 22/9	12 - 22	10	
	TORRO 16 - 27/9	16 - 27	10	
	TORRO 20 - 32/9	20 - 32	10	
	TORRO 25 - 40/9	25 - 40	10	
	TORRO 32 - 50/9	32 - 50	10	
	TORRO 40 - 60/9	40 - 60	10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

**NORMACLAMP® TORRO®
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		



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

Alternatively, or if you are missing any other information, please don't hesitate to get in touch with us:

Infrastructure.info@normagroup.com



NORMA Group

Edisonstraße 4 · D-63477 Maintal

Tel: +49 (61 81) 4 03-0

Fax: +49 (61 81) 4 03-210

www.normagroup.com

info@normagroup.com

NORMA®

NORMACLAMP®

NORMACONNECT®

NORMAFIX®

are registered trademarks of NORMA Germany GmbH.



This catalogue supersedes all previous issues. No part of this publication may be reproduced without our prior written consent. In NORMA Group's policy of continual product improvements to meet user needs and technological developments, all models and sets listed in this folder (photographs, specifications, sizes and weights) may be upgraded or discontinued without notice and without any obligation on our part to modify tools or equipment sold previously. The recommendations for use and safety given in this folder do not replace accepted good practice or the safety related legal and regulatory provisions. References to standards implemented as of May 1st, 2019 are not contractually binding.