

## PRODUCT BENEFITS

### Benefits of NORMACONNECT® Pipe Couplings

NORMACONNECT® pipe couplings provide the following features:

#### Simple fitting and quick installation

- Ready to use, no single parts, no disassembling and reassembling
- No preparation time, no pipe-end treatment, no harmonization work
- Offers angular deflection, no precise pipe gap necessary, stress-free pipe joining

#### Reliable sealing system

- Dynamic sealing effect even with rough pipe surface
- Dampens pressure surges, vibration and shocks
- Axial-restraint (Grip / CombiGrip E / PlastGrip E)
- Allows length variation (Flex)

#### Durable and economic

- High chemical resistance of stainless steel components and sealing sleeve
- Long-term elasticity of rubber
- Trouble-free and maintenance-free pipe joint
- Couplings are several times re-usable
- No pipe-end treatment, thus cost saving

#### Universal range of applications

- For pressure, depression or vacuum
- Free choice of pipe material
- Joins same or different pipe materials
- Dampens pressure surges or structure borne noise
- Repairs pipe damage

## Benefits for the user

NORMACONNECT® pipe couplings and repair clamps provide benefits for the user with regard

### ... to

- Industry and industrial applications
- Water supply and water treatment
- Domestic application
- Shipbuilding and ship repair
- Service, repair and maintenance

### ... to planning

- Simple and cost-reliable planning with ready-to-use pipe joints
- Reproducibility of fitting time, installation according to schedule
- Low weight, handy, compact (shipbuilding, vehicle construction)
- Reduced space requirement thus tight pipe guidance possible
- Enlargement or change of pipeline direction is done quickly and at low cost, due to the re-usability of the pipe couplings

### ... to installation

- Low weight, handy, compact
- Simple and quick installation due to ready-to-use pipe joints
- No preparation time, no pipe-end treatment, no harmonization work
- Tight-safe and long lasting pipe joint
- Installation of pre-fabricated pipe sections

### ... to operation

- Reliable through controlled manufacturing quality and high safety reserves
- Dampening of pressure surges, vibration and structure borne noise, protection of integrated gauges, fittings etc.
- Enlargement or change of pipe direction is done quick and at low cost, due to the re-usability of the pipe couplings
- Changes are possible during operation due to parallel guidance of pipes or bypasses

### ... to down-time, repair or maintenance

- Very quick reaction due to dis-chargeability and re-usability of pipe joints
- Very short down-time due to rapid disconnection and refitting of pipe coupling
- No design constraint, joins same or different pipe materials
- Ready-to-use, no preparation time, no pipe-end treatment, no harmonization work
- No risk of fire, e.g. during welding
- Problem solving during reorganization and reconstruction

# NORMACONNECT® COMBI GRIP/COMBI GRIP E

## THE COMBINING PIPE COUPLING

NORMACONNECT® COMBI GRIP/COMBI GRIP E axial restraint pipe couplings are used to connect plastic pipes with metal pipes. For the plastic pipe the coupling features on one side 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. For the metal pipe the coupling features on the other side an 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.

### 6. 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 material (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.

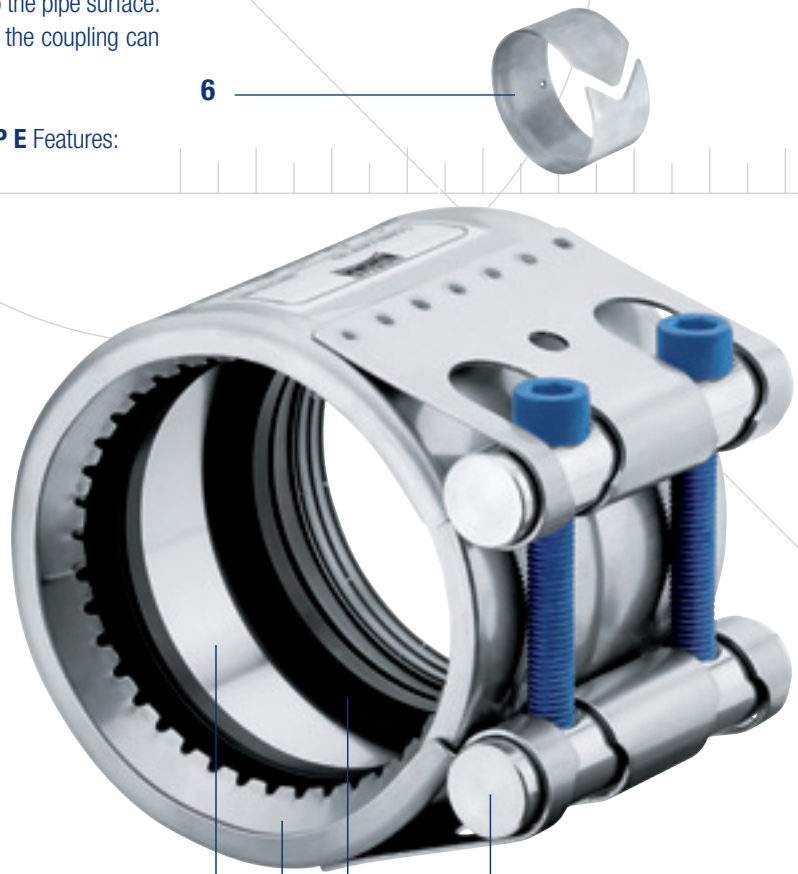
NORMACONNECT® COMBI GRIP/COMBI GRIP E Features:

1. Double-lip sealing system\*
2. Standard strip insert\*
3. Heavy duty lock bars\*
4. Anchoring ring\*

\* For details refer to Product benefits pages 6–7.



NORMACONNECT®  
COMBI GRIP E



2 4 1 3 NORMACONNECT®  
COMBI GRIP

## Enquiries/ordering

When making enquiries or placing orders please indicate:

**Example:**

- |   |            |
|---|------------|
| 1. The type (COMBI GRIP/COMBI GRIP E) .....                     | COMBI GRIP |
| 2. The required material ( <b>W2, W5</b> ), (cf. page 10) ..... | W5         |
| 3. The pipe outside diameter OD, (cf. table) .....              | 88.9/90    |
| 4. The sealing sleeve material (EPDM, NBR) .....                | EPDM       |

For this example, the order text would read: **NORMACONNECT® COMBI GRIP – W5 – 88.9 – EPDM**

## CombiGrip Series

NORMACONNECT® CombiGrip E (40.0 – 168.3 mm)

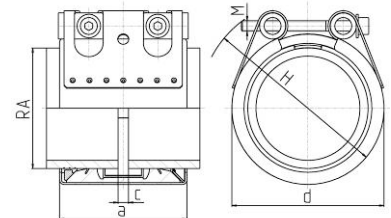
Axial restraint pipe coupling for joining plastic pipes with metal pipes



Available in **W2** or **W5** material

Seal: EPDM or NBR

Operating Temperatures: EPDM -30°C to +125°C and NBR -20°C to +80°C

Test Pressure: 1.5 x working pressure (PN or WP)



OD (mm)	Clamp. Range OD <sub>min</sub> - OD <sub>max</sub> Plastic (mm)	Clamp. Range OD <sub>min</sub> - OD <sub>max</sub> Metal (mm)	PN <sup>1)</sup>  (bar)	WP <sup>2)</sup>  (bar)	C <sub>max</sub> (mm)	Dimensions			Weight approx. (kg/pc.)	Hex socket locking bolts	
						a (mm)	d clamped app. (mm)	H app. (mm)		Thread	Tightening torque (Nm)
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
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
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
48,3 / 48,3	47,6 - 50,5	47,6 - 50,5	10	16	8	62	70	90	0,50	M 8 SW 6	15
50,0 / 48,3	49,0 - 50,5	47,6 - 50,5	10	16	8	62	70	90	0,50	M 8 SW 6	15
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
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
73,0 / 73,0	72,0 - 74,0	72,1 - 73,8	10	16	25	98	95	115	1,30	M 10 SW 8	30
75,0 / 76,1	74,0 - 76,0	75,2 - 77,0	10	16	25	98	100	120	1,30	M 10 SW 8	30
88,9 / 88,9	88,0 - 90,0	87,0 - 89,9	10	16	25	98	110	130	1,39	M 10 SW 8	30
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
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
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
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
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
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
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
160,0 / 159,0	159,0 - 162,0	157,3 - 160,7	10	16	35	115	180	200	3,45	M 12 SW 10	60
168,3 / 168,3	166,5 - 170,1	166,5 - 170,1	10	16	35	115	190	210	3,48	M 12 SW 10	60

### References

Subject to technical changes

- <sup>1)</sup> **PN** (Nominal Pressure)  
is the max. admissible working pressure in shipbuilding, based on a safety factor of  $\geq 4$ .
- <sup>2)</sup> **WP** is the max. working pressure in industrial applications, with a safety factor as per NORMA specification.

**NORMACONNECT® CombiGrip (200.0 – 406.4 mm)**

**Axial restraint Pipe Coupling for joining plastic pipes with metal pipes**

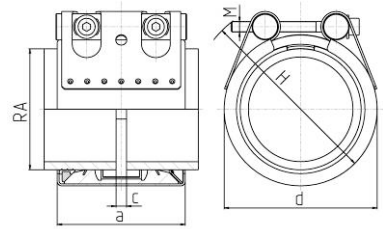
Available in **W2** or **W5** material



**Seal:** EPDM or NBR

**Operating Temperatures:**

OD 200,0/204,0 to OD 406,0/406,0 EPDM and NBR -20°C to +80°C

**Test Pressure:** 1.5 x working pressure (PN or WP)



OD (mm)	Clamp. Range OD <sub>min</sub> - OD <sub>max</sub> Plastic (mm)	Clamp. Range OD <sub>min</sub> - OD <sub>max</sub> Metall (mm)	PN <sup>1)</sup>  (bar)	WP <sup>2)</sup>  (bar)	C <sub>max</sub> (mm)	Dimensions			Weight approx. (kg/pc.)	Hex socket locking bolts	
						a (mm)	d clamped app. (mm)   app. (mm)			H app. (mm)	Thread
200,0 / 204,0	198,0 - 202,0	202,0 - 206,0	-	16	35	142	235	265	7,5	M 12 SW 10	60
219,1 / 219,1	217,0 - 222,0	216,0 - 221,0	-	16	35	142	250	280	7,9	M 12 SW 10	60
225,0 / 219,1	222,0 - 227,0	216,0 - 221,0	-	10	35	142	255	285	8,1	M 12 SW 10	60
225,0 / 222,0	222,0 - 227,0	220,0 - 224,0	-	10	35	142	255	285	8,1	M 12 SW 10	60
250,0 / 254,0	247,0 - 253,0	250,0 - 256,0	-	10	35	142	285	315	8,6	M 12 SW 10	80
273,0 / 273,0	271,0 - 276,0	270,0 - 275,0	-	10	35	142	305	335	9,1	M 16 SW 14	100
280,0 / 273,0	277,0 - 283,0	270,0 - 275,0	-	10	35	142	310	340	9,3	M 16 SW 14	100
323,9 / 323,9	320,0 - 327,0	320,0 - 327,0	-	6	35	142	355	385	10,2	M 16 SW 14	100
355,0 / 355,6	351,0 - 359,0	352,0 - 359,0	-	6	35	142	390	420	10,9	M 16 SW 14	120
400,0 / 406,4	396,0 - 404,0	402,0 - 410,0	-	6	35	142	440	470	11,9	M 16 SW 14	120
406,0 / 406,4	402,0 - 410,0	402,0 - 410,0	-	6	35	142	440	470	12,0	M 16 SW 14	120

**References**

Subject to technical changes

- <sup>1)</sup> **PN** (Nominal Pressure)  
is the max. admissible working pressure in shipbuilding, based on a safety factor of  $\geq 4$ .
- <sup>2)</sup> **WP** is the max. working pressure in industrial applications, with a safety factor as per NORMA specification.

pipes to be joined	[mm]	Grip	Grip E	CombiGrip E	CombiGrip	PlastGrip E	PlastGrip
metal + metal	26.9 to 168.3	70 to 32 bar	70 to 32 bar	-		-	-
	180.0 to 419.0	-	20 to 2 bar	-		-	-
	180.0 to 711.2	32 to 2.5 bar	-	-		-	-
plastic + plastic	40.0 to 168.3	-	-	-		16 bar	-
	200.0 to 406.4	-	-	-	-	-	16 to 6
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	-	-

Material of seal	EPDM	NBR
<p><b>Temperature resistance</b></p>	<p>-30° to +125°  -22°F to 257°F  OD 26.9 - 168.3mm</p> <p>-20°C to + 80°C  -4°F to 176°F  OD &gt; 180mm</p>	<p>-20°C to + 80°C  -4°F to 176°F</p>
<p><b>Media resistance</b></p>	<p>Potable water  alcohols  Compressed Air</p>	<p>Water oils / fuels  (combustible)  gases</p>