PRODUCT BENEFITS

Benefits of NORMA**CONNECT**® Pipe Couplings

NORMA**CONNECT**® 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

NORMA**CONNECT**® 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

NORMA**CONNECT®** GRIP/GRIP E

THE STRONG PIPE COUPLING

NORMA**CONNECT® 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.

NORMA**CONNECT® GRIP/GRIP E** Features:

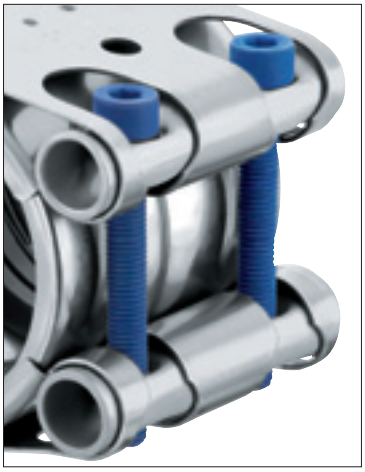
1. Double-lip sealing system*

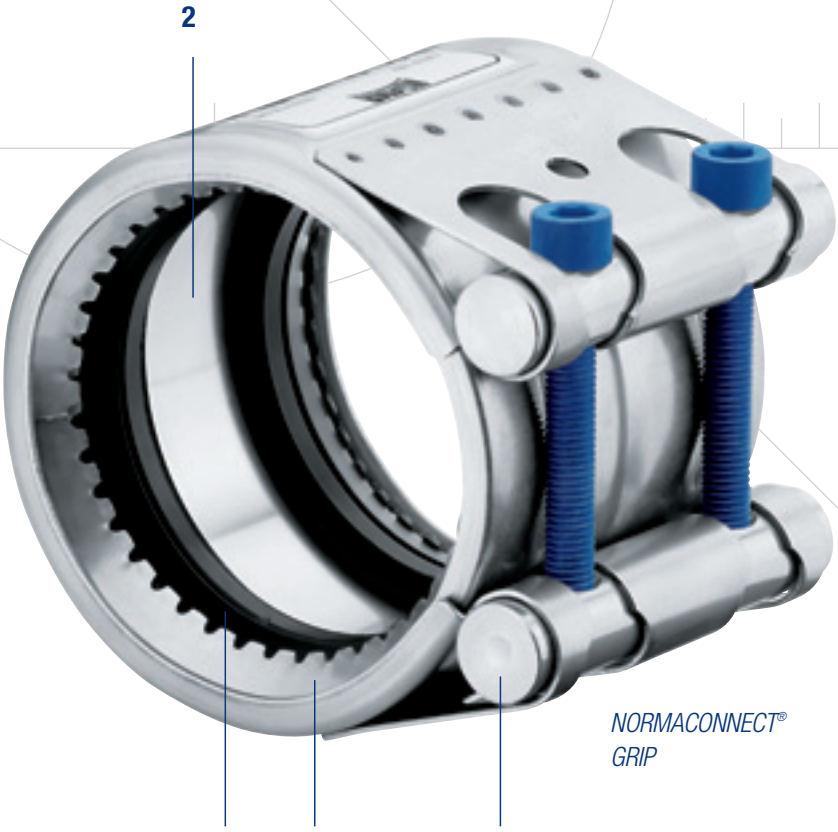
2. Standard strip insert*

3. Heavy duty lock bars*

4. Anchoring ring with conically stamped teeth

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





NORMACONNECT® GRIP

NORMACONNECT® GRIP E

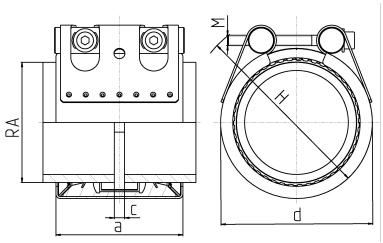
Enquiries/ordering

When making enquiries or placing orders please indicate: **Example:**

1. The type (GRIP/GRIP E) ..... GRIP
2. The required material **(W2,W4,W5),** (cf. page 10) W5
3. The pipe outside diameter OD, (cf. table) 88.9
4. The sealing sleeve material (EPDM, NBR) ..... EPDM

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

Grip Series



NORMA**CONNECT® Grip** (26.9 – 168.3 mm)

Axial restraint pipe coupling for use with metal pipes
Available in **W2, W4** 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	Clamp. Range		PN[1)]	WP[2)]	C_{max}	Dimensions			Weight	Hex socket locking bolts	
						a	d	H			
							clamped				
(mm)	OD_{min} - OD_{max} (mm)		(bar)	(bar)	(mm)	(mm)	app. (mm)	app. (mm)	approx. (kg/pc.)	Thread	Tightening torque (Nm)
26,9	26,4	27,5	16	70	3	67	50	70	0,39	M 8 SW 6	10
28,0	27,5	28,5	16	70	3	67	50	70	0,39	M 8 SW 6	10
30,0	29,5	30,6	16	70	3	67	50	70	0,39	M 8 SW 6	10
33,7	33,0	34,3	16	60	3	67	55	75	0,40	M 8 SW 6	10
35,0	34,5	35,6	16	60	8	63	55	75	0,55	M 8 SW 6	15
38,0	37,5	38,6	16	60	8	63	60	80	0,55	M 8 SW 6	15
42,4	41,7	43,0	16	50	8	63	65	85	0,56	M 8 SW 6	15
44,5	44,0	45,1	16	50	8	63	65	85	0,57	M 8 SW 6	15
48,3	47,6	50,5	16	50	8	63	70	90	0,59	M 8 SW 6	15
54,0	53,3	54,6	16	50	17	78	75	95	0,77	M 8 SW 6	15
57,0	56,3	57,7	16	50	17	78	80	100	0,77	M 8 SW 6	20
60,3	59,5	61,0	16	40	17	78	85	105	0,78	M 8 SW 6	20
63,0	62,2	63,9	16	40	17	78	85	105	0,78	M 8 SW 6	20
70,0	69,0	71,0	16	40	25	98	90	110	1,38	M 10 SW 8	30
73,0	72,1	73,8	16	40	25	98	95	115	1,40	M 10 SW 8	30
76,1	75,2	77,0	16	35	25	98	100	120	1,40	M 10 SW 8	30
78,0	77,1	78,9	16	35	25	98	100	120	1,41	M 10 SW 8	30
80,0	79,0	80,8	16	35	25	98	100	120	1,44	M 10 SW 8	30
84,0	83,0	85,0	16	35	25	98	105	125	1,46	M 10 SW 8	30
88,9	87,0	89,9	16	35	25	98	110	130	1,48	M 10 SW 8	30
101,6	100,4	102,8	16	35	25	98	125	145	1,62	M 10 SW 8	30
104,0	102,8	106,1	16	35	25	98	125	145	1,63	M 10 SW 8	30
108,0	106,8	109,2	16	35	25	98	130	150	1,66	M 10 SW 8	30
110,0	108,8	111,4	16	35	25	98	130	150	1,71	M 10 SW 8	30
114,3	113,0	115,5	16	35	25	98	135	155	1,71	M 10 SW 8	40
122,0	120,8	123,2	16	32	35	115	145	165	2,42	M 12 SW 10	50
129,0	127,6	131,1	16	32	35	115	155	185	3,06	M 12 SW 10	50
133,0	131,5	134,4	16	32	35	115	160	190	3,16	M 12 SW 10	50
139,7	138,1	141,6	16	32	35	115	165	195	3,27	M 12 SW 10	50
141,3	139,6	142,8	16	32	35	115	170	200	3,27	M 12 SW 10	50
154,0	152,3	156,1	16	32	35	115	180	210	3,39	M 12 SW 10	60
159,0	157,3	160,7	16	32	35	115	185	215	3,51	M 12 SW 10	60
168,3	166,5	170,1	16	32	35	115	195	225	3,57	M 12 SW 10	60

References

Subject to technical changes

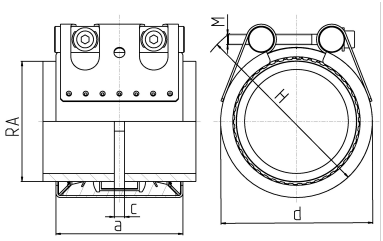
1.) **PN** (Nominal Pressure)
is the max. admissible working pressure in shipbuilding, based on a safety factor of ≥ 4.

2.) **WP** is the max. working pressure in industrial applications, with a safety factor as per NORMA specification.

NORMA**CONNECT**® **Grip** (193.7 – 711.2 mm)

Axial restraint pipe coupling for use with metal pipes

Available in **W2, W4** or **W5** material



Seal: EPDM or NBR
Operating Temperatures: EPDM and NBR -20°C to +80°C
Test Pressure: 1.5 x working pressure (MAWP or WP)

OD	Clamp. Range		MAWP[1)]	WP[2)]	C_{max}	Dimensions			Weight	Hex socket locking bolts	
	OD_{min} - OD_{max}					a	d	H			Tightening torque
							clamped				
(mm)	(mm)		(bar)	(bar)	(mm)	(mm)	app. (mm)	app. (mm)	approx. (kg/pc.)	Thread	(Nm)
193,7	192,0	196,0	16,0	32,0	35	142	225	255	6,8	M 16 SW 14	150
206,0	202,0	208,0	16,0	32,0	35	142	240	270	7,0	M 16 SW 14	150
219,1	216,0	221,0	16,0	32,0	35	142	250	280	7,3	M 16 SW 14	150
225,0	222,0	227,0	13,0	26,5	35	142	255	285	7,4	M 16 SW 14	180
229,9	228,0	232,0	13,0	26,0	35	142	260	290	7,5	M 16 SW 14	180
244,5	242,0	247,0	12,0	24,5	35	142	275	305	7,7	M 16 SW 14	180
254,0	250,0	256,0	11,5	22,5	35	142	285	315	7,9	M 16 SW 14	180
267,0	264,0	269,0	11,0	22,5	35	142	300	330	8,2	M 16 SW 14	180
273,0	270,0	275,0	11,0	22,0	35	142	305	335	8,3	M 16 SW 14	180
306,0	302,0	308,0	9,5	19,5	35	142	340	370	8,9	M 16 SW 14	180
323,9	320,0	327,0	6,5	13,0	35	142	355	385	9,2	M 16 SW 14	180
326,0	322,0	329,0	6,5	13,0	35	142	360	390	9,3	M 16 SW 14	180
355,6	352,0	359,0	6,0	12,0	35	142	390	420	9,8	M 16 SW 14	180
406,4	402,0	410,0	4,5	9,0	35	142	440	470	10,8	M 16 SW 14	180
429,0	426,0	431,0	4,0	8,5	35	142	460	490	11,3	M 16 SW 14	180
442,0	439,0	444,0	4,0	8,0	35	142	475	505	11,5	M 16 SW 14	180
457,2	454,0	459,0	4,0	8,0	35	142	490	520	11,8	M 16 SW 14	180
508,0	505,0	510,0	2,5	5,0	35	142	540	570	12,7	M 16 SW 14	180
531,0	528,0	534,0	2,5	5,0	35	142	565	595	13,2	M 16 SW 14	180
558,8	556,0	562,0	2,0	4,5	35	142	590	620	13,7	M 16 SW 14	180
609,6	606,0	613,0	1,5	3,0	35	142	640	670	14,7	M 16 SW 14	180
634,0	631,0	637,0	1,5	3,0	35	142	665	695	15,1	M 16 SW 14	200
711,2	707,0	715,0	1,5	2,5	35	142	745	775	16,6	M 16 SW 14	200

References

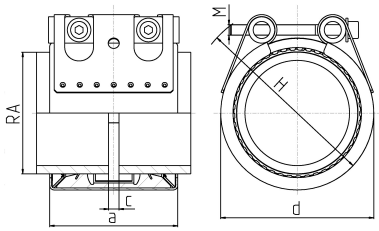
Subject to technical changes

1.) **MAWP** (maximum allowable working pressure)
is the max. admissible working pressure in shipbuilding, based on a safety factor of ≥ 4.

2.) **WP** is the max. working pressure in industrial applications, with a safety factor as per NORMA specification.

NORMA**CONNECT® Grip E** (26.9 – 168.3 mm)

Axial restraint pipe coupling for use with metal pipes



Available in **W2, W4** 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	Clamp. Range	PN[1]	WP[2]	C_{max}	Dimensions			Weight	Hex socket locking bolts	
	OD_{min} - OD_{max}				a	d	H			
						clamped				
(mm)	(mm)	(bar)	(bar)	(mm)	(mm)	app. (mm)	app. (mm)	approx. (kg/pc.)	Thread	Tightening torque (Nm)
26,9	26,4 - 27,5	16	70	3	67	50	70	0,32	M 8 SW 6	10
28,0	27,5 - 28,5	16	70	3	67	50	70	0,32	M 8 SW 6	10
30,0	29,5 - 30,6	16	70	3	67	50	70	0,32	M 8 SW 6	10
33,7	33,0 - 34,3	16	60	3	67	55	75	0,33	M 8 SW 6	10
35,0	34,5 - 35,6	16	60	8	63	55	75	0,45	M 8 SW 6	15
38,0	37,5 - 38,6	16	60	8	63	60	80	0,45	M 8 SW 6	15
42,4	41,7 - 43,0	16	50	8	63	65	85	0,46	M 8 SW 6	15
44,5	44,0 - 45,1	16	50	8	63	65	85	0,47	M 8 SW 6	15
48,3	47,6 - 50,5	16	50	8	63	70	90	0,48	M 8 SW 6	15
54,0	53,3 - 54,6	16	50	17	78	75	95	0,62	M 8 SW 6	15
57,0	56,3 - 57,7	16	50	17	78	80	100	0,63	M 8 SW 6	20
60,3	59,5 - 61,0	16	40	17	78	85	105	0,64	M 8 SW 6	20
63,0	62,2 - 63,9	16	40	17	78	85	105	0,64	M 8 SW 6	20
70,0	69,0 - 71,0	16	40	25	98	90	110	1,21	M 10 SW 8	30
73,0	72,1 - 73,8	16	40	25	98	95	115	1,23	M 10 SW 8	30
76,1	75,2 - 77,0	16	35	25	98	100	120	1,23	M 10 SW 8	30
78,0	77,1 - 78,9	16	35	25	98	100	120	1,24	M 10 SW 8	30
80,0	79,0 - 80,8	16	35	25	98	100	120	1,27	M 10 SW 8	30
84,0	83,0 - 85,0	16	35	25	98	105	125	1,29	M 10 SW 8	30
88,9	87,0 - 89,9	16	35	25	98	110	130	1,31	M 10 SW 8	30
101,6	100,4 - 102,8	16	35	25	98	125	145	1,45	M 10 SW 8	30
104,0	102,8 - 106,1	16	35	25	98	125	145	1,46	M 10 SW 8	30
108,0	106,8 - 109,2	16	35	25	98	130	150	1,49	M 10 SW 8	30
110,0	108,8 - 111,4	16	35	25	98	130	150	1,54	M 10 SW 8	30
114,3	113,0 - 115,5	16	35	25	98	135	155	1,54	M 10 SW 8	40
122,0	120,8 - 123,2	16	32	35	115	145	165	2,19	M 12 SW 10	50
129,0	127,6 - 131,1	16	32	35	115	155	185	2,83	M 12 SW 10	50
133,0	131,5 - 134,4	16	32	35	115	160	190	2,93	M 12 SW 10	50
139,7	138,1 - 141,6	16	32	35	115	165	195	3,04	M 12 SW 10	50
141,3	139,6 - 142,8	16	32	35	115	170	200	3,04	M 12 SW 10	50
154,0	152,3 - 156,1	16	32	35	115	180	210	3,17	M 12 SW 10	60
159,0	157,3 - 160,7	16	32	35	115	185	215	3,28	M 12 SW 10	60
168,3	166,5 - 170,1	16	32	35	115	195	225	3,35	M 12 SW 10	60

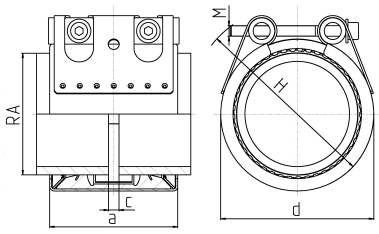
References

Subject to technical changes

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

2.) **WP** is the max. working pressure in industrial applications, with a safety factor as per NORMA specification.

NORMA**CONNECT® Grip E** (193.7 – 609.6 mm)



Axial restraint pipe coupling for use with metal pipes

Available in **W2, W4** or **W5** material

Seal: EPDM or NBR
Operating Temperatures: EPDM and NBR -20°C to +80°C
Test Pressure: 1.5 x working pressure (PN or WP)
The **Diameter Difference** between the pipes to be joined must not exceed 5 mm.

OD	Clamp. Range		PN[1]	WP[2]	C_{max}	Dimensions			Weight	Hex socket locking bolts	
	OD_{min} - OD_{max}					a	d clamped	H clamped	approx.	Thread	Tightening torque
(mm)	(mm)		(bar)	(bar)	(mm)	(mm)	app. (mm)	app. (mm)	(kg/pc.)		(Nm)
193,7	192,0	196,0	10,0	20,0	35	141	225	255	6,2	M 16 SW 14	100
206,0	202,0	208,0	10,0	20,0	35	141	240	270	6,5	M 16 SW 14	100
219,1	216,0	221,0	10,0	20,0	35	141	250	280	6,7	M 16 SW 14	100
225,0	222,0	227,0	10,0	16,0	35	140	255	285	6,2	M 16 SW 14	100
229,9	228,0	232,0	5,5	16,0	35	140	260	290	6,3	M 16 SW 14	100
244,5	242,0	247,0	5,5	15,0	35	140	275	305	6,5	M 16 SW 14	100
254,0	250,0	256,0	5,5	14,0	35	140	285	315	6,6	M 16 SW 14	100
267,0	264,0	269,0	5,5	13,5	35	140	300	330	6,8	M 16 SW 14	100
273,0	270,0	275,0	5,5	13,0	35	140	305	335	6,9	M 16 SW 14	100
306,0	302,0	308,0	5,5	10,5	35	140	340	370	7,4	M 16 SW 14	120
323,9	320,0	327,0	3,0	9,5	35	140	355	385	7,7	M 16 SW 14	120
326,0	322,0	329,0	3,0	9,5	35	140	360	390	7,7	M 16 SW 14	120
355,6	352,0	359,0	2,7	8,5	35	140	390	420	8,2	M 16 SW 14	120
406,4	402,0	410,0	2,5	7,0	35	140	440	470	8,9	M 16 SW 14	120
429,0	426,0	431,0	2,5	6,5	35	140	460	490	9,3	M 16 SW 14	120
442,0	439,0	444,0	2,5	6,5	35	140	475	505	9,5	M 16 SW 14	140
457,2	454,0	459,0	2,5	6,0	35	140	490	520	9,7	M 16 SW 14	140
508,0	505,0	510,0	2,0	4,0	35	140	540	570	10,5	M 16 SW 14	140
531,0	528,0	534,0	1,5	4,0	35	140	565	595	10,8	M 16 SW 14	140
558,8	556,0	562,0	1,5	3,5	35	140	590	620	11,3	M 16 SW 14	140
609,6	606,0	613,0	1,0	2,0	35	140	640	670	12,0	M 16 SW 14	140

References

Subject to technical changes

1.) **PN** (Nominal Pressure) is the max. admissible working pressure in shipbuilding, based on a safety factor of ≥ 4.
2.) **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
Temperature resistance	-30º to +125º -22ºF to 257ºF OD 26.9 - 168.3mm -20ºC to + 80ºC -4ºF to 176ºF OD > 180mm	-20ºC to + 80ºC -4ºF to 176ºF
Media resistance	Potable water alcohols Compressed Air	Water oils / fuels (combustible) gases