

NORMA

*The Connecting
Professionals*

NORMACONNECT® DCS



Proven connections for sleeveless
cast iron drainage pipes and fittings

www.norma.de

NORMA® – Contents

NORMACONNECT® DCS

page

The complete range	4
Certificates, Liability, Memberships	5
Materials at a glance	6
Products and applications at a glance	7

NORMACONNECT® DCS – for non pull-out resistant connections

NORMACONNECT® DCS RAPID	8
NORMACONNECT® DCS RAPID MSM	10
NORMACONNECT® DCS CV/CE	11
NORMACONNECT® DCS FLEX	12
NORMACONNECT® DCS SVE	13

NORMACONNECT® DCS – for pull-out resistant connections

NORMACONNECT® DCS G-A	15
NORMACONNECT® DCS REKORD Restraint Collar	16
NORMACONNECT® DCS CV Restraint Collar	17
NORMACONNECT® DCS GRIP	18

NORMACONNECT® DCS – Multi-range connectors

NORMACONNECT® DCS CONFIX	21
NORMACONNECT® DCS Survey of sizes	22

NORMACONNECT® DCS – The complete range



The perfect connection for pipes

The original product for high quality and reliability

The complete NORMACONNECT® DCS range has been proven a million times when used to achieve both a reliable and economic connection of sleeveless drainage pipes.

Inside buildings, in underground car parks, buried in soil, in purification plants and for drainage systems in bridges, NORMACONNECT® 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.

Variety and operating efficiency

The NORMACONNECT® FGR range* of pipe connections and their compact design stand for the economic and reliable joining of plain-ended cast iron drainage pipes. Furthermore, they are suitable for connecting plastic and metal pipes and specially those made of stainless steel. Their scope of application covers building construction, civil engineering, plant construction, shipbuilding as well as water supply and distribution.

The joining of feed and recovery lines for gases, fluids and solids takes little time and is very easy even within a confined space.

Thanks to the variety of types and sizes you will always find a solution for your problem – no matter if it is for standard or customized applications.

The solution that fits your application

The present brochure contains a complete survey of the NORMA® product range for drainage systems as well as for further industrial applications.

When you have made your choice, or in case you need special advice or want us to develop a customized solution please send us your application profile by mail, e-mail or fax.

* For further information please refer to our NORMACONNECT® FGR catalogue.



NORMA® – Certificates / Liability / Memberships

Certificates

Materialprüfungsamt Nordrhein-Westfalen (MPA NRW)
(Material testing body being part of the business of the ministry of economics and middle class, energy and traffic of North Rhine-Westphalia)

Liability

Product liability: 10 m lump-sum indemnity in case of bodily injury and/or material damage.

Memberships

IZEG – Informationszentrum Entwässerungstechnik Guss
GEG – Gütergemeinschaft Entwässerungstechnik Guss
ZVSHK – Zentralverband Sanitär, Heizung und Klimatechnik



Certificates

NORMA® – Materials at a glance

Materials for NORMACONNECT® couplings and restraint collars				
	Collar	Clamping unit	Screws, Nuts, Bolts	Sealing sleeve
W1		Steel, protected surface		–
W2	1.4510/11	1.4301 1.4510/11	Steel, protected surface	EPDM
W4	1.4301	1.4301	A2	EPDM
W5	1.4571	1.4571	A4	EPDM















Materials for NORMACONNECT® pipe couplings				
	Collar	Clamping unit	Screws	Sealing sleeve
W2	1.4301	Steel, protected surface	Steel, protected surface	EPDM
W5	1.4571	1.4571	A4	EPDM

Materials

- 1.4510/11 Stabilised ferritic chrome steel to DIN EN 10088
- 1.4301 Austenitic chrome-nickel steel to DIN EN 10088
- 1.4310 Austenitic chrome-nickel steel to DIN EN 10088 with increased strength
- 1.4571 Austenitic chrome-nickel-molybdenum steel to DIN EN 10088
- A2 Austenitic chrome-nickel steel to DIN EN ISO 3506
- A4 Austenitic chrome-nickel-molybdenum steel to DIN EN ISO 3506

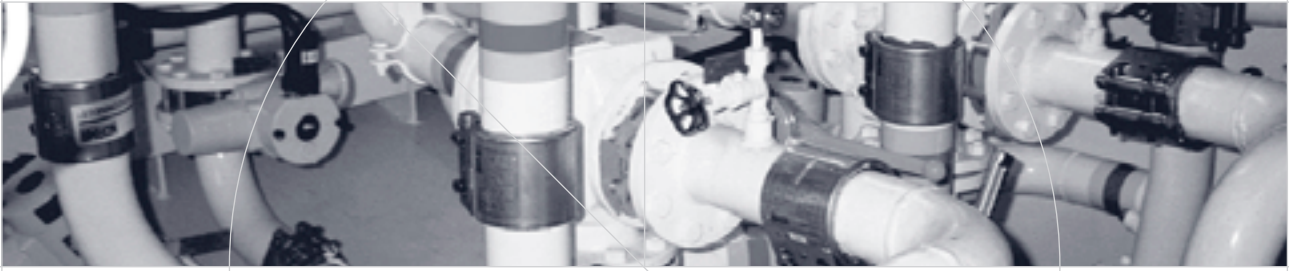


NORMACONNECT® DCS – Products and applications at a glance

Type	DN and Pressure (bar)													Seal Type	Material	Application			
	40	50	70	75/80	100	125	150	200	250	300	400	500	600			Standard		Buil- dings	Bridges
Non pull-out resistant connections																			
RAPID		•	•	•	•	•	•	•	•						EPDM	W 2	•	–	–
RAPID		•	•	•	•	•	•	•	•	•					EPDM	INOX	•	•	•
MSM RAPID		•	•	•	•	•	•	•							EPDM	W 2	•	–	–
CV			•	•	•	•	•	•	•	•					EPDM	W 2	•	–	–
CE			•	•	•	•	•	•	•	•					EPDM	INOX	•	–	•*
FLEX		•	•	•	•	•	•	•	•	•	•	•	•	•	EPDM*	W 2	•	–	–
FLEX		•	•	•	•	•	•	•	•	•	•	•	•	•	EPDM*	INOX	•	•	•
SVE			•		•	•	•	•							NR-SBR	PP-CO	–	–	•
Pull-out resistant connections																			
G-A			10	10	10	10	10	5	5	3	3				–	W 2	•	–	–
REKORD Restraint Collar		10	10	10	10	10	5	5	3						–	W 1	•	–	–
CV Restraint Collar			3	3		3	3	3	3						–	W 1	•	–	–
GRIP		10	10	10	10	10	10	10	10	10	10	6	3	2	EPDM*	W 2	•	–	–
GRIP		10	10	10	10	10	10	10	10	10	10	10	6	4	EPDM*	INOX	•	•	•
Multi-range connector																			
CONFIX			•	•	•	•	•								EPDM	–	•	–	–

Remarks and further information

- * Additional protection against corrosion
- * NBR on request



The perfect connection for pipes

NORMACONNECT® DCS – For non pull-out resistant connections

When it comes to the connection of non pull-out resistant pipes the building industry has been relying on **NORMACONNECT® DCS** connections for decades.



NORMACONNECT® DCS – for non pull-out resistant connections

NORMACONNECT® DCS RAPID – The fast connection

The visible torque control and the single-bolt closure provide for a fast and easy installation.



Features:

- 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

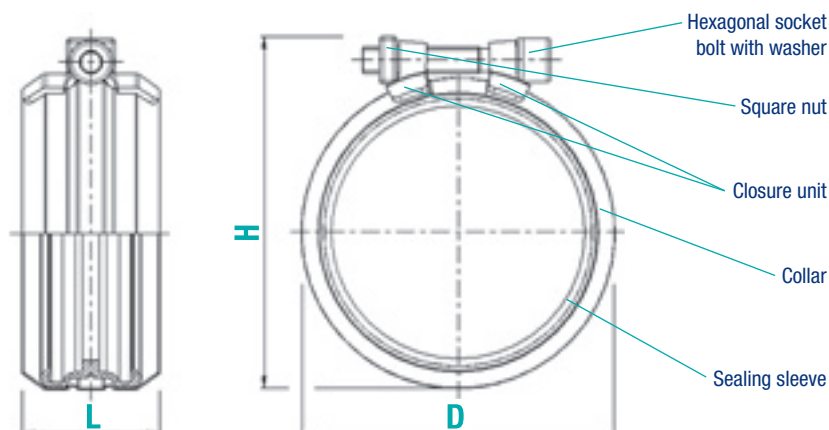
W2

Material, Collar: 1.4510/11
 Material, Clamping unit: 1.4301/1.4510/11
 Material, Bolts/Nuts: Steel, surface protected
 Material, Sealing sleeve: EPDM

INOX (W5)

Material, Collar: 1.4571
 Material, Clamping unit: 1.4571
 Material, Bolts/Nuts: A4
 Material, Sealing sleeve: EPDM

DN	Max. Dimensions after Assembly ~			P _{max} [bar]	Torque [Nm]	Bolt
	~D [mm]	~H [mm]	~L [mm]			
40	53	64	41	0,5	Tight-Locking	M 5
50	70	80	40	0,5	Tight-Locking	M 8
70	90	100	40	0,5	Tight-Locking	M 8
75S	87	97	40	0,5	Tight-Locking	M 8
75/80	95	105	40	0,5	Tight-Locking	M 8
100	125	135	46	0,5	Tight-Locking	M 8
125	147	162	55	0,5	Tight-Locking	M 8
150	172	187	55	0,5	Tight-Locking	M 8
200	227	244	70	0,5	Tight-Locking	M 10
250	293	306	96	0,3	Tight-Locking	M 10
300	345	360	96	0,3	Tight-Locking	M 10



NORMACONNECT® DCS – for non pull-out resistant connections

NORMACONNECT® DCS RAPID MSM – The fast connection with quick release closure

The RAPID MSM connection is easy-fitting and thus especially suitable for repair purposes.



Features:

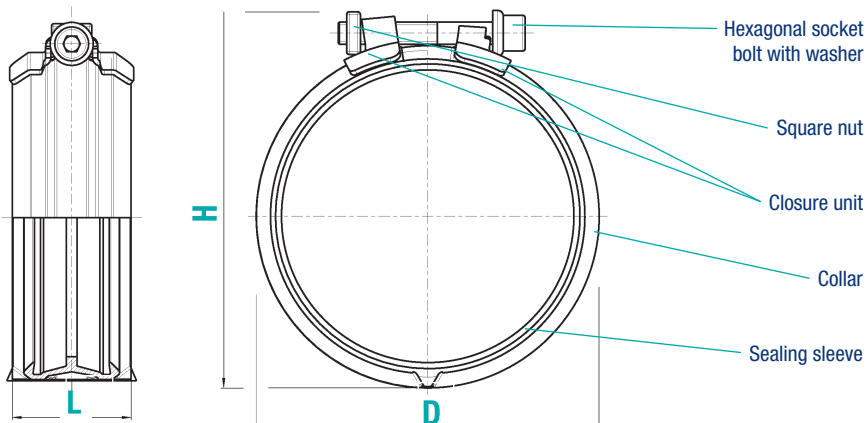
- Resisting axial pull-out forces up to max. 0.5 bar
- Defined locking torque without using a special tool
- Meeting the fire protection requirements

Technical Data

W2

Material, Collar: 1.451/11
 Material, Clamping unit: 1.4301 - 1.4510/11
 Material, Bolts/Nuts: Steel, surface protected
 Material, Sealing sleeve: EPDM

DN	Max. Dimensions after Assembly ~			P _{max} [bar]	Torque [Nm]	Bolt
	~D [mm]	~H [mm]	~L [mm]			
50	70	80	40	0,5	Tight-locking	M 8
70	90	100	40	0,5	Tight-locking	M 8
75/80	95	105	40	0,5	Tight-locking	M 8
100	125	135	46	0,5	Tight-locking	M 8
125	147	162	55	0,5	Tight-locking	M 8
150	172	187	55	0,5	Tight-locking	M 8
200	227	244	70	0,5	Tight-locking	M 10



NORMACONNECT® DCS – for non pull-out resistant connections

NORMACONNECT® DCS CV/CE – The proven standard collar

The CV/CE collar has been proven a million times in all kinds of standard drainage applications.

Features:

- Fast and easy installation
- Suitable for repair purposes
- NOT meeting the fire protection requirements



Technical data

W2

Type CV

Material, Collar: 1.4510/11
 Material, Clamping unit: Steel, surface protected
 Material, Sealing sleeve: EPDM
 Material, Bolts: Steel, surface protected

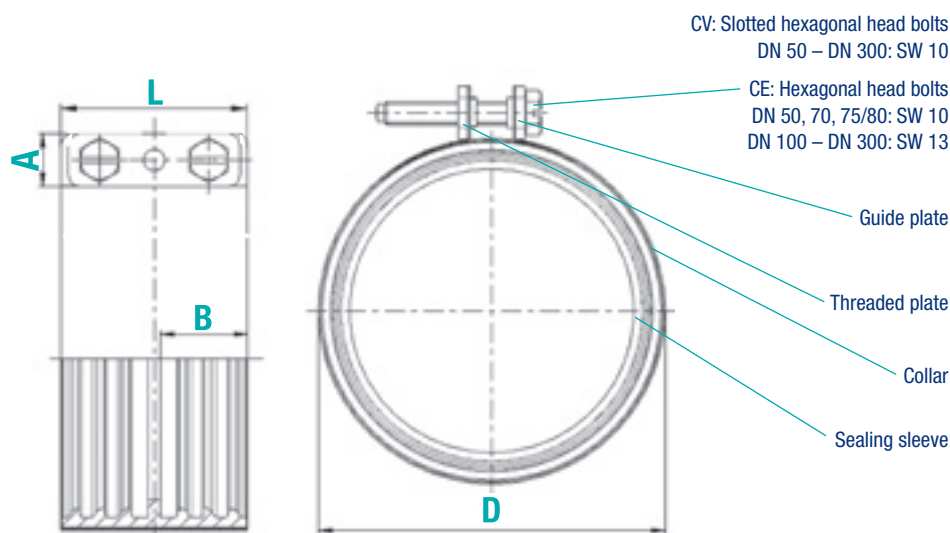
INOX (W4)

Type CE

Material, Collar: 1.4301
 Material, Clamping unit: 1.4301
 Material, Sealing sleeve: EPDM
 Material, Bolts: A2

DN	A [mm]	B [mm]	~D [mm]	L [mm]	Torque [Nm]	Bolt
50	14	22,5	65	48	4–6	M 6
70	14	22,5	85	48	4–6	M 6
75/80	14	22,5	90	48	6–8	M 6
100	18	25,5	115	54	10–12	M 8
125	18	31	140	65	10–12	M 8
150	18	31	170	65	10–12	M 8
200*	18	37	220	78	15–20	M 8
250*	18	37	286	78	15–20	M 8
300*	18	37	338	78	15–20	M 8

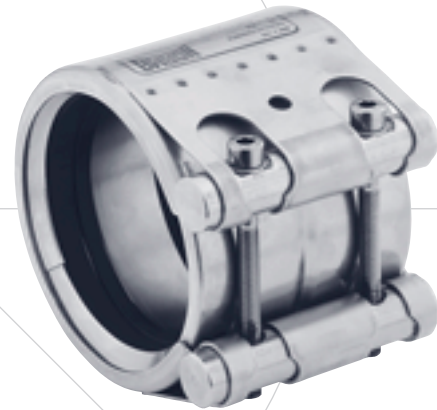
* two pieces



NORMACONNECT® DCS – for non pull-out resistant connections

NORMACONNECT® DCS FLEX – The versatile pipe coupling for axial non-restraint applications

The FLEX coupling ensures a safe and reliably sealed connection even for pipe diameters up to DN 600 provided that the pipes are fixed additionally by other means to take up axial loads.



Features:

- Pressure resistant up to 10 bar when supported

Technical data

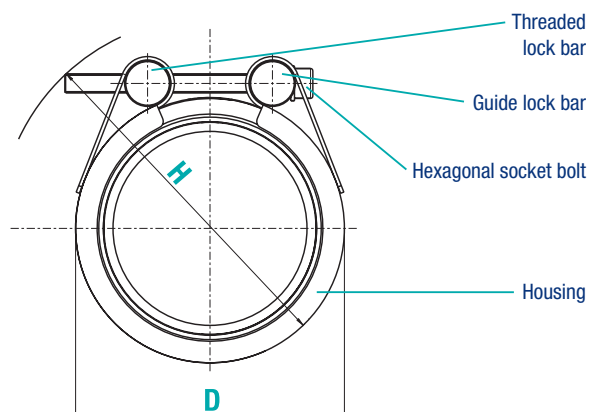
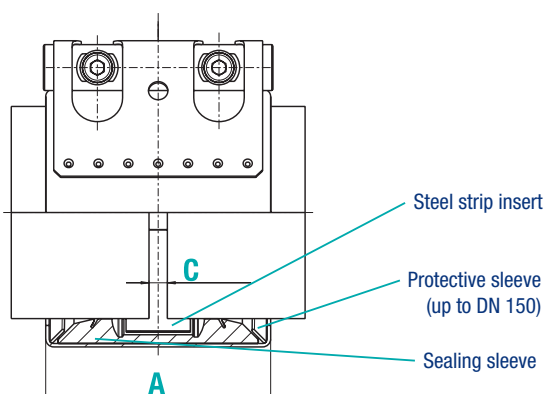
W2

Material, Housing:	1.4301
Material, Lock bars:	Steel, surface protected
Material, Bolts:	Steel, surface protected
Material, Protective sleeve:	1.4571
Material, Steel strip insert:	1.4571
Material, Sealing sleeve:	EPDM

INOX (W5)

Material, Housing:	1.4571
Material, Lock bars:	A 4
Material, Bolts:	A 4
Material, Protective sleeve:	1.4571
Material, Steel strip insert:	1.4571
Material, Sealing sleeve:	EPDM

DN	A [mm]	C [mm]	~D [mm]	~H [mm]	Bolt
40	63	8	70	90	M 8
50	78	17	85	105	M 8
70	98	25	100	120	M 8
75/80	98	25	105	125	M 8
100	98	25	130	150	M 8
125	113	35	165	195	M 10
150	113	35	185	215	M 10
200	138	35	240	270	M 12
250	138	35	305	335	M 12
300	138	35	360	390	M 12
400	139	35	460	490	M 12
500	140	35	565	595	M 12
600	140	35	665	695	M 12



NORMACONNECT® DCS – for non pull-out resistant connections

NORMACONNECT® DCS SVE – The collar for buried drainage pipes

Used to achieve the fast and easy connection of buried drainage pipes – whilst also accommodating larger gaps between pipe ends. The DCS collar made from polypropylene with built-in sealing lips is the universal solution for many applications.



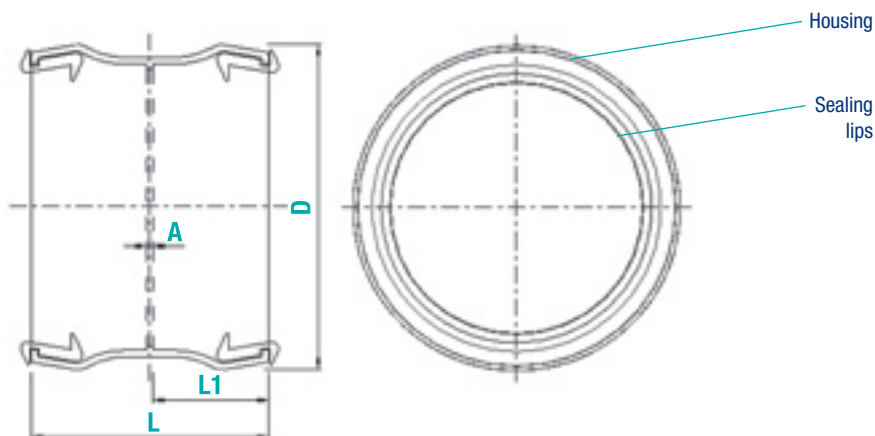
Features

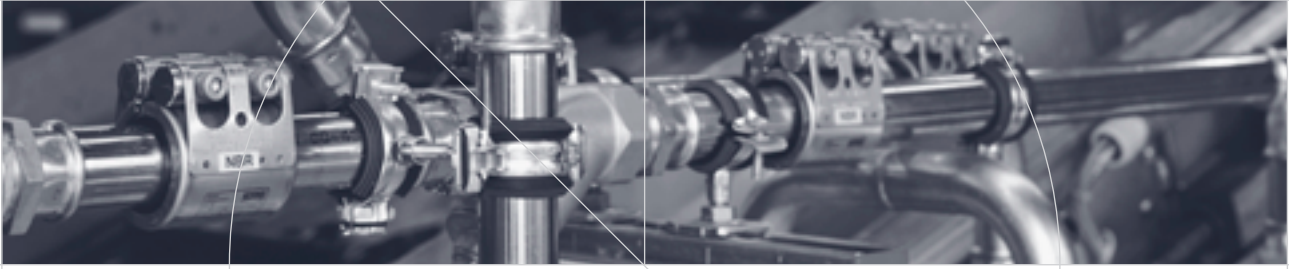
- Collar made from polypropylene with built-in sealing lips
- Compensates for larger gaps between pipe ends

Technical data

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

DN	~D [mm]	L [mm]	L1 [mm]	A [mm]
50	77	60	29	2
75/80	103,5	65,5	32	2
100	134	82	39,5	3
125	161	103	50	3
150	186	103	50	3
200	238	114	55,5	3





The perfect connection for pipes

NORMACONNECT® DCS – For pull-out resistant connections

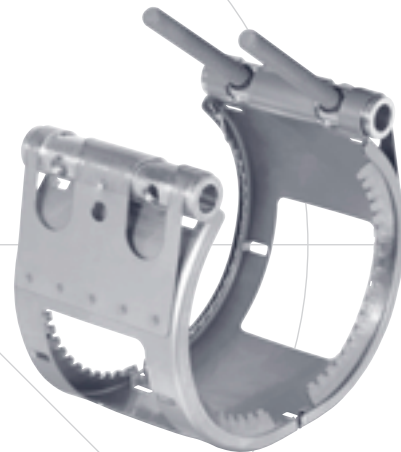
The proven connection from our **NORMACONNECT® DCS** range suitable for use with axial restraint pipes.



NORMACONNECT® DCS – for pull-out resistant connections

NORMACONNECT® DCS G-A Restraint Collar – The grip-type coupling resisting high tensile loads

Combined with either DCS RAPID, DCS RAPID MSM or DCS CV/CE standard collars, our DCS G-A restraint collars ensure that the system can withstand even high tensile loads.



Features:

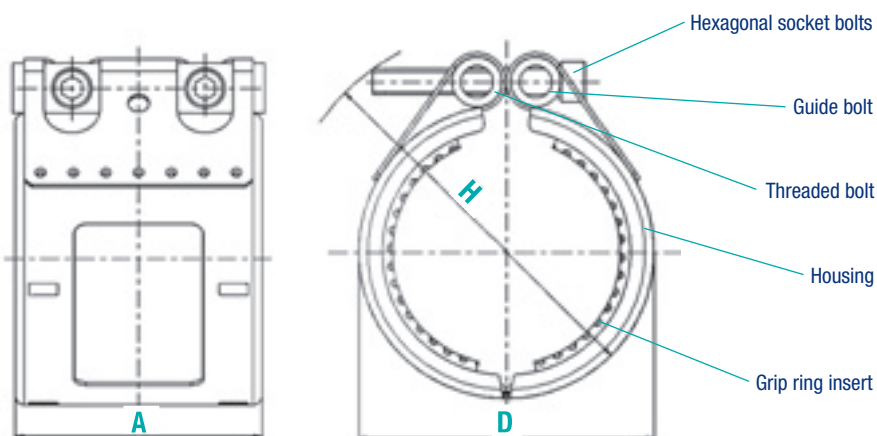
- Recommended for use in combination with types RAPID/RAPID MSM: up to max. 10 bar
- Recommended for use in combination with types CV/CE: up to max. 5 bar (DN 50 – DN 200); up to max. 3 bar (DN 250 – DN 300)

Technical data

W2

Material, Housing: 1.4510/11
 Material, Closure unit: Steel, surface protected
 Material, Grip ring: 1.4310

DN	A [mm]	~D [mm]	~H [mm]	Schraube	P _{max} [bar]		Torque [Nm]
					RAPID/ RAPID MSM	CV/CE	
50	77	85	105	M 8	10	5	Tight-locking
70	77	100	120	M 8	10	5	Tight-locking
75/80	77	105	125	M 8	10	5	Tight-locking
75 S	77	100	120	M 8	10	5	Tight-locking
100	97	130	150	M 10	10	5	Tight-locking
125	97	165	195	M 10	10	5	Tight-locking
150	97	185	215	M 10	5	5	Tight-locking
200	113	240	270	M 12	5	5	Tight-locking
250	139	305	335	M 12	3	3	Tight-locking
300	139	400	490	M 12	3	3	Tight-locking



NORMACONNECT® DCS – for pull-out resistant connections

NORMACONNECT® DCS REKORD Restraint Collar – The powerful add-on collar

Axial restraint safety clamp for use with pressurized pump lines in lifting systems as well as for rain water and sewage lines that are at risk of undergoing back pressures, but only in combination with the NORMACONNECT® DCS RAPID standard collar!

Features:

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

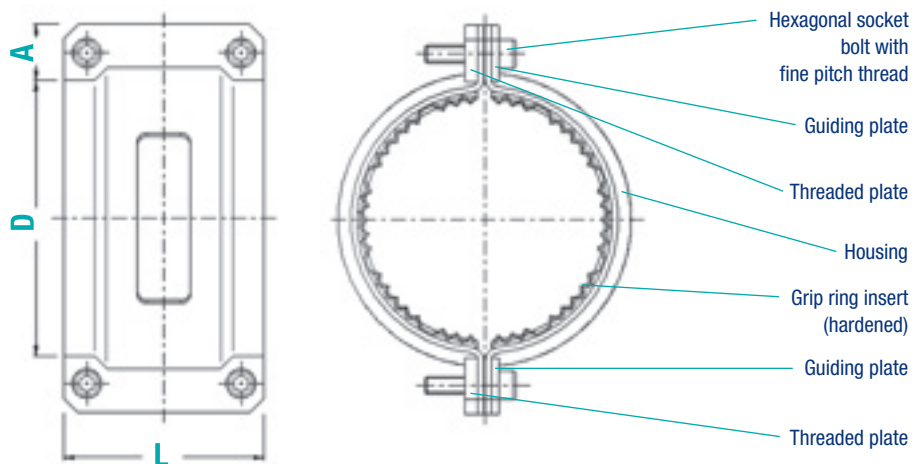


Technical data

W 1

Material, Housing: Steel, surface protected
Material, Closure unit: Steel, surface protected

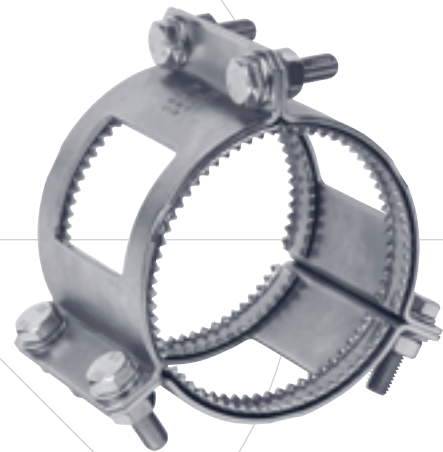
DN	A [mm]	~D [mm]	~L [mm]	Torque [Nm]	Bolt	P _{max} [bar]
40	21	65	66	12–15	M 8	up to 10
50	21	75	69	12–15	M 8	up to 10
70	21	95	69	12–15	M 8	up to 10
75/80	21	100	69	12–15	M 8	up to 10
100	25	135	87	25–30	M 10	up to 10
125	25	160	95	30–35	M 10	up to 5
150	25	185	95	30–35	M 10	up to 5
200	30	235	111	60–65	M 12	up to 3



NORMACONNECT® DCS – for pull-out resistant connections

NORMACONNECT® DCS CV Restraint Collar – The powerful add-on collar

Axial restraint safety clamp for connecting rain water and sewage lines that are at risk of undergoing back pressures, used in combination with CV or CE standard collars - diameters DN 50 up to DN 200.



Features:

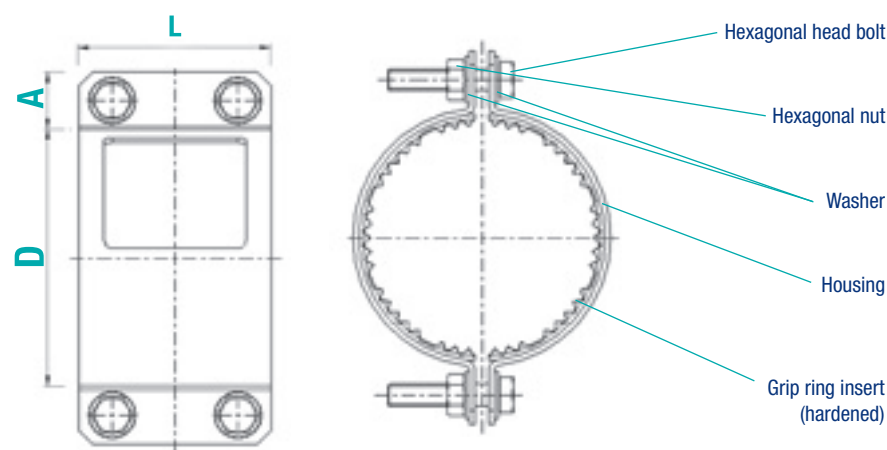
- Axial restraint up to 3 bar

Technical data

W1

Material, Housing: Steel, surface protected
 Material, Closure unit: Steel, surface protected

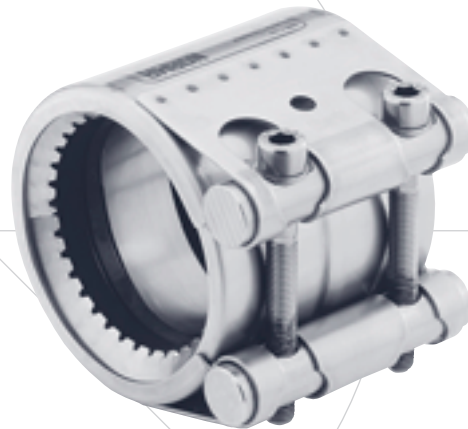
DN	A [mm]	~D [mm]	~L [mm]	Torque [Nm]	Bolt	P _{max} [bar]
50	23	74	71	10–12	M 8	up to 3
70	23	94	71	10–12	M 8	up to 3
100	23	124	87	18–20	M 10	up to 3
125	23	149	98	18–20	M 10	up to 3
150	23	174	98	18–20	M 10	up to 3
200	23	224	110	25–30	M 10	up to 3



NORMACONNECT® DCS – for pull-out resistant connections

NORMACONNECT® DCS GRIP – The pipe connection resisting axial pull-out loads

The solid GRIP connection is the ideal solution for connecting large diameter pipes. The strong heavy-duty lock bars add extra safety to the system.



Features:

- Axial restraint up to max. 10 bar

Technical data

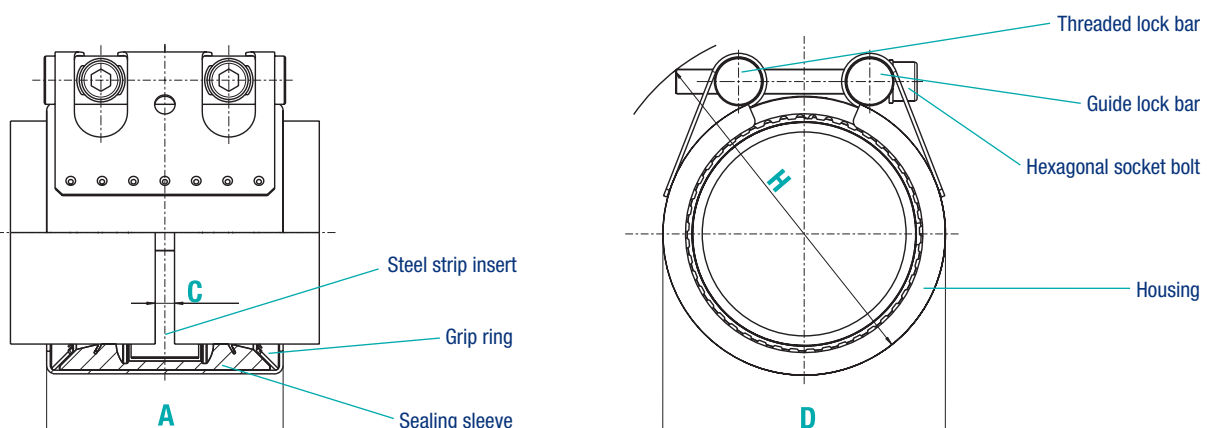
W2

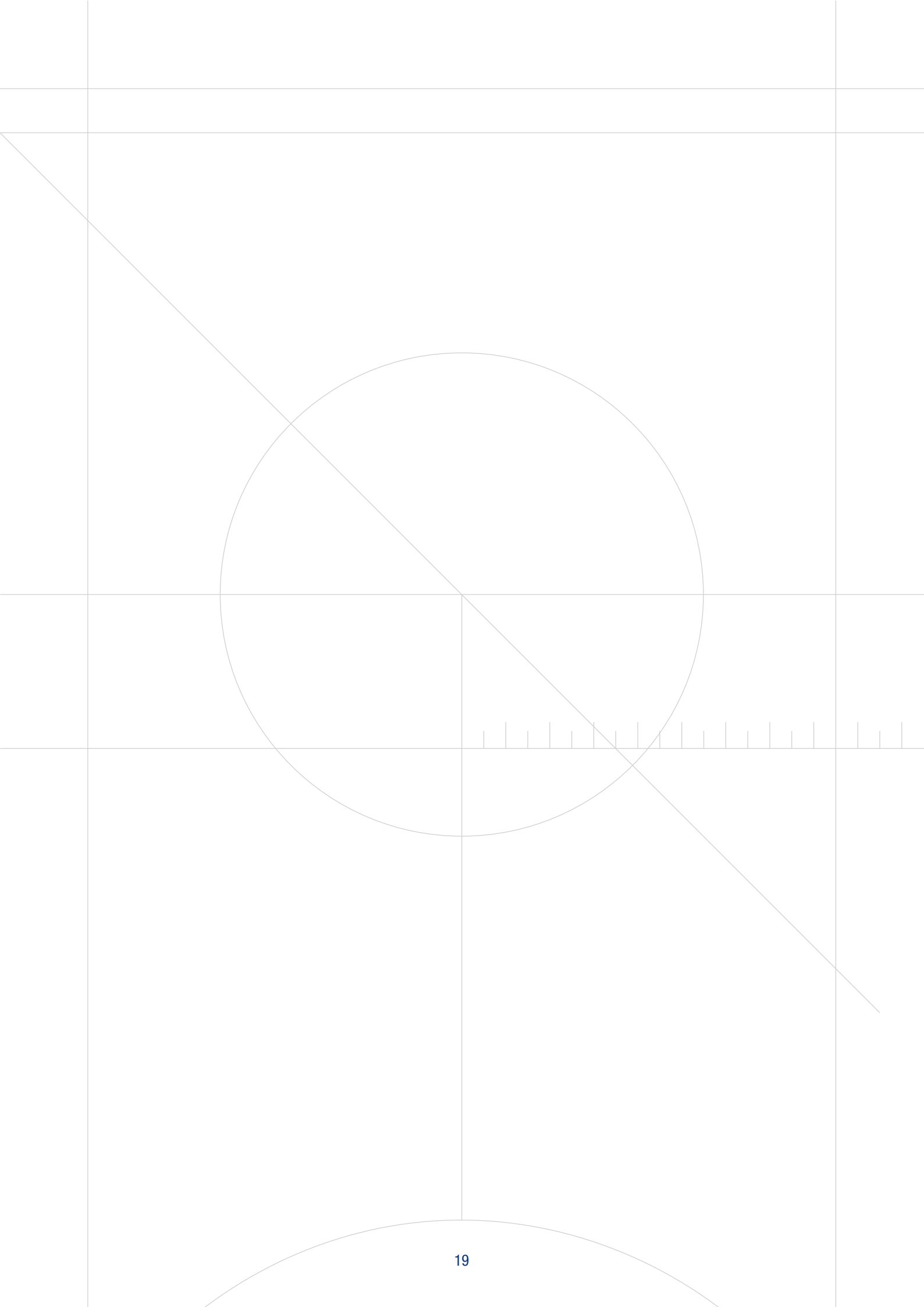
Material, Housing:	1.4301
Material, Lock bars:	Steel, surface protected
Material, Bolts:	Steel, surface protected
Material, Grip ring:	1.4310
Material, Sealing sleeve:	EPDM

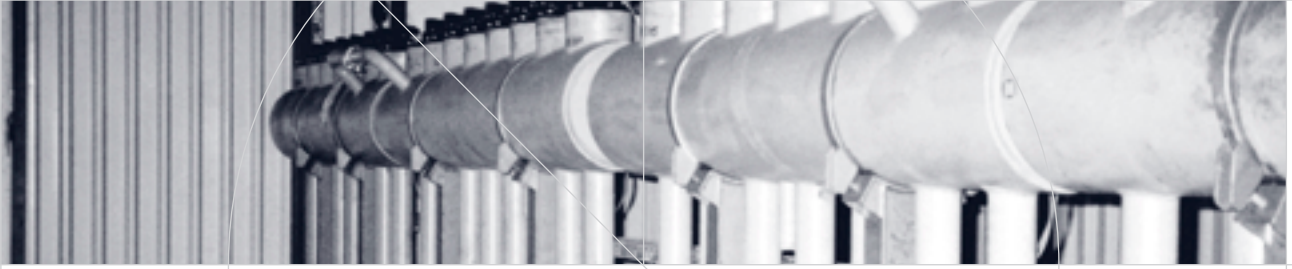
INOX (W5)

Material, Housing:	1.4571
Material, Lock bars:	A4
Material, Bolts:	A4
Material, Grip ring:	1.4310
Material, Sealing sleeve:	EPDM

DN	A [mm]	C [mm]	~D [mm]	~H [mm]	P _{max} [bar]		Bolt
					W2	W5	
40	67	8	70	90	10	10	M 8
50	78	17	85	105	10	10	M 8
70	98	25	100	120	10	10	M 10
75/80	98	25	105	125	10	10	M 10
100	98	25	130	150	10	10	M 10
125	113	35	165	195	10	10	M 12
150	113	35	185	215	10	10	M 12
200	140	35	240	270	10	10	M 16
250	140	35	305	335	10	10	M 16
300	140	35	360	390	10	10	M 16
400	142	35	460	490	6	10	M 16
500	142	35	565	595	3	6	M 16
600	142	35	665	695	2	4	M 16







The perfect connection for pipes

NORMACONNECT® DCS – Multi-range connectors

The flexible multi-range connector for connecting pipes of various materials.



NORMACONNECT® DCS – Multi-range connectors

NORMACONNECT® DCS CONFIX – The multi-range connector

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.



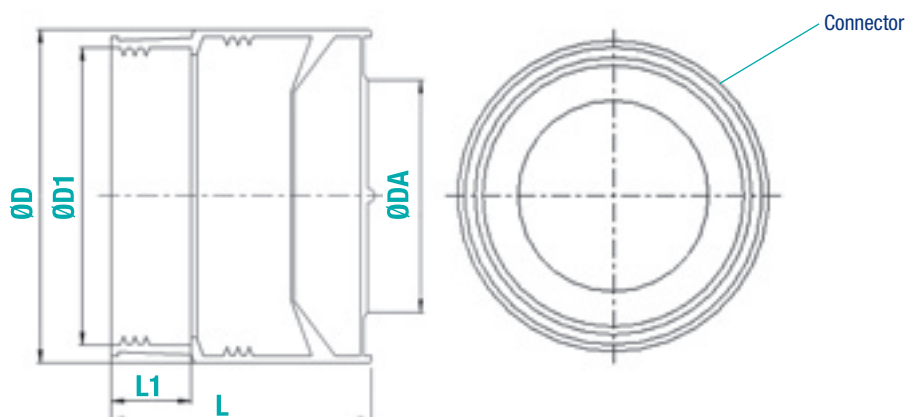
Features:

- Easy handling
- Strong worm-drive hose clip

Technical data:

Material, Connector: EPDM
Material, Worm-drive hose clip: 1.4016

DN	D1 [mm]	D [mm]	ø OD Branch piece [mm]	L1 [mm]	L [mm]	Insertion depth [mm]
50	57	72	40–56	20	58	35
70	77	92	56–75	22	71,5	45
75/80	82	92	56–75	22	71,5	45
100	108	126	102–110	27,5	89,5	57
125	132	151	125	35,5	108,5	65

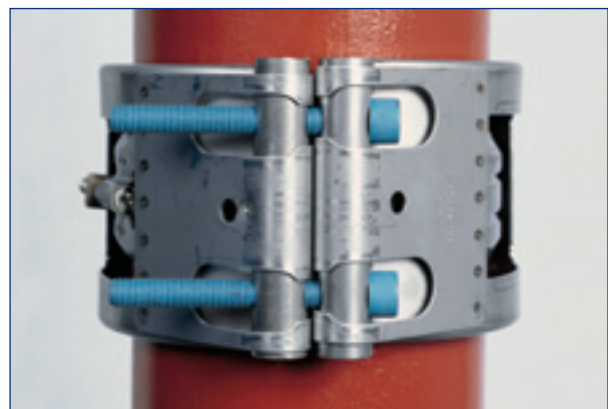


NORMACONNECT® DCS – Survey of sizes

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



NORMA

*The Connecting
Professionals*

The NORMA® Product Range

- **NORMACLAMP®**
= Hose Clamps
- **NORMACONNECT®**
= Pipe Connections
- **NORMAFIX®**
= Retaining Products
- **NORMAQUICK®**
= Quick Connectors
- **NORMAFLEX®**
= Fluid Systems
- **NORMAPLAST®**
= Plastic Products

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