

RTA flexible conduits

For each application and environmental stress there is a corresponding polyamide, PVC or metal-plastic flexible conduit solution, ideal for a wide range of sectors

Composition of the systems

SFP POLYAMIDE SYSTEM:

Particularly suitable for environments where flexibility is required

- Provides a high degree of resistance to:
 - Dynamic stress (movement)
 - Mechanical stress (impact)
 - Environmental stresses (splashes of chemical agents, weatherproofing)
 - Low temperatures (- 45°C)
- System consisting of 3 types of conduit with connectors and junctions
- Suitable, for example, for mobile equipment, machinery or robotics, etc.

PVC SYSTEM

Particularly suitable for environments where excellent resistance to external agents is required: oils, diluted acids, sparks

- Provides a high degree of resistance to:
 - Mechanical stresses (impact and compression)
 - Environmental stresses (splashes)
- System consisting of 2 types of conduit with connectors.
- Suitable, for example, for machining centres, welding shops, etc

METAL-PLASTIC SYSTEM

Particularly suitable for environments where strength is required

- Provides a high degree of resistance to:
 - Mechanical stresses (impact and compression)
 - Tensile and torsional stresses
- System consisting of 3 types of conduit with connectors
- Suitable, for example, for machines in severe mechanical environments

How to select your conduit

RTA flexible conduits are chosen according to the mechanical, dynamic and environmental stresses

The classification in standard EN 50086-1

can be used to define the mechanical and thermal characteristics of a product using 4 digits

1st digit	2nd digit	3rd digit	4th digit
Compressive strength	Impact strength	Minimum temperature	Maximum temperature
1 = 125 N (very low)	1 = 0.5 J (very low)	1 = + 5°C	1 = + 60°C
2 = 320 N (low)	2 = 1 J (low)	2 = - 5°C	2 = + 90°C
3 = 750 N (average)	3 = 2 J (average)	3 = - 15°C	3 = + 150°C
4 = 1250 N (high)	4 = 6 J (high)	4 = - 25°C	4 = + 120°C
5 = 4000 N (very high)	5 = 20 J (very high)	5 = - 45°C	5 = + 150°C
			6 = + 250°C
			7 = + 400°C

		DYNAMIC STRESSES	Classification acc. to EN 50086-1	MECHANICAL STRESSES	ENVIRONMENTAL STRESSES				Conformity to requirements of standards	
		Movement		Compression	Impact	Cold	Heat	Splashes	Weatherproof	
POLYAMIDE	SFP standard	■■■	2223 ⁽¹⁾ 2443	■	■ ⁽¹⁾ ■■■	■ ⁽¹⁾ ■■	■■	■■	IP66 without seal IP68 with seal	EN 50086-1 EN 61386-1 NF R 13-903 ⁽²⁾
	SFP robotic	■■■	1142 ⁽¹⁾ 1452	■	■ ⁽¹⁾ ■■■	■■■	■	■■	IP66 without seal IP68 with seal	EN 50086-1 EN 61386-1
	SFP TR	■■■	2443	■	■■■	■■■	■■	■■■	IP66 without seal IP68 with seal	EN 50086-1 EN 61386-1
PVC	GE-PVC	■■	-	■	■	■	■	■■	IP65 ⁽³⁾	
	FP 2000	■	2311	■■	■■	■	■	■■	IP44 ⁽³⁾ IP66 ⁽⁴⁾	EN 50086-1 EN 61386-1
METAL-PLASTIC	FA	■■	3331	■■	■■	■■	■	■	IP65 ⁽⁴⁾	EN 50086-1 EN 61386-1
	PN	■	3331	■■	■■	■■	■	■■	IP65 ⁽⁴⁾	EN 50086-1 EN 61386-1
	P2	■	4431	■■■	■■■	■■	■	■■	IP65 ⁽⁴⁾	EN 50086-1 EN 61386-1 UL 224

■■■ Very good resistance
■■ Good resistance
■ Limited resistance

(1) Outer diameter <12 mm - (2) Pending - (3) With universale connector - (4) With Metal 2000 connector

SFP polyamide rta flexible conduits

NEW



637 05



637 24



637 34



638 93



Technical characteristics (p. 302)

Protect electrical cables in an environment requiring excellent flexibility
Very good resistance to impacts, chemical agents, and to high and low temperatures
Conform to standard EN 50086-1
IP 66, IP 68 with weatherproof seal
Halogen-free polyamide

Pack	Cat.Nos	Standard
		Black spiral PA 6.6 conduit Suitable for the majority of applications for constructing machines and installations Conform to standard NF R 13-903
		Ø (mm) internalexternal
50 ⁽¹⁾	637 01	710
50 ⁽¹⁾	637 02	812
50 ⁽¹⁾	637 03	1216
50 ⁽¹⁾	637 04	1520
50 ⁽¹⁾	637 05	1925
25 ⁽¹⁾	637 06	2532
25 ⁽¹⁾	637 07	3340
25 ⁽¹⁾	637 08	4250

Pack	Cat.Nos	TR protection rings
		Fitted on the ends of the metal braid on the SFP TR conduit
		External Ø (mm) conduit with braid
25	638 92	14.5
25	638 93	18.5
25	638 94	22.5
10	638 95	27.5
10	638 96	34.5
10	638 97	44.5
5	638 98	52.5

		Robotic
		Black spiral PA 12 conduit High level of flexibility and resistance for dynamic applications and alternating movement, even at low temperature
		Ø (mm) internalexternal
50 ⁽¹⁾	637 21	710
50 ⁽¹⁾	637 22	812
50 ⁽¹⁾	637 23	1216
50 ⁽¹⁾	637 24	1520
50 ⁽¹⁾	637 25	1925
25 ⁽¹⁾	637 26	2532
25 ⁽¹⁾	637 27	3340
25 ⁽¹⁾	637 28	4250

		TR
		Spiral PA 6.6 conduit covered with a metal braid Suitable for harsh conditions with risk of splashing (chips, solder splashes, etc)
		Ø (mm) internalexternal⁽²⁾
50 ⁽¹⁾	637 32	812 / 14.5
50 ⁽¹⁾	637 33	1216 / 18.5
50 ⁽¹⁾	637 34	1520 / 22.5
50 ⁽¹⁾	637 35	1925 / 27.5
25 ⁽¹⁾	637 36	2532 / 34.5
25 ⁽¹⁾	637 37	3340 / 44.5
25 ⁽¹⁾	637 38	4250 / 52.5

(1) Number of meters in pack
(2) Only polyamide conduit / conduit with braid

SFP polyamide rta flexible conduits

connectors and junctions, accessories

NEW



637 55



637 85



638 09



638 10



638 65



638 74



Example of associated bases



979 45

Pack	Cat.Nos		Connectors and junctions	
			Provide excellent tensile strength in static and dynamic applications No tools needed when used with SFP standard, robotic and TR polyamide conduits Conduit inserted directly, clamped by simply pulling the ring, locked with a 1/4 turn with closing indication IP 66, IP 68 with weatherproof seal Supplied in a sachet Black halogen-free PA 6.6	
			Straight and right-angled male connectors	
			External Ø (mm) polyamide conduit	Thread
25	637 50	637 80	10	ISO 12
25 15	637 51	637 81	12	ISO 16
15 10	637 52	637 82	16	ISO 16
15 10	637 53	637 83	16	ISO 20
10	637 54	637 84	20	ISO 20
10	637 55	637 85	20	ISO 25
10 5	637 56	637 86	25	ISO 25
5	637 57	637 87	32	ISO 32
5	637 58		40	ISO 40
1	637 59		50	ISO 50
25	637 60	637 90	10	PG 7
25	637 61		10	PG 9
25 15	637 63	637 91	12	PG 7
25 15	637 64	637 92	12	PG 9
25	637 65		12	PG 11
15 10	637 67	637 93	16	PG 11
15 10	637 68	637 94	16	PG 13.5
10	637 70	637 95	20	PG 13.5
10	637 71	637 96	20	PG 16
10 5	637 72	637 97	25	PG 16
10 5	637 73	637 98	25	PG 21
5	637 74	637 99	32	PG 29
5	637 75		40	PG 36
1	637 76		50	PG 42
1	637 77		50	PG 48
			Right-angled base connectors	
			Supplied with joint surface	
			External Ø (mm) polyamide conduit:	
1	638 08		40	
1	638 09		50	
			Y junctions	
			External Ø (mm) polyamide conduit ⁽¹⁾ :	
1	638 10		12 / 10 - 10	
1	638 12		16 / 12 - 12	
1	638 14		20 / 12 - 12	
1	638 16		20 / 16 - 16	
1	638 18		25 / 20 - 20	

Pack	Cat.Nos		Accessories	
			IP 68 weatherproof seals	
			Fitted at the ends of the conduit to obtain IP 68 with the connectors and junctions	
			Supplied in a sachet	
			External Ø (mm) polyamide conduit:	
50	638 61	10		
50	638 62	12		
50	638 63	16		
50	638 64	20		
10	638 65	25		
1	638 66	32		
10	638 67	40		
10	638 68	50		
			Snap-fixing bases	
			Accessory for holding SFP standard and robotic polyamide conduits	
			Fixed with screws (not supplied)	
			Conduit simply clipped in place and closed with a cover	
			Bases can be used with clips supplied	
			Supplied in a sachet	
			Black PA 6.6	
			External Ø (mm) conduit:	
25	638 71	10		
25	638 72	12		
25	638 73	16		
10	638 74	20		
10	638 75	25		
10	638 76	32		
5	638 77	40		
5	638 78	50		
			Nuts	
			Hexagonal with conduit support in order to protect the casing surface when tightening	
			Black reinforced fibreglass PA 6	
50	979 40	ISO 12		
50	979 41	ISO 16		
50	979 43	ISO 20		
50	979 45	ISO 25		
25	979 46	ISO 32		
25	979 47	ISO 40		
25	979 48	ISO 50		
25	979 49	ISO 63		
50	979 50	PG 7		
50	979 51	PG 9		
50	979 52	PG 11		
50	979 53	PG 13.5		
50	979 54	PG 16		
50	979 55	PG 21		
25	979 56	PG 29		
25	979 57	PG 36		
25	979 58	PG 42		
25	979 59	PG 48		

(1) Arrival/departures

Red catalogue numbers: New products

SFP polyamide rta flexible conduits

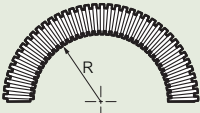
Characteristics

SFP polyamide conduit		Standard	Robotics	TR
Materials ⁽¹⁾		PA 6.6	PA 12	PA 6.6 + zinc-plated steel
Classification acc. to EN 50086-1	ext. diam. ≤12 mm	2 2 2 3	1 1 4 2	2 4 4 3
	ext. diam. > 12 mm	2 4 4 3	1 4 5 2	
Compressive strength		320 N	125 N	320 N
Impact strength	ext. diam. ≤12 mm	IK 06 (1 joule)	IK 04 (0.5 joule)	IK 08 (6 joules)
	ext. diam. > 12 mm	IK 08 (6 joules)	IK 08 (6 joules)	
Operating temperatures ⁽²⁾	min.	- 25 °C	- 45 °C	- 25 °C
	max.	+ 105 °C	+ 90 °C	+ 105 °C
Protection acc. to IEC EN 50086-1		IP 66/IP 68 (with seal)		
Held the U.V.		500 h	500 h	> 500 h
Self-extinguishing acc. to EN 50086-1		Flame-retardant		
Self-extinguishing ⁽³⁾ acc. to IEC EN 60695-2-11			750 °C	
Resistance to the main chemical agents	Lead-free petrol	***	***	***
	Dilute industrial detergents	***	***	***
	Diesel	***	**	***
	Lubricating oils	***	***	***
	Dilute acids	*	*	-
	Dilute alkaline solutions	***	***	***
Cleaning solvents		***	***	***

(1) Halogen-free materials
(2) Min. - 45 °C, max. + 105 °C for connectors and junctions
(3) 850 °C for connectors and junctions

*** Very good
** Good
* Limited

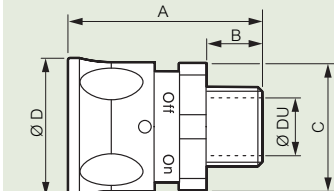
Conduit bending radius

	Cat.Nos	int. Ø (mm)	R min. (mm) ⁽¹⁾			
			Standard	Robotic	TR	
	637 01/21	7	18	16	-	
	637 02/22/32	8	20	18	23	
	637 03/23/33	12	25	22	25	
	637 04/24/34	15	30	27	30	
	637 05/25/35	19.5	40	36	40	
	637 06/26/36	25.5	50	45	55	
	637 07/27/37	33	60	54	70	
	637 08/28/38	42	70	63	110	

(1) Indicative dimensions

Dimensions

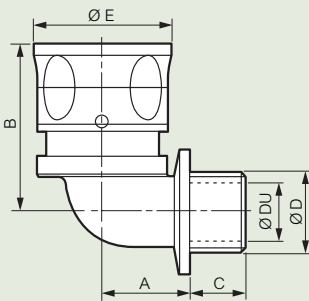
Straight male connectors



Cat.Nos	Thread	Dimensions (mm)				
		Ø DU	A	B	C (across flat)	Ø D
637 50	ISO 12	7	41.5	10	22	24
637 51	ISO 16	9	41.5	10	24	26
637 52	ISO 16	11	46	12	28	30.5
637 53	ISO 20	12.5	46	12	28	30.5
637 54	ISO 20	14.5	49	14	32	34.5
637 55	ISO 25	15.5	49	14	32	34.5
637 56	ISO 25	19	52	14	38	39.5
637 57	ISO 32	26	56	14	45	47
637 58	ISO 40	33.4	59	14	54	55
637 59	ISO 50	42.8	66	16	64	65

Cat.Nos	Thread	Dimensions (mm)				
		Ø DU	A	B	C (across flat)	Ø D
637 60	PG 7	7	41.5	10	22	24
637 61	PG 9	7	41.5	10	22	24
637 63	PG 7	8	41.5	10	24	26
637 64	PG 9	9	41.5	10	24	26
637 65	PG 11	9	41.5	10	24	26
637 67	PG 11	12.5	46	12	28	30.5
637 68	PG 13.5	12.5	46	12	28	30.5
637 70	PG 13.5	15.5	49	14	32	34.5
637 71	PG 16	15.5	49	14	32	34.5
637 72	PG 16	17.5	52	14	38	39.5
637 73	PG 21	19	52	14	38	39.5
637 74	PG 29	26	56	14	45	47
637 75	PG 36	33.4	59	14	54	55
637 76	PG 42	42.8	66	16	64	65
637 77	PG 48	42.8	66	16	64	65

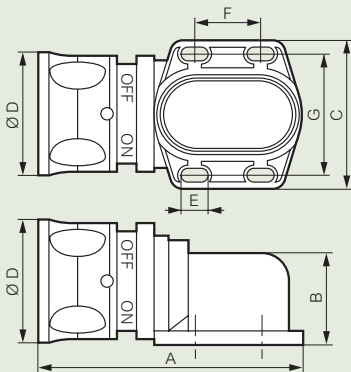
Right-angled male connectors 90°



Cat.Nos	Thread	Dimensions (mm)					
		Ø DU	A	B	C	Ø D	Ø E
637 80	ISO 12	7	16	33.5	10	17.5	24
637 81	ISO 16	8.2	17	34	10	21	26
637 82	ISO 16	10.4	19.5	39.5	12	26	30.5
637 83	ISO 20	10.4	19.5	39.5	12	26	30.5
637 84	ISO 20	13.8	22	41.5	14	31	34.5
637 85	ISO 25	13.8	22	41.5	14	31	34.5
637 86	ISO 25	16.9	25	48	14	34	39.5
637 87	ISO 32	25.3	28.5	58.5	14	43	47

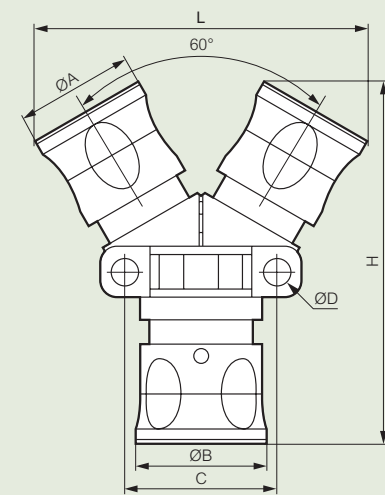
Cat.Nos	Thread	Dimensions (mm)					
		Ø DU	A	B	C	Ø D	Ø E
637 90	PG 7	7	16	33.5	10	17.5	24
637 91	PG 7	8.2	17	34	10	21	26
637 92	PG 9	8.2	17	34	10	21	26
637 93	PG 11	10.4	19.5	39.5	12	26	30.5
637 94	PG 13.5	10.4	19.5	39.5	12	26	30.5
637 95	PG 13.5	13.8	22	41.5	14	31	34.5
637 96	PG 16	13.8	22	41.5	14	31	34.5
637 97	PG 16	16.9	25	48	14	34	39.5
637 98	PG 21	16.9	25	48	14	34	39.5
637 99	PG 29	25.3	28.5	58.5	14	43	47

Right-angled base connectors 90°



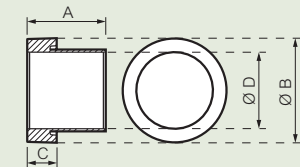
Cat.Nos	Dimensions (mm)						
	A	B	C	Ø D	E	F	G
638 08	130	60	89	47	13	43	75
638 09	155	60	89	55	13	43	75

Y junctions



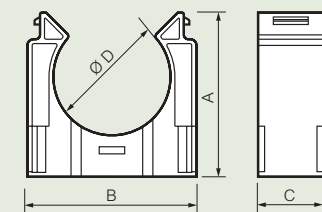
Cat.Nos	Dimensions (mm)						
	H	L	Depth	Ø A	Ø B	C	Ø D
638 10	70	65	32	26	24	30	5.5
638 12	77	70	32	30.5	26	30	5.5
638 14	82	72	41	34.5	26	30	6.5
638 16	86	81	41	34.5	30.5	42	6.5
638 18	92	86	41	39.5	34.5	42	6.5

IP 68 weatherproof seal



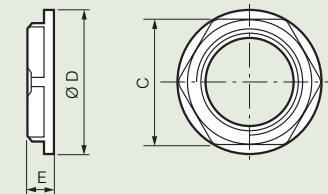
Cat.Nos	Dimensions (mm)			
	A	Ø B	C	Ø D
638 01	10	9.7	3.5	5.4
638 02	10	11.7	3.5	7.4
638 03	11	15.6	3.5	11.4
638 04	15	19.8	5	14.1
638 05	18	24.9	7	17.6
638 06	23	31.9	9	23.4
638 07	24.5	39.9	9	31.4
638 08	27.5	49.9	10	40.1

Snap-fixing base



Cat.Nos	Dimensions (mm)			
	A	B	C	Ø D
638 71	21.5	22.5	18	10
638 72	24.5	23.5	18	12
638 73	28.5	26	18	16
638 74	32.5	32	18	20
638 75	39	38	18	25
638 76	45	46.5	18	32
638 77	53.5	53.5	18	40
638 78	61	63	18	50

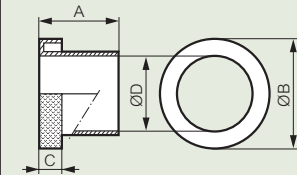
Nuts



Cat.Nos	Thread	Dimensions (mm)		
		C	E	Ø D
979 40	ISO 12	19	5	21
979 41	ISO 16	22	5	24
979 43	ISO 20	26	6	28
979 45	ISO 25	32	6	35
979 46	ISO 32	41	7	43
979 47	ISO 40	50	7	56
979 48	ISO 50	60	8	66
979 49	ISO 63	75	8	82

Cat.Nos	Thread	Dimensions (mm)		
		C	E	Ø D
979 50	PG 7	19	5	21
979 51	PG 9	22	5	24
979 52	PG 11	24	5	26
979 53	PG 13.5	26	6	28
979 54	PG 16	32	6	35
979 55	PG 21	36	7	38
979 56	PG 29	46	7	51
979 57	PG 36	60	8	66
979 58	PG 42	70	8	76
979 59	PG 48	75	8	81

TR protection rings



Cat.Nos	Dimensions (mm)			
	A	Ø B	C	Ø D
637 32	21	19.7	6	12
637 33	21	24.8	6	16
637 34	21	28.8	6	20
637 35	21	34.6	8	25
637 36	21	42	8	32
637 37	21	50	10	40
637 38	21	61	10	50

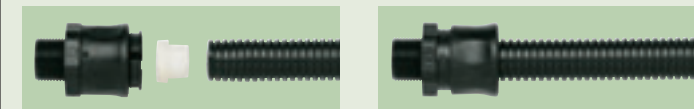
Installation

Assembling the SFP polyamide rta connector



1. Insert the conduit
2. Clamp the connector by pulling on the ring
3. Lock with a 1/4 turn

Assembling the weatherproof seal



1. Position the seal on the conduit
2. Fit the connector

Assembling the TR protection ring



1. Composition of the assembly
2. Place the protection ring in position



3. Fit the connector



635 05



635 25



635 45



635 51



635 62



Technical characteristics (p. 306)

Protect electrical cables in a harsh environment requiring good resistance to oils and dilute acids

Excellent flexibility

FP 2000 PVC and metalloplastic conduits conforming to standard EN 50086-1

P2 metalloplastic conduits conforming to standard UL 224

Pack	Cat.Nos	PVC
GE - PVC		
Simple conduit in grey smooth PVC		
IP 65 with Universale connectors		
Ø (mm)		
		internal external
50 ⁽¹⁾	635 01	10 14
50 ⁽¹⁾	635 02	12 16
50 ⁽¹⁾	635 03	15.5 20.5
50 ⁽¹⁾	635 04	20.5 26.5
25 ⁽¹⁾	635 05	27 33.5
25 ⁽¹⁾	635 06	34.5 41.5
25 ⁽¹⁾	635 07	39.5 47.5
25 ⁽¹⁾	635 09	51 61
FP 2000		
Conduit in grey PVC with reinforcement		
Smooth interior allows cables to slide through easily		
Ensures excellent mechanical resistance		
IP 44 with Universale connectors		
IP 66 with Metal 2000 connectors		
Ø (mm)		
		internal external
50 ⁽¹⁾	635 21	10 15.5
50 ⁽¹⁾	635 22	12.5 17.5
50 ⁽¹⁾	635 23	16 21
50 ⁽¹⁾	635 24	21 26
25 ⁽¹⁾	635 25	27 33.5
25 ⁽¹⁾	635 26	35.5 42.5
25 ⁽¹⁾	635 27	40.5 48.5
25 ⁽¹⁾	635 29	52 60.5

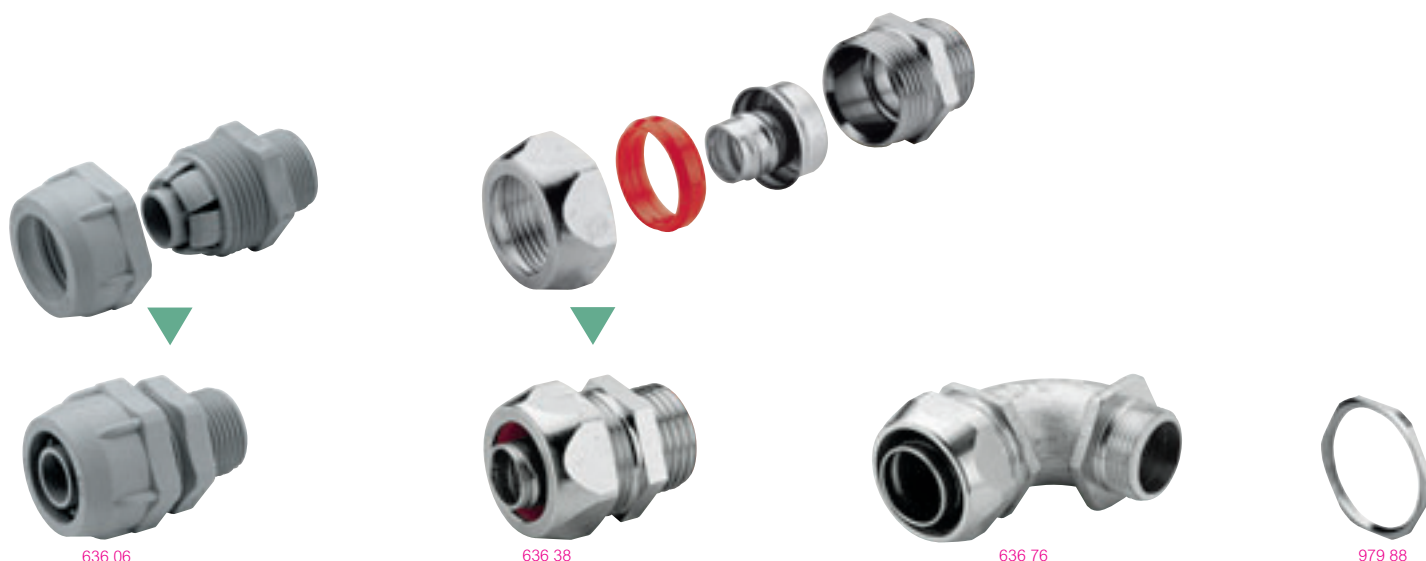
Pack	Cat.Nos	Metalloplastic
Excellent mechanical resistance		
Electrical continuity guaranteed with Metal 2000 connectors		
IP 65 with Metal 2000 connectors		
FA		
Single seam connection steel conduit,		
coated with aspirated grey PVC		
Ø (mm)		
		internal external
50 ⁽¹⁾	635 41	10 14
50 ⁽¹⁾	635 42	12 15.5
50 ⁽¹⁾	635 43	15.5 19.5
50 ⁽¹⁾	635 44	20.5 24.5
25 ⁽¹⁾	635 45	26.5 31.5
25 ⁽¹⁾	635 46	34.5 40
25 ⁽¹⁾	635 47	39.5 45
25 ⁽¹⁾	635 49	50.5 56
PN		
Single seam connection steel conduit,		
coated with smooth grey PVC		
Excellent resistance to wear and abrasion		
Ø (mm)		
		internal external
50 ⁽¹⁾	635 51	10 15.5
50 ⁽¹⁾	635 52	12 18
50 ⁽¹⁾	635 53	15.5 21.5
50 ⁽¹⁾	635 54	20.5 27
25 ⁽¹⁾	635 55	26.5 34
25 ⁽¹⁾	635 56	34.5 42.5
25 ⁽¹⁾	635 57	39.5 48.5
25 ⁽¹⁾	635 59	50.5 61
P2		
Double seam connection steel conduit,		
coated with grey smooth PVC		
Enhanced mechanical resistance to tensile and torsional stress		
Ø (mm)		
		internal external
50 ⁽¹⁾	635 61	10 15.5
50 ⁽¹⁾	635 62	12 18
50 ⁽¹⁾	635 63	15.5 21.5
50 ⁽¹⁾	635 64	20.5 27
25 ⁽¹⁾	635 65	26.5 33.5
25 ⁽¹⁾	635 66	34.5 42.5
25 ⁽¹⁾	635 67	39.5 48
25 ⁽¹⁾	635 69	50.5 60

(1) Number of meters in pack

Red catalogue numbers: New products

PVC and metalloplastic rta flexible conduits connectors

NEW



Pack	Cat.Nos	Connectors for PVC conduits		
		Universale straight male connectors		
		IP 65 with GE-PVC conduit		
		IP 44 with FP 2000 conduit		
		Supplied in a sachet		
		Grey reinforced fibreglass PA 6		
		Ø conduit (mm)		Thread
		min. internal	max. external	
25	636 01	10	16	ISO 16
25	636 02	12	18	ISO 16
25	636 03	12	18	ISO 20
10	636 04	15	21.5	ISO 20
10	636 05	20	26.5	ISO 25
5	636 06	27	33.5	ISO 32
1	636 09	34.5	42.5	ISO 40
1	636 10	39	50	ISO 40
1	636 12	50	61	ISO 50
25	636 21	10	16	PG 9
25	636 22	12	18	PG 11
25	636 23	12	18	PG 13.5
10	636 24	15	21.5	PG 13.5
10	636 25	15	21.5	PG 16
10	636 26	20	26.5	PG 21
5	636 27	27	33.5	PG 29
		Nuts for Universale connectors		
		Hexagonal with conduit support in order to protect the casing surface when tightening		
		Black reinforced fibreglass PA 6		
50	979 41	ISO 16		
50	979 43	ISO 20		
50	979 45	ISO 25		
25	979 46	ISO 32		
25	979 47	ISO 40		
25	979 48	ISO 50		
25	979 49	ISO 63		
50	979 51	PG 9		
50	979 52	PG 11		
50	979 53	PG 13.5		
50	979 54	PG 16		
50	979 55	PG 21		
25	979 56	PG 29		

Pack	Cat.Nos		Connectors for FP 2000 PVC and metalloplastic conduits	
			Metal 2000 male connectors Sealing ring providing the IP between the connector and the conduit IP 66 with PVC FP 2000 conduit IP 65 with metalloplastic conduits Tinned steel ferrule screwed inside the metal conduit to ensure electrical continuity and protection of cables Supplied in a sachet. Nickel-plated brass	
	Straight	Right-angled	Internal Ø (mm) conduit	Thread
1	636 31	636 71	10	ISO 16
1	636 32	636 72	12	ISO 16
1	636 33	636 73	12	ISO 20
1	636 35	636 74	15.5	ISO 20
1	636 37	636 75	20.5	ISO 25
1	636 38		26.5	ISO 25
1	636 39	636 76	26.5	ISO 32
1	636 40	636 77	34.5	ISO 40
1	636 41	636 78	39.5	ISO 50
1	636 42	636 79	50.5	ISO 63
1	636 52	636 82	10	PG 9
1	636 53	636 83	10	PG 11
1	636 55	636 84	12	PG 11
1	636 58	636 86	15.5	PG 13.5
1	636 59	636 87	15.5	PG 16
1	636 60	636 88	20.5	PG 21
1	636 61	636 89	26.5	PG 29
1	636 62	636 90	34.5	PG 36
1	636 63	636 91	39.5	PG 42
1	636 64	636 92	50.5	PG 48
			Nuts for Metal 2000 connectors Nickel-plated brass	
50	979 81	ISO 16		
50	979 83	ISO 20		
50	979 85	ISO 25		
50	979 86	ISO 32		
25	979 87	ISO 40		
10	979 88	ISO 50		
10	979 89	ISO 63		
50	979 91	PG 9		
50	979 92	PG 11		
50	979 93	PG 13.5		
50	979 94	PG 16		
50	979 95	PG 21		
25	979 96	PG 29		
25	979 97	PG 36		
10	979 98	PG 42		
10	979 99	PG 48		

PVC rta flexible conduits and Universale connectors

■ Characteristics

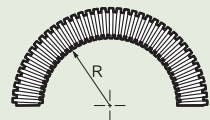
PVC conduit		GE - PVC	FP 2000
Materials		plasticized PVC	PVC
Classification according to EN 50086-1		-	2 3 1 1
Compressive strength		-	320 N
Impact strength		-	IK 07 (2 joules)
Operating temperatures ⁽¹⁾	min.	- 15 °C	+ 5 °C
	max.	+ 70 °C	+ 60 °C
Protection in accordance with IEC EN 60529	With Universale connector	IP 65	IP 44
	With Metal 2000 connector	-	IP 66
Fire resistance ⁽²⁾ in accordance with EN 50086-1		Flameproof	
Resistance to the main chemical agents	Lead-free petrol	..	...
	Dilute industrial detergents	...	...
	Diesel	..	...
	Lubricating oils	...	..
	Dilute acids	..	..
	Dilute alkaline solutions	.	.
	Cleaning solvents	..	.

(1) Min. - 20 °C, max. 80 °C for connectors

(2) Universale connectors, self-extinguishing at 850 °C acc. to IEC EN 60695-2-11 - V.O. acc. to UL 94

... Very good
.. Good
• Limited

Conduit bending radius

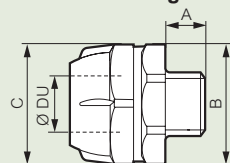


GE-PVC			FP 2000		
Cat.Nos	Ø internal	R min. (mm) ⁽¹⁾	Cat.Nos	Ø internal	R min. (mm) ⁽¹⁾
635 01	10	25	635 21	10	40
635 02	12	30	635 22	12.5	55
635 03	15.5	40	635 23	16	70
635 04	20.5	50	635 24	21	80
635 05	27	70	635 25	27	90
635 06	34.5	80	635 26	35.5	120
635 07	39.5	90	635 27	40.5	140
635 09	51	110	635 29	52	160

(1) Indicative dimensions

■ Dimensions

Universale straight male connectors



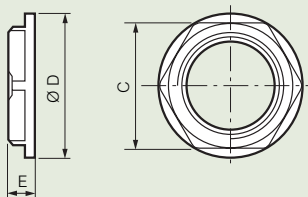
ISO

Cat.Nos	Thread	Dimensions (mm)			
		Ø DU	A	B (across flat)	C (across flat)
636 01	ISO 16	8	10	24	25
636 02	ISO 16	10	12	26	28
636 03	ISO 20	10	12	26	28
636 04	ISO 20	13	13	31	34
636 05	ISO 25	18	14	36	40
636 06	ISO 32	24	15	45	48
636 09	ISO 40	32	15	54	60
636 10	ISO 40	34	15	61	67
636 12	ISO 50	45.5	20	73	80

PG

Cat.Nos	Thread	Dimensions (mm)			
		Ø DU	A	B (across flat)	C (across flat)
636 21	PG 9	8	10	24	25
636 22	PG 11	10	12	26	28
636 23	PG 13.5	10	13	26	28
636 24	PG 13.5	13	13	31	34
636 25	PG 16	13	13	31	34
636 26	PG 21	18	14	36	40
636 27	PG 29	24	15	45	48

Nuts for Universale connectors



ISO

Cat.Nos	Thread	Dimensions		
		C	E	Ø D
979 41	ISO 16	22	5	24
979 43	ISO 20	26	6	28
979 45	ISO 25	32	6	35
979 46	ISO 32	41	7	43
979 47	ISO 40	50	7	56
979 48	ISO 50	60	8	66
979 49	ISO 63	75	8	82

PG

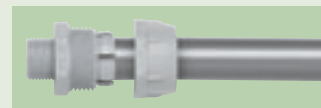
Cat.Nos	Thread	Dimensions		
		C	E	Ø D
979 51	PG 9	22	5	24
979 52	PG 11	24	5	26
979 53	PG 13.5	26	6	28
979 54	PG 16	32	6	35
979 55	PG 21	36	7	38
979 56	PG 29	46	7	51

■ Installation

Assembling the Universale connector



1. Composition of the assembly



2. Clamp ring run along and conduit inserted



3. Assembled elements after tightening

metalloplastic rta flexible conduits and Metal 2000 connectors

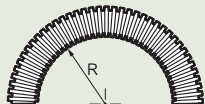
■ Characteristics

Metalloplastic conduit		FA	PN	P2
Materials		PVC coated hot dip galvanized steel		
Classification according to EN 50086-1		3 3 3 1	3 3 3 1	4 4 3 1
Compressive strength		750 N	750 N	1250 N
Impact strength		IK 07 (2 joules)	IK 07 (2 joules)	IK 08 (6 joules)
Operating temperatures ⁽¹⁾	min.		- 15 °C	
	max.		+ 60 °C	
Protection in accordance with IEC EN 60529 with metal connector		IP 65		
Self-extinguishing in accordance with EN 50086-1		Flameproof		
Resistance to the main chemical agents	Lead-free petrol	...	..	...
	Dilute industrial detergents	...	...	...
	Diesel	..	..	..
	Lubricating oils	...	...	...
	Dilute acids	..	.	.
	Dilute alkaline solutions	.	.	.
	Cleaning solvents	.	.	.

(1) Min. -20 °C, max. 80 °C for connectors

... Very good
.. Good
. Limited

Conduit bending radius

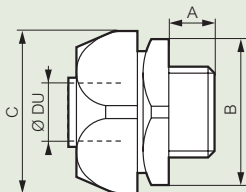


FA			PN			P2		
Cat.Nos	Ø internal	R min. (mm) ⁽¹⁾	Cat.Nos	Ø internal	R min. (mm) ⁽¹⁾	Cat.Nos	Ø internal	R min. (mm) ⁽¹⁾
635 41	10	30	635 51	10	35	635 61	10	50
635 42	12	35	635 52	12	50	635 62	12	65
635 43	15.5	40	635 53	15.5	70	635 63	15.5	80
635 44	20.5	60	635 54	20.5	80	635 64	20.5	110
635 45	26.5	100	635 55	26.5	110	635 65	26.5	130
635 46	34.5	110	635 56	34.5	135	635 66	34.5	150
635 47	39.5	150	635 57	39.5	160	635 67	39.5	190
635 49	50.5	200	635 59	50.5	200	635 69	50.5	230

(1) Indicative dimensions

■ Dimensions

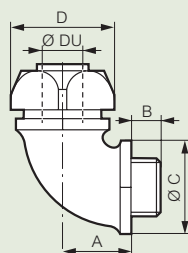
Metal 2000 straight male connectors



Cat.Nos	Thread	Dimensions (mm)			
		Ø DU	A	B (across flat)	C (across flat)
636 31	ISO 16	8.5	10	20	22
636 32	ISO 16	10	10	24	26
636 33	ISO 20	10	10	24	26
636 35	ISO 20	14	10	27	29
636 37	ISO 25	19	10	33	35
636 38	ISO 25	24	10	43	35
636 39	ISO 32	24	12	43	45
636 40	ISO 40	32	14	51	54
636 41	ISO 50	37	14	60	62
636 42	ISO 63	47	16	74	77

Cat.Nos	Thread	Dimensions (mm)			
		Ø DU	A	B (across flat)	C (across flat)
636 52	PG 9	8.5	10	20	22
636 53	PG 11	8.5	10	20	22
636 55	PG 11	10	10	24	26
636 58	PG 13.5	14	10	27	29
636 59	PG 16	14	10	27	29
636 60	PG 21	19	10	33	35
636 61	PG 29	24	12	43	45
636 62	PG 36	32	14	51	54
636 63	PG 42	37	14	60	62
636 64	PG 48	47	16	74	77

Metal 2000 right-angled male connectors 90°

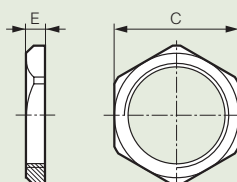


Cat.Nos	Thread	Dimensions (mm)				
		Ø DU	A	B	Ø C	D (across flat)
636 71	ISO 16	8.5	20.5	10	22	22
636 72	ISO 16	10	23	10	25	26
636 73	ISO 20	10	23	10	25	26
636 74	ISO 20	14	23.5	10	27	29
636 75	ISO 25	19	27.5	10	32	35
636 76	ISO 32	24	33	14	42	45
636 77	ISO 40	32	39	16	51	54
636 78	ISO 50	37	47	18	60	62
636 79	ISO 63	47	55	20	74	77

PG

Cat.Nos	Thread	Dimensions (mm)				
		Ø DU	A	B	Ø C	D (across flat)
636 82	PG 9	8.5	20.5	10	22	22
636 83	PG 11	8.5	20.5	10	22	22
636 84	PG 11	10	23	10	25	26
636 86	PG 13.5	14	23.5	10	27	29
636 87	PG 16	14	23.5	10	27	29
636 88	PG 21	19	27.5	10	33	35
636 89	PG 29	24	33	14	42	45
636 90	PG 36	32	39	16	51	54
636 91	PG 42	37	47	18	60	62
636 92	PG 48	47	55	20	74	77

Nuts for Metal 2000 connectors



ISO

Cat.Nos	Thread	Dimensions (mm)	
		C	E
979 81	ISO 16	19	3
979 83	ISO 20	24	3.5
979 85	ISO 25	30	4
979 86	ISO 32	36	4
979 87	ISO 40	46	5
979 88	ISO 50	60	5
979 89	ISO 63	70	5

PG

Cat.Nos	Thread	Dimensions (mm)	
		C	E
979 91	PG 9	18	2.8
979 92	PG 11	21	3
979 93	PG 13.5	23	3
979 94	PG 16	26	3
979 95	PG 21	32	3.5
979 96	PG 29	41	4
979 97	PG 36	51	5
979 98	PG 42	60	5
979 99	PG 48	64	5.5

■ Installation

Assembling the Metal 2000 connector



1. Composition of the assembly



2. Clamp and sealing rings run along then ferrule screwed inside the metal conduit



3. Assembled elements after tightening



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