



- 1 NORMAPLAST YN**  
– Y plastic pipe connectors
- 2 NORMAPLAST TS**  
– Equal T push-on connectors
- 3 NORMAPLAST GES**  
– Straight taper thread connectors
- 4 NORMAPLAST TES**  
– T-taper thread connector
- 5 NORMAPLAST GRS**  
– Reducing straight push-on connectors
- 6 NORMAPLAST WN**  
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## Hose connectors

NORMAPLAST® SV products are proven plastic hose and pipe connection components that create secure, reliable and affordable connections in lines used for transporting media.

NORMAPLAST® SV hose and pipe connectors are used in the automotive construction industry as well as practically every other industrial sector.

### Advantages at a glance

- Extremely strong
- Durable
- Low weight
- Can be used for damping/absorption
- Resistant to abrasion
- Highly resistant to impact

### Applications

- Machine building
- Railway industry
- White goods
- Agricultural machines
- Chemical industry
- Building machines
- Irrigation systems
- Engine manufacturing
- Food and beverage industry
- Pump and filter

## Materials

Materials	PP	POM	PA6	PA with glass fiber
	Moplen HP501H	Polyacetal copolymer standard material hose connectors	Polyamide unreinforced standard material threaded connectors	Polyamide reinforced standard material pipe connectors
<b>Mechanical Properties</b>				
<b>Operation temperature</b>	0°C to +80°C short term (up to 1h) max. +100°C	–40°C to 80°C, short-term (up to 1h) 110°C	–40°C to 90°C, short-term (up to 1h) 120°C	–40°C to 120°C, short-term (up to 1h) 150°C
<b>Max. admissible pressure</b>	10bar	10bar	10bar	10bar

Applications	Recommended material range
Food area / drinking water area / chemical area	>POM<
Chemical area	>PP<
Chemical area (with aggressive media)	>PVDF<
Fuel / UREA (AdBlue) crank case ventilation	>PA12-GF30<
Cooling water / Windshield washer fluid	>PA66-GF30<
Air (Vacuum brake, Secondary air) TOC (Oil cooler, transmission oil)	>PA6-GF30<

### Thermal properties

In the case of threaded spigots, the expansion coefficient  $100 \times 10^{-6}$  for thermoplastic material must be taken into consideration if temperature fluctuations occur. Our standard materials are classified in accordance with the UL (Underwriters Laboratories) system as follows:

- Flammability rating (UL94)
- POM, PP, PA6, PA6.6, and PA12: HB (Horizontal Burning)

## Materials

Chemical properties of the plastics used								
No.	Chemical substance	Concentration	Temperature	POM	PP	PA 6	PA 6.6	PA 12
1	Acetone	100%	20 °C/50 °C	1/3	1/1	1/0	1/0	1/0
2	Formic acid	98-100%	20 °C/50 °C	4/4	1/3	4/4	4/4	4/4
3	Ammonium hydroxide (spirits of ammonia)	Any	20 °C/50 °C	1/2	1/1	1/0	1/0	1/0
4	Benzene; normal and super unleaded	Commercial	20 °C/50 °C	1/1	3/4	1/1	1/1	1/1
5	Benzene, benzene hydrocarbons	100%	20 °C/50 °C	3/3	3/4	1/0	1/0	1/0
6	Bleaching lye (12.5% active chlorine)	Aqueous solution 12.5%	20 °C/50 °C	4/4	3/3	4/4	4/4	3/3
7	Brake fluid (DOT4)	Commercial	20 °C/50 °C	1/1	1/1	1/1	1/1	1/1
8	Butanol	Technically pure	20 °C/50 °C	1/2	1/1	1/0	1/0	1/0
9	Chlorine, chlorine water	Commercial	20 °C/50 °C	4/4	4/4	4/4	4/4	4/4
10	Disinfectant phenols	Diluted solution	20 °C/50 °C	4/4	1/1	4/4	4/4	4/4
11	Diesel fuel, diesel oil	Commercial	20 °C/50 °C	1/1	1/3	1/1	1/1	1/1
12	Decalcifier	Aqueous solution ~10%	20 °C/50 °C	4/4	1/1	2/3	2/3	2/3
13	Photographic developer (1:100)	Commercial	20 °C/50 °C	1/1	1/1	4/4	4/4	4/4
14	Natural gas (town gas, coal gas)	Commercial	20 °C/50 °C	1/1	1/1	1/1	1/1	1/1
15	Crude oil	Commercial	20 °C/50 °C	1/1	3/3	1/1	1/1	1/1
16	Acetic acid (glacial acetic acid)	90%	20 °C/50 °C	4/4	1/2	4/4	4/4	4/4
17	Ethyl alcohol	96% (tech. pure)	20 °C/50 °C	1/2	1/1	1/0	1/0	1/0
18	Photographic emulsion	Commercial	20 °C/50 °C	1/0	1/1	1/0	1/0	1/0
19	Fruit juices	Commercial	20 °C/50 °C	1/1	1/1	1/1	1/1	1/1
20	Glycerine	Technically pure	20 °C/50 °C	1/1	1/1	1/1	1/1	1/1
21	Glysantin	Commercial	20 °C/50 °C	1/1	1/1	3/3	3/3	3/3
22	Heating oil	Commercial	20 °C/50 °C	1/1	1/3	1/1	1/1	1/1
23	Hydraulic fluid	Commercial	20 °C/50 °C	1/0	1/3	1/1	1/1	1/1
24	Carbon dioxide, carbonic acid	Technically pure, saturated	20 °C/50 °C	1/1	1/1	1/0	1/0	1/0
25	Coolants (based on glycol)	Commercial	20 °C/50 °C	1/1	1/1	3/3	1/1	1/1
26	Methane	Technically pure	20 °C/50 °C	1/1	1/1	1/1	1/1	1/1
27	Methanol	Technically pure	20 °C/50 °C	1/1	1/1	1/1	1/1	3/3
28	Methyl ethyl ketone	100%	20 °C/50 °C	3/3	1/3	1/0	1/0	1/1
29	Engine oils (HD)	Commercial	20 °C/50 °C	1/1	1/3	1/1	1/1	1/1
30	Sodium hydroxide (lye; caustic soda)	40%	20 °C/50 °C	1/1	1/1	1/1	1/1	1/1
31	Ozone	Gaseous	20 °C/50 °C	4/4	3/4	3/4	3/4	3/4
32	Propanol	Technically pure	20 °C/50 °C	1/1	1/1	1/1	1/1	2/2
33	Propane (liquefied gas)	Liquid	20 °C/50 °C	1/1	1/1	1/0	1/0	1/0
34	Propene	96%	20 °C/50 °C	1/0	1/1	1/0	1/0	1/0
35	Rape oil (rape oil methyl ester)	Commercial	20 °C/50 °C	1/1	2/2 (*)	1/1	1/1	1/1
36	Hydrochloric acid	Aqueous, 10%	20 °C/50 °C	4/4	1/1	4/4	4/4	3/3
37	Lubricating oil/grease, soft soap	Commercial	20 °C/50 °C	1/1	1/2	1/1	1/1	1/1
38	Sulphuric acid	Aqueous, 10%	20 °C/50 °C	4/4	1/2	3/3	3/3	2/2
39	De-icing salt solution (brine)	Saturated	20 °C/50 °C	1/2	1/1	1/1	1/1	1/1
40	Soap suds (dissolved detergent)	Diluted solution	20 °C/50 °C	1/1	2/2 (*)	1/1	1/1	1/1
41	Water (drinking, river, sea)	Technically pure	20 °C/50 °C	1/1	1/1	1/1	1/1	1/1
42	Citric acid	10%	20 °C/50 °C	2/4	1/1	1/0	1/0	1/0

### Explanation of abbreviations:

POM = Acetal copolymer

PP = Polypropylene

PA = Polyamide

0 = No data available/Not possible to make an appropriate statement

1 = Highly stable/suitable  
(change in dimensions: none or negligible and reversible; no damage even after extended period)

2 = Very stable/suitable  
(change in dimensions after short period: none or negligible and reversible; little change in dimensions, possibly irreversible change to properties after extended period)

3 = Limited stability  
(considerable changes to dimensions, possibly irreversible change to properties after extended period)

4 = Unstable/unsuitable  
(soluble or serious effects after a short period)

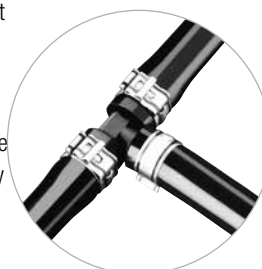
(\*) Moisture expansion

The specifications in this catalogue are based on tests carried out by the Please contact the relevant manufacturer before using a product as a granular material manufacturer. They are intended to serve as guidelines safety component.

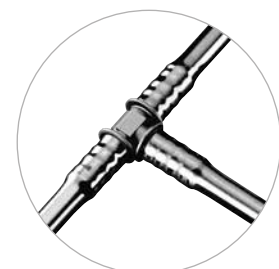
for our customers, but cannot simply be applied to any case in which customers expose these products to demands which fall outside the scope of the tests performed. On no account should this be done without first consulting us.

Our customers must perform their own tests to determine whether our **NORMAPLAST®** plastic hose connecting components are suitable for the application they are intended to be used in. We will be happy to offer any advice or information required.

Our liability is subject exclusively to our terms of delivery and sale. Special versions can be produced if an appropriate quantity of the component in question is ordered.

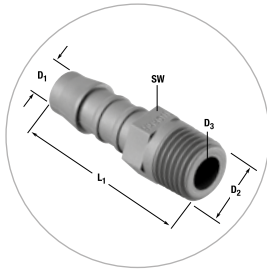


Use as a hose connector



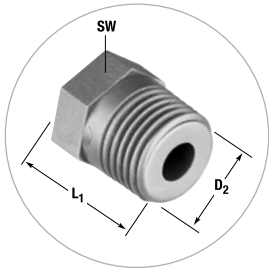
Use as a push-on connector

**GES – Straight taper thread connectors**



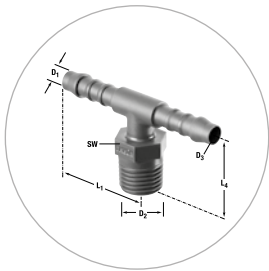
Nominal size ID hose (in mm)	Designation	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	L <sub>1</sub> ~	SW	Material PA6 Product No.
3	GES 3 / M 5	3	M 5 cyl	2.5	19.5	6	0710 8952 003
4	GES 4 / M 8 x 1	4	M 8 x 1 con.	2.5	27	10	0710 8901 004
	GES 4 / M 8 x 1.25	4	M 8 x 1.25 con.	2.5	27	10	0710 8902 004
	GES 4 / M 10 x 1	4	M 10 x 1 con.	2.5	27	10	0710 8903 004
	GES 4 / M 12 x 1.5	4	M 12 x 1.5 con.	2.5	32	14	0710 8904 004
	GES 4 / M 14 x 1.5	4	M 14 x 1.5 con.	2.5	32	14	0710 8905 004
	GES 4 / R 1/8	4	R 1/8 con.	2.5	27	10	0710 8910 004
	GES 4 / R 1/4	4	R 1/4 con.	2.5	32	14	0710 8911 004
	GES 4 / 1/8 NPT	4	1/8 NPT	2.5	29	10	0710 8917 004
GES 4 / 1/4 NPT	4	1/4 NPT	2.5	35	14	0710 8918 004	
5	GES 5 / M 12 x 1.5	5	M 12 x 1.5 con.	3	36	14	0710 8904 005
	GES 5 / M 14 x 1.5	5	M 14 x 1.5 con.	3	36	14	0710 8905 005
	GES 5 / R 1/4	5	R 1/4 con.	3	36	14	0710 8911 005
	GES 5 / R 1/4 NPT	5	R 1/4 NPT	3	39	14	0710 8918 005
6	GES 6 / M 10 x 1	6	M 10 x 1 con.	4	32.5	10	0710 8903 006
	GES 6 / M 12 x 1.5	6	M 12 x 1.5 con.	4	37.5	14	0710 8904 006
	GES 6 / M 14 x 1.5	6	M 14 x 1.5 con.	4	36.5	14	0710 8905 006
	GES 6 / R 1/8	6	R 1/8 con.	4	32.5	10	0710 8910 006
	GES 6 / R 1/4	6	R 1/4 con.	4	37.5	14	0710 8911 006
	GES 6 / R 3/8	6	R 3/8 con.	4	39	17	0710 8912 006
	GES 6 / 1/8 NPT	6	1/8 NPT	4	34.5	10	0710 8917 006
	GES 6 / 1/4 NPT	6	1/4 NPT	4	40.5	14	0710 8918 006
8	GES 8 / M 10 x 1	8	M 10 x 1 con.	5.6	38	14	0710 8903 008
	GES 8 / M 12 x 1.5	8	M 12 x 1.5 con.	5.6	41	14	0710 8904 008
	GES 8 / M 14 x 1.5	8	M 14 x 1.5 con.	5.6	41	14	0710 8905 008
	GES 8 / M 18 x 1.5	8	M 18 x 1.5 con.	5.6	49	22	0710 8907 008
	GES 8 / M 22 x 1.5	8	M 22 x 1.5 con.	5.6	49	22	0710 8949 008
	GES 8 / M 26 x 1.5	8	M 26 x 1.5 con.	5.6	58	27	0710 8908 008
	GES 8 / R 1/8	8	R 1/8 con.	5.6	38	14	0710 8910 008
	GES 8 / R 1/4	8	R 1/4 con.	5.6	41	14	0710 8911 008
	GES 8 / R 3/8	8	R 3/8 con.	5.6	41	17	0710 8912 008
	GES 8 / R 1/2	8	R 1/2 con.	5.6	49	22	0710 8913 008
GES 8 / 1/4 NPT	8	1/4 NPT	5.6	44	14	0710 8918 008	
10	GES 10 / M 12 x 1.5	10	M 12 x 1.5 con.	7	43.5	14	0710 8904 010
	GES 10 / M 14 x 1.5	10	M 14 x 1.5 con.	7	43.5	14	0710 8905 010
	GES 10 / M 16 x 1.5	10	M 16 x 1.5 con.	7	43.5	17	0710 8906 010
	GES 10 / R 1/4	10	R 1/4 con.	7	43.5	14	0710 8911 010
	GES 10 / R 3/8	10	R 3/8 con.	7	43.5	17	0710 8912 010
	GES 10 / 1/4 NPT	10	1/4 NPT	7	46.5	14	0710 8918 010
GES 10 / 3/8 NPT	10	3/8 NPT	7	46.5	17	0710 8919 010	
12	GES 12 / M 16 x 1.5	12	M 16 x 1.5 con.	8.6	45.5	17	0710 8906 012
	GES 12 / M 18 x 1.5	12	M 18 x 1.5 con.	8.6	54	22	0710 8907 012
	GES 12 / M 22 x 1.5	12	M 22 x 1.5 con.	8.6	54	22	0710 8949 012
	GES 12 / M 26 x 1.5	12	M 26 x 1.5 con.	8.6	58	27	0710 8909 012
	GES 12 / R 3/8	12	R 3/8 con.	8.6	45.5	17	0710 8912 012
	GES 12 / R 1/2	12	R 1/2 con.	8.6	54	22	0710 8913 012
GES 12 / 3/8 NPT	12	3/8 NPT	8.6	48	17	0710 8919 012	
14	GES 14 / M 20 x 1.5	14	M 20 x 1.5 con.	10	56	22	0710 8908 014
	GES 14 / R 3/8	14	R 3/8 con.	10	56	17	0710 8912 014
	GES 14 / R 1/2	14	R 1/2 con.	10	56	22	0710 8913 014
	GES 14 / R 1/2 NPT	14	R 1/2 NPT	10	58	22	0710 8920 014
16	GES 16 / M 26 x 1.5	16	M 26 x 1.5 con.	12	58	27	0710 8909 016
	GES 16 / R 1/2	16	R 1/2 con.	12	58	22	0710 8913 016
	GES 16 / R 3/4	16	R 3/4 con.	12	58	27	0710 8914 016
19	GES 19 / M 26 x 1.5	19	M 26 x 1.5 con.	15	58	27	0710 8909 019
	GES 19 / R 3/4	19	R 3/4 con.	15	58	27	0710 8914 019
25	GES 25 / R 1	25	R 1 con.	21	69	32	0710 8915 025

**BST – Blanking plugs with screw-in thread**



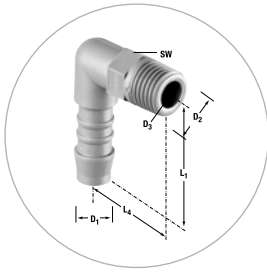
Designation	D <sub>2</sub>	L <sub>1</sub> ~	SW	Material PA6 Product No.
BST M 8 x 1	M 8 x 1 con.	13	10	0711 8901 000
BST M 10 x 1	M 10 x 1 con.	13.5	10	0711 8903 000
BST M 12 x 1.5	M 12 x 1.5 con.	17.5	14	0711 8904 000
BST M 14 x 1.5	M 14 x 1.5 con.	17.5	14	0711 8905 000
BST M 18 x 1.5	M 18 x 1.5 con.	26.5	22	0711 8907 000
BST M 20 x 1.5	M 20 x 1.5 con.	25	22	0711 8908 000
BST M 26 x 1.5	M 26 x 1.5 con.	26.5	22	0711 8909 000
BST R 1/8	R 1/8 con.	26	22	0711 8910 000
BST R 1/4	R 1/4 con.	12.5	10	0711 8911 000
BST R 3/8	R 3/8 con.	17.5	14	0711 8912 000
BST R 1/2	R 1/2 con.	27	17	0711 8913 000
BST 1/8 NPT	1/8 NPT	27.5	22	0711 8917 000
BST 1/4 NPT	1/4 NPT	14	10	0711 8918 000
BST M 22 x 1.5	M 22 x 1.5 con.	20.5	14	0711 8949 000

**TES – T-taper thread connectors**



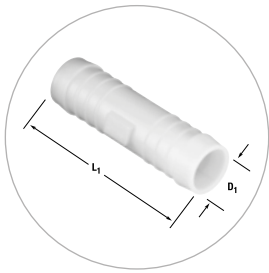
Nominal size ID hose (in mm)	Designation	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	L <sub>1</sub> ~	L <sub>2</sub> ~	SW	Material PA6 Product No.
4	TES 4 / M 8 x 1	4	M 8 x 1 con.	2.5	21	18	10	0720 8901 004
	TES 4 / M 10 x 1	4	M 10 x 1 con.	2.5	21	18	10	0720 8903 004
	TES 4 / M 12 x 1.5	4	M 12 x 1.5 con.	2.9	21	23	14	0720 8904 004
	TES 4 / R 1/8	4	R 1/8 con.	2.5	21	18	10	0720 8910 004
	TES 4 / R 1/4	4	R 1/4 con.	2.5	21	23	14	0720 8911 004
	TES 4 / 1/8 NPT	4	1/8 NPT	2.5	21	20	10	0720 8917 004
	TES 4 / 1/4 NPT	4	1/4 NPT	2.5	21	26	14	0720 8918 004
6	TES 6 / M 10 x 1	6	M 10 x 1 con.	4	28.5	21	10	0720 8903 006
	TES 6 / M 12 x 1.5	6	M 12 x 1.5 con.	4	28.5	26	14	0720 8904 006
	TES 6 / R 1/8	6	R 1/8 con.	4	28.5	21	10	0720 8910 006
	TES 6 / R 1/4	6	R 1/4 con.	4	28.5	26	14	0720 8911 006
	TES 6 / 1/8 NPT	6	1/8 NPT	4	28.5	23	10	0720 8917 006
TES 6 / 1/4 NPT	6	1/4 NPT	4	28.5	29	14	0720 8918 006	
8	TES 8 / M 12 x 1.5	8	M 12 x 1.5 con.	5.6	33	27.5	14	0720 8904 008
	TES 8 / M 14 x 1.5	8	M 14 x 1.5 con.	5.6	33	27.5	14	0720 8905 008
	TES 8 / R 1/4	8	R 1/4 con.	5.6	33	27.5	14	0720 8911 008
	TES 8 / 1/4NPT	8	1/4NPT	5.6	33	30.5	14	0720 8918 008
10	TES 10 / R 3/8	10	R 3/8 con.	7	35.5	30	17	0720 8912 010

## WES – Elbow taper thread connectors



Nominal size ID hose (in mm)	Designation	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	L <sub>1</sub> ~	L <sub>2</sub> ~	SW	Material PA6 Product No.
3	WES 3 / M 5 cyl.	3	M 5 cyl.	2.5	12.5	12.5	6	0730 8952 003
4	WES 4 / M 8 x 1	4	M 8 x 1 con.	2.7	21	16	10	0730 8901 004
	WES 4 / M 10 x 1	4	M 10 x 1 con.	2.7	21	16	10	0730 8903 004
	WES 4 / M 12 x 1.5	4	M 12 x 1.5 con.	2.7	21	25	14	0730 8904 004
	WES 4 / M 14 x 1.5	4	M 14 x 1.5 con.	2.7	21	25	14	0730 8905 004
	WES 4 / R 1/8	4	R 1/8 con.	2.7	21	16	10	0730 8910 004
	WES 4 / R 1/4	4	R 1/4 con.	2.7	21	25	14	0730 8911 004
	WES 4 / 1/8 NPT	4	1/8 NPT	2.7	21	18	10	0730 8917 004
6	WES 6 / M 10 x 1	6	M 10 x 1 con.	4	28.5	21	10	0730 8903 006
	WES 6 / M 12 x 1.5	6	M 12 x 1.5 con.	4	28.5	26	14	0730 8904 006
	WES 6 / R 1/8	6	R 1/8 con.	4	28.5	21	10	0730 8910 006
	WES 6 / R 1/4	6	R 1/4 con.	4	28.5	26	14	0730 8911 006
	WES 6 / R 3/8	6	R 3/8 con.	4	28.5	27	17	0730 8912 006
	WES 6 / 1/8 NPT	6	1/8 NPT	4	28.5	23	10	0730 8917 006
	WES 6 / 1/4 NPT	6	1/4 NPT	4	28.5	29	14	0730 8918 006
8	WES 8 / M 10 x 1	8	M 10 x 1 con.	5.6	33	23.5	14	0730 8903 008
	WES 8 / M 12 x 1.5	8	M 12 x 1.5 con.	5.6	33	27.5	14	0730 8904 008
	WES 8 / M 14 x 1.5	8	M 14 x 1.5 con.	5.6	33	27.5	14	0730 8905 008
	WES 8 / M 16 x 1.5	8	M 16 x 1.5 con.	5.6	36	27.5	17	0730 8906 008
	WES 8 / M 18 x 1.5	8	M 18 x 1.5 con.	5.6	36	36	19	0730 8907 008
	WES 8 / M 22 x 1.5	8	M 22 x 1.5 con.	5.6	36	36	22	0730 8949 008
	WES 8 / R 1/8	8	R 1/8 con.	5.6	33	23	14	0730 8910 008
	WES 8 / R 1/4	8	R 1/4 con.	5.6	33	27.5	14	0730 8911 008
	WES 8 / R 3/8	8	R 3/8 con.	5.6	36	31	17	0730 8912 008
	WES 8 / R 1/2	8	R 1/2 con.	5.6	36	36	22	0730 8913 008
	WES 8 / 1/4 NPT	8	1/4 NPT	5.6	33	30.5	14	0730 8918 008
10	WES 10 / M 14 x 1.5	10	M 14 x 1.5 con.	7	38	30	14	0730 8905 010
	WES 10 / R 1/4	10	R 1/4	7	38	30	14	0730 8911 010
	WES 10 / R 3/8	10	R 3/8	7	38	30	17	0730 8912 010
	WES 10 / 1/2 NPT	10	1/2 NPT	7	38	38	22	0730 8920 010
12	WES 12 / M 16 x 1.5	12	M 16 x 1.5 con.	8.6	40.5	30	17	0730 8906 012
	WES 12 / M 18 x 1.5	12	M 18 x 1.5 con.	8.6	40.5	36	19	0730 8907 012
	WES 12 / M 22 x 1.5	12	M 22 x 1.5 con.	8.6	40.5	36	22	0730 8949 012
	WES 12 / M 26 x 1.5	12	M 26 x 1.5 con.	8.6	40.5	36	22	0730 8909 012
	WES 12 / R 3/8	12	R 3/8	8.6	40.5	31	17	0730 8912 012
	WES 12 / R 1/2	12	R 1/2	8.6	40.5	36	22	0730 8913 012
	WES 12 / 3/8 NPT	12	3/8 NPT	8.6	40.5	31	19	0730 8919 012
19	WES 19 / M 24 x 2	19	M 24 x 2 con.	15	45	42.8	27	0730 8953 019
	WES 19 / R 3/4	19	R 3/4 con.	15	45.5	42.8	27	0730 8914 019
25	WES 25 / R 1	25	R 1 con.	21	60	49	32	0730 8915 025

**GS – Straight push-on connectors**



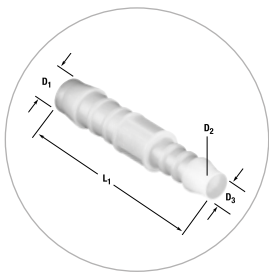
Nominal size ID hose (in mm)	Designation	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub> ~	Material POM Product No.
3	GS 3	3	2.5	25	0750 8900 003
4	GS 4	4	2.7	35	0750 8900 004
5	GS 5	5	3	45	0750 8900 005
6	GS 6	6	4	49	0750 8900 006
8	GS 8	8	5.6	56	0750 8900 008
10	GS 10	10	7	63	0750 8900 010
12	GS 12	12	8.6	66.5	0750 8900 012
13	GS 13	13	8.6	73	0750 8900 013
14	GS 14	14	10	79	0750 8900 014
16	GS 16	16	12	75	0750 8900 016
19	GS 19	19	15	76	0750 8900 019
25	GS 25	25	21	95	0750 8900 025

Additional materials available on request



Refer to pages 192 and 193.

**GRS – Reducing straight push-on connectors**



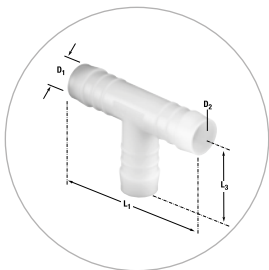
Nominal size ID hose (in mm)	Designation	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	L <sub>1</sub> ~	Material POM Product No.
4 - 3	GRS 4 - 3	4	2.5	3	30	0751 8904 003
5 - 4	GRS 5 - 4	5	2.7	3	41	0751 8905 004
6 - 4	GRS 6 - 4	6	2.7	4	42.5	0751 8906 004
8 - 4	GRS 8 - 4	8	2.7	4	48	0751 8908 004
8 - 6	GRS 8 - 6	8	4	6	54	0751 8908 006
10 - 6	GRS 10 - 6	10	4	6	58	0751 8910 006
10 - 8	GRS 10 - 8	10	5.6	8	60.5	0751 8910 008
12 - 8	GRS 12 - 8	12	5.6	8	62.5	0751 8912 008
12 - 10	GRS 12 - 10	12	7	10	64	0751 8912 010

Additional materials available on request



Refer to pages 193.

**TS – Equal T push-on connectors**



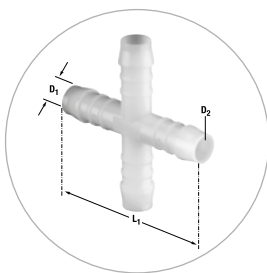
Nominal size ID hose (in mm)	Designation	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub> ~	L <sub>2</sub> ~	Material POM Product No.
3	TS 3	3	2.5	25	12.5	0760 8900 003
4	TS 4	4	2.7	35	19.5	0760 8900 004
5	TS 5	5	3	42	22	0760 8900 005
6	TS 6	6	4	50	26	0760 8900 006
7	TS 7	7	5	50	26	0760 8900 007
8	TS 8	8	5.6	58	30	0760 8900 008
10	TS 10	10	7	62.5	33.5	0760 8900 010
12	TS 12	12	8.6	69	36	0760 8900 012
13	TS 13	13	8.6	68	36	0760 8900 013
14	TS 14	14	10	77.5	41.5	0760 8900 014
15	TS 15	15	11	79.5	43.5	0760 8900 015
16	TS 16	16	12	81	45	0760 8900 016
19	TS 19	19	15	85	45	0760 8900 019
25	TS 25	25	21	105	52.5	0760 8900 025

Additional materials available on request



Refer to pages 192 and 193.

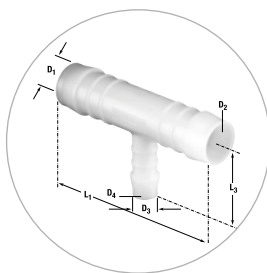
### KS – Cross push-on connectors



Nominal size ID hose (in mm)	Designation	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub> ~	Material POM Product No.
4	KS 4	4	2.9	39	0772 8900 004
5	KS 5	5	3	48	0772 8900 005
6	KS 6	6	4	48	0772 8900 006
12	KS 12	12	8.6	69	0772 8900 012

Additional materials available on request

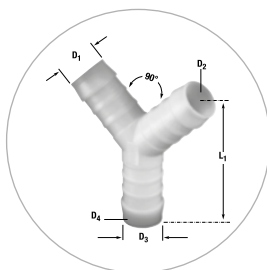
### TRS – Reducing T push-on connectors



Nominal size ID hose (in mm)	Designation	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	L <sub>1</sub> ~	L <sub>4</sub> ~	Material POM Product No.
3 - 4 - 3	TRS 3 - 4 - 3	3	2.5	4	2.5	25	17.5	0761 8903 004
4 - 6 - 4	TRS 4 - 6 - 4	4	2.7	6	4	37	24	0761 8904 006
6 - 4 - 6	TRS 6 - 4 - 6	6	4	4	2.5	49	20.5	0761 8906 004
8 - 4 - 8	TRS 8 - 4 - 8	8	5.6	4	2.5	56	22	0761 8908 004
8 - 6 - 8	TRS 8 - 6 - 8	8	5.6	6	4	56	28	0761 8908 006
8 - 12 - 8	TRS 8 - 12 - 8	8	5.6	12	8.6	57	34	0761 8908 012
10 - 6 - 10	TRS 10 - 6 - 10	10	7	6	4	62	28	0761 8910 006
10 - 8 - 10	TRS 10 - 8 - 10	10	7	8	5.6	62	31	0761 8910 008
10 - 13 - 10	TRS 10 - 13 - 10	10	7	13	8.6	64	38	0761 8910 013
12 - 6 - 12	TRS 12 - 6 - 12	12	8.6	6	4	69	29	0761 8912 006
12 - 8 - 12	TRS 12 - 8 - 12	12	8.6	8	5.6	69	31	0761 8912 008
12 - 10 - 12	TRS 12 - 10 - 12	12	8.6	10	7	69	33	0761 8912 010
15 - 6 - 15	TRS 15 - 6 - 15	15	11	6	4	78	28	0761 8915 006
15 - 8 - 15	TRS 15 - 8 - 15	15	11	8	5.6	79	33	0761 8915 008
18 - 10 - 18	TRS 18 - 10 - 18	18	14	10	7	79	36	0761 8918 010
18 - 15 - 18	TRS 18 - 15 - 18	18	14	15	11	80	44	0761 8918 015

Additional materials available on request

### YRS – Reducing Y push-on connectors

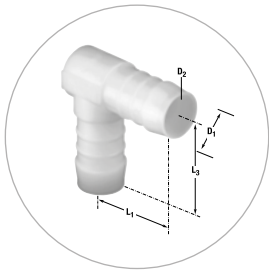


Nominal size ID hose (in mm)	Designation	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	L <sub>1</sub> ~	Material POM Product No.
4 - 6 - 4	YRS 4 - 6 - 4	4	2.7	6	4	35	0771 8904 006
6 - 8 - 6	YRS 6 - 8 - 6	6	4	8	5.6	49	0771 8906 008

Additional materials available on request

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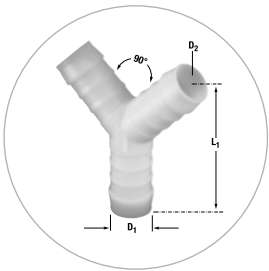
**WS – Elbow push-on connectors**



Nominal size ID hose (in mm)	Designation	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub> ~	L <sub>2</sub> ~	Material POM Product No.
3	WS 3	3	2.5	12.5	12.5	0762 8900 003
4	WS 4	4	2.5	17.5	19.5	0762 8900 004
5	WS 5	5	3	21	22	0762 8900 005
6	WS 6	6	4	25	26	0762 8900 006
8	WS 8	8	5.6	29	30	0762 8900 008
10	WS 10	10	7	31	33.5	0762 8900 010
12	WS 12	12	8.6	34.5	36	0762 8900 012
13	WS 13	13	8.6	36.5	38.5	0762 8900 013
14	WS 14	14	10	38.5	41.5	0762 8900 014
15	WS 15	15	11	40	43.5	0762 8900 015
16	WS 16	16	12	40.5	45	0762 8900 016
19	WS 19	19	15	43.5	46	0762 8900 019
25	WS 25	25	21	52.5	52.5	0762 8900 025

Additional materials available on request

**YS – Equal Y push-on connectors**



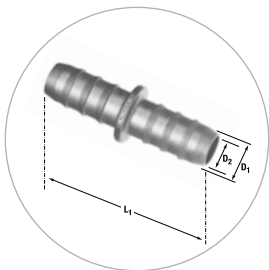
Nominal size ID hose (in mm)	Designation	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub> ~	Material POM Product No.
3	YS 3	3	2.5	21	0770 8900 003
4	YS 4	4	2.5	25.5	0770 8900 004
5	YS 5	5	3	43	0770 8900 005
6	YS 6	6	4	44	0770 8900 006
8	YS 8	8	5.6	51	0770 8900 008
10	YS 10	10	7	54	0770 8900 010
12	YS 12	12	8.6	64	0770 8900 012
13	YS 13	13	9	65	0770 8900 013
14	YS 14	14	10	65	0770 8900 014
16	YS 16	16	12	67	0770 8900 016
19	YS 19	19	15	72	0770 8900 019

Additional materials available on request



Refer to page 193.

**GN – Straight plastic pipe connectors**

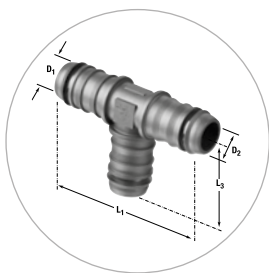


Nominal size ID PA tube (in mm)	Designation	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub> ~	Material PAG -GF30* Product No.	Material PA12-GF20* Product No.	Material PA12-GF30* Product No.
6	GN 6	6.4	4.75	45			0750 8200 006
8	GN 8	9.2	6.8	46	0750 8074 008		
10	GN 10	11	8	46	0750 8300 010		0750 8200 010
15	GN 15	16.9	12	32		0750 8001 015	
19	GN 19	21	16	39		0750 8001 019	
27	GN 27	29	24	42		0750 8001 027	
27 - 19	GRN 27 - 19	29 - 21	24 - 16	44		0751 8045 000	

\* Glass fiber content



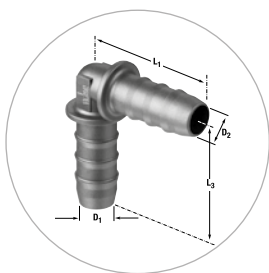
**TN – T plastic pipe connectors**



Nominal size ID PA tube (in mm)	Designation	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub> ~	L <sub>3</sub> ~	Material PA6 -GF30* Product No.	Material PA66-GF30* Product No.	Material PA12-GF30* Product No.
4	TN 4	4.6	2.5	43	23	0760 8129 004		
6	TN 6	6.4	4.75	56.5	28.5	0760 8202 006	0760 8203 006	0760 8200 006
8	TN 8	9.2	6.8	58	29	0760 8112 008		0760 8200 008
10	TN 10	11	8	60	30			0760 8200 010
15	TN 15	16.4	12	72	36			0760 8200 015
19	TN 19	18.9	16	65	32.5			0760 8201 019
15-8-15	TN 15-8-15	16.4-8.9-16.4	12-6-12	72	35			0761 8052 000
15-12-15	TN 15-12-15	16.4-13.5-16.4	12-10.5-12	72	35.5			0761 8015 012

\* Glass fiber content

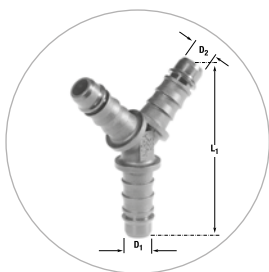
**WN – Elbow plastic pipe connectors**



Nominal size ID PA tube (in mm)	Designation	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub> ~	L <sub>3</sub> ~	Material PA6 -GF30* Product No.	Material PA66-GF30* Product No.	Material PA12-GF30* Product No.
6	WN 6	6.4	4.75	28	28		0762 8205 006	0762 8200 006
8	WN 8	9.2	6.8	29	29	0762 8067 008		0762 8200 008
10	WN 10	11	8	30	30	0762 8201 010		0762 8200 010
19	WN 19	18.9	16	32	32			0762 8200 019

\* Glass fiber content

**YN – Y plastic pipe connectors**



Nominal size ID PA tube (in mm)	Designation	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub> ~	Material PA66-GF30* Product No.	Material PA12-GF20* Product No.	Material PA12-GF30* Product No.
8	YN 8	8.4	5.8	50.5	0770 8203 008		0770 8200 008
10	YN 10	11	8	80			0770 8200 010
15	YN 15	14.9	12	49.3			0770 8200 015
19	YN 19	18.9	16	85		0770 8201 019	

\* Glass fiber content

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**EG – Straight compression connectors**



Nominal size ID PA tube (in mm)	Designation	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub> ~	SW	Diameter	Material PA12-GF30* Product No.
6	EG 6 x 1-R 1/8	6 x 1	R 1/8 con.	25	13	6 x 1-R 1/8	0780 8900 001
	EG 6 x 1-R 1/4	6 x 1	R 1/4 con.	31	17	6 x 1-R 1/4	0780 8900 002
	EG 6 x 1-M10 x 1	6 x 1	M10 x 1 con.	25	13	6 x 1-M10 x 1	0780 8900 003
8	EG 8 x 1-R 1/8	8 x 1	R 1/8 con.	25	13	8 x 1-R 1/8	0780 8900 021
	EG 8 x 1-R 1/4	8 x 1	R 1/4 con.	31	17	8 x 1-R 1/4	0780 8900 022
	EG 8 x 1-M10 x 1	8 x 1	M10 x 1 con.	25	13	8 x 1-M10 x 1	0780 8900 023

\* Glass fiber content

**EWS – Swivel elbow compression connectors**



Nominal size ID PA tube (in mm)	Designation	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub> ~	L <sub>2</sub> ~	L <sub>3</sub> ~	SW	Material PAG-GF30* Product No.
6	EWS 6 x 1-R 1/8	6 x 1	R 1/8	14	21	30	13	0780 8901 001
	EWS 6 x 1-R 1/4	6 x 1	R 1/4	15	23	33.5	17	0780 8901 002
	EWS 6 x 1-M10 x 1	6 x 1	M10 x 1	14	21	30	13	0780 8901 003
8	EWS 8 x 1-R 1/8	8 x 1	R 1/8	14	21	30	13	0780 8901 021
	EWS 8 x 1-R 1/4	8 x 1	R 1/4	15	23	33.5	17	0780 8901 022
	EWS 8 x 1-M10 x 1	8 x 1	M10 x 1	14	21	30	13	0780 8901 023

\* Glass fiber content

**ETS – Swivel T compression connectors**



Nominal size ID PA tube (in mm)	Designation	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub> ~	L <sub>2</sub> ~	L <sub>3</sub> ~	SW	Material PAG-GF30* Product No.
6	ETS 6 x 1-R 1/8	6 x 1	R 1/8	14	21	30	13	0780 8902 001
	ETS 6 x 1-R 1/4	6 x 1	R 1/4	15	23	33.5	17	0780 8902 002
	ETS 6 x 1-M10 x 1	6 x 1	M10 x 1	14	21	30	13	0780 8902 003
8	ETS 8 x 1-R 1/8	8 x 1	R 1/8	15	23	33.5	17	0780 8902 021

\* Glass fiber content

**ET – T compression connectors**

Nominal size ID PA tube (in mm)	Designation	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub> ~	L <sub>2</sub> ~	Material PA6-GF30* Product No.
6	ET 6 x 1-R 1/8	6 x 1	R 1/8 con.	19	23	0780 8904 001
	ET 6 x 1-R 1/4	6 x 1	R 1/4 con.	23	23	0780 8904 002
	ET 6 x 1-M10 x 1	6 x 1	M10 x 1 con.	19	23	0780 8904 003
8	ET 8 x 1-R 1/8	8 x 1	R 1/8 con.	19	23	0780 8904 021
	ET 8 x 1-R 1/4	8 x 1	R 1/4 con.	23	23	0780 8904 022
	ET 8 x 1-M10 x 1	8 x 1	M10 x 1 con.	19	23	0780 8904 023

\* Glass fiber content

**EW/WV – Elbow compression connectors**

Nominal size ID PA tube (in mm)	Designation	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub> ~	L <sub>2</sub> ~	Material PA6-GF30* Product No.
6	EW 6 x 1 - R 1/8	6 x 1	R 1/8 con.	19	23	0780 8905 001
	EW 6 x 1 - R 1/4	6 x 1	R 1/4 con.	23	23	0780 8905 002
	EW 6 x 1 - M10 x 1	6 x 1	M10 x 1 con.	19	23	0780 8905 003
8	EW 8 x 1 - R 1/8	8 x 1	R 1/8 con.	19	23	0780 8905 021
	EW 8 x 1 - R 1/4	8 x 1	R 1/4 con.	23	23	0780 8905 022
	EW 8 x 1 - M10 x 1	8 x 1	M10 x 1 con.	19	23	0780 8905 023
	WV 8 x 1	8 x 1	8 x 1	23	23	0781 8900 011

\* Glass fiber content

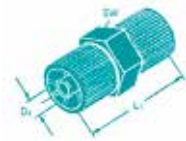
**VT/VTR** – Equal T and reducing T compression connectors



Nominal size ID PA tube (in mm)	Designation	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub> ~	L <sub>2</sub> ~	Material PA6-GF30* Product No.
N/A	VT 6 x 1	6 x 1	6 x 1	23	23	0781 8900 001
	VT 8 x 1	8 x 1	8 x 1	23	23	0781 8900 002
	VTR 6 x 1-8 x 1-6 x 1	6 x 1	8 x 1	23	23	0781 8900 021
	VTR 8 x 1-6 x 1-8 x 1	8 x 1	6 x 1	23	23	0781 8900 022

\* Glass fiber content

**VG/VGR** – Straight/Reducing compression connectors



Nominal size ID PA tube (in mm)	Designation	D <sub>1</sub>	L <sub>1</sub> ~	SW	Material PA6-GF30* Product No.
N/A	VG 6 x 1	6 x 1	31	17	0781 8901 003
	VG 8 x 1	8 x 1	31	17	0781 8901 002
	VGR 8 x 1 - 6 x 1	6 x 1	31	17	0781 8901 004

\* Glass fiber content