



## New Cable Protection Products . . .

. . . now available in a wider selection!



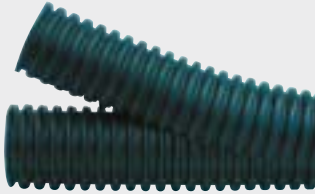
Reliable protection for wires and cables in multiple applications:

- Machinery and equipment engineering
- Industrial facilities
- Control panel design and fabrication
- Automotive installation
- Transport conduits
- Cable conduits

Depending on the quantity, conduits are available in custom colours upon request. Our specialised manufacturing equipment was designed and built to offer our customers custom-tailored solutions.



# Cable Protection Products



## Co-flex PP – Resealable Slit Corrugated Tubing

### Applications:

Ideal for computers, entertainment centres, control panels, cars and electrical appliances.

### Chemical properties:

Resistant to: Acids, bases, inorganic salts, fuels, mineral oils, greases and most common solvents.

Limitedly resistant to: Aether.

Non-resistant to: Halogenated, oxidising and aromatic compounds.

### Physical properties:

Material: PP, temperature resistance  $-40^{\circ}\text{C}$  to  $+135^{\circ}\text{C}$ , short-term temperature resistance  $+150^{\circ}\text{C}$ .

Colour: black.

### Flammability:

UL 94:V2

FMVSS 302:

self-extinguishing

Type	Cat. no.	10	14	20	23	37	45	70
OD [in mm]		13.4	18.5	25.3	30.8	41.4	54.0	79.8
ID [in mm]		8.4	12.5	19.2	23.4	31.0	42.7	66.5
Approx. bend radius [in mm]*		70	95	130	155	205	190	375
Pck. Qty. [in m]		50	50	50	50	25	25	10
Colour: black	370. ... .00	010	014	020	023	037	045	070
Pck. Qty. [in m]		10	10	10	10	10	10	–
Colour: black	370. ... .02	010	014	020	023	037	045	–
Pck. Qty. [in m]		5	5	5	5	5	5	–
Colour: black	370. ... .03	010	014	020	023	037	045	–

\* min. bend radius (neutral fibre) with a flattening of the conduit outside diameter of  $\leq 5\%$ .

Installation tip:  
Open tube to insert cable.  
Clip outer tube onto inner  
tube to close and secure.



## Co-flex PA 6 – Resealable Slit Corrugated Tubing

### Applications:

Ideal for computers, entertainment centres, control panels, cars, protection against damage from rodents bites, electrical appliances.

### Chemical properties:

Resistant to: Fuels, mineral oils, greases and most common solvents.

Limitedly resistant to: Bases, also if diluted.

Non-resistant to: Acids, halogenated and oxidising compounds.

### Physical properties:

Material: PA 6, temperature resistance  $-40^{\circ}\text{C}$  to  $+120^{\circ}\text{C}$ , short-term temperature resistance  $+150^{\circ}\text{C}$ , halogen-free.

Colour: black.

### Flammability:

UL94:V2

FMVSS 302:

self-extinguishing

Type	Cat. no.	10	14	20	23	37	45	70
OD [in mm]		13.5	18.7	25.7	31.3	43.2	54.2	79.8
ID [in mm]		8.8	13.2	20.2	23.9	32.5	43.1	66.0
Approx. bend radius [in mm]*		55	75	105	125	170	170	300
Pck. Qty. [in m]		50	50	50	50	25	25	10
Colour: black	410. ... .00	010	014	020	023	037	045	070

\* min. bend radius (neutral fibre) with a flattening of the conduit outside diameter of  $\leq 5\%$ .

All dimensions without tolerances are for reference only.



# Cable Protection Products



## Co-flex PP-UV – Resealable Slit Corrugated Tubing

Slit Co-flex PP-UV tubing made from modified polypropylene (PP); UV stabilised. Available in black.

### Applications:

Co-flex PP-UV is ideal for installation outdoors. Its UV stability offers not only mechanical protection, but also protects cables and wires from damage caused by UV radiation. Co-flex PP-UV is mainly used for solar panels, satellite TV facilities and other outdoor installations.

### Physical properties:

Material: modified PP,  
temperature resistance:  
–40 °C to +135 °C, short-term temperature resistance +150°C, flame propagating; halogen-free.

Type	Cat. no.	10	14	20	23	37	45	70
OD [in mm]		13.6	18.5	25.5	31.0	41.4	54.0	79.8
ID [in mm]		8.7	12.2	19.5	24.2	31.0	42.7	66.5
Approx. bend radius [in mm]*		70	95	130	155	205	190	375
Pck. Qty. [in m]		50	50	50	50	25	25	10
Colour: black	384. ... .00	010	014	020	023	037	045	070
Pck. Qty. [in m]		10	10	10	10	10	10	
Colour: black	384. ... .02	010	014	020	023	037	045	

\* min. bend radius (neutral fibre) with a flattening of the conduit outside diameter of  $\leq 5\%$ .



## Co-flex PP-white – Resealable Slit Corrugated Tubing

Slit Co-flex PP-white tubing made of polypropylene (PP).

### Applications:

Co-flex PP-white is ideal for use in hi-fi units, wiring in offices, ships, medical devices, such as x-ray machines and tomographs, hospital beds and furniture.

### Physical properties:

Material: PP,  
temperature resistance:  
–40°C to +135°C, short-term temperature resistance +150°C, flame propagating; halogen-free.

Type	Cat. no.	20						
OD [in mm]		25.3						
ID [in mm]		19.2						
Approx. bend radius [in mm]*		130						
Pck. Qty. [in m]		50						
Colour: white	384. ... .10	020						

\* min. bend radius (neutral fibre) with a flattening of the conduit outside diameter of  $\leq 5\%$ .



## Insertion Tool with Handle

### Applications:

Wire insertion tool to insert wires and cables in Co-flex and slit corrugated tubing.  
Available dimensions: NW 7.5–NW 34.

### Physical properties:

Material: PA 6

	Cat. no.	Dimension	Colour
Insertion tool	490.90.003	7.5 - 34	black

All dimensions without tolerances are for reference only.



## Cable Protection Products



### COS – Fixing Clip with Integrated Ledge

#### Applications:

A fixing clip with integrated ledge to axially secure Co-flex-PP and PA 6 tubes.

#### Chemical properties:

Resistant to: Fuels, mineral oils, greases, alkalis and most common solvents.

Limitedly resistant to: Bases, also if diluted.

Non-resistant to: Acids, halogen and oxidative compounds.

#### Physical properties:

Material: PA 6, temperature resistance –40 °C to +120 °C, short-term temperature resistance +140°C.

#### Flammability:

self-extinguishing

Type	Cat. no.	10	14	20	23	37	45
Clip ID [in mm]		13.0	17.8	26.0	32.0	42.7	53.6
Pck. Qty./Pc(s).		100	100	50	50	20	20
Colour: black	491.20. ...	100	140	200	230	370	450



### COV – Two-Piece Threaded Connector Pg

#### Applications:

Ideal for Co-flex-PP and PA 6

#### Chemical properties:

Resistant to: Fuels, mineral oils, greases, alkalis and most common solvents.

Limitedly resistant to: Bases, also if diluted.

Non-resistant to: Acids, halogen and oxidative compounds.

#### Physical properties:

Material: PA 6, temperature resistance –40 °C to 120 °C, short-term temperature resistance to 150 °C, available  
Colour: black.

#### Flammability:

UL94:HB

Type	Cat. no.	10	14	20	23	37	
Pg connecting thread		9	13.5	21	29	29	
Thread ID [in mm]		9	13	20	27	31	
Pck. Qty./Pc(s).		100	100	50	50	25	
Colour: black	491.10. ...	100	140	200	230	370	



### Cofix – Two-Piece Threaded Connector metric

#### Screw joint

Type	Cat. no.	10	14	20	23	37	45
Metric connecting thread x 1,5		M 16	M 20	M 25	M32	M 40	M 50
Pck. Qty./Pc(s).		100	100	50	50	25	25
Colour: black	491.10. ...	102	142	202	232	372	452

#### Nut

Type	Cat. no.	10	14	20	23	37	45
Cofix-nut x 1,5		M 16	M 20	M 25	M32	M 40	M 50
Pck. Qty./Pc(s).		100	100	50	50	25	25
Colour: black	491.12. ...	101	141	201	231	371	451

All dimensions without tolerances are for reference only.



# Cable Protection Products



See product description 8.33 for more detailed information on FFMYD corrugated conduits - Please request product description if needed.

## FFMYD – PA 6 Corrugated Tubing

A flexible, halogen-free PA 6 tube with parallel corrugation. Custom colours, lengths and slits are available upon request.

### Applications:

Its excellent dynamic properties allow for the conduit to be used on moving parts. Ideal for use in shipbuilding, mechanical and railway engineering, tool manufacturing and as transport tube in different areas.

### Chemical properties:

Resistant to: Fuels, mineral oils, greases, alkalis and most common solvents.

Limitedly resistant to: Bases, also if diluted.

Non-resistant to: Acids, halogen and oxidising compounds

– Suitable for use at sub-zero temperatures

– Good weathering resistance.

### Physical properties:

Material: PA 6, temperature resistance –40 °C to +120 °C, short-term temperature resistance +150 °C, halogen-free.

Colour: black/grey.

### Flammability:

UL94:V2

FMVSS 302

self-extinguishing

Type	Cat. no.	7,5	10	12	17	23	29	37	50
OD [in mm]		10	12.8	15.7	21.1	28.4	34.5	42.1	53.8
ID [in mm]		6.6	9.8	12.3	16.6	23.1	28.9	34.0	47.5
Approx. bend radius [in mm]*		11	15	20	30	40	50	65	90
Pck. Qty. [in m]		50	50	50	50	50	25	25	25
Colour: black	400. ... .00	..007	..010	..012	..017	..023	..029	..037	..050
Colour: grey	402. ... .00	..007	..010	..012	..017	..023	..029	..037	..050

\* min. bend radius (neutral fibre) with a flattening of the conduit outside diameter of ≤ 5%.



Protection classification: IP68  
DIN EN 60529  
IP66 rated system

## FFTYL – PE-LD Corrugated Tubing

A flexible PE-LD tube with parallel corrugation. Custom colours, lengths and slits are available upon request.

### Applications:

Ideal for use in the household appliance and the electric power industry, in HVAC and medical technology.

### Chemical properties:

Resistant to: Acids, bases, inorganic salts, water and greases.

Limitedly resistant to: Alcohol, esters, ketones and mineral oils.

Non-resistant to: Fuels, oxidising and aromatic compounds.

### Physical properties:

Material: PE-LD, temperature resistance –40°C to +70°C, short-term temperature resistance +90°C, halogen-free.

Colour: black.

### Flammability:

UL94:HB

FMVSS 302:met

Type	Cat. no.	7,5	10	12	17	23	29	37	50
OD [in mm]		9.9	12.7	15.6	20.8	27.9	34	41.5	53.3
ID [in mm]		6.5	9.8	11.6	16.3	22.9	28.9	33.7	47.1
Approx. bend radius [in mm]*		12	15	18	30	45	55	75	100
Pck. Qty. [in m]		50	50	50	50	50	25	25	25
Colour: black	320. ... .00	..007	..010	..012	..017	..023	..029	..037	..050

\* min. bend radius (neutral fibre) with a flattening of the conduit outside diameter of ≤ 5%.

All dimensions without tolerances are for reference only.





## Cable Protection Products



Protection classification: IP68  
DIN EN 60529  
IP66 rated system

### FFTYL-V – Corrugated Ethylene-Vinyl acetate Copolymer (EVA) Tubing

Flexible ethene-vinyl acetate copolymer (EVA) tubing with parallel corrugation. Custom colours, lengths and slits are available upon request.

#### Application:

Its excellent flexibility makes it ideal for use in automation and medical/chemical mechanical engineering.

#### Chemical properties:

Resistant to: Weak and organic acids, bases, inorganic salts, amines, alcohol and greases.

Limitedly resistant to: Fuels and mineral oils.

Non-resistant to: Strong acids, halogenated and oxidising compounds, ketones and esters.

#### Physical properties:

Material: Ethylene-vinyl acetate copolymer (EVA), halogen-free.

Temperature resistance  
-40°C to +55°C, short-term  
temperature resistance  
+65°C.

Colour: black.

#### Flammability:

UL94:HB

Type	Cat. no.	7.5	10	12	17	23	29	37	50
OD [in mm]		9.9	12.8	15.6	20.8	28	33.8	41.6	53.5
ID [in mm]		6.5	9.7	11.5	16.1	22.5	28.5	33.8	47
Approx. bend radius [in mm]*		18	25	30	45	65	80	105	140
Pck. Qty. [in m]		50	50	50	50	50	25	25	25
Colour: black	336. ... .00	..007..	..010..	..012..	..017..	..023..	..029..	..037..	..050..

\* min. bend radius (neutral fibre) with a flattening of the conduit outside diameter of ≤ 5%.



Protection classification: IP68  
DIN EN 60529  
IP66 rated system

### FFPYL – Corrugated Polypropylene (PP) Tubing

Flexible polypropylene (PP) tubing with parallel corrugation. Custom colours, lengths and slits are available upon request.

#### Application:

Ideal for use in HVAC technology, and in the electrical and household appliance industry.

#### Chemical properties:

Resistant to: Acids, bases, inorganic salts, fuels, mineral oils, greases and most common solvents.

Limitedly resistant to: Ether.

Non-resistant to: Halogen, oxidising and aromatic compounds.

#### Physical properties:

Material: Polypropylene (PP), halogen-free.

Temperature resistance  
-40 °C to +105 °C, short-term  
temperature resistance +130 °C.  
Colour: black

#### Flammability:

UL94:HB

FMVSS 302: fulfilled

Type	Cat. no.	7.5	10	12	17	23	29
OD [in mm]		9.9	12.8	15.7	20.9	28	33.9
ID [in mm]		6.7	9.8	11.6	16.5	23	28.8
Approx. bend radius [in mm]*		16	20	25	35	45	55
Pck. Qty. [in m]		50	50	50	50	50	25
Colour: black	360. ... .00	..007..	..010..	..012..	..017..	..023..	..029..

\* min. bend radius (neutral fibre) with a flattening of the conduit outside diameter of ≤ 5%

All dimensions without tolerances are for reference only.



## Cable Protection Products



Protection classification: IP68  
DIN EN 60529  
IP66 rated system

### FFHY – Corrugated Thermoplastic Polyester (TPE) Tubing

Flexible thermoplastic polyester (TPE) tubing with parallel corrugation. Custom colours, lengths and slits available upon request.

#### Applications:

Its high temperature resistance, superior flexibility and dynamic properties make it ideal for use in the electrical and appliance industry on moving parts.

#### Chemical properties:

Resistant to: Fuels, mineral oils, greases, alkalis and most common solvents.

Limitedly resistant to: Bases, also if diluted.

Non-resistant to: Acids, halogen and oxidative compounds.

#### Physical properties:

Material: Thermoplastic polyester (TPE), halogen-free.

Temperature resistance -40°C to +105°C, short-term temperature resistance +150°C.

Colour: black.

#### Flammability:

UL94:HB

FMVSS 302: fulfilled

Type	Cat. no.	4.5	7.5	8.5	10	12	13	17	23	29	37
OD [in mm]		7.2	10	11.5	12.9	15.6	16	21	28.1	33.8	41.6
ID [in mm]		4.4	6.5	8.2	9.9	11.5	12.5	16.4	23.4	28.9	34.1
Approx. bend radius [in mm]*		10	20	20	25	25	30	35	45	55	65
Pck. Qty. [in m]		100	50	50	50	50	50	50	50	25	25
Colour: black	461. ... .00	..004..	..007..	..008..	..010..	..012..	..013..	..017..	..023..	..029..	..037..

\* min. bend radius (neutral fibre) with a flattening of the conduit outside diameter of ≤ 5%.



### BFS – Plastic Clip

PA 6 clip for plastic tubes with parallel corrugation. The plastic clip can be secured with both screws and on a C-shaped rail. A "ledge" prevents the tube from sliding in the clip. Special loops enable the tube to be secured with cable binders or ties.

#### Chemical properties:

Resistant to: Fuels, mineral oils, greases, alkalis and most common solvents.

Limitedly resistant to: Bases, also if diluted.

Non-resistant to: Acids, halogen and oxidative compounds.

#### Physical properties:

Material: Polyamide (PA 6), halogen-free, cadmium-free.

Temperature resistance -40°C to +105°C, short-term temperature resistance +150°C.

Colour: black/grey.

#### Flammability:

UL94:V2

Type	Cat. no.	7.5	9	11	16	21	29	36	48
Suitable for type		7.5	10	12	17	23	29	37	50
Pck. Qty. / Pc.(s)		100	100	100	100	50	30	20	20
Colour: black	490.06. ...	..070	..090	..110	..160	..210	..290	..360	..480
Colour: grey	490.07. ...	–	..090	..110	..160	..210	..290	..360	..480

All dimensions without tolerances are for reference only.



## Cable Protection Products



IP66 static/54 dynamic acc.  
to DIN EN 60529

### FKSV..M – Threaded Plastic Connector

One-piece metric threaded PA 6 quick-connect connector for corrugated tubes. "Shark teeth" make it easy to install and safe to uninstall.

#### Chemical properties:

Resistant to: Fuels, mineral oils, greases, alkalis and most common solvents and glycols.

#### Physical properties:

Material: PA 6, temperature resistance -40 °C to +90 °C, short-term temperature resistance +130 °C, halogen-free. Colour: black and grey.

Type	Cat. no.	7M12	10M16	12M16	17M20	23M25	29M32	37M40	50M50
Connecting thread x 1.5		M12	M16	M16	M20	M25	M32	M40	M50
Suitable for		7.5	10	12	17	23	29	37	50
Pck. Qty. [in m]		100	100	100	100	50	30	20	10
Colour: black	289.10. ...	..007	..010	..012	..017	..023	..029	..037	..050
Colour: grey	289.11. ...	..007	..010	..012	..017	..023	..029	..037	..050



IP66 static/54 dynamic acc.  
to DIN EN 60529

### FKSV..Pg – Threaded Plastic Connector

One-piece Pg threaded PA 6 quick-connect connector for corrugated tubes. "Shark teeth" make it easy to install and safe to uninstall.

Type	Cat. no.	7Pg7	10Pg9	12Pg11	17Pg13,5	17Pg16	23Pg21	29Pg29	37Pg36	50Pg48
Connecting thread		Pg7	Pg9	Pg11	Pg13.5	Pg16	Pg21	Pg29	Pg36	Pg48
Suitable for		7,5	10	12	17	17	23	29	37	50
Pck. Qty. [in m]		100	100	100	100	100	50	30	20	10
Colour: black	289.20. ...	..007	..010	..012	..017	..117	..023	..029	..037	..050



IP66 according to DIN EN 60529

### FKSW..M.. 90° Threaded Plastic Elbow Connector

One-piece metric threaded PA 6 elbow connector for corrugated tubes. Easy to install and uninstall.

Type	Cat. no.	12M16	17M20	23M25	29M32
Connecting thread x 1.5		16	20	25	32
Suitable for		12	17	23	29
Pck. Qty. [in m]		50	50	30	20
Colour: black	289.50. ...	..012	..017	..023	..029



IP66 according to DIN EN 60529

### FKSW..Pg.. 90° Threaded Plastic Elbow Connector

One-piece Pg threaded PA 6 elbow connector for corrugated tubes. Easy to install and uninstall.

Type	Cat. no.	10Pg9	12Pg11	17Pg13,5	17Pg16	23Pg21	29Pg29
Connecting thread Pg		9	11	13.5	16	21	29
Suitable for		10	12	17	17	23	29
Pck. Qty. [in m]		50	50	50	50	30	20
Colour: black	289.60. ...	..010	..012	..017	..117	..023	..029





# Cable Protection Products



Protection classification: IP40  
DIN EN 60529  
IP40 rated system

## FFMSS – Metal Hose

A flexible strip-wound interlocking metal hose made of galvanised steel, without sealing element. Suitable for heavy machinery and production lines.

### Properties:

Compressible, corrosion resistant, with good tensile strength.

### Physical properties:

Material: galvanised strip steel, temperature resistance –100 °C to +400 °C. Colour/finish: galvanised

Type	Cat. no.	7	10	13	15	20	25	28	37	45	52
OD [in mm]		9.5	13	16	18.5	24	28.5	31.5	41.5	49.5	56.5
ID [in mm]		7	10	13	15.5	20.0	25	28	37	45	52
Approx. bend radius [in mm]*		14	19	24	28	34	40	45	95	115	145
Pck. Qty. [in m] <sup>1) 2)</sup>		10	10	10	10	10	10	10	10	10	10
Finish: galvanised	280.00. ...	..007	..010	..013	..015	..020	..025	..028	..037	..045	..052
Pck. Qty. [in m] <sup>1) 2)</sup>		50	50	50	50	50	50	25	25	25	25
Finish: galvanised	280.01. ...	..007	..010	..013	..015	..020	..025	..028	..037	..045	..052

1) Other pack quantities upon request  
2) Uncoiled length

\* Referring to the inner diameter



Protection classification: IP68  
DIN EN 60529  
IP40 rated system

## FFMSS-K – Metal Hose

A flexible PVC jacketed strip-wound interlocking metal hose made of galvanised steel. Suitable for heavy machinery and production lines.

### Properties:

UV and ozone resistant, airtight and watertight, good resistance to oils, acids and bases, compressible, corrosion resistant, with good tensile strength.

### Physical properties:

Material: galvanised strip steel, PVC-P jacket, temperature resistance –15 °C to +70 °C. Colour: grey.

Type	Cat. no.	7	10	13	15	20	25	28	37	45	52
OD [in mm]		10	13.5	16.5	19	25	30	32.5	42.5	51	58
ID [in mm]		7	10	13	15.5	20	25	28	37	45	52
Approx. bend radius [in mm]*		25	40	50	60	70	100	120	150	180	230
Pck. Qty. [in m] <sup>1) 2)</sup>		10	10	10	10	10	10	10	10	10	10
Colour: grey	280.20. ...	..007	..010	..013	..015	..020	..025	..028	..037	..045	..052
Pck. Qty. [in m] <sup>1) 2)</sup>		50	50	50	50	50	50	25	25	25	25
Finish: galvanised	280.21. ...	..007	..010	..013	..015	..020	..025	..028	..037	..045	..052

1) Other pack quantities upon request  
2) Uncoiled length

\* Referring to the inner diameter



Protection classification: IP40  
DIN EN 60529

## FMV – Threaded Connector

Threaded nickel plated brass connector for FFMSS and FFMSS-K. Rotatable with metric male thread and inner coupler.

### Properties:

Vibration and corrosion resistant, with good tensile strength.

### Physical properties:

Material: nickel plated brass, temperature resistance –100 °C to +400 °C. Colour/finish: galvanised

Type	Cat. no.	7M12	10M16	13M16	15M20	20M25	25M32	28M32	37M40	45M50	52M63
Pck. Qty./Pc(s).		20	20	20	10	10	10	10	5	1	1
Finish: galvanised	280.50. ...	..007	..010	..013	..015	..020	..025	..028	..037	..045	..052

All dimensions without tolerances are for reference only.



## Cable Protection Products



Protection classification IP 68 acc. to  
DIN EN 60529  
IP 67 rated system

### FFMSS-K-FD Metal Hose

A flexible PVC jacketed strip-wound interlocking metal hose made of galvanised steel, without sealing element. Suitable for heavy machinery and production lines.

#### Properties:

Vibration and corrosion resistant, with good tensile strength, liquid tight.

#### Physical properties:

Temperature resistance  
–40°C to +120°C.

Colour/finish:  
galvanised

Type	Cat. no.	8	10	12	15	20	25	35	40	51
OD [in mm]		13	15	17	21	27	34	43	48	58.5
ID [in mm]		8.5	10	12	15.5	20	26.5	35	40	50.5
Approx. bend radius [in mm]*		40	50	60	70	90	120	150	200	250
Pck. Qty. [in m]		10	10	10	10	10	10	10	10	10
Colour: grey	280.10. ...	..008	..010	..012	..015	..020	..025	..035	..040	..051

\*Referring to the inner diameter



IP 67 rated system  
System acc. to DIN EN 60529

### FMV-FD – Threaded Connector

Threaded nickel plated brass connector for FFMSS-K-FD. Rotatable with metric male thread and inner coupler. PA 6 sealing ring will provide for a liquid tight seal.

#### Properties:

Vibration and corrosion resistant, with good tensile strength, liquid tight.

#### Physical properties:

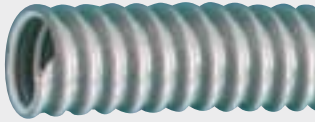
Temperature resistance  
–40°C to +120°C.

Colour/finish:  
galvanised

Type	Cat. no.	8M12	10M12	12M16	15M20	20M25	25M32	35M40	40M50	51M63
Pck. Qty. / Pc.(s)		20	20	20	10	10	10	5	5	2
Finish: galvanised	280.60. ...	..008	..010	..012	..015	..020	..025	..035	..040	..051
Thread		M12x1,5	M12x1,5	M16x1,5	M20x1,5	M25x1,5	M32x1,5	M40x1,5	M50x1,5	M63x1,5
Suitable for type		8	10	12	15	20	25	35	40	51



# Cable Protection Products



Protection classification: IP68 DIN  
EN 60529  
IP54 rated system

## FFKSS-SW – Spiral Hose

A flexible PVC-P jacketed protective hose made from helically wound spring steel wire.

### Applications:

Ideal for installation in control panels and for use in mechanical engineering and robotics.

### Properties:

UV and ozone resistant.

Airtight and watertight, good resistance to oils, acids and bases, axially rotatable and compressible.

### Physical properties:

Material: PVC-P, temperature resistance –20 °C to +70 °C, short-term temperature resistance +80 °C.

Colour: grey.

Type	Cat. no.	7	9	11	13,5	16	21	29	36	48
OD [in mm]		10.0	14.0	17.0	19.0	21.0	27.0	36.0	45.0	56.0
ID [in mm]		7.0	10.5	13.4	15.3	16.6	22.5	30.6	38.3	48.8
Approx. bend radius [in mm]*		10	14	17	19	21	27	36	45	56
Pck. Qty. small coils [in mm]		10	10	10	10	10	10	10	10	10
Colour: grey	281.20..	..007	..009	..011	..013	..016	..021	..029	..036	..048
Pck. Qty. bulk coils [in mm]		50	50	50	50	50	50	25	25	25
Colour: grey	281.21..	..007	..009	..011	..013	..016	..021	..029	..036	..048

\* Referring to the inner diameter



Protection classification: IP54  
DIN EN 60529

## FKV-SW – Threaded Connector

A threaded PE connector with rotatable nickel-plated brass male tread. Ideal for FFKSS-SW protective hoses.

### Properties:

The integrated bushing effectively protects the cables at the hose ends.

High tensile and vibration strength guaranteed if FFKSS-SW conduits are used together with FKV-SW connectors.

### Physical properties:

Material: Polyethylene (PE), temperature resistance –40 °C to +110 °C.

Colour: grey.

Type	Cat. no.	9M16	11M20	13,5M20	16M25	21M32	29M40	36M50	48M63
Pck. Qty./Pc(s).		50	50	50	25	25	25	25	10
Colour: grey	281.60..	..009	..011	..013	..016	..021	..029	..036	..048
Thread		M16x1.5	M20x1.5	M20x1.5	M25x1.5	M32x1.5	M40x1.5	M50x1.5	M63x1.5
Suitable for type		9	11	13,5	16	21	29	36	48

All dimensions without tolerances are for reference only.

# Cable Protection Products



For more detailed information on Quick-Lock connectors please refer to product description 8.63 – Please order separately if needed.

## Quick-Lock 44 / Quick-Lock 66

PA6 Quick-Lock connector, tested and certified by the TÜV Product Service, for a quick and easy installation of flexible corrugated tubing. The material is halogen-free, does not contain any heavy metals and has an excellent impact strength.

**Quick-Lock** is ideal for use in installing wires and cables in buildings, apparatus, mechanical and control panel engineering, and machine building. The combination of thermal and chemical resistance of the high-quality material used and the quick and easy installation, provides efficient protection of cables and wires at short installation times.

### Hermeticity:

Quick-Lock 44: Protection class IP 44, (protection against grain-sized foreign particles and splash water) acc. to EN 60529/DIN VDE 0470 Part 1.  
Quick-Lock 66: Protection class IP 66, (prevents the entry of dust and protects against in case of flooding) acc. to EN 60529/DIN VDE0470 Part 1.

Type	Cat. no.	9	11	16	21	29	
<b>Suitable for</b>		10	12/13	17	23	29	
<b>Thread</b>		Pg 9	Pg 11	Pg 16	Pg 21	Pg 29	
<b>Quick-Lock 44</b>	Cat. no. 493.00..	..090	..110	..160	..210	..290	
<b>Quick-Lock 66</b>	Cat. no. 493.01..	..090	..110	..160	..210	..290	
Packing unit		100	100	50	25	25	
<b>FDR-R</b> profile sealing ring	Cat. no. 493.11..	..090	..110	..160	..210	..290	
<b>FDR-G</b> flat sealing ring	Cat. no. 493.10..	..090	..110	..160	..210	..290	
<b>SGMKu</b> lock nut	Cat. no. 493.21..	..090	..110	..160	..210	..290	

## Tee/Wye

PA6 connectors to connect three corrugated protective hoses. Versions: Tee / Wye / Vee. (halogen-free)

Description	Cat. no.	QTY (pcs)	
T-Snap-Lock 7.5-7.5-7.5	492.15.070	100	
T-Snap-Lock 10-7.5-7.5	492.17.100	100	
T-Snap-Lock 10-7.5-10	492.16.101	100	
T-Snap-Lock 10-10-7.5	492.16.103	100	
T-Snap-Lock 10-10-10	492.15.100	100	
T-Snap-Lock 17-7.5-17	492.16.170	100	
T-Snap-Lock 17-10-17	492.16.172	100	
T-Snap-Lock 17-17-7.5	492.16.173	100	
T-Snap-Lock 17-17-17	492.15.170	100	
Y-Snap-Lock 7.5-7.5-7.5	492.65.070	100	
Y-Snap-Lock 10-10-10	492.65.100	100	

## FDRM – Sealing ring for metric threads

Sealing ring for metric threads

FDRM Type	M16	M20	M25	M32	M40	M50	M63
QTY (pcs.)	100	50	50	50	25	25	25
Cat. no. 288.90. ...	..016	..020	..025	..032	..040	..050	..063





# Cable Protection Products



Protection class IP 67  
(proximity switch)  
Protection class IP65  
(corrugated tubing)

## FAN – Adapter for approach switches

Translucent plastic PA12 adapter for corrugated tubing. With metric fine pitch thread on one side for proximity switch.

### Chemical properties:

Resistant against: Fuels, mineral oils, grease, alkalis, common solvents, glycol, weak bases and acids.

### Application:

Used in machine building together with electric sensors. The translucent connector allows light-emitting diodes (LEDs) to shine through.

### Physical properties:

Withstands temperatures down to -40°C and up to +105°C, short-term up to +150°C.

Colour: translucent

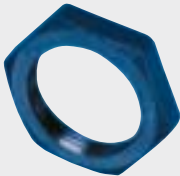
### Material:

Polyamide 12 (halogen-free, does not contain cadmium or phosphor)

Type	Cat. no.	7M8	7M12	7M18	7M30	10M12	10M18	10M30
QTY (pcs.)		100	100	100	100	50	50	50
Colour: translucent	289.90. ...	..708	..712	..718	..730	..112	..118	..130
Suitable for pipe type		7.5	7.5	7.5	7.5	10	10	10
Metric thread, fine pitch		M8 x 1,0	M12 x 1,0	M18 x 1,0	M30 x 1,5	M12 x 1,0	M18 x 1,0	M30 x 1,5
Thread length [in mm]		6.5	6.5	6.5	6.5	6.5	6.5	6.5
Total length		30	56	57	57	57	57	57

## FGKM and FGKP – Plastic lock nut

**Metric thread** polyamide lock nut. (halogen-free)



FGKM type	M16	M20	M25	M32	M40	M50	M63
QTY (pcs.)	100	100	50	50	25	25	25
Cat. no. 288.20. ...	..016	..020	..025	..032	..040	..050	..063

Colour / finish: black

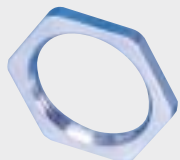
**Pg thread** polyamide lock nut. (halogen-free)

FGKP type	Pg7	Pg9	Pg11	Pg13,5	Pg16	Pg21	Pg29	Pg36	Pg48
QTY (pcs.)	100	100	100	100	50	50	50	25	25
Cat. no. 288.25. ...	..007	..009	..011	..013	..016	..021	..029	..036	..048

Colour / finish: black

## FGMM and FGMP – Metal lock nut

**Metric thread** nickel plated brass lock nut.



FGMM type	M16	M20	M25	M32	M40	M50	M63
QTY (pcs.)	100	100	50	50	25	25	10
Cat. no. 288.10. ...	..016	..020	..025	..032	..040	..050	..063

Colour / finish: nickel plated

**Pg thread** nickel plated brass lock nut.

FGMP type	Pg7	Pg9	Pg11	Pg13,5	Pg16	Pg21	Pg29	Pg36	Pg48
QTY (pcs.)	100	100	100	100	50	50	50	25	10
Cat. no. 288.15. ...	..007	..009	..011	..013	..016	..021	..029	..036	..048

Colour / finish: nickel plated