# FRÄNKISCHE

# FRÄNKISCHE Electrical Systems

Main Catalogue – Cable Ducting



Last modified: June 2012

DRAINAGE SYSTEMS

ELECTRICAL SYSTEMS

BUILDING TECHNOLOGY

INDUSTRIAL PRODUCTS



# ... technology made easy

- easy and quick to join and release
- protection against unintended conduit releases
- compact design facilitates installation in cramped locations
- compatible with conduits from other manufacturers
- sealing reliability even under dynamic conditions
   and when conduit sections have not been accurately cut (IP66 and IP68)
- small quantity packaging



For more information, please refer to:

www.fraenkische-elektro.de

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### **Table of Contents: Corrugated Plastic Conduits**

**FFMYD** 12



Material: PA6

Temperature resistance range according to DIN EN 61386-23: -45°C to +120°C Temperature resistance range according to LV312-3: -40°C to +120°C, short-term temperature resistance +150°C

Colour: black, grey, opaque

Characteristics: non-flame propagating

Flammability: UL 94 V2 / FMVSS 302; self-extinguishing

Classification: 125440

FFMYD-L 13





Material: PA6

Temperature resistance range according to DIN EN 61386-23: -25°C to +120°C Temperature resistance range according to LV312-3: -40°C to +120°C, short-term temperature resistance +150°C

Colour: black

Characteristics: non-flame propagating

Flammability: UL 94 V2 / FMVSS 302; self-extinguishing

Classification: 024440

**FFHY** 14



Material: TPE

Temperature resistance range according to DIN EN 61386-23: -45°C to +105°C Temperature resistance range according to LV312-3: -30°C to +150°C, short-term temperature resistance +180°C

Colour: black

Characteristics: non-flame propagating

Flammability: UL 94 HB / FMVSS 302; self-extinguishing

Classification: 035340

**FFTYL-BS** 15





Material: modified PE-LD

Temperature resistance range according to DIN EN 61386-23: -45°C to +60°C Temperature resistance range according to LV312-3: -40°C to +70°C, short-term

temperature resistance +90°C

Colour: black

Characteristics: non-flame propagating

Flammability: UL 94 HB / FMVSS 302; self-extinguishing

Classification: 045142

**FFTYL-V** 16



Material: EVA

Temperature resistance range according to LV312-3: -40°C to +55°C, short-term

temperature resistance +65°C

Colour: black

Characteristics: non-flame propagating

Flammability: UL 94 HB Classification: 045042

FFPYL-MOD-BS 17





Material: modified. PP

Temperature resistance range according to DIN EN 61386-23: -15°C to +60°C Temperature resistance range according to LV312-3: -40°C to +135°C, short-term temperature resistance +150°C

Colour: black

Characteristics: non-flame propagating Flammability: UL 94 V2 / FMVSS 302 type B

Classification: 033142

### Table of Contents: Corrugated Plastic Conduit Accessories

NEW NEW **FKC Click** FKC-B90 Click 20-21 22 – 23 Material: PA6 Material: PA6 Protection class: IP66/IP68 Protection class: IP66/IP68 Temperature resistance range: -40°C to Temperature resistance range: -40°C to +120°C Colour: black, grey Colour: black, grey Characteristics: non-flame propagating Characteristics: non-flame propagating NEW FKC-B45 Click **FKC Click Pg** 24 - 2526 Material: PA6 Material: PA6 Protection class: IP66/IP68 Protection class: IP66 Temperature resistance range: -40°C to Temperature resistance range: -40°C to +120°C +120°C Colour: black, grey Colour: black Characteristics: non-flame propagating Characteristics: non-flame propagating FKC-B90 Click Pg FKC-B45 Click Pg 27 28 Material: PA6 Material: PA6 Protection class: IP66 Protection class: IP66 Temperature resistance range: -40°C to Temperature resistance range: -40°C to +120°C +120°C Colour: black Characteristics: non-flame propagating Characteristics: non-flame propagating **FKC-I Click FKC-Z Click** 29 30 Material: PA6 Material: PA6 Protection class: IP68 Protection class: IP68 Temperature resistance range: -40°C to Temperature resistance range: -40°C to +120°C +120°C Characteristics: non-flame propagating Characteristics: non-flame propagating **FKC-M FKC-S Click** 32 Material: PA6 Material: PA6 Protection class: IP66 Protection class: IP66/IP68 Temperature resistance range: -40°C to Temperature resistance range: -40°C to +120°C +120°C Colour: black, grey Colour: black, grey Characteristics: non-flame propagating Characteristics: non-flame propagating FE-KA FE-K 33 33 Material: TPE Material: PA6 Temperature resistance range: -30°C to Temperature resistance range: -40°C to +150°C +120°C Colour: black Colour: black Characteristics: non-flame propagating Characteristics: non-flame propagating **FCLC** 34 34 Material: PA6 Material: PA6 Temperature resistance range: -40°C to Temperature resistance range: -40°C to +120°C +120°C Colour: black Colour: black Characteristics: non-flame propagating Characteristics: non-flame propagating Flammability: UL 94 HB Flammability: UL 94 HB T- / Y-piece 35 Material: PA6 Temperature resistance range: -40°C to +120°C Colour: black

Characteristics: non-flame propagating Flammability: UL 94 HB - V2 / FMVSS 302;

self-extinguishing

### Table of Contents: Resealable Corrugated Conduits

Co-flex PP-UV 36



Material: modified PP

Temperature resistance range according to DIN EN 61386-23: –25°C to +105°C
Temperature resistance range according to LV312-3: –40°C to +105°C, short-term
temperature resistance +130°C

Colour: black

Characteristics: non-flame propagating

Flammability: UL 94 HB / FMVSS 302

Classification: 134340

Co-flex PP 37



Material: PP

Temperature resistance range according to DIN EN 61386-23: –25°C to +105°C
Temperature resistance range according to LV312-3: –40°C to +135°C, short-term temperature resistance +150°C

Colour: black

Characteristics: non-flame propagating

Flammability: UL 94 V2 / FMVSS 302

Classification: 134340

Co-flex PP-weiß 38



Material: PP

Temperature resistance range according to DIN EN 61386-23: –25°C to +105°C
Temperature resistance range according to LV312-3: –40°C to +135°C, short-term
temperature resistance +150°C

Colour: white

Characteristics: non-flame propagating

Flammability: UL 94 V2 / FMVSS 302

Classification: 134340

Co-flex PA6 39



Material: PA6

Temperature resistance range according to DIN EN 61386-23: –25°C to +150°C
Temperature resistance range according to LV312-3: –40°C to +120°C, short-term temperature resistance +150°C

Colour: black

Characteristics: non-flame propagating

Flammability: UL 94 V2 / FMVSS 302

Classification: 124540

# Table of Contents: Resealable Corrugated Conduit Accessories

cos 40



Material: PA6

Temperature resistance range: -40°C to +120°C

Colour: black

Characteristics: non-flame propagating

Flammability: self-extinguishing

COV 40



Material: PA6 Protection class: IP43

Temperature resistance range: -40°C to +120°C

Colour: black

Characteristics: non-flame propagating

Flammability: UL 94 HB

**COFIX** 41



Material: PA6 Protection class: IP43

Temperature resistance range: -40°C to +120°C

Colour: black

Characteristics: non-flame propagating

Flammability: UL 94 HB

Insertion tool 41



Material: PA6 Colour: black

### **Table of Contents: Metal Cable Ducts**

FFMSS 43



Material: galvanised steel strip

Temperature resistance range: -45°C to +400°C

Compressive strength: heavy

Colour: galvanised

Characteristics: non-flame propagating

Classification: 435741

FFMSS-K-FD 44



Material: galvanised steel strip / PVC-P

Temperature resistance range: -25°C to +60°C

Compressive strength: heavy

Colour: grey

Characteristics: non-flame propagating

**UV-resistant** 

Classification: 434143

FFMSS-K 45



Material: galvanised steel strip / PVC-P

Temperature resistance range: -25°C to +60°C

Compressive strength: heavy

Colour: grey

Characteristics: non-flame propagating

UV-resistant

Classification: 434143

FFMSS-G 46





Material: galvanised steel strip / metal braiding Temperature resistance range: -45°C to +400°C

Compressive strength: heavy

Colour: galvanised

Characteristics: non-flame propagating

Classification: 435741

FFMSS-VA 47





Material: stainless steel

Temperature resistance range: -45°C to +400°C

Compressive strength: heavy

Colour: stainless steel

Characteristics: non-flame propagating

Classification: 435741

## **Table of Contents: Metal Cable Duct Accessories**

FMV 49



Material: nickel-plated brass Protection class: IP40

Temperature resistance range: -45°C to +400°C

Characteristics: non-flame propagating

FMV-FD 49



Material: nickel-plated brass Protection class: IP67

Temperature resistance range: -40°C to +120°C

Characteristics: non-flame propagating

FMV-W 50





Material: nickel-plated brass Protection class: IP67

Temperature resistance range: -40°C to +120°C Characteristics: non-flame propagating

FMV-I 50





Material: nickel-plated brass Protection class: IP67

Temperature resistance range: -40°C to +120°C Characteristics: non-flame propagating

FME 51





Material: nickel-plated brass

Temperature resistance range: -45°C to +400°C

Characteristics: non-flame propagating

# **Table of Contents: Plastic Spiral Conduits**

FFKSS-SW 52



Material: PVC-P / spring steel wire

Temperature resistance range: -25°C to +60°C

Compressive strength: heavy

Colour: grey

Characteristics: non-flame propagating

**UV-resistant** 

Classification: 424140

FFKSS-KW 53



Material: PVC-U / hard plastic spiral

Temperature resistance range: -25°C to +60°C

Compressive strength: very light

Colour: grey

Characteristics: non-flame propagating

**UV-resistant** 

Classification: 134142

FKV-SW 54



Material: PE

Temperature resistance range: -40°C to +110°C

Colour: grey

Characteristics: non-flame propagating

FKV-KW 54



Material: PVC

Temperature resistance range: -20°C to +80°C

Colour: grey

Characteristics: non-flame propagating

Flammability: UL94 V2

## **Table of Contents: Cable Protection Accessories**

FKH-M 55



Material: PP

Temperature resistance range: -40°C to

+ 120°C Colour: grey Thread: metric

Characteristics: non-flame propagating





Material: nickel-plated brass

Temperature resistance range: -45°C to

55

+ 400°C

Thread: metric / metric

Characteristics: non-flame propagating



FEMM 55



Material: nickel-plated brass

Temperature resistance range: -45°C to +400°C

Thread: metric / metric

Characteristics: non-flame propagating

FGKM 56



Material: PA6

Temperature resistance range: -40°C to

+ 120°C Colour: black Thread: metric

Characteristics: non-flame propagating

FGMM 56



Material: nickel-plated brass

Temperature resistance range: -45°C to

+ 400°C Thread: metric

Characteristics: non-flame propagating

FDRM 56



Colour: grey Thread: metric

FGKP 57



Material: PA6

Temperature resistance range: -40°C to

+ 120°C Colour: black Thread: Pg

Characteristics: non-flame propagating

FGMP 57



Material: nickel-plated brass

Temperature resistance range: -45°C to

+ 400°C Thread: Pg

Characteristics: non-flame propagating



DIN EN 60529 Protection class IP68 VDE 0605 LV312-3 DIN EN 61386-23 Classification: 125440

### FFMYD-PA6

FFMYD-PA6 is a flexible corrugated polyamide 6 conduit, available in black, grey and opaque. Very light compressive strength, high temperature resistance and cold impact strength in extreme temperatures, zero halogen and non-flame propagating.

Due to good dynamic characteristics used for moving parts and in machine engineering, tool engineering, shipbuilding and railroad construction or as feed conduit in various applications.

#### **Characteristics:**

Resistant to: fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to:** bases, also diluted solutions of bases **Not resistant to:** acids, halogens and oxidative compounds

#### **Technical specifications:**

- material: polyamide 6 (PA6)
- temperature resistance range according to DIN EN 61386-23: –45°C to +120°C
- temperature resistance range according to LV312-3: -40°C to +120°C, shortterm temperature resistance up to +150°C
- compressive strength: very light
- high temperature resistant
- cold impact strength in extreme temperatures
- zero halogen
- non-flame propagating
- flammability: UL 94 V2 / FMVSS 302 self-extinguishing

Cat. no. FFI	MYD (PA6)		Tuno	Outside Ø	Inside Ø	Bend radius*	Packaging
black	grey	opaque	Туре	mm	mm	≥ mm	in m
400.007.00	402.007.00	401.007.00	7.5	10.0	6.6	11	50
400.010.00	402.010.00	401.010.00	10	12.8	9.8	15	50
400.012.00	402.012.00	401.012.00	12	15.7	12.3	20	50
400.017.00	402.017.00	401.017.00	17	21.1	16.6	30	50
400.023.00	402.023.00	401.023.00	23	28.4	23.1	40	50
400.029.00	402.029.00	401.029.00	29	34.5	28.9	50	25
400.037.00	402.037.00	401.037.00	37	42.2	34.0	65	25
400.050.00	402.050.00	401.050.00	50	53.8	45.6	90	25

<sup>\*</sup>Min. bend radius (neutral fibre) with a flattening of the conduit outside diameter of  $\le 5\%$ 



Please refer to pages 20-35 for FKC Click threaded connectors and accessories



DIN EN 60529 Protection class IP68 VDE 0605 LV312-3 DIN EN 61386-23 Classification: 024440

### **FFMYD-L**

FFMYD-L is a flexible corrugated polyamide 6 conduit, available in black. High temperature resistance and cold impact strength in extreme temperatures, zero halogen and non-flame propagating.

Due to good dynamic characteristics used for moving parts and in machine engineering, tool engineering, shipbuilding and railroad construction or as feed conduit in various applications.

#### **Characteristics:**

**Resistant to:** fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to:** bases, also diluted solutions of bases **Not resistant to:** acids, halogens and oxidative compounds

#### **Technical specifications:**

- material: polyamide 6 (PA6)
- temperature resistance range according to DIN EN 61386-23: –25°C to +120°C
- temperature resistance range according to LV312-3: -40°C to +120°C, shortterm temperature resistance up to +150°C
- high temperature resistant
- cold impact strength in extreme temperatures
- zero halogen
- non-flame propagating
- flammability: UL 94 V2 / FMVSS 302 self-extinguishing

Cat. no. FFMYD-L black	Туре	Outside Ø mm	Inside Ø mm	Bend radius* ≥ mm	Packaging in m
400.007.08	7.5	10.0	6.8	11	50
400.010.08	10	12.8	10.0	15	50
400.012.08	12	15.7	12.5	20	50
400.017.08	17	21.1	16.8	30	50
400.023.08	23	28.4	23.4	40	50
400.029.08	29	34.5	29.2	50	25
400.037.08	37	41.8	34.0	65	25
400.050.08	50	53.8	46.0	90	25

<sup>\*</sup>Min. bend radius (neutral fibre) with a flattening of the conduit outside diameter of  $\le 5\%$ 



Please refer to pages 20-35 for FKC Click threaded connectors and accessories



DIN EN 60529 Protection class IP68 VDE 0605 LV312-3 DIN EN 61386-23 Classification: 035340

#### FFHY

FFHY is a flexible corrugated conduit made of thermoplastic elastomer, available in black. High temperature resistance and cold impact strength in extreme temperatures, zero halogen and non-flame propagating.

Due to good flexibility and dynamic characteristics used for moving parts and in machine engineering, tool engineering, shipbuilding and railroad construction or as feed conduit in various applications.

#### **Characteristics:**

Resistant to: fuels, hydraulic fluid and aromatic compounds Limitedly resistant to: weak acids and bases, amines and glycols over +70°C

**Not resistant to:** concentrated sulfuric acid, chlorinated hydrocarbons, phenols

#### **Technical specifications:**

- material: thermoplastic elastomer (TPE)
- temperature resistance range according to DIN EN 61386-23: –45°C to +105°C
- temperature resistance range according to LV312-3: -30°C to +150°C, shortterm temperature resistance up to +180°C
- high temperature resistant
- cold impact strength in extreme temperatures
- zero halogen
- non-flame propagating
- flammability: UL 94 HB / FMVSS 302; self-extinguishing

Cat. no. FFHY	Typo	Outside Ø	Inside Ø	Bend radius*	Packaging	
black	Туре	mm	mm	≥ mm	in m	
461.004.00	4.5	7.2	4.4	10	100	
461.007.00	7.5	10.0	6.5	20	50	
461.008.00	8.5	11.5	8.2	20	50	
461.010.00	10	12.9	9.9	25	50	
461.012.00	12	15.6	11.5	25	50	
461.013.00	13	16.0	12.5	30	50	
461.017.00	17	21.0	16.4	35	50	
461.023.00	23	28.1	23.4	45	50	
461.029.00	29	33.8	28.9	55	25	
461.037.00	37	41.6	34.1	65	25	

<sup>\*</sup>Min. bend radius (neutral fibre) with a flattening of the conduit outside diameter of  $\leq 5\%$ 



Please refer to pages 20–35 for FKC Click threaded connectors and accessories



DIN EN 60529 Protection class IP68 VDE 0605 LV312-3 DIN EN 61386-23 Classification: 045142

### **FFTYL-BS**

FFTYL-BS is a flexible corrugated conduit made of modified low-density polyethylene, available in black. Cold impact strength in extreme temperatures, zero halogen and non-flame propagating.

Used for applications in the home appliance industry, in heating and air-conditioning, in the electrical and medical industry.

#### **Characteristics:**

Resistant to: acids, bases, inorganic salts, water and greases Limitedly resistant to: alcohols, esters, ketones and mineral oils

Not resistant to: fuels, oxidising and aromatic compounds

#### **Technical specifications:**

- material: PE-LD, modified
- temperature resistance range according to DIN EN 61386-23: –45°C to +60°C
- temperature resistance range according to LV312-3: -40°C to +70°C, shortterm temperature resistance up to +90°C
- cold impact strength in extreme temperatures
- zero halogen
- non-flame propagating
- flammability: UL 94 HB / FMVSS 302; self-extinguishing

Cat. no. FFTYL-BS	lvpe	Outside Ø	Inside Ø	Bend radius*	Packaging	
black	Туре	mm	mm	≥mm	in m	
323.007.00	7.5	9.9	6.5	12	50	
323.010.00	10	12.7	9.8	15	50	
323.012.00	12	15.6	11.6	18	50	
323.017.00	17	20.8	16.3	30	50	
323.023.00	23	27.9	22.9	45	50	
323.029.00	29	34.0	28.9	55	25	
323.037.00	37	41.5	33.7	75	25	
323.050.00	50	53.3	47.1	100	25	

<sup>\*</sup>Min. bend radius (neutral fibre) with a flattening of the conduit outside diameter of  $\le 5\%$ 



Please refer to pages 20–35 for FKC Click threaded connectors and accessories  $\frac{1}{2}$ 

### FFTYL-V



DIN EN 60529 Protection class IP68 VDE 0605 LV312-3 DIN EN 61386-23 Classification: 045042 FFTYL-V is a flexible corrugated conduit made of EVA, available in black. Cold impact strength in extreme temperatures, zero halogen and non-flame propagating.

Due to its high flexibility used for applications in automation engineering and medical / chemical plant engineering.

#### **Characteristics:**

**Resistant to:** weak and organic acids, bases, inorganic salts, amines, alcohols and greases

Limitedly resistant to: fuels and mineral oils

**Not resistant to:** strong acids, halogenated and oxidising compounds, ketones and esters

#### **Technical specifications:**

- material: EVA
- temperature resistance range according to LV312-3: -40°C to +55°C, shortterm temperature resistance up to +65°C
- cold impact strength in extreme temperatures
- zero halogen
- non-flame propagating
- flammability: UL 94 HB

Cat. no. FFTYL-V	Turne	Outside Ø	Inside Ø	Bend radius*	Packaging	
black	Туре	mm	mm	≥ mm	in m	
336.007.00	7.5	9.9	6.6	18	50	
336.010.00	10	12.8	9.7	25	50	
336.012.00	12	15.6	11.5	30	50	
336.017.00	17	20.8	16.1	45	50	
336.023.00	23	28.0	22.5	65	50	
336.029.00	29	33.8	28.5	80	25	
336.037.00	37	41.5	33.3	105	25	
336.050.00	50	53.5	47.0	140	25	

<sup>\*</sup>Min. bend radius (neutral fibre) with a flattening of the conduit outside diameter of  $\leq 5\%$ 



Please refer to pages 20-35 for FKC Click threaded connectors and accessories



DIN EN 60529 Protection class IP68 VDE 0605 LV312-3 DIN EN 61386-23 Classification: 033142

### FFPYL-MOD-BS

FFPYL-MOD-BS is a flexible corrugated conduit made of modified polypropylene, available in black. Non-flame propagating.

Used for applications in the electrical and home appliance industry and in air-conditioning.

#### **Characteristics:**

**Resistant to:** acids, bases, inorganic salts, fuels, mineral oils, greases and most common solvents

Limitedly resistant to: ether

**Not resistant to:** halogen-containing, oxidising and aromatic compounds

#### **Technical specifications:**

- material: modified PP
- temperature resistance range according to DIN EN 61386-23: –15°C to +60°C
- temperature resistance range according to LV312-3: -40°C to +135°C, shortterm temperature resistance up to +150°C
- non-flame propagating
- flammability: UL 94 V2 / FMVSS 302 type B

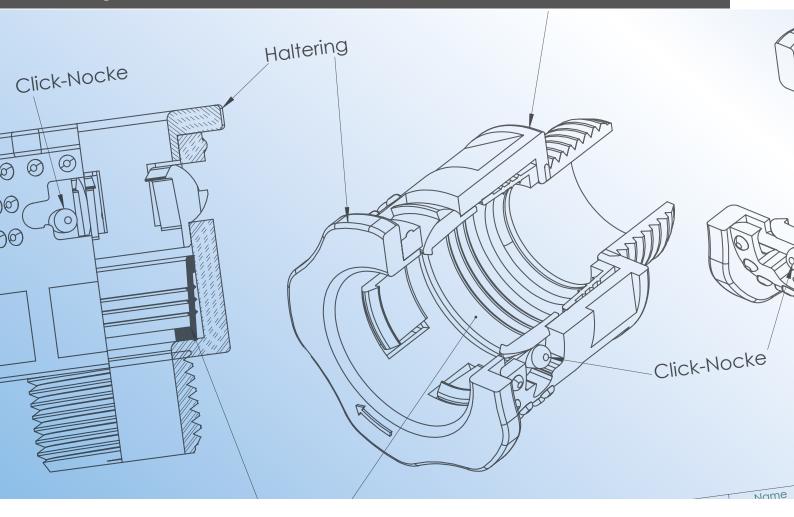
Cat. no. FFPYL-MOD-BS	Туре	Outside Ø	Inside Ø	Bend radius*	Packaging
black	Турс	mm	mm	≥mm	in m
366.007.00	7.5	9.9	6.9	16	50
366.010.00	10	12.6	10.1	20	50
366.012.00	12	15.6	12.0	25	50
366.017.00	17	21.0	16.8	35	50
366.023.00	23	28.0	23.7	45	50
366.029.00	29	33.9	29.3	55	25

<sup>\*</sup>Min. bend radius (neutral fibre) with a flattening of the conduit outside diameter of  $\le 5\%$ 



Please refer to pages 20–35 for FKC Click threaded connectors and accessories

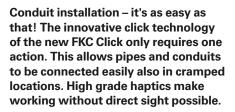
# Corrugated Plastic Conduit Accessories: FKC Click



### ...conduit installation today – it's as easy as that:

#### Seize the benefits of FKC Click threaded connectors:

- easy and quick to plug and unplug
- click locking mechanism ensures reliable connections
- protection against unintended conduit releases
- excellent haptics
- compact design
- sealing reliability under dynamic conditions
- small quantity packaging



The reliable connection that is established by the click locking mechanism can be released easily but still offers effective protection against unintended conduit releases.





### ... now available in many different designs

#### Reliable conduit connections due to FKC Click:

- different colour clamps available for protection classes
- compatible with conduits from other manufacturers
- sealing reliability even when conduit sections have not been accurately cut (IP66 und IP68)
- high tensile strength
- compressive and impact strength
- temperature resistance range: -40°C to +120°C
- resistant to: fuels, mineral oils, greases, alkaline substances

FRÄNKISCHE products were developed and optimised with practical requirements in mind. This is why FKC Click threaded connectors are available in various designs. This allows easy and quick installation under various conditions. The plug connectors are

available as straight and 90° and 45° connectors in various designs.

All FKC Click threaded connectors are compatible with FRÄNKISCHE corrugated plastic conduits. This guarantees reliable sealing.







DIN EN 60529 Protection class IP66

### **FKC Click metric IP66**

Straight one-piece polyamide 6 threaded click connector with metric male thread, protection class IP66, zero halogen and non-flame propagating, available in black and grey. Suited for FFMYD-PA6, FFMYD-L, FFHY, FFTYL-BS, FFTYL-V and FFPYL-MOD-BS corrugated plastic conduits.

To easily and quickly connect and disconnect corrugated conduits. Click locking mechanism prevents unintended conduit releases.

#### Characteristics:

**Resistant to:** fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to**: bases, also diluted solutions of bases **Not resistant to**: acids, halogens and oxidative compounds

#### **Technical specifications:**

- material: polyamide 6 (PA6)
- temperature resistance range: -40°C to +120°C, short-term temperature resistance up to +150°C
- zero halogen
- non-flame propagating

Cat. no. FKC Click metric IP66		Туре	Thread m.	Inside Ø	Outside Ø	Thread length	Total length	Ss mm	Packag- ing
black	grey		x1.5	mm	mm	mm	mm		in pcs.
285.10.007	285.10.507	7.5	12	7.3	17.1	11.5	35.5	16	4
285.10.010	285.10.510	10	16	11.5	19.9	11.5	35.8	18	4
285.10.012	285.10.512	12	16	11.5	22.9	11.5	37.4	21	10
285.10.112	285.10.612	12	20	15.3	22.9	11.5	37.4	21	10
285.10.017	285.10.517	17	20	15.3	29.5	11.5	42.3	27	10
285.10.117	285.10.617	17	25	20.3	29.5	13.0	43.8	27	10
285.10.023	285.10.523	23	25	20.3	36.8	13.0	44.9	34	10
285.10.123	285.10.623	23	32	26.0	36.8	14.0	45.9	34	10
285.10.029	285.10.529	29	32	26.0	43.0	14.0	48.7	40	4
285.10.129	285.10.629	29	40	34.0	43.0	14.0	48.7	40	4
285.10.036	285.10.536	36 / 37	40	34.0	51.4	14.0	50.7	48	4
285.10.136	285.10.636	36 / 37	50	42.5	51.4	15.0	51.7	48	4
285.10.048	285.10.548	48 / 50	50	43.0	63.2	15.0	50.7	60	4
285.10.148	285.10.648	48 / 50	63	54.0	63.2	15.0	50.7	60	4





DIN EN 60529 Protection class IP68

### **FKC Click metric IP68**

Straight one-piece polyamide 6 threaded click connector with metric male thread, protection class IP68, zero halogen and non-flame propagating, available in black and grey. Suited for FFMYD-PA6, FFMYD-L, FFHY, FFTYL-BS, FFTYL-V and FFPYL-MOD-BS corrugated plastic conduits.

To easily and quickly connect and disconnect corrugated conduits. Click locking mechanism prevents unintended conduit releases.

#### **Characteristics:**

**Resistant to:** fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to:** bases, also diluted solutions of bases **Not resistant to:** acids, halogens and oxidative compounds

#### **Technical specifications:**

- material: polyamide 6 (PA6)
- temperature resistance range: -40°C to +120°C, short-term temperature resistance up to +150°C
- zero halogen
- non-flame propagating

Cat. no. FKC Click metric IP68		Туре	Thread m.	Inside Ø	Outside Ø	Thread length	Total length	Ss mm	Packag- ing
black	grey		x1.5	mm	mm	mm	mm		in pcs.
285.11.007	285.11.507	7.5	12	7.3	17.1	11.5	35.5	16	4
285.11.010	285.11.510	10	16	11.5	19.9	11.5	35.8	18	4
285.11.012	285.11.512	12	16	11.5	22.9	11.5	37.4	21	4
285.11.112	285.11.612	12	20	15.3	22.9	11.5	37.4	21	4
285.11.017	285.11.517	17	20	15.3	29.5	11.5	42.3	27	4
285.11.117	285.11.617	17	25	20.3	29.5	13.0	43.8	27	4
285.11.023	285.11.523	23	25	20.3	36.8	13.0	44.9	34	4
285.11.123	285.11.623	23	32	26.0	36.8	14.0	45.9	34	4
285.11.129	285.11.629	29	40	34.0	43.0	14.0	48.7	40	4
285.11.136	285.11.636	36 / 37	50	42.5	51.4	15.0	51.7	48	4
285.11.148	285.11.648	48 / 50	63	54.0	63.2	15.0	50.7	60	4







DIN EN 60529 Protection class IP66

### FKC-B90 Click metric IP66

90° one-piece polyamide 6 click elbow with metric male thread, protection class IP66, zero halogen and non-flame propagating, available in black and grey. Suited for FFMYD-PA6, FFMYD-L, FFHY, FFTYL-BS, FFTYL-V and FFPYL-MOD-BS corrugated plastic conduits.

To easily and quickly connect and disconnect corrugated conduits. Click locking mechanism pevents unintended conduit releases.

#### Characteristics:

**Resistant to:** fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to:** bases, also diluted solutions of bases **Not resistant to:** acids, halogens and oxidative compounds

#### **Technical specifications:**

- material: polyamide 6 (PA6)
- temperature resistance range: -40°C to +120°C, short-term temperature resistance up to +150°C
- zero halogen
- non-flame propagating

Cat. no. FKC-B90 Cl metric IP66	5	Туре	Thread m. x1.5	Inside Ø mm	Outside Ø mm	Thread length mm	Total length mm	Total width mm	Ss mm	Pack- aging in pcs.
black	grey		4.0						4.0	
285.20.007	285.20.507	7,5	12	7.3	17.1	11.5	41.1	35.2	16	4
285.20.010	285.20.510	10	16	11.5	19.9	11.5	44.4	39.7	18	4
285.20.012	285.20.512	12	16	11.5	22.9	11.5	49.0	42.3	21	10
285.20.112	285.20.612	12	20	15.3	22.9	11.5	50.9	42.3	21	10
285.20.017	285.20.517	17	20	15.3	29.5	11.5	60.3	50.7	27	10
285.20.117	285.20.617	17	25	20.3	29.5	13.0	60.3	52.2	27	10
285.20.023	285.20.523	23	25	20.3	36.8	13.0	69.1	61.0	34	10
285.20.123	285.20.623	23	32	26.0	36.8	14.0	68.7	61.5	34	10
285.20.029	285.20.529	29	32	26.0	43.0	14.0	78.1	66.2	40	4
285.20.129	285.20.629	29	40	34.0	43.0	14.0	83.7	65.7	40	4
285.20.036	285.20.536	36 / 37	40	34.0	51.4	13.0	88.8	75.3	48	4
285.20.136	285.20.636	36 / 37	50	42.5	51.4	15.0	92.7	76.8	48	4
285.20.048	285.20.548	48 / 50	50	42.5	63.2	15.0	99.3	86.4	60	4
285.20.148	285.20.648	48 / 50	63	54.0	63.2	15.0	105.3	86.4	60	4







DIN EN 60529 Protection class IP68

### FKC-B90 Click metric IP68

90° one-piece polyamide 6 click elbow with metric male thread, protection class IP68, zero halogen and non-flame propagating, available in black and grey. Suited for FFMYD-PA6, FFMYD-L, FFHY, FFTYL-BS, FFTYL-V and FFPYL-MOD-BS corrugated plastic conduits.

To easily and quickly connect and disconnect corrugated conduits. Click locking mechanism prevents unintended conduit releases.

#### **Characteristics:**

**Resistant to:** fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to:** bases, also diluted solutions of bases **Not resistant to:** acids, halogens and oxidative compounds

#### **Technical specifications:**

- material: polyamide 6 (PA6)
- temperature resistance range: -40°C to +120°C, short-term temperature resistance up to +150°C
- zero halogen
- non-flame propagating

Cat. no. FKC-B90 Click metric IP68		Туре	Thread m. x1.5	Inside Ø mm	Outside Ø mm	Thread length mm	Total length mm	Total width mm	Ss mm	Pack- aging in pcs.
black	grey									
285.21.007	285.21.507	7.5	12	7.3	17.1	11.5	41.1	35.2	16	4
285.21.010	285.21.510	10	16	11.5	19.9	11.5	44.4	39.7	18	4
285.21.012	285.21.512	12	16	11.5	22.9	11.5	49.0	42.3	21	4
285.21.112	285.21.612	12	20	15.3	22.9	11.5	50.9	42.3	21	4
285.21.017	285.21.517	17	20	15.3	29.5	11.5	60.3	50.7	27	4
285.21.117	285.21.617	17	25	20.3	29.5	13.0	60.3	52.2	27	4
285.21.023	285.21.523	23	25	20.3	36.8	13.0	69.1	61.0	34	4
285.21.123	285.21.623	23	32	26.0	36.8	14.0	68.7	61.5	34	4
285.21.129	285.21.629	29	40	34.0	43.0	14.0	83.7	65.7	40	4
285.21.136	285.21.636	36 / 37	50	42.5	51.4	15.0	92.7	76.8	48	4
285.21.148	285.21.648	48/50	63	54.0	63.2	15.0	105.3	86.4	60	4





DIN EN 60529 Protection class IP66

### FKC-B45 Click metric IP66

45° one-piece polyamide 6 click elbow with metric male thread, protection class IP66, zero halogen and non-flame propagating, available in black and grey. Suited for FFMYD-PA6, FFMYD-L, FFHY, FFTYL-BS, FFTYL-V and FFPYL-MOD-BS corrugated plastic conduits.

To easily and quickly connect and disconnect corrugated conduits. Click locking mechanism prevents unintended conduit releases.

#### **Characteristics:**

**Resistant to:** fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to:** bases, also diluted solutions of bases **Not resistant to:** acids, halogens and oxidative compounds

#### **Technical specifications:**

- material: polyamide 6 (PA6)
- temperature resistance range: -40°C to +120°C, short-term temperature resistance up to +150°C
- zero halogen
- non-flame propagating

Cat. no. FKC-B45 Click metric IP66		Туре	Thread m. x1.5	Inside Ø mm	Out- side Ø	Thread length mm	Total length mm	Total width mm	Ss mm	Pack- aging in pcs.
black	grey				mm					
285.25.007	285.25.507	7.5	12	7.3	17.1	11.5	42.8	29.2	16	4
285.25.010	285.25.510	10	16	11.5	19.9	11.5	46.0	32.7	18	4
285.25.012	285.25.512	12	16	11.5	22.9	11.5	48.7	34.5	21	4
285.25.017	285.25.517	17	20	15.3	29.5	11.5	58.2	41.6	27	4
285.25.117	285.25.617	17	25	20.3	29.5	13.0	61.0	44.5	27	4
285.25.023	285.25.523	23	25	20.3	36.8	13.0	64.1	49.9	34	4
285.25.123	285.25.623	23	32	26.0	36.8	14.0	67.6	53.3	34	4
285.25.129	285.25.629	29	40	34.0	49.0	14.0	75.8	59.2	40	4
285.25.136	285.25.636	36 / 37	50	42.5	56.0	15.0	83.9	69.3	48	4
285.25.148	285.25.648	48 / 50	63	54.0	70.0	15.0	97.1	79.7	60	4





DIN EN 60529 Protection class IP68

### FKC-B45 Click metric IP68

45° one-piece polyamide 6 click elbow with metric male thread, protection class IP68, zero halogen and non-flame propagating, available in black and grey. Suited for FFMYD-PA6, FFMYD-L, FFHY, FFTYL-BS, FFTYL-V and FFPYL-MOD-BS corrugated plastic conduits.

To easily and quickly connect and disconnect corrugated conduits. Click locking mechanism prevents unintended conduit releases.

#### **Characteristics:**

**Resistant to:** fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to:** bases, also diluted solutions of bases **Not resistant to:** acids, halogens and oxidative compounds

#### **Technical specifications:**

- material: polyamide 6 (PA6)
- temperature resistance range: -40°C to +120°C, short-term temperature resistance up to +150°C
- zero halogen
- non-flame propagating

Cat. no. FKC-B45 Click metric IP68		Туре	Thread m. x1.5	Inside Ø mm	Outside Ø mm	Thread length mm	Total length mm	Total width mm	Ss mm	Pack- aging in pcs.
black	grey									
285.26.007	285.26.507	7,5	12	7.3	17.1	11.5	42.8	29.2	16	4
285.26.010	285.26.510	10	16	11.5	19.9	11.5	46.0	32.7	18	4
285.26.012	285.26.512	12	16	11.5	22.9	11.5	48.7	34.5	21	4
285.26.017	285.26.517	17	20	15.3	29.5	1.5	58.2	41.6	27	4
285.26.117	285.26.617	17	25	20.3	29.5	13.0	61.0	44.5	27	4
285.26.023	285.26.523	23	25	20.3	36.8	13.0	64.1	49.9	34	4
285.26.123	285.26.623	23	32	26.0	36.8	14.0	67.6	53.3	34	4
285.26.129	285.26.629	29	40	34.0	49.0	14.0	75.8	59.2	40	4
285.26.136	285.26.636	36 / 37	50	42.5	56.0	15.0	83.9	69.3	48	4
285.26.148	285.26.648	48 / 50	63	54.0	70.0	15.0	97.1	79.7	60	4





DIN EN 60529 Protection class IP66

### FKC Click Pg IP66

Straight one-piece polyamide 6 threaded click connector with Pg male thread, protection class IP66, zero halogen and non-flame propagating, available in black. Suited for FFMYD-PA6, FFMYD-L, FFHY, FFTYL-BS, FFTYL-V and FFPYL-MOD-BS corrugated plastic conduits.

To easily and quickly connect and disconnect corrugated conduits. Click locking mechanism prevents unintended conduit releases.

#### Characteristics:

**Resistant to:** fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to:** bases, also diluted solutions of bases **Not resistant to:** acids, halogens and oxidative compounds

#### **Technical specifications:**

- material: polyamide 6 (PA6)
- temperature resistance range: -40°C to +120°C, short-term temperature resistance up to +150°C
- zero halogen
- non-flame propagating

Cat. no. FKC Click Pg IP66	Туре	Thread Pg.	Inside Ø mm	Outside Ø mm	Thread length mm	Total length mm	Ss mm	Packag- ing in pcs.
black								ili pus.
285.60.007	7.5	7	7.3	17.1	11.5	35.5	16	4
285.60.010	10	9	11.0	19.9	11.5	35.8	18	4
285.60.012	12	11	14.3	22.9	11.5	37.4	21	10
285.60.017	17	16	17.0	29.5	13.0	43.8	27	10
285.60.023	23	21	23.3	36.8	13.0	44.9	34	10
285.60.029	29	29	30.0	43.0	14.0	48.7	40	4
285.60.036	36 / 37	36	41.0	51.4	15.0	51.7	48	4
285.60.048	48 / 50	48	52.4	63.2	15.0	50.7	60	4







DIN EN 60529 Protection class IP66

### FKC-B90 Click Pg IP66

90° one-piece polyamide 6 click elbow with Pg male thread, protection class IP66, zero halogen and non-flame propagating, available in black. Suited for FFMYD-PA6, FFMYD-L, FFHY, FFTYL-BS, FFTYL-V and FFPYL-MOD-BS corrugated plastic conduits.

To easily and quickly connect and disconnect corrugated conduits. Click locking mechanism prevents unintended conduit releases.

#### **Characteristics:**

**Resistant to:** fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to:** bases, also diluted solutions of bases **Not resistant to:** acids, halogens and oxidative compounds

#### **Technical specifications:**

- material: polyamide 6 (PA6)
- temperature resistance range: -40°C to +120°C, short-term temperature resistance up to +150°C
- zero halogen
- non-flame propagating

Cat. no. FKC-B90 Click Pg IP66	Туре	Thread Pg.	Inside Ø	Ø	Thread length	length	Total width	Ss mm	Pack- aging
black			mm	mm	mm	mm	mm		in pcs.
285.70.007	7.5	7	7.3	17.1	11.5	41.1	35.2	16	4
285.70.010	10	9	11.0	19.9	11.5	44.4	39.7	18	4
285.70.012	12	11	14.3	22.9	11.5	49.0	42.3	21	4
285.70.017	17	16	17.0	29.5	11.5	60.3	50.7	27	4
285.70.023	23	21	23.3	36.8	13.0	69.1	61.0	34	4
285.70.029	29	29	30.0	43.0	14.0	78.1	66.2	40	4
285.70.036	36 / 37	36	41.0	51.4	13.0	88.8	75.3	48	4
285.70.048	48 / 50	48	52.4	63.2	15.0	99.3	86.4	60	4





DIN EN 60529 Protection class IP66

### FKC-B45 Click Pg IP66

45° one-piece polyamide 6 click elbow with Pg male thread, protection class IP66, zero halogen and non-flame propagating, available in black. Suited for FFMYD-PA6, FFMYD-L, FFHY, FFTYL-BS, FFTYL-V and FFPYL-MOD-BS corrugated plastic conduits.

To easily and quickly connect and disconnect corrugated conduits. Click locking mechanism prevents unintended conduit releases.

#### **Characteristics:**

**Resistant to:** fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to:** bases, also diluted solutions of bases **Not resistant to:** acids, halogens and oxidative compounds

#### **Technical specifications:**

- material: polyamide 6 (PA6)
- temperature resistance range: -40°C to +120°C, short-term temperature resistance up to +150°C
- zero halogen
- non-flame propagating

Cat. no. FKC-B45 Click Pg IP66 black	Туре	Thread Pg.	Inside Ø mm	Outside Ø mm	Thread length mm	Total length mm	Total width mm	Ss mm	Pack- aging in pcs.
285.75.007	7.5	7	7.3	17.1	11.5	42.8	29.2	16	4
285.75.010	10	9	11.0	19.9	11.5	46.0	32.7	18	4
285.75.012	12	11	14.3	22.9	11.5	48.7	34.5	21	4
285.75.017	17	16	17.0	29.5	11.5	61.0	41.6	27	4
285.75.023	23	21	23.3	36.8	13.0	64.1	49.9	34	4
285.75.029	29	29	30.0	43.0	14.0	75.8	59.2	40	4
285.75.036	36 / 37	36	41.0	51.4	13.0	83.9	69.3	48	4
285.75.048	48 / 50	48	52.4	63.2	15.0	97.1	79.7	60	4





DIN EN 60529 Protection class IP68

### **FKC-I Click metric IP68**

Straight one-piece polyamide 6 threaded click connector with metric female thread, protection class IP68, zero halogen and non-flame propagating, available in black. Suited for FFMYD-PA6, FFMYD-L, FFHY, FFTYL-BS, FFTYL-V and FFPYL-MOD-BS corrugated plastic conduits.

To easily and quickly connect and disconnect corrugated conduits. Click locking mechanism prevents unintended conduit releases.

#### **Characteristics:**

**Resistant to:** fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to:** bases, also diluted solutions of bases **Not resistant to:** acids, halogens and oxidative compounds

- material: polyamide 6 (PA6)
- temperature resistance range: -40°C to +120°C, short-term temperature resistance up to +150°C
- zero halogen
- non-flame propagating

Cat. no. FKC-I Click metric IP68 black	Туре	Thread m. x1.5	Inside Ø mm	Outside Ø mm	Thread length mm	Total length mm	Ss mm	Packag- ing in pcs.
285.41.010	10	16	14.5	19.9	11.5	35.8	18	4
285.41.012	12	20	18.5	22.9	11.5	37.4	21	4
285.41.017	17	25	23.5	29.5	11.5	42.3	27	4
285.41.023	23	32	30.5	36.8	13.0	44.9	34	4
285.41.029	29	40	38.5	43.0	14.0	48.7	40	4
285.41.036	36 / 37	50	48.5	51.4	14.0	50.7	48	4
285.41.048	48 / 50	63	61.5	63.2	15.0	50.7	60	4



DIN EN 60529 Protection class IP68

### **FKC-Z Click metric IP68**

Straight two-piece polyamide 6 threaded click connector with metric male thread and strain relief, protection class IP68, zero halogen and non-flame propagating, available in black. Suited for FFMYD-PA6, FFMYD-L, FFHY, FFTYL-BS, FFTYL-V and FFPYL-MOD-BS corrugated plastic conduits.

To easily and quickly connect and disconnect corrugated conduits. Click locking mechanism prevents unintended conduit releases.

#### Characteristics:

**Resistant to:** fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to:** bases, also diluted solutions of bases **Not resistant to:** acids, halogens and oxidative compounds

#### **Technical specifications:**

- material: polyamide 6 (PA6)
- temperature resistance range: -40°C to +120°C, short-term temperature resistance up to +150°C
- zero halogen
- non-flame propagating

Cat. no. FKC-Z Click metric IP68 black	Туре	Thread m. x1.5	Inside Ø mm	Outside Ø mm	Thread length mm	Total length mm	Ss1 mm	Ss2 mm	Pack- aging in pcs.
285.46.010	10	16	14.5	19.9	11.5	51.5	18	20	4
285.46.012	12	20	18.5	22.9	11.5	53.9	21	23	4
285.46.017	17	25	23.5	29.5	11.5	58.8	27	29	4
285.46.023	23	32	30.5	36.8	13.0	62.9	34	36	4
285.46.029	29	40	38.5	43.0	14.0	67.7	40	42	4
285.46.036	36 / 37	50	48.5	51.4	14.0	69.0	48	50	4
285.46.048	48 / 50	63	61.5	63.2	15.0	70.7	60	62	4





DIN EN 60529 Protection class IP66

## FKC-S Click plug connector IP66

Straight one-piece polyamide 6 click plug connector, including O-ring, protection class IP66, zero halogen and non-flame propagating, available in black and grey. Suited for wall thicknesses of 1–2.5mm. Suited for FFMYD-PA6, FFMYD-L, FFHY, FFTYL-BS, FFTYL-V and FFPYL-MOD-BS corrugated plastic conduits.

To easily and quickly connect and disconnect corrugated conduits. Click locking mechanism prevents unintended conduit releases.

#### **Characteristics:**

**Resistant to:** fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to:** bases, also diluted solutions of bases **Not resistant to:** acids, halogens and oxidative compounds

- material: polyamide 6 (PA6)
- temperature resistance range: -40°C to +120°C, short-term temperature resistance up to +150°C
- zero halogen
- non-flame propagating

Cat. no. FKC-S Click IP66		Туре	Bore Ø mm	Inside Ø	Outside Ø	Plug length	Total length	Ss mm	Packag- ing
black	grey			mm	mm	mm	mm		in pcs.
285.50.010	285.50.510	10	15	14.5	19.9	12.7	37.3	18	4
285.50.012	285.50.512	12	18	18.5	22.9	12.7	38.9	21	4
285.50.017	285.50.517	17	22	23.5	29.5	12.7	43.8	27	4
285.50.023	285.50.523	23	28	30.5	36.8	14.2	46.4	34	4
285.50.029	285.50.529	29	37	38.5	43.0	15.2	50.2	40	4
285.50.036	285.50.536	36 / 37	47	48.5	51.4	15.2	52.2	48	4
285.50.048	285.50.548	48 / 50	50	61.5	63.2	16.2	52.2	60	4



DIN EN 60529 Protection class IP66

### **FKC-M Click IP66**

Straight one-piece polyamide 6 click coupling to connect two corrugated plastic conduits of the same type, protection class IP66, zero halogen and non-flame propagating, available in black and grey.

Suited for FFMYD-PA6, FFMYD-L, FFHY, FFTYL-BS, FFTYL-V and FFPYL-MOD-BS corrugated plastic conduits.

To easily and quickly connect and disconnect corrugated conduits.

#### **Characteristics:**

**Resistant to:** fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to:** bases, also diluted solutions of bases **Not resistant to:** acids, halogens and oxidative compounds

### **Technical specifications:**

- material: polyamide 6 (PA6)
- temperature resistance range: -40°C to +120°C, short-term temperature resistance up to +150°C
- zero halogen
- non-flame propagating

Cat. no. FKC-M IP66		Туре	Inside Ø	Outside Ø Total		Ss	Packaging
black	grey	Туре	mm	mm	length mm	mm	in pcs.
285.80.012	285.80.512	12	18.5	22.9	52.4	21	5
285.80.017	285.80.517	17	23.5	29.5	62.2	27	5
285.80.023	285.80.523	23	30.5	36.8	64.4	34	5
285.80.029	285.80.529	29	38.5	43.0	70.0	40	5
285.80.036	285.80.536	36 / 37	48.5	51.4	74.0	48	5
285.80.048	285.80.548	48 / 50	61.5	63.2	72.0	60	5



DIN EN 60529 Protection class IP68

### **FKC-M Click IP68**

Straight one-piece polyamide 6 click coupling to connect two corrugated plastic conduits of the same type, protection class IP68, zero halogen and non-flame propagating, available in black and grey. Suited for FFMYD-PA6, FFMYD-L, FFHY, FFTYL-BS, FFTYL-V and FFPYL-MOD-BS corrugated plastic conduits.

To easily and quickly connect and disconnect corrugated conduits.

#### **Characteristics:**

Resistant to: fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to:** bases, also diluted solutions of bases **Not resistant to:** acids, halogens and oxidative compounds

- material: polyamide 6 (PA6)
- temperature resistance range: -40°C to +120°C, short-term temperature resistance up to +150°C
- zero halogen
- non-flame propagating

Cat. no. FK	Cat. no. FKC-M IP68		Inside Ø	Outside Ø	Total	Ss	Packaging
black	grey	Туре	mm	mm	length mm	mm	in pcs.
285.81.012	285.81.512	12	18.5	22.9	52.4	21	5
285.81.017	285.81.517	17	23.5	29.5	62.2	27	5
285.81.023	285.81.523	23	30.5	36.8	64.4	34	5
285.81.029	285.81.529	29	38.5	43.0	70.0	40	5
285.81.036	285.81.536	36 / 37	48.5	51.4	74.0	48	5
285.81.048	285.81.548	48 / 50	61.5	63.2	72.0	60	5





### FE-KA

Plastic end cap made of thermoplastic elastomer to run cables through, zero halogen and non-flame propagating, available in black. Suited for FFMYD-PA6, FFMYD-L, FFHY, FFTYL-BS, FFTYL-V and FFPYL-MOD-BS corrugated plastic conduits. To easily and quickly connect and disconnect corrugated conduits.

#### **Characteristics:**

**Resistant to:** fuels, hydraulic fluid and aromatic compounds **Limitedly resistant to:** weak acids and bases, amines and glycols over +70°C

**Not resistant to:** concentrated sulphuric acid, chlorinated hydrocarbons, phenols.

#### **Technical specifications:**

- material: thermoplastic elastomer (TPE)
- temperature resistance range: -30°C to +150°C, short-term temperature resistance up to +180°C
- zero halogen
- non-flame propagating

Cat. no. FE-KA	∃lvpe   `	For cable Ø	Outside Ø	Total length	Packaging
black	.,,,,	mm	mm	mm	in pcs.
285.91.007	7.5	1.0-8.0	17.0	29.0	5
285.91.010	10	1.0-10.0	20.0	32.5	10
285.91.012	12	4.0-12.0	22.8	36.5	25
285.91.017	17	6.0-16.5	29.6	37.5	25
285.91.023	23	6.0-23.0	36.2	40.2	25
285.91.029	29	6.0-29.0	42.6	44.2	25
285.91.036	36 / 37	10.0-37.0	50.8	46.0	10
285.91.048	48 / 50	10.0-47.0	63.8	52.0	5





#### FE-K

TPE plastic end cap, zero halogen and non-flame propagating, available in black and grey. Suited for FFMYD-PA6, FFMYD-L, FFHY, FFTYL-BS, FFTYL-V and FFPYL-MOD-BS corrugated plastic conduits.

To easily and quickly connect and disconnect corrugated conduits.

#### **Characteristics:**

Resistant to: fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to:** bases, also diluted solutions of bases **Not resistant to:** acids, halogens and oxidative compounds

- material: TPE
- temperature resistance range: -40°C to +120°C, short-term temperature resistance up to +150°C
- zero halogen
- non-flame propagating

Cat. no. FE	-K	Туре	Outside Ø	Inside Ø	Total length	Total width	Packaging
black	grey	Туре	mm	mm	mm	mm	in pcs.
285.90.007	285.90.507	7.5	10.0	4.3	12.0	20	5
285.90.010	285.90.510	10	12.8	7.8	15.0	20	10
285.90.012	285.90.512	12	15.7	10.3	17.8	20	25
285.90.017	285.90.517	17	21.1	14.3	23.2	21	25
285.90.023	285.90.523	23	28.4	20.8	30.5	22	25
285.90.029	285.90.529	29	34.5	26.8	36.5	22	25
285.90.036	285.90.536	36 / 37	42.1	33.8	44.5	25	10
285.90.048	285.90.548	48 / 50	53.8	45.8	56.5	25	5



#### **FCL**

Polyamide 6 corrugated conduit holder, zero halogen, non-flame propagating, available in black. Suited for FFMYD-PA6, FFMYD-L, FFHY, FFTYL-BS, FFTYL-V and FFPYL-MOD-BS corrugated plastic conduits. The conduit holder can be fixed with screws and can also be mounted onto a C-rail. The various sizes can be used in combination. A limit stop prevents the conduit from moving inside the clamp.

#### **Characteristics:**

**Resistant to:** fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to**: bases, also diluted solutions of bases **Not resistant to**: acids, halogens and oxidative compounds

### **Technical specifications:**

- material: polyamide 6 (PA6)
- temperature resistance range: -40°C to +120°C, short-term temperature resistance up to +150°C
- zero halogen
- non-flame propagating
- flammability: UL94 HB

Cat. no. FCL	Ivpe	Total width	Total height	Total depth	Bore Ø	Packaging
black	туре	mm	mm	mm	mm	in pcs.
489.40.070	7.5	13.4	20.0	15.0	4.5	100
489.40.100	10	17.4	25.3	15.0	4.5	100
489.40.120	12	19.7	25.4	15.0	4.5	100
489.40.170	17	24.0	29.7	15.0	4.5	100
489.40.230	23	32.2	38.3	15.0	4.5	100
489.40.290	29	39.5	45.0	15.0	4.5	100
489.40.370	37	48.2	53.7	15.0	6.5	100
489.40.500	50	60.0	65.6	15.0	6.5	100



### **FCLC**

Polyamide 6 cover, zero halogen, non-flame propagating, available in black. Suited for FCL corrugated plastic conduit holder. In addition to securely closing the corrugated plastic conduit holder, the various sizes can be used in combination on this cover.

#### Characteristics:

Resistant to: fuels, mineral oils, greases, alkaline substances and most common solvents

Limitedly resistant to: bases, also diluted solutions of bases Not resistant to: acids, halogens and oxidative compounds

- material: polyamide 6 (PA6)
- temperature resistance range: -40°C to +120°C, short-term temperature resistance up to +150°C
- zero halogen
- non-flame propagating
- flammability: UL94 HB

Cat. no. FCLC	Туре	Total width	Total depth	Packaging in pcs.	
black		mm	mm		
489.40.071	7.5	13.4	15.0	100	
489.40.101	10	18.6	15.0	100	
489.40.121	12	20.8	15.0	100	
489.40.171	17	24.0	15.0	100	
489.40.231	23	35.8	15.0	100	
489.40.291	29	40.5	15.0	100	
489.40.371	37	53.2	15.0	100	
489.40.501	50	60.0	15.0	100	



### T- / Y-piece

Polyamide 6 connectors to connect three corrugated plastic conduits, zero halogen and non-flame propagating, available in black. Suited for FFMYD-PA6, FFMYD-L, FFHY, FFTYL-BS, FFTYL-V and FFPYL-MOD-BS corrugated plastic conduits. Designs: T-shape/Y-shape.

#### Characteristics:

**Resistant to:** fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to:** bases, also diluted solutions of bases **Not resistant to:** acids, halogens and oxidative compounds

- material: polyamide 6 (PA6)
- temperature resistance range: -40°C to +120°C, short-term temperature resistance up to +150°C
- colour: black
- zero halogen
- non-flame propagating
- flammability: UL 94 HB - V2 / FMVSS 302 self-extinguishing

Cat. no. T-/Y-piece black	Name	Туре	Packaging in pcs.
492.15.070	T-Snap-Lock	7.5-7.5-7.5	100
492.17.100	T-Snap-Lock	10.0-7.5-7.5	100
492.16.101	T-Snap-Lock	10.0-7.5-10.0	100
492.16.103	T-Snap-Lock	10.0-10.0-7.5	100
492.15.100	T-Snap-Lock	10.0-10.0-10.0	100
492.16.170	T-Snap-Lock	17.0-7.5-17.0	100
492.16.172	T-Snap-Lock	17.0-10.0-17.0	100
492.16.173	T-Snap-Lock	17.0-17.0-7.5	100
492.15.170	T-Snap-Lock	17.0-17.0-17.0	100
492.65.070	Y-Snap-Lock	7.5-7.5-7.5	100
492.65.100	Y-Snap-Lock	10.0-10.0-10.0	100

# **Resealable Corrugated Conduits**



VDE 0605 DIN EN 61386-23 Classification: 134340

### Co-flex PP-UV

Co-flex PP-UV is a resealable, slit corrugated conduit made of modified polypropylene, available in black. Light compressive strength, high temperature resistance, non-flame propagating, UV-stabilised and zero halogen. Intended for installation outdoors. Its main fields of application are solar collectors, SAT units and other various installations outdoors. Provides protection against damage from marten and rodent bites. UV-resistant for up to 10 years. To begin the installation open the conduit, then insert the cable in the conduit. Close slit by slipping over the outside conduit.

#### **Characteristics:**

**Resistant to:** acids, bases, inorganic salts, fuels, mineral oils, greases and most common solvents

Limitedly resistant to: ether

**Not resistant to:** halogen-containing, oxidising and aromatic compounds

#### **Technical specifications:**

- material: modified PP
- temperature resistance range: -25°C to +105°C
- temperature resistance range: -40°C to +105°C, short-term temperature resistance up to +130°C
- compressive strength: light
- high temperature resistant
- zero halogen
- non-flame propagating
- flammability: UL 94 HB / FMVSS 302

Cat. no. Co-flex PP-UV 50m	Туре	Outside Ø	Inside Ø	Bend radius * ≥ mm	Packaging m
black					
384.010.00	10	13.6	8.7	70	50
384.014.00	14	18.5	12.2	95	50
384.020.00	20	25.5	19.5	130	50
384.023.00	23	31.0	24.2	155	50
384.037.00	37	41.4	31.0	205	25
384.045.00	45	54.0	42.7	190	25
384.070.00	70	79.8	66.5	375	10

Cat. no. Co-flex PP-UV 10m black	Туре	Outside Ø mm	Inside Ø mm	Bend radius * ≥ mm	Packaging m
384.010.02	10	13.6	8.7	70	10
384.014.02	14	18.5	12.2	95	10
384.020.02	20	25.5	19.5	130	10
384.023.02	23	31.0	24.2	155	10
384.037.02	37	41.4	31.0	205	10
384.045.02	45	54.0	42.7	190	10

<sup>\*</sup>Min. bend radius (neutral fibre) with a flattening of the conduit outside diameter of  $\leq$  5 % .



Please refer to pages 40 and 41 for COV or COFIX threaded connectors and accessories

## **Resealable Corrugated Conduits**



VDE 0605 DIN EN 61386-23 Classification: 134340

### **Co-flex PP-black**

Co-flex PP is a resealable, slit corrugated conduit made of polypropylene, available in black. Light compressive strength, high temperature resistant and non-flame propagating. Used as mechanical protection for computers and TV racks, in control panel engineering, in automobile installation and in the electrical appliance industry. Provides protection against damage from marten and rodent bites. To begin the installation open the conduit, then insert the cable in the conduit. Close the slit by slipping over the outside conduit.

#### **Characteristics:**

**Resistant to:** acids, bases, inorganic salts, fuels, mineral oils, greases and most common solvents

Limitedly resistant to: ether

Not resistant to: halogenated, oxidising and aromatic com-

pounds

### **Technical specifications:**

- material: PP-MOD-BS
- temperature resistance range: -25°C to +105°C
- temperature resistance range: -40°C to +135°C, short-term temperature resistance up to +150°C
- compressive strength: light
- high temperature resistant
- non-flame propagating
- flammability: UL94 V2 / FMVSS 302

Cat. no. Co-flex PP 50m	Tuno	Outside Ø	Inside Ø	Bend radius *	Packaging m
black	Туре	mm	mm	≥ mm	
370.010.00	10	13.4	8.4	70	50
370.014.00	14	18.5	12.5	95	50
370.020.00	20	25.3	19.2	130	50
370.023.00	23	30.8	23.4	155	50
370.037.00	37	41.4	31.0	205	25
370.045.00	45	54.0	42.7	190	25
370.070.00	70	79.8	66.5	375	10

Cat. no. Co-flex PP 10m black	Туре	Outside Ø mm	Inside Ø mm	Bend radius * ≥ mm	Packaging m
370.010.02	10	13.4	8.4	70	10
370.014.02	14	18.5	12.5	95	10
370.020.02	20	25.3	19.2	130	10
370.023.02	23	30.8	23.4	155	10
370.037.02	37	41.4	31.0	205	10
370.045.02	45	54.0	42.7	190	10

Cat. no. Co-flex PP 5m black	Туре	Outside Ø mm	Inside Ø mm	Bend radius * ≥ mm	Packaging m
370.010.03	10	13.4	8.4	70	5
370.014.03	14	18.5	12.5	95	5
370.020.03	20	25.3	19.2	130	5
370.023.03	23	30.8	23.4	155	5
370.037.03	37	41.4	31.0	205	5
370.045.03	45	54.0	42.7	190	5

<sup>\*</sup>Min. bend radius (neutral fibre) with a flattening of the conduit outside diameter of  $\leq$  5 % .



Please refer to pages 40 and 41 for COV or COFIX threaded connectors and accessories

## **Resealable Corrugated Conduits**



VDE 0605 DIN EN 61386-23 Classification: 134340

### **Co-flex PP white**

Co-flex PP white is a resealable, slit corrugated conduit made of polypropylene, available in white. Light compressive strength, high temperature resistant and non-flame propagating. Used as mechanical protection for audio/HIFI systems, office wiring, in shipbuilding, for medical instruments, such as X-ray units and tomographs, hospital beds and the furniture industry. Provides protection against damage from marten and rodent bites.

To begin the installation open the conduit, then insert the cable in the conduit. Close the slit by slipping over the outside conduit.

### **Characteristics:**

**Resistant to:** acids, bases, inorganic salts, fuels, mineral oils, greases and most common solvents

Limitedly resistant to: ether

Not resistant to: halogenated, oxidising and aromatic com-

pounds

#### **Technical specifications:**

- material: PP-MOD-BS
- temperature resistance range: -25°C to +105°C
- temperature resistance range: -40°C to +135°C, short-term temperature resistance up to +150°C
- compressive strength: light
- high temperature resistant
- non-flame propagating
- flammability: UL94 V2 / FMVSS 302

Cat. no. Co-flex PP	Туре	Outside Ø mm	Inside Ø mm	Bend radius * ≥ mm	Packaging m
384.020.10	20	25.3	19.2	130	50

<sup>\*</sup>Min. bend radius (neutral fibre) with a flattening of the conduit outside diameter of  $\leq 5\%$ .



Please refer to pages 40 and 41 for COV or COFIX threaded connectors and accessories

## **Resealable Corrugated Conduits**



VDE 0605 DIN EN 61386-23 Classification: 124540

### Co-flex PA6

Co-flex PA6 is a resealable, slit corrugated conduit made of polyamide 6, available in black. Light compressive strength, high temperature resistance, cold impact strength in extreme temperatures and non-flame propagating.

Used as mechanical protection for computers and TV racks, in control panel engineering, in automotive engineering and in the electrical appliance industry. Provides protection against damage from marten and rodent bites.

To begin the installation open the conduit, then insert the cable in the conduit. Close the slit by slipping over the outside conduit.

### **Characteristics:**

Resistant to: fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to:** bases, also diluted solutions of bases **Not resistant to:** acids, halogens and oxidative compounds

### **Technical specifications:**

- material: polyamide 6 (PA6)
- temperature resistance range: -45°C to +120°C
- temperature resistance range: -40°C to +120°C, short-term temperature resistance up to +150°C
- compressive strength: light
- high temperature resistant
- cold impact strength in extreme temperatures
- zero halogen
- non-flame propagating
- flammability: UL94 V2/ FMVSS 302

Cat. no. Co-flex PA6	Туре	Outside Ø	Inside Ø	Bend radius *	Packaging
black	Туре	mm	mm	≥mm	m
410.010.00	10	13.5	8.8	55	50
410.014.00	14	18.7	13.2	75	50
410.020.00	20	25.7	20.2	105	50
410.023.00	23	31.3	23.9	125	50
410.037.00	37	43.2	32.5	170	25
410.045.00	45	54.2	43.1	170	25
410.070.00	70	79.8	66.0	300	10

<sup>\*</sup>Min. bend radius (neutral fibre) with a flattening of the conduit outside diameter of  $\leq$  5 % .



Please refer to pages 40 and 41 for COV or COFIX threaded connectors and accessories

## Resealable Corrugated Conduit Accessories



### cos

Fixing clip with integrated polyamide 6 ledge, available in black, zero halogen and non-flame propagating. Fixing clip to axially fixed Co-flex corrugated conduits.

#### **Characteristics:**

**Resistant to:** fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to**: bases, also diluted solutions of bases **Not resistant to**: acids, halogens and oxidative compounds

### **Technical specifications:**

- material: polyamide 6 (PA6)
- temperature resistance range: -40°C to +120°C, short-term temperature resistance up to +140°C
- zero halogen
- non-flame propagating
- flammability: self-extinguishing

Cat. no. COS	Туре	Conduit capacity mm	Total length mm	Total width mm	Total height mm	Mounting hole mm	Packag- ing in pcs.
491.20.100	10	13.0	18.6	20.0	23.0	5.5	100
491.20.140	14	17.8	24.0	20.0	26.1	5.5	100
491.20.200	20	26.0	35.0	20.0	39.6	7.1	50
491.20.230	23	32.0	42.5	20.5	44.5	6.4	50
491.20.370	37	42.7	52.0	20.5	52.5	7.0	20
491.20.450	45	53.6	66.2	20.5	66.3	6.9	20

## С





DIN EN 60529 Protection class IP43

### COV

Dividable threaded connector and two-piece locknut with Pg thread made of polyamide 6, available in black, protection class IP43, zero halogen and non-flame propagating. Can be used for all Co-flex corrugated conduits.

#### **Characteristics:**

**Resistant to:** fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to:** bases, also diluted solutions of bases **Not resistant to:** acids, halogens and oxidative compounds

### **Technical specifications:**

- material: polyamide 6 (PA6)
- temperature resistance range: −40°C to +120°C, short-term temperature resistance up to +150°C
- zero halogen
- non-flame propagating
- flammability: UL94 HB

Cat. no. COV	Thread Pg.	Туре	Inside Ø mm	Total length mm	Thread length mm	Nut width mm	Packag- ing in pcs.
491.10.100	9	10	9	27	12	11	100
491.10.140	13.5	14	13	34	17	14	100
491.10.200	21	20	20	34	17	14	50
491.10.230	29	23	31	42	21	17	50
491.10.370	29	37	31	50	22	17	25

## **Resealable Corrugated Conduit Accessories**



DIN EN 60529 Protection class IP43

### COFIX

Dividable threaded connector and two-piece locknut with metric thread made of polyamide 6, available in black, protection class IP43, zero halogen and non-flame propagating. Can be used for all Co-flex corrugated conduits.

#### **Characteristics:**

**Resistant to:** fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to**: bases, also diluted solutions of bases **Not resistant to**: acids, halogens and oxidative compounds

### **Technical specifications:**

- material: polyamide 6 (PA6)
- temperature resistance range: -40°C to +120°C, short-term temperature resistance up to +150°C
- zero halogen
- non-flame propagating
- flammability: UL94 HB

Cat. no. COFIX threaded connector black	Туре	Thread m. x 1.5	Total length mm	Ss mm	Packaging in pcs.
491.10.102	10	16	34.0	19	100
491.10.142	14	20	41.0	27	100
491.10.202	20	25	43.0	30	50
491.10.232	23	32	50.5	36	50
491.10.372	37	40	59.0	46	25
491.10.452	45	50	67.5	55	25

Cat. no. COFIX locknut black	Туре	Thread m. x 1.5	Total length mm	Ss mm	Packaging in pcs.
491.12.101	10	16	8	19	100
491.12.141	14	20	8	27	100
491.12.201	20	25	9	30	50
491.12.231	23	32	12	36	50
491.12.371	37	40	15	46	25
491.12.451	45	50	15	55	25



### **Insertion tool**

Insertion tool made of polyamide 6, available in black. To insert cables in Co-flex corrugated conduits and slit conduits. Design type 7.5 – type 34.

### **Characteristics:**

Resistant to: fuels, mineral oils, greases, alkaline substances and most common solvents

**Limitedly resistant to:** bases, also diluted solutions of bases **Not resistant to:** acids, halogens and oxidative compounds

### **Technical specifications:**

- material: polyamide 6 (PA6)
- colour: black

Cat. no. insertion tool black		Packaging in pcs.
490.90.003	7.5-34	100

### ... for increased safety and reliability

Reliable protection for wires and cables primarily in the following fields:

- heavy machinery
- system installations



Flexible, strip-wound metal cable ducts with hooked profiles that feature high temperature resistance, heavy compressive strength and cold impact strength in extreme temperatures.

There is no reduction in cross-section

owing to their flexibility. Due to abrasion protection, tensile strength and corrosion resistance, they lastingly prevent damage to cables. They protect and increase their durability by reducing wear to a minimum.





DIN EN 60529 Protection class IP40 VDE 0605 DIN EN 61386-23 Classification: 435741

### **FFMSS**

Flexible, strip-wound metal cable duct with hooked profile, without seal, made of galvanised steel and non-flame propagating. Heavy compressive strength, high temperature resistance and cold impact strength in extreme temperatures. No reduction in cross-section due to its flexibility. For heavy machinery and system installations.

### **Characteristics:**

Compressibility, tensile strength and corrosion resistance

### **Technical specifications:**

- material: galvanised steel strip
- temperature resistance range: -45°C to +400°C
- compressive strength: heavy
- high temperature resistant
- cold impact strength in extreme temperatures
- non-flame propagating

Cat. no. FFMSS 10m	Туре	Outside Ø mm	Inside Ø mm	Bend radius * ≥ mm	Packaging m **
280.00.007	7	9.5	7.0	14	10
280.00.010	10	13.0	10.0	19	10
280.00.013	13	16.0	13.0	24	10
280.00.015	15	18.5	15.5	28	10
280.00.020	20	24.0	20.0	34	10
280.00.025	25	28.5	25.0	40	10
280.00.028	28	31.5	28.0	45	10
280.00.037	37	41.5	37.0	95	10
280.00.045	45	49.5	45.0	115	10
280.00.052	52	56.5	52.0	145	10

Cat. no. FFMSS 50m	Туре	Outside Ø mm	Inside Ø	Bend radius * ≥ mm	Packaging m **
280.01.007	7	9.5	7.0	14	50
280.01.010	10	13.0	10.0	19	50
280.01.013	13	16.0	13.0	24	50
280.01.015	15	18.5	15.5	28	50
280.01.020	20	24.0	20.0	34	50
280.01.025	25	28.5	25.0	40	50
280.01.028	28	31.5	28.0	45	25
280.01.037	37	41.5	37.0	95	25
280.01.045	45	49.5	45.0	115	25
280.01.052	52	56.5	52.0	145	25

<sup>\*</sup>Referring to the inside diameter of the conduit elbow



Please refer to page 49 for FMV threaded metal connectors

<sup>\*\*</sup>Uncoiled length



DIN EN 60529 Protection class IP68 VDE 0605 DIN EN 61386-23 Classification: 434143

## FFMSS-K-FD

Flexible strip-wound metal cable duct with hooked profile, without seal, made of galvanised steel with high-quality PVC sheathing, non-flame propagating and UV-resistant. Heavy compressive strength and cold impact strength in extreme temperatures. For heavy machinery and system installations.

#### Characteristics:

Resistant to UV radiation and ozone, air and waterproof, good resistance against oil, bases and acids, compressibility, tensile strength and corrosion resistance.

### **Technical specifications:**

- material: galvanised steel strip/PVC-P
- temperature resistance range: -25°C to +60°C
- compressive strength: heavy
- cold impact strength in extreme temperatures
- non-flame propagating
- UV-resistant

Cat. no. FFMSS-K-FD grey	Туре	Outside Ø mm	Inside Ø mm	Bend radius * ≥ mm	Packaging m
280.10.008	8	13.0	8.5	40	10
280.10.010	10	15.0	10.0	50	10
280.10.012	12	17.0	12.0	60	10
280.10.015	15	21.0	15.5	70	10
280.10.020	20	27.0	20.0	90	10
280.10.025	25	34.0	26.5	120	10
280.10.035	35	43.0	35.0	150	10
280.10.040	40	48.0	40.0	200	10
280.10.051	51	58.5	50.5	250	10

<sup>\*</sup>Referring to the inside diameter of the conduit elbow



Please refer to pages 49-51 for FMV-FD threaded metal connectors and other threaded connectors



DIN EN 60529 Protection class IP68 VDE 0605 DIN EN 61386-23 Classification: 434143

### FFMSS-K

Flexible strip-wound metal cable duct with hooked profile, without seal, made of galvanised steel with high-quality PVC sheathing, non-flame propagating and UV-resistant. Heavy compressive strength and cold impact strength in extreme temperatures. No reduction in cross-section due to its flexibility.

For heavy machinery and system installations.

#### **Characteristics:**

Resistant to UV radiation and ozone, air and waterproof, good resistance against oil, bases and acids, compressibility, tensile strength and corrosion resistance.

### **Technical specifications:**

- material: galvanised steel strip/ PVC-P
- temperature resistance range: -25°C to +60°C
- compressive strength: heavy
- cold impact strength in extreme temperatures
- non-flame propagating
- UV-resistant

Cat. no. FFMSS-K 10m grey	Туре	Outside Ø mm	Inside Ø mm	Bend radius * ≥ mm	Packaging m
280.20.007	7	10.0	7.0	25	10
280.20.010	10	13.5	10.0	40	10
280.20.013	13	16.5	13.0	50	10
280.20.015	15	19.0	15.5	60	10
280.20.020	20	25.0	20.0	70	10
280.20.025	25	30.0	25.0	100	10
280.20.028	28	32.5	28.0	120	10
280.20.037	37	42.5	37.0	150	10
280.20.045	45	51.0	45.0	180	10
280.20.052	52	58.0	52.0	230	10

Cat. no. FFMSS-K 50m grey	Туре	Outside Ø mm	Inside Ø mm	Bend radius * ≥ mm	Packaging m
280.21.007	7	10.0	7.0	25	50
280.21.010	10	13.5	10.0	40	50
280.21.013	13	16.5	13.0	50	50
280.21.015	15	19.0	15.5	60	50
280.21.020	20	25.0	20.0	70	50
280.21.025	25	30.0	25.0	100	50
280.21.028	28	32.5	28.0	120	25
280.21.037	37	42.5	37.0	150	25
280.21.045	45	51.0	45.0	180	25
280.21.052	52	58.0	52.0	230	25

<sup>\*</sup>Referring to the inside diameter of the conduit elbow



Please refer to page 49 for **FMV threaded metal connectors** 



DIN EN 60529 Protection class IP40 VDE 0605 DIN EN 61386-23 Classification: 435741

### FFMSS-G

Flexible strip-wound metal cable duct with hooked profile, without seal, made of galvanised steel with metal braiding and non-flame propagating.

Heavy compressive strength, high temperature resistance and cold impact strength in extreme temperatures. No cross-sectional narrowing occurs because of the flexibility. For heavy machinery and system installations.

### **Characteristics:**

Compressibility, tensile strength and corrosion resistance

### **Technical specifications:**

- material: galvanised steel strip/metal braiding
- temperature resistance range: -45°C to +250°C
- compressive strength: heavy
- high temperature resistant
- cold impact strength in extreme temperatures
- non-flame propagating

Cat. no. FFMSS-G 10m	Туре	Outside Ø mm	Inside Ø mm	Bend radius * ≥ mm	Packaging m
280.30.008	8	13.0	8.5	30	10
280.30.010	10	14.0	10.0	40	10
280.30.012	12	16.0	12.0	50	10
280.30.015	15	20.0	15.5	60	10
280.30.020	20	26.0	20.5	65	10
280.30.025	25	31.0	25.0	70	10
280.30.035	35	42.0	35.0	150	5
280.30.040	40	47.0	40.0	170	5
280.30.051	51	57.0	50.5	200	5

Cat. no. FFMSS-G 50m	Туре	Outside Ø mm	Inside Ø mm	Bend radius * ≥ mm	Packaging m
280.31.008	8	13.0	8.5	30	50
280.31.010	10	14.0	10.0	40	50
280.31.012	12	16.0	12.0	50	50
280.31.015	15	20.0	15.5	60	50
280.31.020	20	26.0	20.5	65	50
280.31.025	25	31.0	25.0	70	50
280.31.035	35	42.0	35.0	150	25
280.31.040	40	47.0	40.0	170	25
280.31.051	51	57.0	50.5	200	25

<sup>\*</sup>Referring to the inside diameter of the conduit elbow



Please refer to pages 49–51 for **FMV-FD threaded metal connectors and other threaded connectors** 





DIN EN 60529 Protection class IP40 VDE 0605 DIN EN 61386-23 Classification: 435741

### FFMSS-VA

Flexible strip-wound metal cable duct with hooked profile, without seal, made of stainless steel and non-flame propagating. Heavy compressive strength, high temperature resistance and cold impact strength in extreme temperatures. No cross-sectional narrowing occurs because of the flexibility. For heavy machinery and system installations.

### **Characteristics:**

Compressibility, tensile strength and corrosion resistance

### **Technical specifications:**

- material: stainless steel V2A / AISI 304
- temperature resistance range: -45°C to +400°C
- compressive strength: heavy
- high temperature resistant
- cold impact strength in extreme temperatures
- non-flame propagating

Cat. no. FFMSS-VA stainless steel 10m	Туре	Outside Ø mm	Inside Ø mm	Bend radius * ≥ mm	Packaging m **
280.05.010	10	13.0	10.0	35	10
280.05.013	13	16.0	13.0	43	10
280.05.015	15	19.1	15.5	58	10
280.05.020	20	24.1	20.5	75	10
280.05.025	25	28.6	25.0	90	5

Cat. no. FFMSS-VA stainless steel 50m	Туре	Outside Ø mm	Inside Ø mm	Bend radius * ≥ mm	Packaging m**
280.06.010	10	13.0	10.0	35	50
280.06.013	13	16.0	13.0	43	50
280.06.015	15	19.1	15.5	58	50
280.06.020	20	24.1	20.5	75	50
280.06.025	25	28.6	25.0	90	25

<sup>\*</sup>Referring to the inside diameter of the conduit elbow



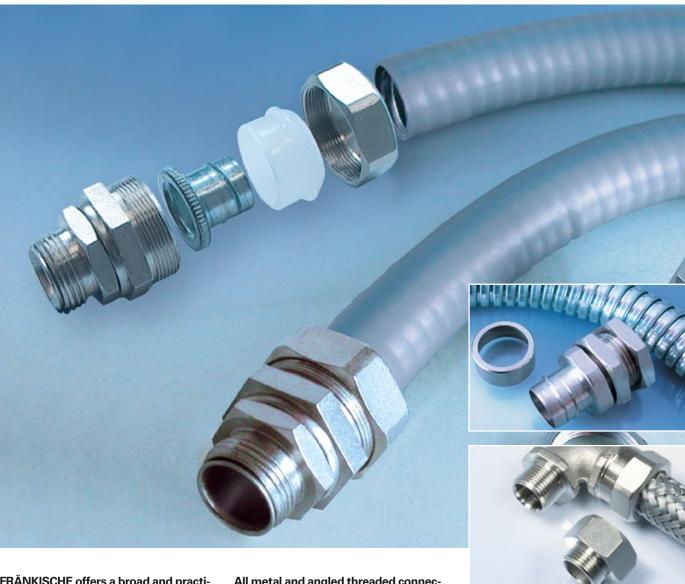
Please refer to page 49 for FMV threaded metal connectors

<sup>\*\*</sup>Uncoiled length

### ... we offer the right connection

### Perfect installation due to a broad range of accessories:

- perfect fit for all metal cable ducts
- quick and easy installation
- high level of reliability



FRÄNKISCHE offers a broad and practical range of accessories for a professional installation of metal cable ducts. Perfect fit and easy handling allow quick and easy installation, because metal cable ducts and accessories form a perfect union and achieve highest levels of reliability.

All metal and angled threaded connectors, including end caps, are corrosion-resistant, non-flame propagating and temperature resistant which makes them ideal accessories for metal cable ducts



DIN EN 60529 Protection class IP40

### **FMV**

Threaded metal connector made of nickel-plated brass for FFMSS, FFMSS-VA and FFMSS-K, protection class IP40 and non-flame propagating. Rotatable connector with metric male thread and inside end cap.

#### **Characteristics:**

Tensile strength, vibration resistance, corrosion-resistant

### **Technical specifications:**

- material: nickel-plated brass
- temperature resistance range: -45°C to +400°C
- non-flame propagating

Cat. no. FMV	Thread m. x 1.5	Туре	Inside Ø mm	Total length mm	Thread length mm	Ss 1 mm	Ss 2 mm	Packag- ing in pcs.
280.50.007	12	7	5.0	30	8	15	14	20
280.50.010	16	10	8.5	30	8	19	17	20
280.50.013	16	13	10.0	30	8	19	17	20
280.50.015	20	15	14.0	30	10	24	22	10
280.50.020	25	20	18.5	36	12	30	28	10
280.50.025	32	25	23.0	36	12	35	32	10
280.50.028	32	28	23.0	36	12	36	32	10
280.50.037	40	37	31.0	36	14	45	45	5
280.50.045	50	45	42.0	63	14	55	55	1
280.50.052	63	52	48.5	72	15	64	65	1



Please refer to page 56 for FGMM metal locknuts

DIN EN 60529 Protection class IP67

### FMV-FD

Threaded metal connector made of nickel-plated brass for FFMSS-K-FD and FFMSS-G, protection class IP67 and non-flame propagating. Rotatable connector with metric male thread and inside end cap. Liquid-tight due to polyamide 6 sealing ring.

### Characteristics:

Tensile strength, vibration resistance, corrosion-resistant and liquid-tight

recilicai	specifications:

- material: nickel-plated brass
  - temperature resistance range: -40°C to +120°C
- non-flame propagating

Cat. no. FMV-FD	Thread m. x 1.5	Conduit dimen- sions NW	Inside Ø mm	Total length mm	Thread length mm	Ss 1 mm	Ss 2 mm	Ss 3 mm	Pack- aging in pcs.
280.60.008	12	8	7.0	37	9	15	20	22	20
280.60.010	12	10	7.0	37	9	15	22	24	20
280.60.012	16	12	10.0	37	9	19	24	26	20
280.60.015	20	15	14.0	37	9	24	28	30	10
280.60.020	25	20	18.5	42	10	30	35	38	10
280.60.025	32	25	23.0	49	13	38	40	42	10
280.60.035	40	35	32.5	55	18	45	50	53	5
280.60.040	50	40	37.5	60	20	52	58	61	5
280.60.051	63	51	48.0	74	24	64	70	74	2



Please refer to page 56 for FGMM metal locknuts



DIN EN 60529 Protection class IP67

### FMV-W

Threaded 90° metal connector made of nickel-plated brass for FFMSS-K-FD and FFMSS-G, protection class IP67 and non-flame propagating. With metric male thread and inside end cap. Liquid-tight used to polyamide 6 sealing.

#### **Characteristics:**

Corrosion-resistant and liquid-tight

### **Technical specifications:**

- material: nickel-plated brass
- temperature resistance range: -40°C to +120°C
- non-flame propagating

Cat. no. FMV-W	Thread m. x 1.5	Туре	Outside Ø mm	Inside Ø mm	Total length mm	Thread length mm	Se 1	Ss 2 mm	Ss 3 mm	Pack- aging in pcs.
280.75.008	12	8	13	8.5	44	11	22	22	22	20
280.75.010	12	10	15	10.0	44	11	22	24	22	20
280.75.012	16	12	17	12.0	46	12	26	26	26	10
280.75.015	20	15	21	15.5	50	12	28	30	28	10
280.75.020	25	20	27	20.0	62	13	35	38	35	5
280.75.025	32	25	34	26.5	73	16	42	42	42	2



Please refer to page 56 for FGMM metal locknuts



DIN EN 60529 Protection class IP67

#### FMV-

Threaded metal connector made of nickel-plated brass for FFMSS-K-FD and FFMSS-G, protection class IP67 and non-flame propagating. With metric female thread. Liquid-tight used to polyamide 6 sealing.

### **Characteristics:**

Corrosion-resistant and liquid-tight

### **Technical specifications:**

- material: nickel-plated brass
- temperature resistance range: -40°C to +120°C
- non-flame propagating

Cat. no. FMV-I	Thread m. x 1.5	Туре	Outside Ø mm	Inside Ø mm	Thread length mm	Ss 1 mm	Ss 2 mm	Packag- ing in pcs.
280.80.010	16	10	15.0	10.0	9	22	24	20
280.80.012	16	12	17.0	12.0	9	24	26	20
280.80.015	20	15	21.0	15.5	10	28	30	20
280.80.020	25	20	27.0	20.0	12	36	38	10
280.80.025	32	25	34.0	26.5	12	40	42	10
280.80.035	40	35	43.0	35.0	12	50	53	5
280.80.040	50	40	48.0	40.0	13	58	61	5
280.80.051	63	51	58.5	50.5	20	70	74	2



## FME

Metal end cap for all metal cable conduits, non-flame propagating.

#### **Characteristics:**

Corrosion resistance

### **Technical specifications:**

- material: nickel-plated brass
- temperature resistance range: -45°C to +400°C
- non-flame propagating

Cat. no. FME	Туре	Inside Ø mm	Packaging in pcs.
280.90.008	8	8.5	1
280.90.010	10	10.0	1
280.90.012	12	12.0	1
280.90.013	13	13.0	1
280.90.015	15	15.5	1
280.90.020	20	20.5	1
280.90.025	25	25.0	1
280.90.027	27	26.5	1
280.90.035	35	35.0	1
280.90.040	40	40.0	1

## **Plastic Spiral Conduits**



DIN EN 60529 Protection class IP68 VDE 0605 DIN EN 61386-23 Classification: 424140

### **FFKSS-SW**

Flexible cable protection conduit, PVC-P sheathing, plastic-coated spring made of spring steel wire, non-flame propagating and UV-resistant. Heavy compressive strength and cold impact strength in extreme temperatures.

Fields of application of the cable duct are control panel engineering, control cabinets, engineering and robotics.

### **Characteristics:**

Resistant to UV radiation and ozone, air and waterproof, good resistance against oil, bases and acids, can be rotated axially and compressed.

### **Technical specifications:**

- material: PVC-P / spring steel wire
- temperature resistance range: -25°C to +60°C
- compressive strength: heavy
- cold impact strength in extreme temperatures
- non-flame propagating
- UV-resistant

Cat. no. FFKSS-SW 10m grey	Туре	Outside Ø mm	Inside Ø mm	Bend radius * ≥ mm	Packaging m
281.20.007	7	10	7.0	10	10
281.20.009	9	14	10	14	10
281.20.011	11	17	13	17	10
281.20.016	16	21	16	21	10
281.20.021	21	27	21	27	10
281.20.029	29	36	30	36	10
281.20.036	36	45	38	45	10
281.20.048	48	56	48	56	10

Cat. no. FFKSS-SW 50m grey	Туре	Outside Ø mm	Inside Ø mm	Bend radius * ≥ mm	Packaging m
281.21.007	7	10	7.0	10	50
281.21.009	9	14	10	14	50
281.21.011	11	17	13	17	50
281.21.016	16	21	16	21	50
281.21.021	21	27	21	27	50
281.21.029	29	36	30	36	25
281.21.036	36	45	38	45	25
281.21.048	48	56	48	56	25

<sup>\*</sup>Referring to the inside diameter of the conduit bending radius



Please refer to page 54 for FKV-SW threaded conduit connectors

## **Plastic Spiral Conduits**



DIN EN 60529 Protection class IP68 VDE 0605 DIN EN 61386-23 Classification: 134142

### FFKSS-KW

PVC-P spiral conduit with integrated PVC-U hard plastic coil, non-flame propagating and UV-resistant. Light compressive strength and cold impact strength in extreme temperatures.

Application for liquid-tight and insulating installations.

### **Characteristics:**

Resistant to UV radiation and ozone, air and waterproof, good resistance against oil, bases and acids, tensile strength and corrosion resistance.

### **Technical specifications:**

- material: PVC-P / hard plastic coil
- temperature resistance range: -25°C to +60°C
- compressive strength: light
- cold impact strength in extreme temperatures
- non-flame propagating
- UV-resistant

Cat. no. FFKSS-KW grey	Туре	Outside Ø mm	Inside Ø mm	Bend radius * ≥ mm	Packaging m
281.10.008	8	12.0	8.0	18	10
281.10.010	10	14.7	10.0	20	10
281.10.012	12	16.4	12.0	26	10
281.10.015	15	20.7	15.5	30	10
281.10.020	20	24.7	20.0	38	10
281.10.025	25	30.6	25.0	45	10
281.10.032	32	38.0	32.0	52	10
281.10.040	40	46.4	40.0	72	10
281.10.050	50	57.5	50.0	110	10

<sup>\*</sup>Referring to the inside diameter of the conduit bending radius



Please refer to page 54 for FKV-KW threaded conduit connectors

## **Plastic Spiral Conduit Accessories**

### **FKV-SW**



DIN EN 60529 Protection class IP54 Threaded polyethylene conduit connector with rotatable male thread made of nickel-plated brass, protection class IP54 and non-flame propagating. Suited for FFKSS-SW cable ducts.

#### **Characteristics:**

The integrated inside end cap effectively protects the cables at the conduit ends.

FFKSS-SW + FKV-SW = tensile strength and vibration resistance

#### Technical specifications:

- material: polyethylene (PE)
- temperature resistance range: -40°C to +110°C
- colour: grey
- non-flame propagating

Cat. no. FKV-SW grey	Thread m. x 1.5	Туре	Outside Ø mm	Inside Ø mm	Total length mm	Thread length mm	Ss mm	Packag- ing in pcs.
281.60.009	16	9	21.1	8.3	34.0	6.0	19	50
281.60.011	20	11	26.7	10.4	35.3	6.0	24	50
281.60.016	25	16	33.5	13.5	41.0	7.5	30	25
281.60.021	32	21	40.0	18.8	45.2	8.0	36	25
281.60.029	40	29	51.3	26.5	47.5	8.0	46	25
281.60.036	50	36	61.3	35.1	50.2	9.5	55	25
281.60.048	63	48	76.8	45.4	64.5	11.5	68	10



Please refer to page 56 for FGMM metal locknuts

### **FKV-KW**



DIN EN 60529 Protection class IP67 Threaded polyvinylchloride connector for FFKSS-KW with integrated inside end cap and rotatable thread, including locknut, protection class IP67 and non-flame propagating.

#### **Characteristics:**

Tensile strength, vibration resistance, corrosion-resistant and liquid-tight

### **Technical specifications:**

- material: polyvinylchloride (PVC)
- temperature resistance range: -20°C to +80°C
- colour: grey
- non-flame propagating

Cat. no. FKV-KW grey	Thread m.x1.5	Туре	Outside Ø mm	Inside Ø mm	Total length mm	Thread length mm	Ss 1 mm	Ss 2 mm	Pack- aging in pcs.
281.50.010	12	10	25.0	8	47	10.0	22	22	20
281.50.012	16	12	27.0	10	48	10.0	24	24	20
281.50.015	20	15	32.5	13	55	12.5	29	27	20
281.50.020	25	20	37.5	18	57	12.5	33	33	10
281.50.025	32	25	48.5	23	67	16	40	43	10
281.50.032	40	32	57.0	30	71	16.5	48	50	10
281.50.040	50	40	63.5	38	77	17.5	58	60	5
281.50.050	63	50	76.5	48	80	18.0	70	70	2

## **Cable Protection Accessories**



### FKH-M

Polypropylene conduit holder with metric thread for connections with metric threads and a thread pitch of 1.5mm, available in grey, non-flame propagating. To connect metric threaded connectors to components.

### **Technical specifications:**

■ material: PP

■ temperature resistance range: -40°C to +100°C

■ colour: grey

non-flame propagating

Cat. no. FKH-M grey	Thread m. x 1.5	Туре	Total length mm	Total width mm	Total height mm	Hole spacing mm	Screw holes Ø mm	Packag- ing in pcs.
289.70.020	20	20	50.0	14.0	27.0	37.0	5.7	50
289.70.025	25	25	57.0	14.0	32.0	43.0	5.7	50
289.70.032	32	32	67.0	16.5	41.0	53.0	6.7	50
289.70.040	40	40	80.0	16.5	52.0	65.0	6.7	25
289.70.050	50	50	86.0	18.5	59.0	69.0	6.7	25

### FRMM / FEMM

Metal reduction/expansion made of nickel-plated brass, with metric female and male thread, non-flame propagating and nickel-plated brass.

#### **Characteristics:**

Corrosion resistance

### **Technical specifications:**

material: nickel-plated brass

■ temperature resistance range: -45°C to +400°C

non-flame propagating





FRMM

Cat. no.	Thread m. x	1.5	Thread length	Thread length	Se Packadii	
FRMM	Outside	Inside	Outside mm		mm	in pcs.
280.91.012	16	12	8	13	19	50
280.91.016	20	16	8	13	22	50
280.91.020	25	20	10	16	28	20
280.91.025	32	25	12	18	35	20
280.91.032	40	32	13	20	45	10
280.91.040	50	40	13	20	52	5
280.91.050	63	50	15	23	64	5



FEMM

Cat. no.	Thread m. 3	c 1.5	Thread	Thread Ss Package	Packaging	
FEMM	Outside	Inside	length Outside mm	length Inside mm	mm	in pcs.
280.92.012	12	16	10	8	19	50
280.92.016	16	20	10	8	22	50
280.92.020	20	25	12	8	28	50
280.92.025	25	32	15	10	35	20
280.92.032	32	40	15	12	45	20
280.92.040	40	50	16	13	52	10
280.92.050	50	63	19	13	64	5

## **Cable Protection Accessories**



### **FGKM**

Polyamide 6 locknut with metric thread, available in black, zero halogen and non-flame propagating.

### **Technical specifications:**

- material: polyamide 6 (PA6)
- temperature resistance range: -40°C to +120°C, short-term temperature resistance up to +150°C
- colour: black
- zero halogen
- non-flame propagating

Cat. no. FGKM black	Thread m. x 1.5	Туре	Ss mm	Packaging in pcs.
288.20.016	16	16	22	100
288.20.020	20	20	26	100
288.20.025	25	25	32	50
288.20.032	32	32	40	50
288.20.040	40	40	50	25
288.20.050	50	50	60	25
288.20.063	63	63	74	25

### **FGMM**



Metal locknut made of nickel-plated brass with metric thread, non-flame propagating.

### **Technical specifications:**

- material: nickel-plated brass
- temperature resistance range: -45°C to +400°C
- non-flame propagating

Cat. no. FGMM	Thread m. x 1.5	Туре	Ss mm	Packaging in pcs.
288.10.016	16	16	19	100
288.10.020	20	20	24	100
288.10.025	25	25	30	50
288.10.032	32	32	36	50
288.10.040	40	40	46	25
288.10.050	50	50	59	25
288.10.063	63	63	70	10

### **FDRM**



Sealing ring for connections with metric thread, available in grey.

Cat. no. FDRM grey	Thread m. x 1.5	Туре	Packaging in pcs.
288.90.016	16	16	100
288.90.020	20	20	100
288.90.025	25	25	50
288.90.032	32	32	50
288.90.040	40	40	20
288.90.050	50	50	20
288.90.063	63	63	10

## **Cable Protection Accessories**



### **FGKP**

Polyamide 6 locknut with Pg thread, available in black, zero halogen and non-flame propagating.

### **Technical specifications:**

- material: polyamide 6 (PA6)
- temperature resistance range: -40°C to +120°C, short-term temperature resistance up to +150°C
- colour: black
- zero halogen
- non-flame propagating

Cat. no. FGKP	Thread Pg.	Type	Ss	Packaging
black	Tilleau Fy.	Туре	mm	in pcs.
288.25.007	7	7	19	100
288.25.009	9	9	22	100
288.25.011	11	11	24	100
288.25.013	13.5	13.5	27	100
288.25.016	16	16	30	50
288.25.021	21	21	36	50
288.25.029	29	29	46	25
288.25.036	36	36	60	25
288.25.048	48	48	70	25

### **FGMP**



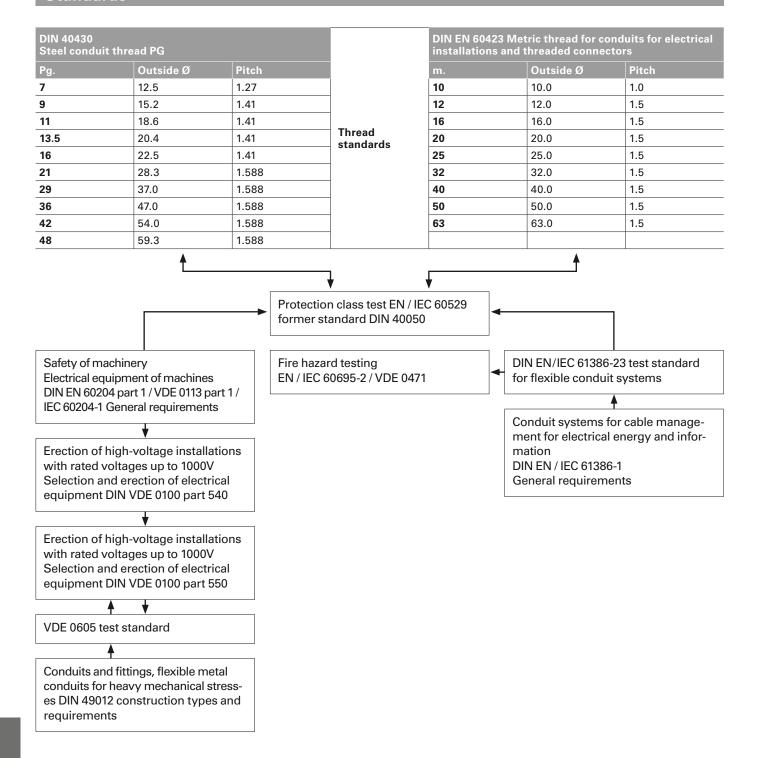
Metal locknut made of nickel-plated brass with Pg thread, non-flame propagating.

### **Technical specifications:**

- material: nickel-plated brass
- temperature resistance range: -45°C to +400°C
- non-flame propagating

Cat. no. FGMP	Thread Pg.	Туре	Ss mm	Packaging in pcs.
288.15.007	7	7	15	100
288.15.009	9	9	19	100
288.15.011	11	11	22	100
288.15.013	13.5	13.5	24	100
288.15.016	16	16	27	50
288.15.021	21	21	32	50
288.15.029	29	29	42	50
288.15.036	36	36	52	25
288.15.048	48	48	66	10

### **Standards**



## **Definition: protection class**

DIN EN 60529 indentifies protection classes by 4-digit codes. The two-letter abbreviation IP (International Protection) comes first and always stays the same. The protection levels are complemented by two digits. The first digit stands for protection

against contact and foreign objects, the second digit stands for protection against water.

For example:

IP54 (1st digit = 5 and 2nd digit = 4)

Protec	tion levels agai	nst contact and foreign object	s	Protec	Protection levels against water			
1st digit	Designation	Degree of protection contact	Degree of protection foreign objects	2nd digit	Designation	Degree of protection water protection		
0	No protection	No particular protection of persons against direct contact with live or moving parts.	No protection of the equipment against ingress of solid, foreign objects.	0	No protection	No particular protection.		
1	Protection against large foreign objects	Protection against accidental or inadvertent contact by large surfaces of the body with live and/or internal moving parts, e.g. back of hand, but no protection against deliberate access to these parts.	Protection against ingress of solid, foreign objects in a diameter of > 50mm.	1	Protection against verti- cally falling drops of water	Vertically falling drops of water shall have no harmful effect.		
2	Protection against medium- sized foreign objects	Protection against finger contact with live and/or internal moving parts.	Protection against ingress of solid, foreign objects in a diameter of > 12mm.	2	Protection against diagonally dripping water	Dripping water falling at an angle of 15° shall have no harmful effect.		
3	Protection against small foreign objects	Protection against contact between live and/or internal moving parts and tools, wires or similar objects the like with a thickness of > 2.5mm.	Protection against ingress of solid, foreign objects in a diameter of > 2.5mm.	3	Protection against spraying water	Water falling at an angle of 60° from the vertical shall have no harmful effect.		
4	Protection against gran- ular foreign objects	Protection against contact between live and/or internal moving parts and tools, wires or similar objects with a thickness of > 1mm.	Protection against ingress of solid, foreign objects in a diameter of > 1mm.	4	Protection against spraying water	Water splashing against equipment from any direction shall have no harmful effect.		
5	Protection against dust deposits	Complete protection against contact with live and/or internal moving parts.	Protection against harmful dust deposits. Ingress of dust is not entirely prevented. The quantity of dust entering must not interfere with operation.	5	Protection against water jets	Water projected by a nozzle against equipment from any direction shall have no harmful effect.		
6	Protection against dust ingress	Complete protection against contact with live and/or internal moving parts.	Protection against ingress of dust.	6	Protection against flood water	Water in harmful quantities must not enter the equipment in case of heavy seas or powerful jets of water.		
-	-	-	-	7	Protection during short immersion	Water must not enter in harmful quantities if equip- ment is immersed in water under defined conditions of pressure and time.		
-	-	-	-	8	Protection during continuous submersion	Water must not enter in harmful quantities if equip- ment is submersed in water (1.2m water depth, 1 hour)		

### **Chemical properties of plastics**

### Please note

The following information is provided to the best of our current knowledge and experience. We reserve the right to make technical changes or improvements to our products. The customer is responsible for conducting adequate incoming inspections, tests and other inspections. The customer is also solely responsible for observing industrial property rights, laws and regulations.

Medium	Concentration in %	PVC-U	PE-HD	PP	PA6	TPE
Hydrochloric acid emissions	any	+	+	+	0	
Sulfuric acid emissions	any	+	+	+	-	
Liquid ammonia	TR	+	+	+	+	0
Gaseous ammonia	TR	+	+	+	+	0
Gasoline	Н	+	+	0	+	0
Benzene	TR	-	0	0	+	-
Beer	Н	-	+	+	+	
Gaseous, dry chlorine	TR	0	0	-	-	0
Diesel fuel	Н	+	+	+	+	
Aqueous fertiliser salt	saturated	+	+	+		
Photographic developer	Н	+	+	+	-	
Vinegar (wine vinegar)	Н	+	+	+	-	+
Anti-freeze	Н	+	+	+	0	
Fruit juices	Н	+	+	+	-	
Aqueous uric acid	33%	+	+	+	+	
Fuel oil	Н	+	+	+	+	
Sea water	Н	+	+	+	+	
Methanol	TR	+	+	+	+	
Milk	Н	+	+	+	+	+
Mineral oil	Н	+	+	+	+	-
Vegetable and animal oils	Н	+	+	+	+	0
Paraffin	TR	+	+	+	+	
Gaseous propane	TR	+	+	+	+	
Nitric acid	30%	+	0	0	-	0
Hydrochloric acid	30%	+	+	+	-	0
Sulfuric acid	40%	+	+	+	-	0
Terpentine	TR	+	o	-	+	
Detergent	VL	+	+	+	+	

Note: The information mentioned above applies to 20°C. The concentration (%) and the temperature must always be indicated additionally for special applications.

VL = aqueous solution, rate ≥ 10%

GL = saturated solution, aqueous

TR = minimum requirement: technically pure

 $\mathsf{H} = \mathsf{standard} \ \mathsf{composition}$ 

+ = resistant

o = limitedly resistant

### **Designation of materials:**

**PA** = polyamide

**TPE** = thermoplastic polyester

**PP** = polypropylene

**PVC** = polyvinylchloride

**PE-LD** = low-density polyethylene

### **Chemical properties of metals**

### Please note

The following information is provided to the best of our current knowledge and experiences. We reserve the right to make technical changes or improvements to our products. The customer is responsible for conducting adequate

incoming inspections, tests and other inspections. The customer is also solely responsible for observing industrial property rights, laws and regulations.

Medium	Concentration in %	Galvanised steel strip	Galvanised steel strip, metal braiding	Galvanised steel strip, PVC, metal braiding	Stainless steel V2A	Brass
Hydrochloric acid emissions	any			+	-	0
Sulfuric acid emissions	any			+	0	-
Liquid ammonia	TR	+	+	+	+	0
Gaseous ammonia	TR	+	+	+	+	-
Gasoline	Н			+	+	+
Benzene	TR	+	+	-	+	+
Beer	Н			-	+	+
Gaseous, dry chlorine	TR	+	+	0	-	-
Diesel fuel	Н	+	+	+	+	+
Aqueous fertiliser salt	saturated			+		
Photographic developer	Н			+	+	
Vinegar (wine vinegar)	Н			+	+	-
Anti-freeze	Н			+	+	+
Fruit juices	Н			+	+	-
Aqueous uric acid	33%			+	0	0
Fuel oil	Н	+	+	+	+	+
Sea water	Н			+	0	0
Methanol	TR			+	+	+
Milk	Н	+	+	+	+	0
Mineral oil	Н			+	+	+
Vegetable and animal oils	Н			+	+	0
Paraffin	TR	+	+	+	+	+
Gaseous propane	TR			+	+	+
Nitric acid	30%			+	-	-
Hydrochloric acid	30%			+	0	-
Sulfuric acid	40%	+	+	+	-	-
Terpentine	TR	+	+	+	+	0
Detergent	VL			+	+	0

Note: The information mentioned above applies to 20°C. The concentration (%) and the temperature must always be indicated additionally for special applications.

VL = aqueous solution, rate ≥ 10% GL = saturated solution, aqueous

o = limitedly resistant TR = minimum requirement: technically pure

+ = resistant

H = standard composition

### **Designation of materials:**

Galvanised steel strip Galvanised steel strip, metal braiding PVC, metal braiding Stainless steel V2A **Brass** 

## **Classification code**

Electrical installation conduits must comply with the requirements of DIN EN 61386 (VDE 0605). These standards determine the classifications, identification and VDE tests. The twelve-digit code classifies conduits and fittings according to compressive strength, impact strength and the minimum and maximum operating temperatures and bending

during transport, storage and use. Electrical properties, protection class, corrosion resistance and tensile strength as well as flame propagation resistance and suspended load capacity are also indicated.

	Meaning	0	1	2	3	4	5	6	7
First digit	Resistance to compression	-	125N	320N	750N	1250N	4000N	-	-
Second digit	Resistance to impact stresses	-	0.5kg	1kg	2kg	2kg	6.8kg	-	-
Third digit	Minimum tempera- ture range	-	+5°C	−5°C	–15°C	−25°C	-45°C	-	-
Fourth digit	Maximum tem- perature range	-	+60°C	+90°C	+105°C	+120°C	+150°C	+250°C	+400°C
Fifth digit	Resistance against bending	-	rigid	flexible	flexible, moves back on its own	flexible	-	-	-
Sixth digit	Electrical properties	not de- clared	with elec- trical con- ductivity properties	with electrical insulation properties	with electri- cal conduc- tivity and insulation properties	-	-	-	-
Seventh digit	Protection against ingress of solid foreign objects	protection class IP -	protection class IP -	protection class IP -	protection class IP 3X	protection class IP 4X	protection class IP 5X	protection class IP 6X	protection class IP -
Eighth digit	Protection against ingress of water	protection class IP X0	protection class IP X1	protection class IP X2	protection class IP X3	protection class IP X4	protection class IP X5	protection class IP X6	protection class IP X7
Ninth digit	Resistance against corrosion	-	low protection	medium protection	medium inside, high outside protection	high pro- tection	-	-	-
Tenth digit	Tensile strength	not de- clared	100N	250N	500N	1000N	2500N	-	-
Elev- enth digit	Resistance against flame propagation	-	non-flame propagat- ing	flame propagat- ing	-	-	-	-	-
Twelfth digit	Suspended load capacity	not de- clared	20N	30N	150N	450N	850N	-	-

### **Classification code**

Explanation of test methods for different temperature indications:

Temperature resistance test according to LV312-3 is conducted without load being applied. Temperature resistance test according to DIN EN 61386-23 is conducted with the test load described in the standard being applied.

All accessories have been tested for flame propagation according to DIN 61386-1 using the glow-wire test, according to DIN IEC 60695-2-11.

The classification code refers to the tests according to DIN EN 61386-23. The following is based on type 17 and type 20:

Conduit type	First digit	Second digit	Third digit	Fourth digit	Fifth digit	Sixth digit	Page
FFMYD-PA6	1	2	5	4	4	0	12
FFMYD-L	0	2	4	4	4	0	13
FFHY	0	3	5	3	4	0	14
FFTYL-BS	0	4	5	1	4	2	15
FFTYL-V	0	4	5	0	4	2	16
FFPYL-MOD-BS	0	3	3	1	4	2	17
Co-flex PP-UV	1	3	4	3	4	0	36
Co-flex PP black	1	3	4	3	4	0	37
Co-flex PP white	1	3	4	3	4	0	38
Co-flex PA6	1	2	4	5	4	0	39
FFMSS	4	3	5	7	4	1	43
FFMSS-K-FD	4	3	4	1	4	3	44
FFMSS-K	4	3	4	1	4	3	45
FFMSS-G	4	3	5	7	4	1	46
FFMSS-VA	4	3	5	7	4	1	47
FFKSS-SW	4	2	4	1	4	0	52
FFKSS-KW	1	3	4	1	4	2	53

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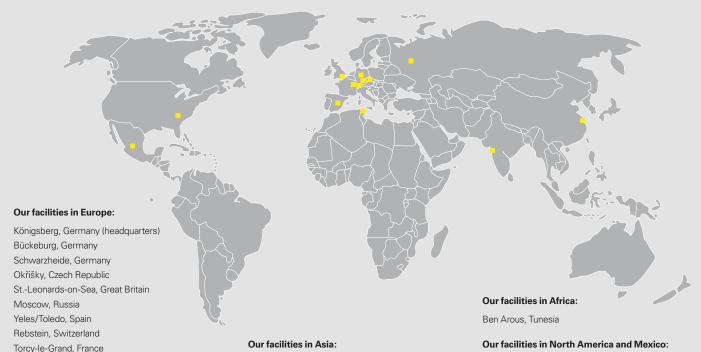
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and solutions that are perfectly tailored to our customers' needs. Our action and business philosophy focus on our customers and their needs and requirements for our products.

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