

5 CONFiX™ Cable conduit system



The 90° angled conduit fitting CONFiX FWS is perfect for installation of parallel corrugated cable protection conduits, e.g. in machines, control panels or control cabinets. The liftable cover is tightly fixed by a hinge to the mounting box. Therefore, the system is very easy to handle.

Corrugated conduits CONFiX WS for cable routing are used where cables have to be protected from mechanical damage or certain weather conditions.

In addition, icotek offers split corrugated conduits CONFiX WST for routing pre-terminated cables and corresponding conduit clips CONFiX SH.

Advantages & benefits

1. Fast and easy assembly

The liftable cover of the bulkhead fitting CONFiX FWS is tightly fixed by a hinge to the mounting box. The system is therefore very easy to mount.

2. Easy to maintain

The split version of the corrugated conduits CONFiX WST offers the possibility of routing standard or pre-terminated cables in harsh environments.

3. Flexible

The corrugated conduits CONFiX WS can be used for various applications, depending on the material. UV resistant polyamide conduits for high mechanical requirements (indoor and outdoor use), polypropylene conduits with high resistance against acids / alkalis.

5

CONFiX™ FWS Assembly

Installation of CONFiX FWS is quick and easy:

1. Use top screw(s) to mount the FWS
2. Insert conduit
3. Secure and complete installation with two side screws



Chapter content 5



Bulkhead fittings, split | IP54
for conduit screw connections /
direct conduit pickup

CONFIX FWS

168 – 169



Corrugated conduits
NW 7,5 - NW 50

CONFIX WS

170 – 171



Corrugated conduits, split
for cables with connectors
NW 10 - NW 70

CONFIX WST

172



Conduit clips
for split corrugated conduits CONFIX WST

CONFIX SH

173

CONFIX™ FWS-A

Bulkhead fittings for conduit screw connections



Metric internal thread for conduit screw connections

Product description

The 90° angled conduit fitting CONFiX FWS is for installation of parallel corrugated cable protection conduits, e.g. in machines, control panels or control cabinets.

The liftable cover is tightly fixed by a hinge. Therefore, the system is fast and easy to install.

CONFIX FWS is offered in the following versions:

CONFIX FWS-A with metric internal thread M16 to M50

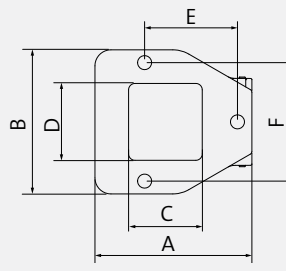
CONFIX FWS-B with a grooved conduit clip for types with sizes NW 13, 17, 23, 29, 37 and 50.

The available colours are grey (RAL 7011) and black (RAL 9005).

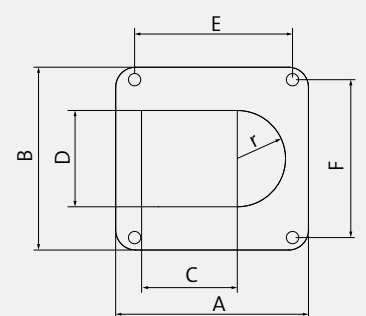
Accessories

CONFIX WS conduits 170 – 171

Type	Internal Thread	Hole Ø [mm]	Size (A × B) [mm]	Cut-out (C × D) [mm]	Drill. Templ. (E × F) [mm]	Order No.	PU
CONFIX FWS-A 16	M16 × 1.5	3 × 4.3	49 × 45	22 × 22.6	29 × 37	■ 31381	10
						■ 31380	
CONFIX FWS-A 20	M20 × 1.5	3 × 4.3	49 × 45	22 × 22.6	29 × 37	■ 31384	10
						■ 31383	
CONFIX FWS-A 25	M25 × 1.5	3 × 6.6	67 × 63	37 × 28	41.5 × 51.5	■ 31387	10
						■ 31386	
CONFIX FWS-A 32	M32 × 1.5	4 × 6.6	85.5 × 76	41.9 × 40 r = 20	64.5 × 64.5	■ 31390	10
						■ 31389	
CONFIX FWS-A 40	M40 × 1.5	4 × 6.6	97 × 92	48.3 × 48.4 r = 24.2	79.5 × 79.5	■ 31393	5
						■ 31392	
CONFIX FWS-A 50	M50 × 1.5	4 × 6.6	111.5 × 100.5	53 × 60.5 r = 30.25	87.5 × 87.5	■ 31396	5
						■ 31395	



Size / Drilling template FWS-A 16 to 25



Size / Drilling template FWS-A 32 to 50

CONFIX™ FWS-B

Bulkhead fittings for direct conduit pickup



Grooved conduit clip



Fixed cover due to hinges

IP54



Type	Dimension*	Hole Ø [mm]	Size (A × B) [mm]	Cut-out (C × D) [mm]	Drill. Templ. (E × F) [mm]	Order No.	PU
CONFIX FWS-B 11	NW 13	3 × 4.3	49 × 45	22 × 22.6	29 × 37	■ 31411 ■ 31410	10
CONFIX FWS-B 16	NW 17	3 × 4.3	49 × 45	22 × 22.6	29 × 37	■ 31414 ■ 31413	10
CONFIX FWS-B 21	NW 23	3 × 6.6	67 × 63	37 × 28	41.5 × 51.5	■ 31417 ■ 31416	10
CONFIX FWS-B 29	NW 29	4 × 6.6	85.5 × 76	41.9 × 40 r = 20	64.5 × 64.5	■ 31420 ■ 31419	10
CONFIX FWS-B 36	NW 37	4 × 6.6	97 × 92	48.3 × 48.4 r = 24.2	79.5 × 79.5	■ 31423 ■ 31422	5
CONFIX FWS-B 48	NW 50	4 × 6.6	111.5 × 100.5	53 × 60.5 r = 30.25	87.5 × 87.5	■ 31426 ■ 31425	5

Advantages & benefits

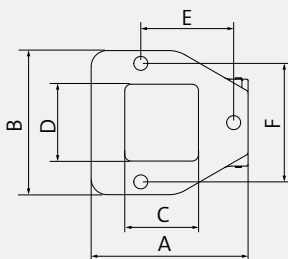
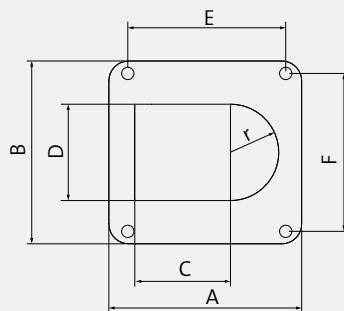
- Hinged cover
- Fast and easy installation
- Functional design
- Protection class IP54

Specifications

Material	Polycarbonate (PC)
Colour	■ grey (RAL 7011) ■ black (RAL 9005)
IP rating	IP54
Flame class	UL94-Vo, self-extinguishing
Temperature	-30°C to +100°C (static)
Properties	Halogen free, silicone free

Accessories

CONFIX WS conduits 170 – 171

Size / Drilling template
FWS-B 11 to 21Size / Drilling template
FWS-B 29 to 48

* For parallel corrugated cable protection conduit with dimension (NW)

CONFIX™ WS

Corrugated conduits



Compatible with CONFiX FWS-B

Product description

Parallel corrugated conduits for cable routing are used where cables have to be protected from mechanical damage or certain weather conditions.

icotek provides conduits in sizes NW 7.5, 8.5, 10, 13, 17, 23, 29, 37, and 50. Conduits from size NW 13 can be mounted with CONFiX FWS bulkhead fittings.

Parallel corrugated conduits are available in 3 different versions:

- **CONFIX WS-PA:** Polyamide conduit for high mechanical requirements (e.g. engine compartments, car bodies, construction machines, ship building, rail transportation technology, switch cabinets).
→ Suitable for ground installation
- **CONFIX WS-PAL (light):** Polyamide conduit for high mechanical requirements
→ Suitable for suspended installation
- **CONFIX WS-PP:** Polypropylene conduit for use in engine compartments, car bodies and for static installation at machinery and plant engineering.
→ Advantages: Cost-effective, flame class UL94-V2, temperature resistant, resistant to chemicals

Type	External Ø	Internal Ø	Compatible with:	Order No.	PU (Length)
CONFIX WS-G-PA-NW 7.5	Ø 10 mm	Ø 6.7 mm	-	■ 31550	50 m
CONFIX WS-B-PA-NW 7.5	Ø 10 mm	Ø 6.7 mm	-	■ 31570	50 m
CONFIX WS-G-PA-NW 8.5	Ø 11.7 mm	Ø 8.4 mm	-	■ 31552	50 m
CONFIX WS-B-PA-NW 8.5	Ø 11.7 mm	Ø 8.4 mm	-	■ 31572	50 m
CONFIX WS-G-PA-NW 10	Ø 13 mm	Ø 9.9 mm	-	■ 31554	50 m
CONFIX WS-B-PA-NW 10	Ø 13 mm	Ø 9.9 mm	-	■ 31574	50 m
CONFIX WS-G-PA-NW 13	Ø 15.8 mm	Ø 12.7 mm	CONFIX FWS-B 11	■ 31556	50 m
CONFIX WS-B-PA-NW 13	Ø 15.8 mm	Ø 12.7 mm	CONFIX FWS-B 11	■ 31576	50 m
CONFIX WS-G-PA-NW 17	Ø 21.2 mm	Ø 16.6 mm	CONFIX FWS-B 16	■ 31558	50 m
CONFIX WS-B-PA-NW 17	Ø 21.2 mm	Ø 16.6 mm	CONFIX FWS-B 16	■ 31578	50 m
CONFIX WS-G-PA-NW 23	Ø 28.3 mm	Ø 23.2 mm	CONFIX FWS-B 21	■ 31560	50 m
CONFIX WS-B-PA-NW 23	Ø 28.3 mm	Ø 23.2 mm	CONFIX FWS-B 21	■ 31580	50 m
CONFIX WS-G-PA-NW 29	Ø 34.5 mm	Ø 29 mm	CONFIX FWS-B 29	■ 31562	25 m
CONFIX WS-B-PA-NW 29	Ø 34.5 mm	Ø 29 mm	CONFIX FWS-B 29	■ 31582	25 m
CONFIX WS-G-PA-NW 37	Ø 42.4 mm	Ø 36 mm	CONFIX FWS-B 36	■ 31564	25 m
CONFIX WS-B-PA-NW 37	Ø 42.4 mm	Ø 36 mm	CONFIX FWS-B 36	■ 31584	25 m
CONFIX WS-G-PA-NW 50	Ø 54 mm	Ø 47.7 mm	CONFIX FWS-B 48	■ 31566	25 m
CONFIX WS-B-PA-NW 50	Ø 54 mm	Ø 47.7 mm	CONFIX FWS-B 48	■ 31586	25 m

CONFIX™ WS Corrugated conduits



Type	External Ø	Internal Ø	Compatible with:	Order No.	PU (Length)
CONFIX WS-B-PAL-NW 7.5	Ø 10 mm	Ø 6.7 mm	-	■ 31590	50 m
CONFIX WS-B-PAL-NW 8.5	Ø 11.5 mm	Ø 8.5 mm	-	■ 31592	50 m
CONFIX WS-B-PAL-NW 10	Ø 13.2 mm	Ø 10.1 mm	-	■ 31594	50 m
CONFIX WS-B-PAL-NW 13	Ø 16 mm	Ø 13 mm	CONFIX FWS-B 11	■ 31596	50 m
CONFIX WS-B-PAL-NW 17	Ø 21.2 mm	Ø 17.1 mm	CONFIX FWS-B 16	■ 31598	50 m
CONFIX WS-B-PAL-NW 23	Ø 28.4 mm	Ø 23.5 mm	CONFIX FWS-B 21	■ 31600	50 m
CONFIX WS-B-PAL-NW 29	Ø 34.5 mm	Ø 29.4 mm	CONFIX FWS-B 29	■ 31602	25 m
CONFIX WS-B-PAL-NW 37	Ø 42.2 mm	Ø 36.7 mm	CONFIX FWS-B 36	■ 31604	25 m
CONFIX WS-B-PAL-NW 50	Ø 54 mm	Ø 48.1 mm	CONFIX FWS-B 48	■ 31606	25 m
CONFIX WS-B-PP-NW 7.5	Ø 9.9 mm	Ø 6.9 mm	-	■ 31610	50 m
CONFIX WS-B-PP-NW 8.5	Ø 11.6 mm	Ø 8.5 mm	-	■ 31612	50 m
CONFIX WS-B-PP-NW 10	Ø 12.7 mm	Ø 10.1 mm	-	■ 31614	50 m
CONFIX WS-B-PP-NW 13	Ø 15.8 mm	Ø 12.9 mm	CONFIX FWS-B 11	■ 31616	50 m
CONFIX WS-B-PP-NW 17	Ø 21 mm	Ø 16.8 mm	CONFIX FWS-B 16	■ 31618	50 m
CONFIX WS-B-PP-NW 23	Ø 28 mm	Ø 23.7 mm	CONFIX FWS-B 21	■ 31620	50 m
CONFIX WS-B-PP-NW 29	Ø 33.9 mm	Ø 29.3 mm	CONFIX FWS-B 29	■ 31622	25 m
CONFIX WS-B-PP-NW 37	Ø 42 mm	Ø 36.7 mm	CONFIX FWS-B 36	■ 31624	25 m
CONFIX WS-B-PP-NW 50	Ø 53.6 mm	Ø 47.8 mm	CONFIX FWS-B 48	■ 31626	25 m

* For parallel corrugated cable protection conduit with dimension (NW)

Specifications WS-PA

Material	Polyamide (PA)
Colour	■ black ■ grey
Flame class	UL94-HB
Temperature	-40°C to +120°C
Properties	Halogen free, UV resistant, according to EN ISO 8580

Specifications WS-PAL

Material	Polyamide (PA)
Colour	■ black
Flame class	UL94-HB
Temperature	-40°C to +120°C
Properties	Halogen free, UV resistant according to EN ISO 8580

Specifications WS-PP

Material	Polypropylene (PP)
Colour	■ black
Flame class	UL94-V2, self-extinguishing
Temperature	-40°C to +135°C
Properties	Halogen free, high resistance against acids / alkalis

Compatible with

CONFIX FWS Bulkhead fitting 168 – 169

CONFIX™ WST

Split corrugated conduits



Individual lengths are possible!

Product description

The CONFiX WST is a two piece corrugated conduit. Perfect for routing cables with or without connectors in rough environments.

In conjunction with e.g. KVT-W90, a high degree of flexibility is achieved. Numerous conduit sizes can be used thanks to the wide variety of split grommets offered (see KT grommets on pages 44 - 46).

The length of the CONFiX WST split corrugated conduit can be customized to your application. All conduits are available by the meter (0.5 m steps).

Advantages & benefits

- Containing pre-terminated cables, warranty of cable remains
- Retrofitting and maintenance carried out easily and quickly

Type	Order No.	Internal diameter	External diameter	Compatible grommets	Dimensions	Ring length*
CONFIX WST NW 10	31200	8.7 mm	13.6 mm	KT 13	NW 10	50 m*
CONFIX WST NW 14	31210	12.5 mm	18.5 mm	KT 18	NW 14	50 m*
CONFIX WST NW 20	31220	19.5 mm	25.5 mm	KT 25	NW 20	50 m*
CONFIX WST NW 23	31230	24.2 mm	31 mm	KT 30	NW 23	50 m*
CONFIX WST NW 29	31235	27.3 mm	35.5 mm	KTMB-P	NW 29	25 m*
CONFIX WST NW 37	31240	31 mm	41.4 mm	KTMB-P	NW 37	25 m*
CONFIX WST NW 45	31250	42.7 mm	54 mm	KTMB-Q	NW 45	25 m*
CONFIX WST NW 70	31260	66.5 mm	79.8 mm	KTMB-S	NW 70	10 m*

*All conduits are also available by the metre (0.5 m steps).

Specifications

Material	Polypropylene, black
Flame class	UL94-HB
Temperature	- 40°C to + 105°C
Properties	UV resistant

Compatible with

CONFIX SH Conduit clip	173
Cable entry systems for pre-terminated cables	8 – 75
Cable entry systems for standard cables	78 – 107

CONFIX™ SH

Conduit clips for WST



Type	Order No.	Suitable conduit	Fixing hole	Width [mm]	Height [mm]	PU
CONFIX SH 10	31300	NW 10	M3	18.5	21	10
CONFIX SH 14	31310	NW 14	M3	24	25.5	10
CONFIX SH 20	31320	NW 20	M5	35	36	10
CONFIX SH 23	31330	NW 23	M5	42	43.5	10
CONFIX SH 29	31335	NW 29	M5	48	48.5	10
CONFIX SH 37	31340	NW 37	M6	55	56.5	10
CONFIX SH 45	31350	NW 45	M6	67	68	10
CONFIX SH 70	31360	NW 70	M6	100	101	10

Product description

CONFIX SH Conduit clips are a one-piece clamping system to provide secure mounting points for corrugated conduit systems.

The clips are secured to their mounting position through a central mounting point with a hexagonal counter-bore.

Specifications

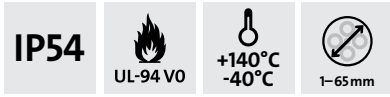
Material	Polyamide (PA), black
Flame class	UL94-V2, self-extinguishing
Temperature	- 40°C to + 140°C
Properties	Halogen free, silicone free

Compatible with

CONFIX WST
Split corrugated conduit 172

6 Enclosure accessories

Gland plates, flange plates & accessories



Enclosure gland plates

Electronic enclosures which are used in industrial manufacturing processes have to be reliably protected against dirt and dust ingress. The accumulation of dust and dirt can lead to short circuits and overheating of internal components. This can easily lead to machine downtime, premature maintenance requirements and at worst fire or electric shock incidents.

When running cables through the base of an enclosure you are susceptible to dust and debris entering through the cable ingress point. Components with internal fans and air-conditioning can create a suction through any opening, pulling dust and debris into the cabinet. The icotek gland plates KDR-ESR and KDRS-ESR provide the perfect solution to prevent dust build up and keep your cabinet running efficiently.

KDR-ESR-VX25



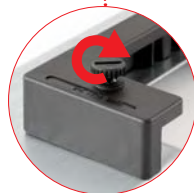
KDRS-ESR-VX25



Routing of pre-terminated cables of up to 35 mm in diameter (KEL 24)



Optional with EMC cable assembly KDR-EMC-PF



Fast and tool-free mounting of KEL-U cable entry frames



Routing of pre-terminated cables of up to 35 mm in diameter (KEL-U 24 / KEL-U 16)



Straight cable routing into the cable duct

6

KDR-ESR Assembly



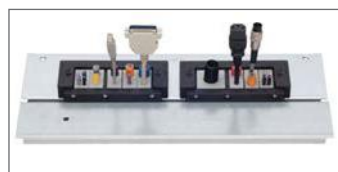
- 1 The gland plate is fixed in the enclosure floor. The KEL cable entry frames are fitted.



- 3 Afterwards the KEL frames are pushed into the slide frames and fixed with the knurled screws.



- 2 The KEL cable entry frames are screwed together after fitting.



- 4 Finally, the middle gland plate which is part of the standard enclosure, moves together with the KDR-ESR plates.

Chapter content 6



Rittal / Hoffman
Enclosure gland plates
with slide frames for cable entry frames

KDR-ESR-VX25 / KDRS-ESR-VX25 /
KDR-ESR-TS8 / KDR-ESR-HG2

176 – 181



Rittal
Enclosure gland plates
split, for cable entry frames

KDR 2-VX25 / KDR 2-TS8

182 – 183



Rittal
Enclosure gland plates
with brush grommets

KDR-BES-TS8

184 – 185



Rittal / Hoffman / Others
Universal brush strip
for enclosures

KDR-BES-U / KDR-BES-U-VX25 /
KDR-BES-U-TS8 / KDR-BES-U-HG2

186 – 187



Rittal / Lohmeier
Module plates
for cable entry components

MP

188 – 189



Rittal
Enclosure gland plates
for MP module plates

KDR-BMP-VX25 / KDR-BMP-TS8

190 – 193



Rittal / Fibox
Flange plates for enclosures
for cable entry components

FP-AX / FP-AE / FP-KX / FP-KL / FP-BG /
FP-FL21

194 – 203



Blank plates

BPK / BPK-RF / BPM / BPK-SNAP

204 – 206



Supports
for DIN rails and bus bars

MF

207



Hexagonal Locknuts
M16 - M85

KGM / GM / GMT

208 – 209