

Type EW-PRF

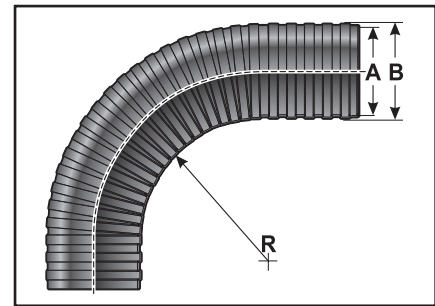
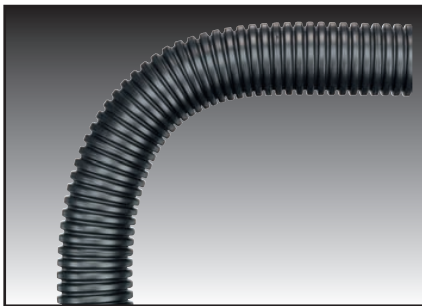
RoHS
compliant

-  -58 to 221 °F
transient 302 °F
-  Mod. polyamide 12
-  V0
Self-extinguishing
-  > 45.72 lb./inch
-  Suitable fittings:
m-top, -tec, -fix, -jumbo, KFW, AT

Cable protection conduit for high mechanical stresses and maximum flexibility. UR-listed self-extinguishing conduit approved for use in railway engineering. Particularly suited for dynamic routing in railway vehicles. FAR / ABD authorization for color grey only.

Applications:

- Railway engineering
- Robots
- Handling systems
- In cable drag chains



EW-PRF

Type	Order no.	Color	A Ø inches (Ø mm)	B Ø inches (Ø mm)	R inches (mm) static	R inches (mm) dyn.	Weight lbs / 100 ft (kg / 100 m)	Pack ft. (m)
EW-PRE-M10/P7	83181252	black	0.33 (8.50)	0.44 (11.20)	0.83 (21.00)	1.81 (46.00)	1.41 (2.1)	164 (50)
EW-PRF-M12/P9	83181254	black	0.39 (9.80)	0.51 (13.00)	0.87 (22.00)	2.01 (51.00)	1.75 (2.6)	164 (50)
EW-PRF-M16/P11	83181256	black	0.47 (12.00)	0.62 (15.80)	1.10 (28.00)	2.68 (68.00)	2.42 (3.6)	164 (50)
EW-PRF-M20/P16	83181258	black	0.62 (15.80)	0.83 (21.00)	1.50 (38.00)	3.74 (95.00)	3.56 (5.3)	164 (50)
EW-PRF-M20/P16S*	83181260	black	0.66 (16.80)	0.83 (21.00)	1.38 (35.00)	3.54 (90.00)	3.76 (5.6)	164 (50)
EW-PRF-M25/P21	83181262	black	0.87 (22.00)	1.12 (28.50)	1.93 (49.00)	4.29 (109.00)	6.45 (9.6)	164 (50)
EW-PRF-M25/P21S*	83181462	black	0.90 (22.90)	1.12 (28.50)	1.73 (44.00)	4.09 (104.00)	6.45 (9.6)	164 (50)
EW-PRF-M32/P29	83181264	black	1.10 (28.00)	1.36 (34.50)	2.64 (67.00)	5.59 (142.00)	8.20 (12.2)	82 (25)
EW-PRF-M32/P29S*	83181464	black	1.14 (28.90)	1.36 (34.50)	2.44 (62.00)	5.20 (132.00)	9.41 (14.0)	82 (25)
EW-PRF-M40/P36	83181266	black	1.42 (36.00)	1.67 (42.50)	3.19 (81.00)	7.52 (191.00)	10.89 (16.2)	82 (25)
EW-PRF-M50/P48	83181268	black	1.83 (46.50)	2.15 (54.50)	4.02 (102.00)	9.33 (237.00)	14.98 (22.3)	82 (25)
EW-PRF-70 Jumbo	83181272	black	2.66 (67.50)	3.15 (80.00)	7.87 (200.00)	15.35 (390.00)	32.25 (48.0)	82 (25)
EW-PRF-95 Jumbo	83181274	black	3.60 (91.50)	4.17 (106.00)	10.43 (265.00)	19.69 (500.00)	53.76 (80.0)	33 (10)
EW-PRE-M10/P7	83181212	grey	0.33 (8.50)	0.44 (11.20)	0.83 (21.00)	1.81 (46.00)	1.41 (2.1)	164 (50)
EW-PRF-M12/P9	83181214	grey	0.39 (9.80)	0.51 (13.00)	0.87 (22.00)	2.01 (51.00)	1.75 (2.6)	164 (50)
EW-PRF-M16/P11	83181216	grey	0.47 (12.00)	0.62 (15.80)	1.10 (28.00)	2.68 (68.00)	2.42 (3.6)	164 (50)
EW-PRF-M20/P16	83181218	grey	0.62 (15.80)	0.83 (21.00)	1.50 (38.00)	3.74 (95.00)	3.56 (5.3)	164 (50)
EW-PRF-M20/P16S*	83181220	grey	0.66 (16.80)	0.83 (21.00)	1.38 (35.00)	3.54 (90.00)	3.76 (5.6)	164 (50)
EW-PRF-M25/P21	83181222	grey	0.87 (22.00)	1.12 (28.50)	1.93 (49.00)	4.29 (109.00)	6.45 (9.6)	164 (50)
EW-PRF-M25/P21S*	83181422	grey	0.90 (22.90)	1.12 (28.50)	1.73 (44.00)	4.09 (104.00)	6.45 (9.6)	164 (50)
EW-PRF-M32/P29	83181224	grey	1.10 (28.00)	1.36 (34.50)	2.64 (67.00)	5.59 (142.00)	8.20 (12.2)	82 (25)
EW-PRF-M32/P29S*	83181424	grey	1.14 (28.90)	1.36 (34.50)	2.44 (62.00)	5.2 (132.00)	9.41 (14.0)	82 (25)
EW-PRF-M40/P36	83181226	grey	1.42 (36.00)	1.67 (42.50)	3.19 (81.00)	7.52 (191.00)	10.89 (16.2)	82 (25)
EW-PRF-M50/P48	83181228	grey	1.83 (46.50)	2.15 (54.50)	4.02 (102.00)	9.33 (237.00)	14.98 (22.3)	82 (25)
EW-PRF-70 Jumbo	83181232	grey	2.66 (67.50)	3.15 (80.00)	7.87 (200.00)	15.35 (390.00)	32.25 (48.0)	82 (25)
EW-PRF-95 Jumbo	83181234	grey	3.60 (91.50)	4.17 (106.00)	10.43 (265.00)	19.69 (500.00)	53.76 (80.0)	33 (10)

* Narrow corrugation



Recommendations for use

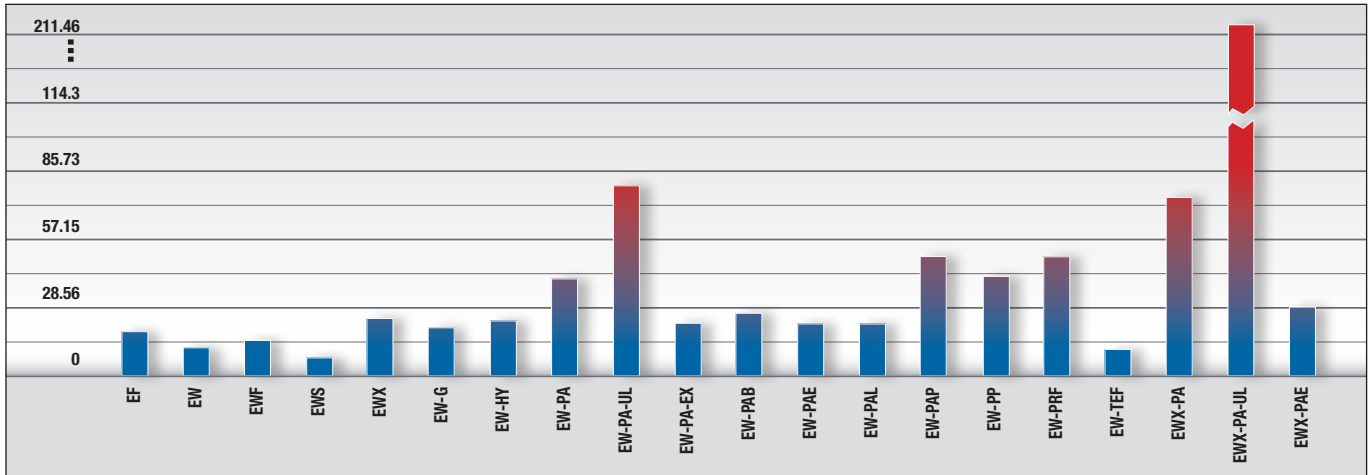
	EF	EW	EW-F	EWS	EWX	EW-G	EW-HY	EW-PA	EW-PA-UL	EW-PA-EX	EW-PAB	EW-PAE	EW-PAL	EW-PAP	EW-PP	EW-PRF	EW-TEF	EWX-PA	EWX-PA-UL	EWX-PAE	GF
Bundling cables		✓	✓	✓	✓																✓
Light mechanical protection	✓	✓	✓	✓		✓											✓				
Medium mechanical protection					✓		✓			✓	✓	✓	✓							✓	
High mechanical protection								✓						✓	✓	✓					
Very high mechanical protection									✓									✓			
Extremely high mechanical protection																			✓		
Persistent movements / dynamic applications (robotically controlled axes)	✓						✓					✓			✓	✓				✓	
Protection against hot solids (e.g. chippings)														✓							
ATEX Guideline 94/9/EG										✓											
UL-listed conduits File No.: E148958								✓	✓		✓					✓			✓		
CSA-listed conduits File No.: 217843								✓	✓		✓										
German railways approval DIN 5510-2									✓		✓					✓					
Approved by French railways NF F 16-101									✓		✓					✓					
Airways approval ABD 0031																✓					
Airways approval FAR 25853																✓					
Very good chemical resistance	✓					✓	✓								✓		✓				
Hygiene applications						✓															
For pre-assembled cables and retrofitting of cables																					
Extreme temperature range																	✓				

Material data

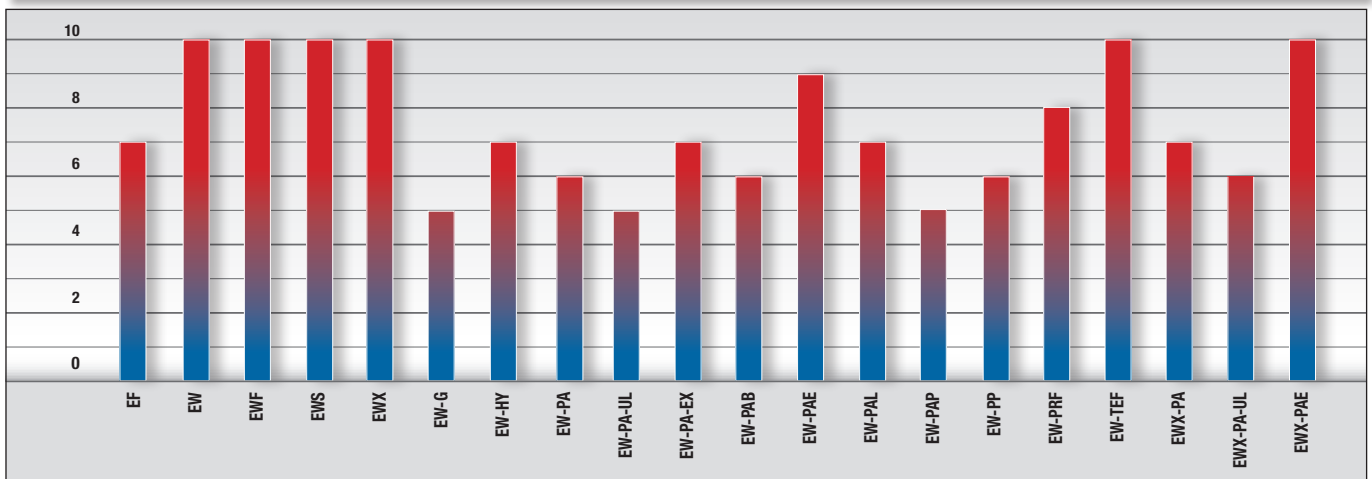
	Material	Temperature area [°F]			Fire specifications UL94	UL 224, type B	Self-extinguishing	UL File number E148958	S4 Fire classification DIN 5510	FMVSS Type A [$<2.95 \text{ in./min}$] type B [$<3.94 \text{ in./min}$]	CSA 217843	Crush resistance / inch EW-M25/P21 / EWX-M25/P21	Halogen-free	Phosphorous-free	Cadmium-free	Asbestos-free	Lead-free	Silicone-free	PWIS-free	RoHS Compliant
		Min.	Max.	Short periods																
EF	Thermoplastic elastomer	-58	320	356	HB							>17.15	✓	✓	✓	✓	✓	✓	✓	✓
EW	Polyethylene	-40	194	248	HB					B		>11.43	✓	✓	✓	✓	✓	✓	✓	✓
EWf	Polyethylene	-40	194	248	V2		✓					>14.29	✓	✓	✓	✓	✓	✓	✓	✓
EWS	Polyethylene	-40	194	248	HB							>5.72	✓	✓	✓	✓	✓	✓	✓	✓
EWX	Polyethylene	-40	194	248	HB					B		>22.86	✓	✓	✓	✓	✓	✓	✓	✓
EW-G	Polypropylene, EPDM	-40	248	302	HB					A		>20.00		✓	✓	✓	✓	✓	✓	✓
EW-HY	Thermoplastic elastomer	-58	320	356	HB					B		>22.86	✓	✓	✓	✓	✓	✓	✓	✓
EW-PA	Polyamide PA6	-40	284	320	HB			✓		B	✓	>40.00	✓	✓	✓	✓	✓	✓	✓	✓
EW-PA-UL	Polyamide PA6	-40	284	320	V0		✓	✓	✓	A	✓	>74.30	✓	✓	✓	✓	✓	✓	✓	✓
EW-PA-EX	Polyamide PA12	-40	230	302	HB					B		>20.00	✓	✓	✓	✓	✓	✓	✓	✓
EW-PAB	Polyamide PA6	-40	284	320	V0		✓	✓	✓	B	✓	>25.72	✓	✓	✓	✓	✓	✓	✓	✓
EW-PAE	Polyamide PA12	-40	248	302	HB					B		>22.86	✓	✓	✓	✓	✓	✓	✓	✓
EW-PAL	Polyamide PA6	-40	284	320	HB					B		>22.86	✓	✓	✓	✓	✓	✓	✓	✓
EW-PAP	Polyamide PA6	-40	284	320	HB					B		>45.72	✓	✓	✓	✓	✓	✓	✓	
EW-PP	Polypropylene	-40	266	302	V2		✓			A		>40.00		✓	✓	✓	✓	✓	✓	✓
EW-PRF	Polyamide PA12	-58	221	302	V0		✓	✓	✓	B		>45.72	✓	✓	✓	✓	✓	✓	✓	✓
EW-TEF	Fluoroplastic	-328	500		V0		✓			A		>11.43	✓	✓	✓	✓	✓	✓	✓	✓
EWX-PA	Polyamide PA6	-40	284	320	HB					B		>74.30	✓	✓	✓	✓	✓	✓	✓	✓
EWX-PA-UL	Polyamide PA6	-40	284	320	V0		✓	✓				>217.17	✓	✓	✓	✓	✓	✓	✓	✓
EWX-PAE	Polyamide PA12	-40	248	302	HB					B		>28.56	✓	✓	✓	✓	✓	✓	✓	✓
GF	Polyamide PA6	-40	302	347		✓	✓			B			✓	✓	✓	✓	✓	✓	✓	



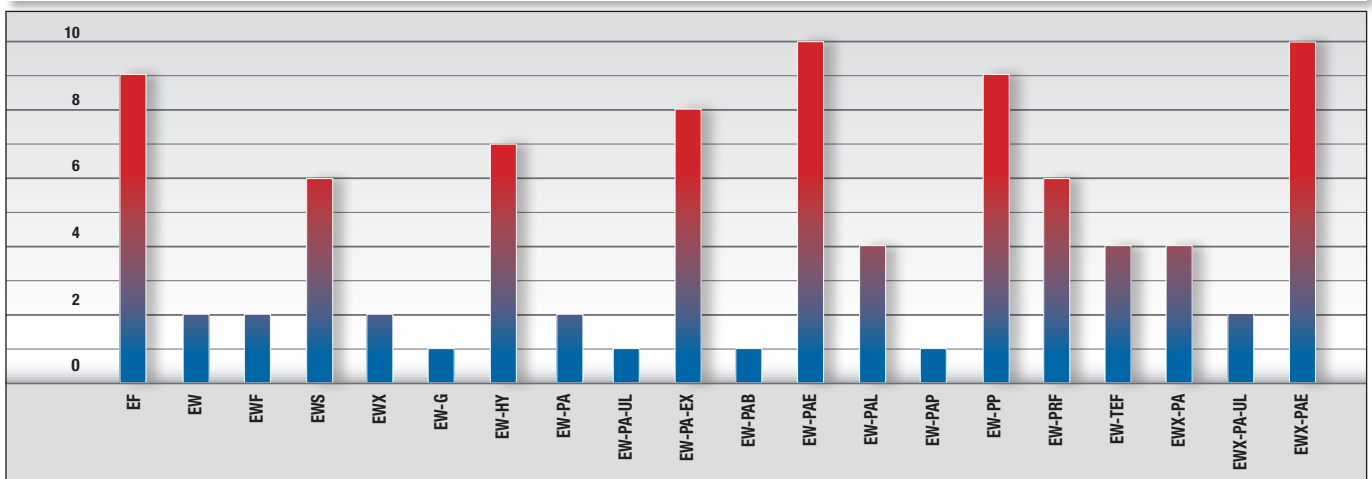
Selection diagrams



Crush resistance [lb_f / inch]

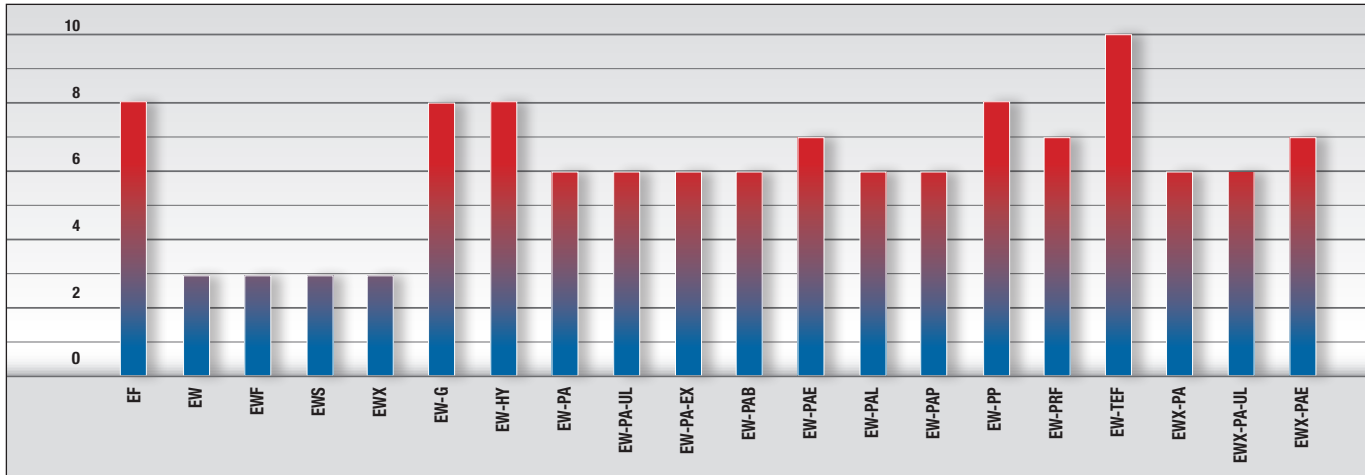


Flexibility

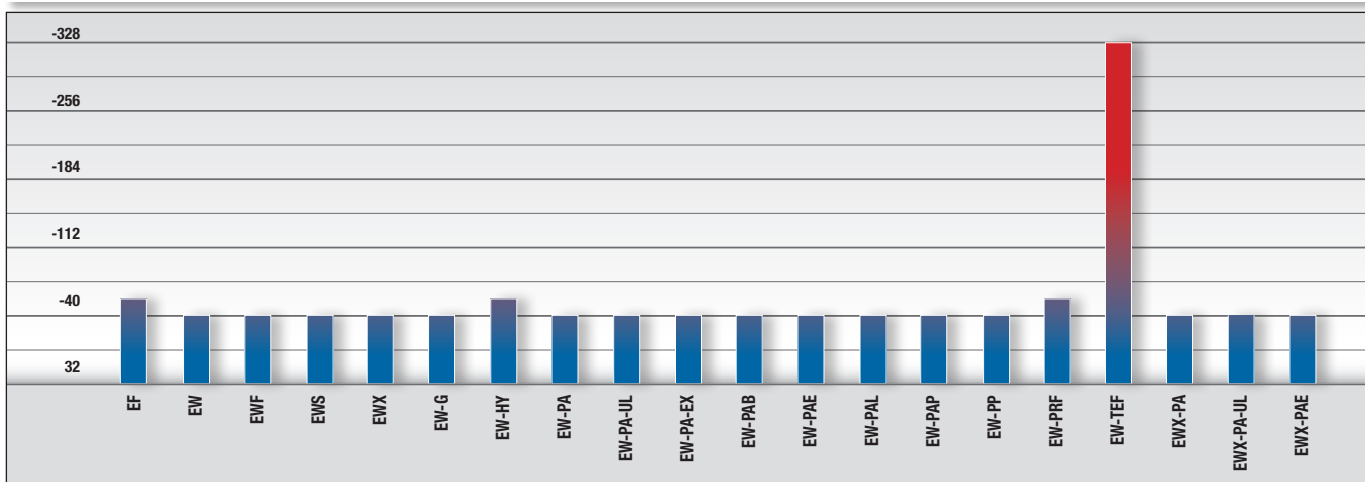


Flexural fatigue strength

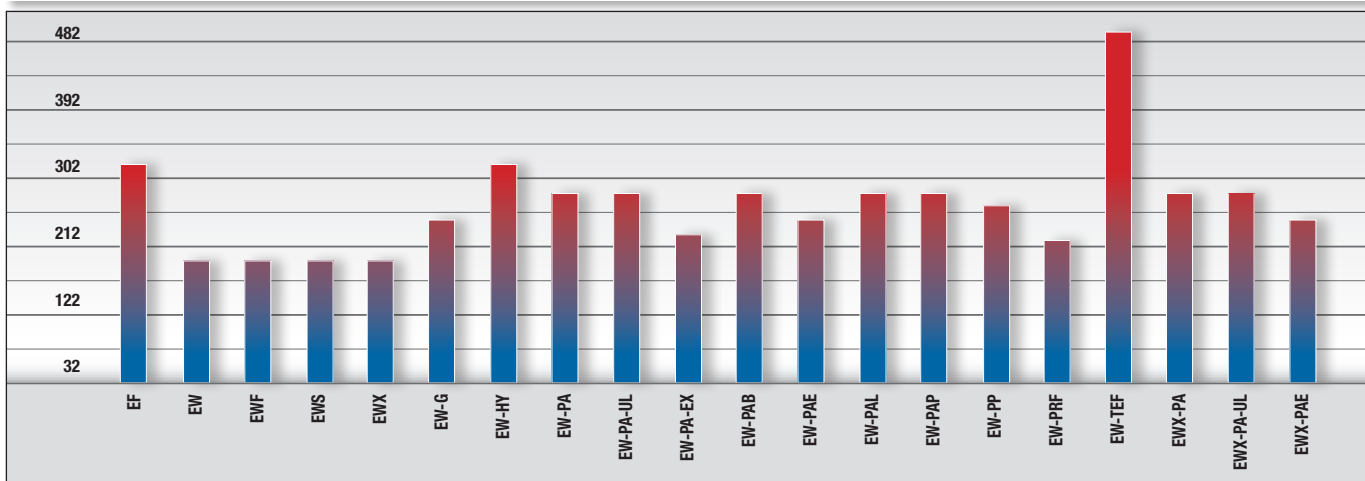
Selection diagrams



Chemical resistance



Lower temperature range [°F]



Higher temperature range [°F]



Combination options

	Conduit fittings up to conduit size M50 / Pg48													
	m-top									m-tec				
	CVG	CWV 45°	CWV 90°	DWV 45°	DWV 90°	IVG	VG	VW 45°	VW 90°	EH	KW	CSKV	ECSKV	MECSKV
EF	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
EW	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EWf	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EWS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EWX	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EW-G	⦿	⦿	⦿	⦿	⦿	⦿	⦿	⦿	⦿	⦿	⦿	⦿	⦿	⦿
EW-HY	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EW-PA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EW-PA-UL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EW-PA-EX	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EW-PAB	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EW-PAE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EW-PAL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EW-PAP	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
EW-PP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EW-PRF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EW-TEF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EWX-PA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EWX-PA-UL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EWX-PAE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GF	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗

✓ combinable

✗ not combinable

⦿ combinable to an extent (remove sheathing)

Combination options

Conduit fittings up to conduit size M50 / Pg48									From NW56		Special		
m-tec			m-fix			Bulkhead fitting			m-Jumbo				
CKW	MCSKV	MCKW	MSV	WSV	KSV	KFW *	KFW/D	KFW/X	SA-Jumbo	KFW-Jumbo	EH-EMV	AT	
✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	EF
✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✗	✓	EW
✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✗	✓	EWf
✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✗	✓	EWS
✓	✓	✓	*	*	*	✓	✗	✓	✓	✓	✗	✓	EWX
⋮	⋮	⋮	⋮	⋮	⋮	✓	⋮	✗	⋮	⋮	✗	⋮	EW-G
✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✗	✓	EW-HY
✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✗	✓	EW-PA
✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✗	✓	EW-PA-UL
✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✗	✓	EW-PA-EX
✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✗	✓	EW-PAB
✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✗	✓	EW-PAE
✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✗	✓	EW-PAL
✗	✗	✗	✗	✗	✗	✗	✗	✗	✓	✓	✓	✗	EW-PAP
✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✗	✓	EW-PP
✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✗	✓	EW-PRF
✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✗	✓	EW-TEF
✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✗	✓	EWX-PA
✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✗	✓	EWX-PA-UL
✓	✓	✓	*	*	*	✓	✗	✓	✓	✓	✗	✓	EWX-PAE
✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	GF

✓ combinable

✗ not combinable

* combinable where extraction forces are low

⋮ combinable to an extent (remove sheathing)

* in connection with an additional conduit or cable fitting