



Robotic equipment

MATERIAL PROPERTIES



Materials used

MECHANICAL PROPERTIES



Protection class



Crush resistance

THERMAL PROPERTIES



Temperature / temperature range

FIRE BEHAVIOUR



Fire classification

GENERAL TECHNICAL DATA



Additional information

APPROVALS AND OPERATING PERMITS



EU railway approval
EN 45545-2



CSA approval



cULus-approval



cURus-approval



VDE-approval



EX-approval



ROBI-approval

TECHNICAL INFORMATION



Halogen-free
DIN 53474



UV-resistant

CONFORMITY



RoHS (EC Directive 2002/95/EC)

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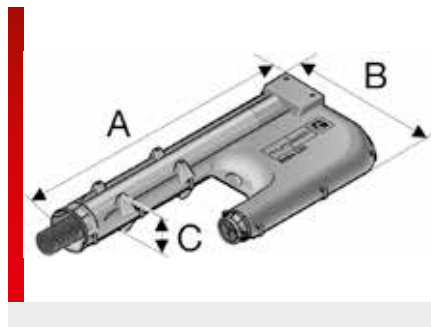
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R-Tec Box

R-Tec Box



PRODUCT INFORMATION

With their R-Tec Box design, Murrplastik has succeeded in creating a new system for optimum management of energy packages from axis 3 to axis 6 of industrial robots. In this specially designed housing with the unique, integrated spring return system, the energy packet is transported safely and

effectively in a low-wear manner within the smallest space.

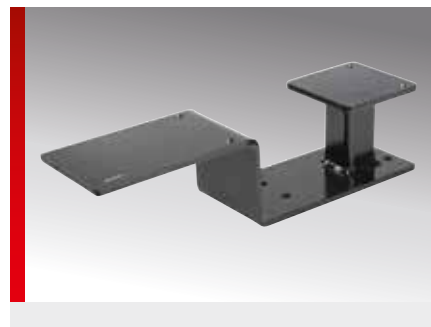
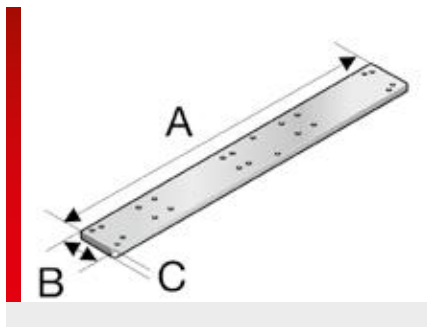
SPECIFICATIONS


 -40.00 – 284.00 °F
 short term 320.00 °F

 Mod. polypropylene

Type	Order No.	Color	Suitable for conduit type EW-PAE	Suitable for conduit type EWX-PAE	A inch	B inch	C inch	Stroke inch	Pack qty.
R-Tec Box-S EW 29 MP - 35N	83692693	Black	M32/P29		19.96	11.22	4.33	10.63	1
R-Tec Box-S EWX 29 MP - 35N	83692695	Black		M32/P29	19.96	11.22	4.33	10.63	1
R-Tec Box-S EW 36 MP - 35N	83692696	Black	M40/P36		19.96	11.22	4.33	10.63	1
R-Tec Box-S EWX 36 MP - 35N	83692697	Black		M40/P36	19.96	11.22	4.33	10.63	1
R-Tec Box EW 36 MP - 80N	83692650	Black	M40/P36		28.74	13.50	5.43	15.75	1
R-Tec Box EWX 36 MP - 80N	83692652	Black		M40/P36	28.74	13.50	5.43	15.75	1
R-Tec Box EW 48 MP - 100N	83692654	Black	M50/P48		28.74	13.50	5.43	15.75	1
R-Tec Box EWX 48-KB MP - 100N	83692633	Black		M50/P48	28.74	13.50	5.43	15.75	1
R-Tec Box EW 48 MP - 120N	83692664	Black	M50/P48		28.74	13.50	5.43	15.75	1
R-Tec Box EWX 48 MP - 120N	83692665	Black		M50/P48	28.74	13.50	5.43	15.75	1
R-Tec Box EW/EWX 56 MP - 200N	83692658	Black	56 Jumbo	56 Jumbo	36.91	16.93	6.93	23.62	1
R-Tec Box EW/EWX 70-KB MP - 200N	83692662	Black	70 Jumbo	70 Jumbo	36.91	16.93	6.93	23.62	1

System plate for R-Tec Box



PRODUCT INFORMATION

System plate for mounting a R-Tec Box on axis 3. Adapted to production series of various manufacturers.
The listed system plates are examples only.
Contact us for the proper size for you.

SPECIFICATIONS

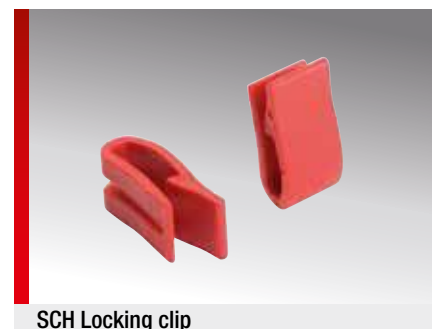
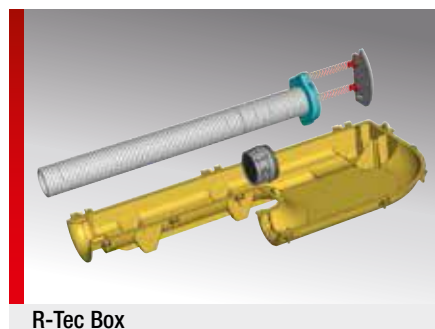


Powder coated sheet steel



Type	Order No.	Color	Pack qty.
A3 Kuka KR6 base plate	83692751	Black	
Kuka KR16 base plate	83692750	Black	1
Kuka KR16 L base plate	83692777	Black	1
Kuka KR30 - KR60 base plate	83692757	Black	1
Kuka KR30 - KR60 L base plate	83692776	Black	1
Kuka Quantec/series 2000 base plate	83692620	Black	1
Kuka KR1000 base plate	83692785	Black	1
Base plate ABB IRB series 1600	83692762	Black	1
R-Tec Box, ABB IRB 4400 base plate	82390027	Black	1
Base plate ABB IRB series -1.85	83692763	Black	1
Base plate ABB series 4600	83692625	Black	1
Base plate ABB series 6400	83692623	Black	1
ABB 6600/6640/6650/6700 series base plate	83692622	Black	1
Base plate ABB IRB series 6620	83692627	Black	1
R-Tec Box, ABB IRB 6640 base plate	82390028	Black	1
Base plate ABB IRB series 7600	83692764	Black	1
R-Tec Box Fanuc M710 base plate	82390043	Black	1
Fanuc M-900 base plate	83692755	Black	1
Fanuc M-900iA350/600 base plate	83692624	Black	1
Base plate Fanuc series 2000 iB/iA	83692621	Black	1
Motoman HD20 base plate	83692761	Black	1
Motoman MH50 base plate	83692628	Black	1
Motoman MH50-35 base plate	83692772	Black	1
Motoman MS165, MH165 base plate	83692629	Black	1

Replacement parts for R-Tec Box



PRODUCT INFORMATION

Replacement parts for R-Tec Box

Type	Order No.	Color	Pack qty.
Spring set			
Spring Set 29/36 35N ¹⁾	83692679	Silver	1
Spring Set 36/48 80N ¹⁾	83692685	Silver	1
Spring Set 36/48 100N ¹⁾	83692686	Silver	1
Spring Set 36/48 120N ¹⁾	83692687	Silver	1
Spring Set 56/70 200N ¹⁾	83692688	Silver	1
Position markers for EW, EW-LS, EWT and EWX			
Position marker - set 36	83692690	Green / yellow / red	1
Position marker - set 48	83692692	Green / yellow / red	1
Position marker - set 56	83692694	Green / yellow / red	1
Position marker - set 70	83692698	Green / yellow / red	1
Slider set			
Slider-Set R-Tec Box-S EW 29 ²⁾	83692671	Black	1
R-Tec Box-S EWX 29 slider set ²⁾	83692673	Black	1
Slider-Set R-Tec Box-S EW 36 ²⁾	83692675	Black	1
R-Tec Box-S EWX 36 slider set ²⁾	83692677	Black	1
Slider set EW 36 ²⁾	83692670	Black	1
Slider set EWX 36 ²⁾	83692672	Black	1
Slider set EW 48 ²⁾	83692674	Black	1
Slider set EWX 48 ²⁾	83692676	Black	1
Slider set EW/EWX 56 ²⁾	83692678	Black	1
Slider set EW/EWX 70 ²⁾	83692680	Black	1
Mounting set			
Set 29/36 mounting set ³⁾	83692681	-	1
Set 36/48 mounting set ³⁾	83692682	-	1

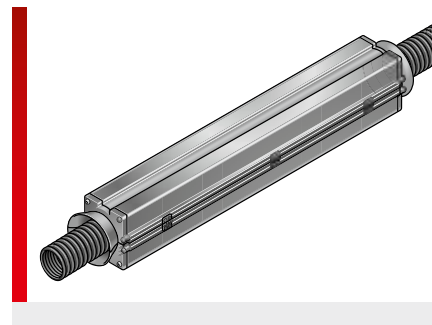
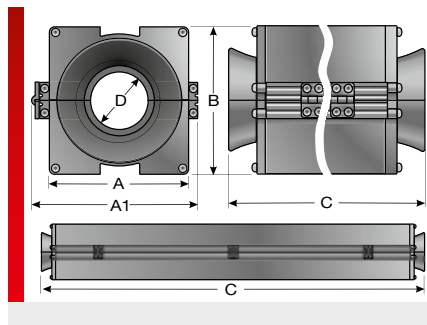
Type	Order No.	Color	Pack qty.
Set 56/70 mounting set ³⁾	83692684	-	1
Thread bushing			
ELH 8s bushing	83692630	Gold	6
Suitable for R-Tec Box-S 29/36 & R-Tec Box 36/48			
ELH 12s bushing	83692632	Gold	6
Suitable for R-Tec Box 56/70 and R-Tec Liner 56/70			
Wear ring for R-Tec Box			
Wear ring R-Tec Box M40/M50	83692715	Black	1
Wear ring R-Tec Box NW 56/70	83692716	Black	1
Locking clip for manual opening for SH system holder... as well as R-Tec Box			
SCH locking clip, rt	83980022	Red	10
Robotic opening tool			
Robotic opening tool	83980312	Red	1
for opening the locking clip at the SH system holder... as well as the R-Tec Box			

²⁾ consisting of: 1x slider incl. mounting material

³⁾consisting of: ELH bushing, cover caps and mounting material



R-Tec Liner



PRODUCT INFORMATION

The R-Tec Liner is Murrplastik's innovation for a new linear system supplying optimum guidance for energy packets from axis 3 to axis 6 on industrial robots. Inside the specially manufactured aluminum housing with the integrated and patented spring return system the energy packet is guided in a low-wearing and effective manner.

- extremely strong aluminum housing
- the system can be installed without base plate on selected robots
- compact design
- highest holding times
- quick and easy replacement of the dress-pack
- closed system; the guidance system is protected from ingress of dirt
- preferred for conduit harnesses from axis 1-6

SPECIFICATIONS

	-40.00 – 284.00 °F short term 320.00 °F
	Aluminum Mod. polypropylene
	Acc. to UL94 V2



Type	Order No.	Color	Suitable for conduit type EW-PAE	Suitable for conduit type EWX-PAE	A inch	A1 inch	B inch	C inch	Stroke inch	Pack qty.
R-Tec Liner 350mm EW/EWX 56 ¹⁾	83693076	Black	NW 56	56 Jumbo	5.91	7.68	5.91	25.79	13.78	1
R-Tec Liner 550mm EW/EWX 56 ¹⁾	83693078	Black	NW 56	56 Jumbo	5.91	7.68	5.91	33.66	21.65	1
R-Tec Liner 350mm EW/EWX 70 ¹⁾	83693080	Black	NW 70	70 Jumbo	5.91	7.68	5.91	25.79	13.78	1
R-Tec Liner 550mm EW/EWX 70 ¹⁾	83693082	Black	NW 70	70 Jumbo	5.91	7.68	5.91	33.66	21.65	1
R-Tec Liner 350mm EW/EWX 80 – 200N ¹⁾	83693084	Black	NW 80	80 Jumbo	6.89	8.46	7.28	25.79	13.78	1
R-Tec Liner 550mm EW/EWX 80 – 200N ¹⁾	83693086	Black	NW 80	80 Jumbo	6.89	8.46	7.28	33.66	21.65	1
R-Tec Liner 350mm EW/EWX 95 – 200N ¹⁾	83693088	Black	NW 95	95 Jumbo	6.89	8.46	7.28	25.79	13.78	1
R-Tec Liner 550mm EW/EWX 95 – 200N ¹⁾	83693090	Black	NW 95	95 Jumbo	6.89	8.46	7.28	33.66	21.65	1

¹⁾System plates of R-Tec Box 56/70 will fit R-Tec Liner 56/70 as well as R-Tec Liner 80/95

Replacement parts for R-Tec Liner

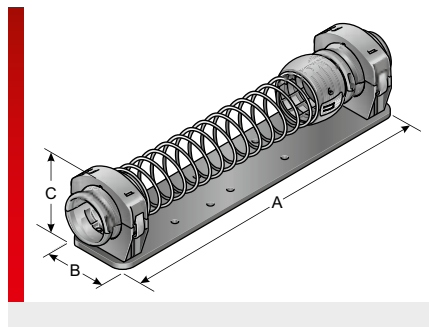


PRODUCT INFORMATION

Type	Order No.	Color	Suitable for conduit type EW-PAE	Suitable for conduit type EWX-PAE	A inch	B inch	Pack qty.
Spring set							
Spring set 56/70 200N, 350MM ¹⁾	83693006	Silver					1
Spring Set 56/70 200N ¹⁾	83692688	Silver					1
Suitable for R-Tec Liner EW/EWX 56							
EW/EWX 56 R-Tec Liner slider	83693022	Black	NW 56	56 Jumbo			1
EW/EWX 70 R-Tec Liner slider	83693020	Black	NW 70	70 Jumbo			1
EW/EWX 80 R-Tec Liner slider	83693021	Black	NW 80	80 Jumbo			1
EW/EWX 95 R-Tec Liner slider	83693023	Black	NW 95	95 Jumbo			1
Suitable for R-Tec Liner EW/EWX 56 and R-Tec Liner EW/EWX70							
TRO R-Tec Liner 56/70	83693036	Black					1
TRO R-Tec Liner 80/95	83693035	Black					1
Position markers for EW, EW-LS, EWT and EWX							
Position marker - set 56	83692694	Green / yellow / red			2.33	0.07	1
Position marker - set 70	83692698	Green / yellow / red			2.78	0.07	1
Position marker - set 80	83692733	Green / yellow / red			3.25	0.07	1
Position marker - set 95	83692737	Green / yellow / red			3.74	0.07	1

¹⁾ consisting of: 2x tension spring incl. mounting material

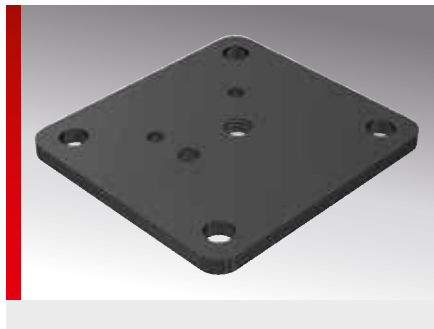
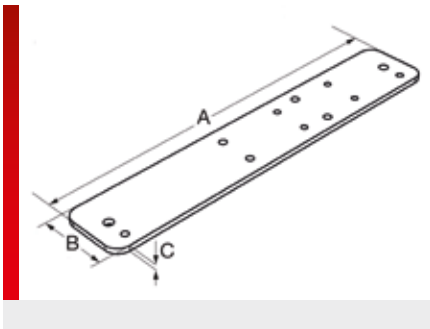
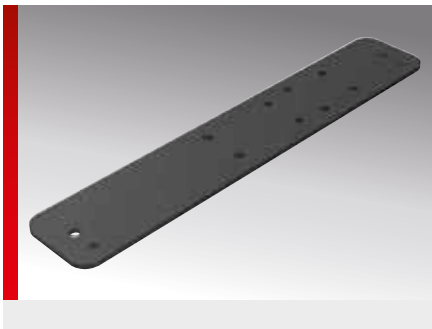




As long as the hole pattern fits, the recirculation system can be mounted directly on the robot or attached with spacer sleeves. If the hole pattern does not match, an additional adapter plate will be necessary for the installation.

Type	Order No.	Color	A inch	B inch	C inch	Pack qty.
EW 21 - 20N Recirculation system	83692721	Black	11.42	2.85	2.76	1
EW 21 - 20N recirculation system	83692722	Black	11.42	2.85	2.76	1
EW 29 - 20N Recirculation system	83692723	Black	11.42	2.85	2.76	1
EW 29 - 20N recirculation system	83692724	Black	11.42	2.85	2.76	1

Recirculation system, system plate 21/29



PRODUCT INFORMATION

System plate for holding the recirculation system. Adapted to production series of various manufacturers.
Contact us for the correct system plate for you!

SPECIFICATIONS

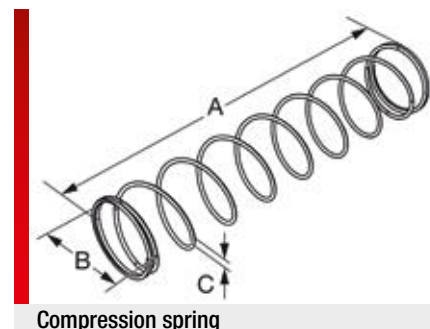
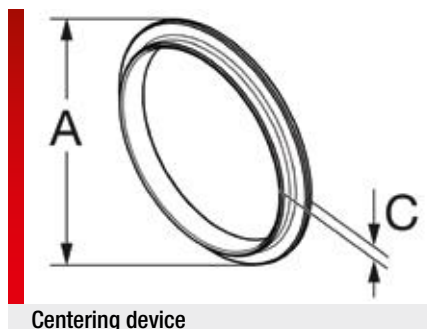
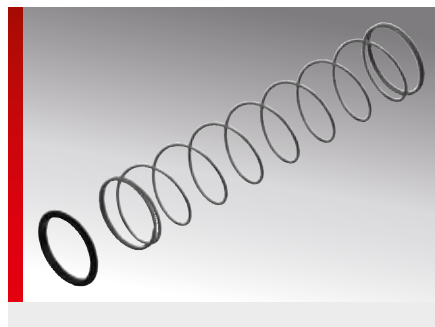
 Aluminum

Type	Order No.	Color	A inch	B inch	C inch	Pack qty.
A3 Fanuc M20iA adapter plate	83692759	Anodized black	2.56	2.36	0.16	1
Kuka KR10 R 1100 base plate ¹⁾	83692760	Anodized black	11.02	1.97	0.16	1

¹⁾ serves as mounting base plate for recirculation systems 21/29 (pre-assembled)

Recirculation system 21/29, replacement parts



PRODUCT INFORMATION

Replacement parts for the M25/M32 recirculation system

[illegible]



Flexible support system

FHS-SH support bracket



PRODUCT INFORMATION

The FHS-SH fixes the proven SH-P M25-M32 system holder without tools and without much effort to nearly any small robots and cobots.
For smaller cable packages and low to medium travel speed, this is the way to provide secure hold and maximum flexibility for the applications. The respective protective conduits can be installed fixed, sliding in

axial direction or with strain relief by using additional system components in M25 or M32 sizes.

Optional accessories:

- KEG/ZL - strain relief with cable ties
- KEG/K - strain relief with cable star
- KMG/G - sliding channel guide
- KMG/F - axial channel guide

SPECIFICATIONS



Mod. polyamide
Mod. polypropylene
Thermoplastic elastomer



Type	Order No.	Color	Length of Velcro tape inch	Pack qty.
FHS-SH 350	83693423	Black / Red	13.78	1
FHS-SH 450	83693425	Black / Red	17.72	1
FHS-SH 550	83693427	Black / Red	21.65	1
FHS-SH 750	83693429	Black / Red	29.53	1
FHS-SH Set ¹⁾	83693422	Black / Red	13.78 – 29.53	1

¹⁾Set with 4 Velcro tapes

FHS-C support bracket



PRODUCT INFORMATION

The FHS-C has been designed for the direct insertion of cords or protective conduits. The Velcro tape has a slip-resistant coating and wraps around the cable packet as well as the robot. The variable lengths of Velcro tape and the special contour of the base element makes the system exceptionally well suited for assemblies on a variety of robot models and machine components.

- low interference contour
- saves space
- low weight
- secure hold, even on conical surfaces
- quick fit, without pre-drilling
- quick routing adjustment is possible during implementation

SPECIFICATIONS

 Polypropylene (PP)
Thermoplastic elastomer

Advantages:

Type	Order No.	Color	Length of Velcro tape inch	Pack qty.
FHS-C 350	83693443	Black / Red	13.78	1
FHS-C 450	83693445	Black / Red	17.72	1
FHS-C 550	83693447	Black / Red	21.65	1
FHS-C 750	83693449	Black / Red	29.53	1
FHS-C Set ¹⁾	83693442	Black / Red	13.78 – 29.53	1

¹⁾ Set with 4 Velcro tapes

FHS-UHE support bracket



FHS-UHE on UR5

PRODUCT INFORMATION

The FHS-UHE makes fixing the cable protection conduit quick and possible without tools. The conduit is fixed with especially low cable wear for light, dynamic applications and without axial movement of the attachment.

The specially coated Velcro tape and the unique shape of the base element gives the system a tight fit on almost any contour. This makes the FHS-UHE suitable for nearly all small robot cable routings.

- Advantages:
- no additional components required
 - especially gentle on cables
 - secure hold, even on conical surfaces
 - quick fit, without pre-drilling
 - quick routing adjustment is possible during implementation

SPECIFICATIONS



Mod. polyamide PA 6
Polypropylene (PP)
Thermoplastic elastomer



Type	Order No.	Color	Length of Velcro tape inch	Pack qty.
Suitable for Murrflex EW and EWX				
FHS-UHE M32/P29 350	83693466	Black / Red	13.78	1
FHS-UHE M32/P29 450	83693467	Black / Red	17.72	1
FHS-UHE M32/P29 550	83693468	Black / Red	21.65	1
FHS-UHE M32/P29 750	83693469	Black / Red	29.53	1
FHS-UHE M32/P29 ¹⁾	83693465	Black / Red	13.78 – 29.53	1

¹⁾ Set with 4 Velcro tapes

Robotics kit



FHS-C on UR5



PRODUCT INFORMATION

Sets, especially designed for cable routing on robots of the Universal Robots Company. The configuration includes protective cable conduit, end sleeves and the matching attachments using the relevant FHS-C. The protective cable conduit slotted LS version is ideal for the installation of pre-assembled cables.

The set offers a lowest possible interference contour for a low risk of damage.

Optional accessories:

- R-SSR - tension clamp for axis 6
- SH-P M25-M32 - system holder
- KEG/ZL or KEG/K - strain relief

SPECIFICATIONS

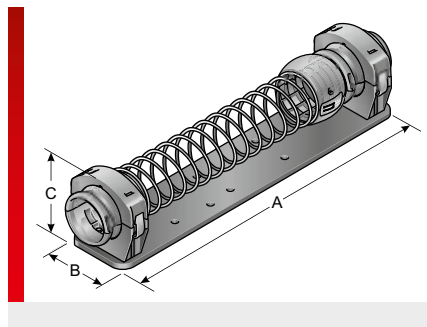


Polypropylene (PP)
Thermoplastic elastomer
Mod. polyamide



Type	Order No.	Color	Pack qty.
Fixing kit for Universal Robot UR3			
FHS-C-Set UR3	83693480	Black / Red	1
Set consists of: 2m EWX-PP-LS M25/P21, 3x FHS-C incl. Velcro tape, 2x end sleeves, 1x wire insertion tool			
FHS-SH-Set UR3	83693491	Black / Red	1
Set consists of: 2m EWX-PP-LS M25/P21, 2x FHS-SH incl. Velcro tape, 1x end grommet, 1x strain relief, 1x tension clamp axis 6, 1x wire insertion tool			
Fixing kit for Universal Robot UR5			
FHS-C-Set UR5	83693482	Black / Red	1
Set consists of: 2m EWX-PP-LS M32/P29, 4x FHS-C incl. Velcro tape, 2x end sleeves, 1x wire insertion tool			
FHS-UHE-Set UR5	83693489	Black / Red	1
Set consists of: 2m EWX-PP-LS M32/P29, 4x FHS-UHE incl. Velcro tape, 2x end grommet, 1x wire insertion tool			
FHS-SH-Set UR5	83693492	Black / Red	1
Set consists of: 2m EWX-PP-LS M32/P29, 3x FHS-SH incl. Velcro tape, 1x end grommet, 1x strain relief, 1x tension clamp axis 6, 1x wire insertion tool			
FHS-RS-Set UR5	83693495	Black / Red	1
Set consists of: 2m EWX-PP-LS M32/P29, 1x- spring-return mechanism, 1x FHS-SH incl. Velcro tape, 1x end grommet, 1x strain relief, 1x tension clamp axis 6, 1x wire insertion tool			
Fixing kit for Universal Robot UR10			
FHS-C-Set UR10	83693484	Black / Red	1
Set consists of: 3.5m EWX-PP-LS M32/P29, 5x FHS-C incl. Velcro tape, 2x end sleeves, 1x wire insertion tool			
FHS-UHE-Set UR10	83693490	Black / Red	1
Set consists of: 3.5m EWX-PP-LS M32/P29, 5x FHS-UHE incl. Velcro tape, 2x end grommet, 1x wire insertion tool			
FHS-SH-Set UR10	83693493	Black / Red	1
Set consists of: 3.5m EWX-PP-LS M32/P29, 5x FHS-UHE incl. Velcro tape, 1x end grommet, 1x strain relief, 1x tension clamp axis 6, 1x wire insertion tool			
FHS-RS-Set UR10	83693496	Black / Red	1
Set consists of: 3.5 m EWX-PP-LS M32/P29, 1x- spring-return mechanism, 2x FHS-UHE incl. Velcro tape, 1x end grommet, 1x strain relief, 1x tension clamp axis 6, 1x wire insertion tool			

FHS Recirculation system 21/29



PRODUCT INFORMATION

The recirculation system is a simple and space-saving system and can handle a length adjustment of 5.91 in (150 mm). The system is very suitable for small robots, such as UR3, UR5 & UR10 of Universal Robots.

The recirculation system can be mounted directly on the robot with FHS-Velcro holders.

SPECIFICATIONS

 -40.00 – 230.00 °F
 Mod. polyamide PA 6
 Base plate: Aluminum
 Spring Steel
 Acc. to UL94 V0

[illegible]



Advantages:

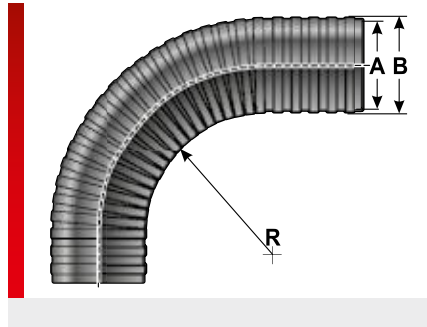
- tool-free installation
- secure grip without slipping
- no restriction of sensitive cables
- no risk of damage due to sharp edges

 Polypropylene (PP)
coated with anti-slip layer
Mod. polyamide PA 6

[illegible]



Type EW-PAE



PRODUCT INFORMATION

The EW-PAE cable protection conduits are made of specially modified polyamide 12. The material is halogen, phosphor and cadmium-free.

The EW-PAE cable protection conduits are characterized by excellent flexibility, flexural fatigue strength and good crush resistance.

For extremely dynamic applications involving medium mechanical loads.

Applications:

- Robotics
- Handling systems
- In energy chains

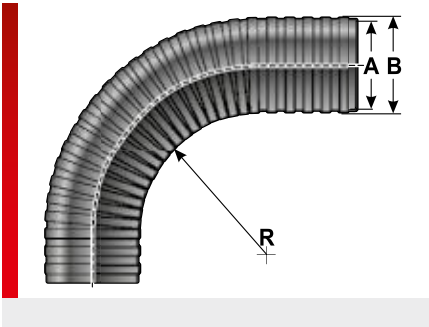
SPECIFICATIONS

-  -40.00 – 248.00 °F
short term 302.00 °F
-  Mod. polyamide PA 12
-  Acc. to UL94 HB
-  In conformity with
IEC EN 61386: > 500 N



Type	Order No.	Color	A Ø inch	B Ø inch	R stat. inch	R dyn. inch	Weight lbs/100ft	Pack ft.
Standard corrugation								
EW-PAE-06	83181650	Black	0.26	0.39	0.59	1.57	1.21	164.04
EW-PAE-M10/P7	83181652	Black	0.33	0.45	0.79	1.77	1.41	164.04
EW-PAE M12/P09, 200m	83988262	Black	0.38	0.50	0.83	2.01	1.88	656.17
EW-PAE-M12/P9	83181654	Black	0.38	0.50	0.83	2.01	1.88	164.04
EW-PAE-M16/P11	83181656	Black	0.47	0.61	1.10	2.68	2.55	164.04
EW-PAE-M20/P16	83181658	Black	0.61	0.82	1.42	2.76	3.9	164.04
EW-PAE M20/P16, 200m	83988263	Black	0.61	0.82	1.42	2.76	3.9	656.17
EW-PAE-M25/P21	83181660	Black	0.86	1.11	1.93	4.29	6.38	164.04
EW-PAE-M32/P29	83181662	Black	1.09	1.35	2.64	5.59	8.47	82.02
EW-PAE M32/P29, 200m	83988264	Black	1.09	1.35	2.64	5.59	8.47	656.17
EW-PAE-M40/P36	83181664	Black	1.37	1.65	3.19	7.52	11.42	82.02
EW-PAE-M50/P48	83181666	Black	1.85	2.13	4.02	9.33	15.32	82.02
EW-PAE-56 Jumbo	83181678	Black	2.20	2.65	4.33	12.20	26.88	82.02
EW-PAE-70 Jumbo	83181680	Black	2.65	3.11	7.87	15.35	32.25	82.02
EW-PAE-80 Jumbo	83181681	Black	3.11	3.66	8.66	17.32	41.66	49.21
EW-PAE-95 Jumbo	83181682	Black	3.53	4.13	10.43	19.69	55.77	32.81
EW-PAE-06 ¹⁾	83181610	Gray	0.26	0.39	0.59	1.57	1.34	164.04
EW-PAE-M10/P7	83181612	Gray	0.33	0.45	0.79	1.77	1.41	164.04
EW-PAE-M12/P9	83181614	Gray	0.38	0.50	0.83	2.01	1.75	164.04
EW-PAE-M16/P11	83181616	Gray	0.47	0.61	1.10	2.68	2.42	164.04
EW-PAE-M20/P16	83181618	Gray	0.61	0.82	1.42	2.76	3.9	164.04
EW-PAE-M25/P21	83181620	Gray	0.86	1.11	1.93	4.29	6.38	164.04
EW-PAE-M32/P29	83181622	Gray	1.09	1.35	2.64	5.59	8.47	82.02
EW-PAE-M40/P36	83181624	Gray	1.37	1.65	3.19	7.52	11.42	82.02

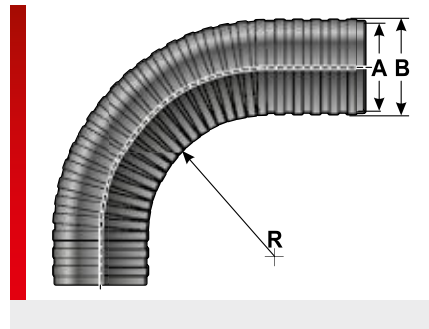
Type EW-PAE (Continued...)



Type	Order No.	Color	A Ø inch	B Ø inch	R stat. inch	R dyn. inch	Weight lbs/100ft	Pack ft.
EW-PAE-M50/P48	83181626	Gray	1.85	2.13	4.02	9.33	15.32	82.02
EW-PAE-56 Jumbo ¹⁾	83181638	Gray	2.20	2.65	4.33	12.20	23.52	82.02
EW-PAE-70 Jumbo ¹⁾	83181640	Gray	2.65	3.12	7.87	15.35	37.63	82.02
EW-PAE-95 Jumbo ¹⁾	83181642	Gray	3.53	4.17	10.43	19.69	53.76	32.81

¹⁾ No stock goods, delivery time and minimum order quantities upon request

Type EWX-PAE (high corrugation)



PRODUCT INFORMATION

The EWX-PAE cable protection conduits are made of specially modified polyamide 12. The material is halogen, phosphor and cadmium-free.

With its excellent flexural fatigue strength, this product is ideal for robot technology and in the area of handling systems. For extremely dynamic applications involving medium to high mechanical loads.

The EWX-PAE cable protection conduits have a higher corrugation and feature the following advantages:

- Very good flexibility
- Excellent flexural fatigue strength
- Less wear
- Good crush resistance

SPECIFICATIONS

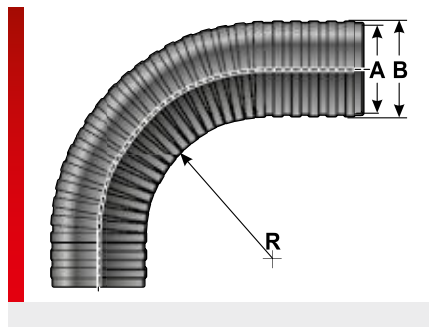
	-40.00 – 248.00 °F short term 302.00 °F
	Mod. polyamide PA 12
	Acc. to UL94 HB
	In conformity with IEC EN 61386: > 1200 N



Type	Order No.	Color	A Ø inch	B Ø inch	R stat. inch	R dyn. inch	Weight lbs/100ft	Pack ft.
High corrugation								
EWX-PAE-M25/P21	83182058	Black	0.72	1.11	1.93	4.09	8.74	164.04
EWX-PAE-M32/P29	83182060	Black	0.90	1.34	2.24	4.61	14.78	82.02
EWX-PAE-M40/P36	83182062	Black	1.13	1.67	2.80	5.75	18.82	82.02
EWX-PAE-M50/P48	83182064	Black	1.44	2.11	3.43	6.57	24.19	82.02
EWX-PAE-56 Jumbo	83182078	Black	2.06	2.67	3.74	8.66	26.88	82.02
EWX-PAE-70 Jumbo	83182080	Black	2.52	3.16	4.53	9.25	37.63	82.02
EWX-PAE-70 Jumbo	83182084	Black	2.52	3.16	4.53	9.25	34.94	360.89
EWX-PAE-80 Jumbo	83182081	Black	2.99	3.65	7.68	14.96	44.35	49.21
EWX-PAE-95 Jumbo	83182082	Black	3.47	4.15	8.66	17.72	62.16	32.81
EWX-PAE-M25/P21	83182018	Gray	0.72	1.11	1.93	4.09	7.39	164.04
EWX-PAE-M32/P29	83182020	Gray	0.90	1.34	2.24	4.61	14.78	82.02
EWX-PAE-M40/P36 ¹⁾	83182022	Gray	1.13	1.67	2.80	5.75	18.82	82.02
EWX-PAE-M50/P48 ¹⁾	83182024	Gray	1.44	2.11	3.43	6.57	24.19	82.02
EWX-PAE-70 Jumbo ¹⁾	83182040	Gray	2.52	3.16	4.53	9.25	37.63	82.02

¹⁾No stock goods, delivery time and minimum order quantities upon request

Type EWX-PAE-LS (high corrugation)



PRODUCT INFORMATION

The EWX-PAE-LS cable protection conduits are made of specially modified polyamide 12. The material is halogen, phosphor and cadmium-free.

With its excellent flexural fatigue strength, this product is ideal for robot technology and in the area of handling systems. For installation of pre-assembled cables, retrofitting or repair of cables. For dynamic applications involving light to medium mechanical loads.

The EWX-PAE-LS cable protection conduits have a higher corrugation and feature the following advantages:

- Very good flexibility
- Excellent flexural fatigue strength
- Less wear
- Good crush resistance
- Subsequent installation possible

SPECIFICATIONS

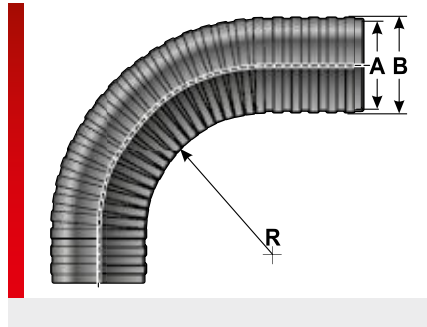
	-40.00 – 248.00 °F short term 302.00 °F
	Mod. polyamide PA 12
	Acc. to UL94 HB



Type	Order No.	Color	A Ø inch	B Ø inch	R stat. inch	R dyn. inch	Weight lbs/100ft	Pack ft.
High corrugation								
EWX-PAE-LS-M20/P16	83182256	Black	0.52	0.83	1.42	3.03	4.03	164.04
EWX-PAE-LS-M25/P21	83182258	Black	0.76	1.11	1.93	4.09	7.39	164.04
EWX-PAE-LS-M32/P29	83182260	Black	0.91	1.36	2.24	4.61	9.41	82.02
EWX-PAE-LS-M40/P36	83182262	Black	1.12	1.66	2.80	5.75	12.23	82.02
EWX-PAE-LS-M50/P48	83182264	Black	1.44	2.11	3.43	6.57	16.13	82.02
EWX-PAE-LS-56 Jumbo ¹⁾	83182278	Black	2.04	2.67	3.74	8.66	26.88	82.02
EWX-PAE-LS-70 Jumbo	83182280	Black	2.53	3.16	4.53	9.25	34.94	82.02

¹⁾ No stock goods, delivery time and minimum order quantities upon request

Type EW-HY



PRODUCT INFORMATION

The EW-HY cable protection conduits are made of specially modified thermoplastic elastomer. The material is halogen, phosphor and cadmium-free and is also heat and hydrolysis stabilized.

The EW-HY cable protection conduits are characterized by outstanding flexibility, flexural fatigue strength and good crush resistance.

This product is ideal for use in handling systems and robot technology, because of its excellent flexural fatigue strength. For dynamic applications involving low to medium mechanical loads.

Applications:

- Robotics
- Handling systems

SPECIFICATIONS

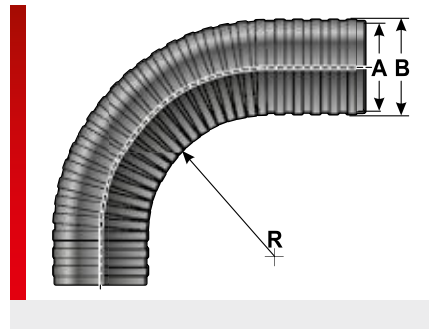
-  -49.00 – 320.00 °F
short term 356 °F
-  Thermoplastic elastomer
-  Acc. to UL94 HB
-  In conformity with
IEC EN 61386: > 500 N



Type	Order No.	Color	A Ø inch	B Ø inch	R stat. inch	R dyn. inch	Weight lbs/100ft	Pack ft.
Standard corrugation								
EW-HY-06	83121048	Black	0.25	0.39	0.71	1.57	1.61	164.04
EW-HY-M12/P9	83121050	Black	0.37	0.50	0.83	2.01	2.15	164.04
EW-HY-M16/P11	83121052	Black	0.48	0.61	1.10	2.68	2.69	164.04
EW-HY-M20/P16S	83121054	Black	0.66	0.81	1.50	3.74	4.7	164.04
EW-HY-M25/P21	83121056	Black	0.86	1.10	1.93	4.29	8.06	164.04
EW-HY-M32/P29	83121058	Black	1.09	1.35	2.64	5.59	11.42	82.02
EW-HY-M40/P36	83121060	Black	1.39	1.66	3.19	7.52	14.11	82.02
EW-HY-M50/P48	83121062	Black	1.86	2.10	4.02	9.33	18.82	82.02
EW-HY-70 Jumbo	83121066	Black	2.61	3.13	5.51	12.99	34.61	82.02
EW-HY-95 Jumbo	83121070	Black	3.54	4.13	5.91	15.75	60.48	32.81
EW-HY-M12/P9 ¹⁾	83121010	Gray	0.37	0.50	0.83	2.01	1.88	164.04
EW-HY-M16/P11	83121012	Gray	0.48	0.61	1.10	2.68	2.69	164.04
EW-HY-M25/P21	83121016	Gray	0.86	1.10	1.93	4.29	8.06	164.04
EW-HY-M32/P29	83121018	Gray	1.09	1.35	2.64	5.59	11.42	82.02
EW-HY-M40/P36	83121020	Gray	1.39	1.66	3.19	7.52	14.11	82.02
EW-HY-M50/P48	83121022	Gray	1.86	2.10	4.02	9.33	19.82	82.02
EW-HY-70 Jumbo	83121026	Gray	2.61	3.13	5.51	12.99	34.61	82.02
EW-HY-95 Jumbo	83121030	Gray	3.54	4.13	5.91	15.75	60.48	32.81
Narrow corrugation								
EW-HY-M20/P16S	83121014	Gray	0.66	0.81	1.50	3.74	4.57	164.04

¹⁾ Min. order quantity 8202 ft (2100 m)

Type EWX-HY (high corrugation)



PRODUCT INFORMATION

The EWX-HY cable protection conduits are made of specially modified thermoplastic elastomer. The material is halogen, phosphor and cadmium-free and is also heat and hydrolysis stabilized.

The EWX-HY cable protection conduits are characterized by outstanding flexibility,

flexural fatigue strength and good crush resistance. With its excellent flexural fatigue strength, this product is ideal for use in handling systems and robot technology. For dynamic applications involving low to medium mechanical loads.

SPECIFICATIONS

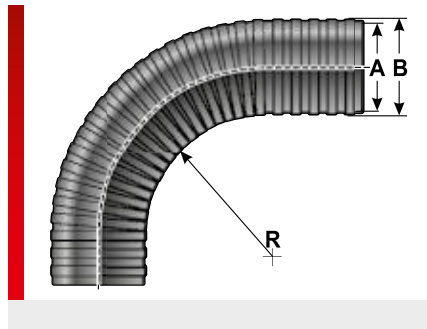
	-49.00 – 320.00 °F short term 356 °F
	Thermoplastic elastomer
	Acc. to UL94 HB
	In conformity with IEC EN 61386: > 900 N



Type	Order No.	Color	A Ø inch	B Ø inch	R stat. inch	R dyn. inch	Weight lbs/100ft	Pack ft.
High corrugation								
EWX-HY-M25/P21	83121258	Black	0.73	1.09	1.93	4.09	8.74	164.04
EWX-HY-M32/P29	83121260	Black	0.91	1.35	2.24	4.61	11.76	82.02
EWX-HY-M40/P36	83121262	Black	1.14	1.67	2.80	5.75	18.82	82.02
EWX-HY-M50/P48	83121264	Black	1.45	2.11	3.43	6.57	20.43	82.02
EWX-HY-56 Jumbo	83121278	Black	2.09	2.67	3.74	8.66	30.24	82.02
EWX-HY-70 Jumbo	83121280	Black	2.54	3.17	5.51	12.99	42.33	82.02
EWX-HY-95 Jumbo ¹⁾	83121282	Black	3.58	4.15	5.91	15.75	59.81	32.81

¹⁾ Min. order quantity 131.23 ft (40 m)

Type EWX-HY-LS (high corrugation)



PRODUCT INFORMATION

The EWX-HY-LS cable protection conduits are made of specially modified thermoplastic elastomer. The material is halogen, phosphor and cadmium-free.

With its excellent flexural fatigue strength, this product is ideal for robot technology and in the area of handling systems. For installation of pre-assembled cables, retrofitting or repair of cables. For dynamic applications involving light to medium mechanical loads.

The EWX-HY-LS cable protection conduits have a higher corrugation and feature the following advantages:

- Very good flexibility
- Excellent flexural fatigue strength
- Less wear
- Good crush resistance
- Subsequent installation possible

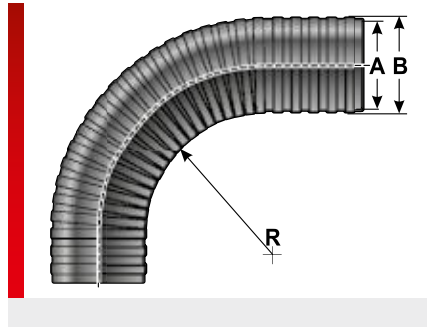
SPECIFICATIONS

	-49.00 – 320.00 °F short term 356 °F
	Thermoplastic elastomer
	Acc. to UL94 HB
	
	
	
	

Type	Order No.	Color	A Ø inch	B Ø inch	R stat. inch	R dyn. inch	Weight lbs/100ft	Pack ft.
High corrugation								
EWX-HY-LS-M25/P21	83122258	Black	0.78	1.11	1.93	4.09	7.73	164.04
EWX-HY-LS-M32/P29	83122260	Black	0.95	1.36	2.24	4.61	11.76	82.02
EWX-HY-LS-M40/P36	83122262	Black	1.17	1.66	2.80	5.75	14.78	82.02
EWX-HY-LS-M50/P48	83122264	Black	1.50	2.13	3.43	6.57	20.43	82.02
EWX-HY-LS-56 Jumbo ¹⁾	83122278	Black	2.05	2.68	3.74	8.66	30.24	82.02
EWX-HY-LS-70 Jumbo ¹⁾	83122282	Black	2.52	3.15	4.53	9.25	42.33	82.02

¹⁾ No stock goods, delivery time and minimum order quantities upon request

Type EW-PRF



PRODUCT INFORMATION

The EW-PRF cable protection conduits are made of specially modified polyamide 12. The material is halogen, phosphor and cadmium-free. The conduits are suitable for dynamic applications involving medium to high mechanical loads. The EW-PRF cable protection conduits are used both in robotics engineering as well as in the aviation industry.

They feature the following advantages:

- High flexibility
- Excellent impact strength
- Excellent self-extinguishing properties
- Very low levels of smoke gas

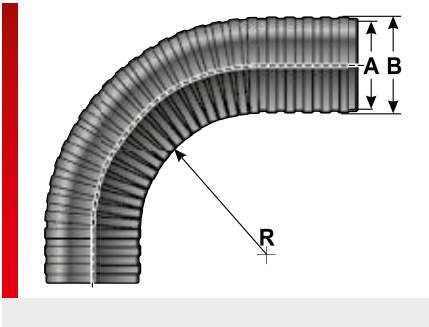
SPECIFICATIONS

-  -40.00 – 221 °F
short term 302.00 °F
-  Mod. polyamide PA 12
-  Acc. to UL94 V2 self-extinguishing
-  In conformity with
IEC EN 61386: > 1100 N



Type	Order No.	Color	A Ø inch	B Ø inch	R stat. inch	R dyn. inch	Weight lbs/100ft	Pack ft.
Standard corrugation								
EW-PRF-M10/P7	83181252	Black	0.33	0.46	0.83	1.81	1.34	164.04
EW-PRF-M12/P9	83181254	Black	0.39	0.51	0.87	2.01	1.68	164.04
EW-PRF-M16/P11	83181256	Black	0.46	0.63	1.10	2.68	2.42	164.04
EW-PRF-M20/P16	83181258	Black	0.61	0.83	1.50	3.74	3.7	164.04
EW-PRF-M25/P21	83181262	Black	0.85	1.12	1.93	4.29	6.72	164.04
EW-PRF-M32/P29	83181264	Black	1.10	1.36	2.64	5.59	8.06	82.02
EW-PRF-M40/P36	83181266	Black	1.38	1.67	3.19	7.52	11.42	82.02
EW-PRF-M50/P48	83181268	Black	1.85	2.14	4.02	9.33	15.46	82.02
EW-PRF-70 Jumbo	83181272	Black	2.69	3.15	7.87	15.35	29.57	82.02
EW-PRF-95 Jumbo ¹⁾	83181274	Black	3.52	4.18	10.43	19.69	54.09	32.81
Gray								
EW-PRF-M10/P7	83181212	Gray	0.33	0.46	0.83	1.81	1.41	164.04
EW-PRF-M12/P9 ¹⁾	83181214	Gray	0.39	0.51	0.87	2.01	1.68	164.04
EW-PRF-M16/P11 ¹⁾	83181216	Gray	0.46	0.63	1.10	2.68	2.42	164.04
EW-PRF-M20/P16 ¹⁾	83181218	Gray	0.61	0.83	1.50	3.74	3.9	164.04
EW-PRF-M25/P21	83181222	Gray	0.85	1.12	1.93	4.29	6.38	164.04
EW-PRF-M32/P29	83181224	Gray	1.10	1.36	2.64	5.59	8.06	82.02
EW-PRF-M40/P36 ¹⁾	83181226	Gray	1.38	1.67	3.19	7.52	11.09	82.02
EW-PRF-M50/P48 ¹⁾	83181228	Gray	1.85	2.14	4.02	9.33	15.46	82.02
EW-PRF-70 Jumbo ¹⁾	83181232	Gray	2.69	3.15	7.87	15.35	32.25	82.02
EW-PRF-95 Jumbo ¹⁾	83181234	Gray	3.52	4.18	10.43	19.69	54.43	32.81
Narrow corrugation								
EW-PRF-M20/P16S	83181260	Black	0.66	0.83	1.38	3.54	3.76	164.04
EW-PRF-M25/P21S ¹⁾	83181462	Black	0.91	1.11	1.73	4.09	6.72	164.04

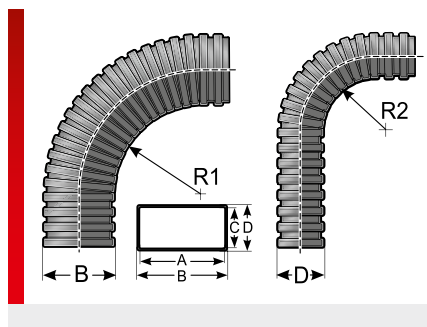
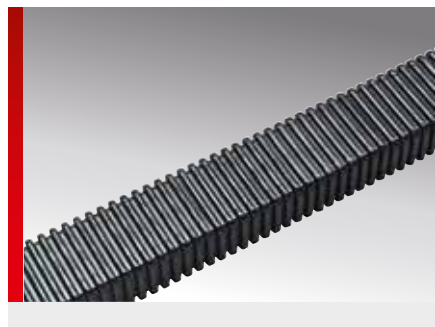
Type EW-PRF (Continued...)



Type	Order No.	Color	A Ø inch	B Ø inch	R stat. inch	R dyn. inch	Weight lbs/100ft	Pack ft.
EW-PRF-M32/P29S	83181464	Black	1.12	1.35	2.44	5.20	9.41	82.02
EW-PRF-M20/P16S ¹⁾	83181220	Gray	0.66	0.83	1.38	3.54	3.76	164.04
EW-PRF-M25/P21S ¹⁾	83181422	Gray	0.91	1.11	1.73	4.09	6.38	164.04
EW-PRF-M32/P29S ¹⁾	83181424	Gray	1.12	1.35	2.44	5.20	9.41	82.02

¹⁾ No stock goods, delivery time and minimum order quantities upon request

Type EF (rectangular conduit)



PRODUCT INFORMATION

The rectangular Energoflex EF cable protection conduits are made of specially modified thermoplastic elastomer. The material is halogen, phosphor and cadmium-free. The Energoflex EW cable protection conduits are characterized by excellent flexibility and good flexural fatigue strength. With its rectangular shape, the EF conduit can be used as a cost-effective alternative to energy chains.

For dynamic applications involving light to medium mechanical loads in mechanical and plant engineering.

Advantages of the Energoflex include:

- Little relative movement of the cords
- Low-wear interior
- Simultaneous traversing in multiple axes possible
- Higher stability compared to a conduit

System affiliation:

- Holder EF/B 26/42
- Flange connection FL-EF 26042

SPECIFICATIONS

	-49.00 – 320.00 °F short term 356 °F
	Thermoplastic elastomer
	Acc. to UL94 HB
	In conformity with IEC EN 61386: 1000 N

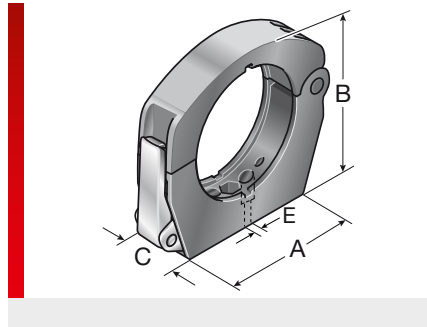


Type	Order No.	Color	A inch	B inch	C inch	D inch	R1 stat./dyn. inch	R2 stat./dyn. inch	Weight lbs/100ft	Pack ft.
EF 26042	83361012	Black	1.65	1.97	1.02	1.34	4.33 / 12.6	2.36 / 4.72	14.78	9.84



Fastening element

SH system holder



PRODUCT INFORMATION

The SH system holder is the optimally aligned main component which, especially in conjunction with MurrFlex cable protection conduits and the inlays, is able to promise excellent performance in terms of stability, operational flexibility and durability, even under high dynamic loads.

The SH 56/70 & SH 56/70-M system holder is made of a modified, impact resistant polyamide, whereas the SH 56/70-A is made of black anodized aluminum.

- Suitable for initial equipment, subsequent installations or repairs.
- Excellent system stability
- Easy assembly of inlays and the cable protection conduit without tools
- Suitable for 4 different inserts/inlays
- Simple and easy configuration for dynamic or rigid applications
- Cost reduction – only one system holder for every application
- Versatile mounting options

SPECIFICATIONS

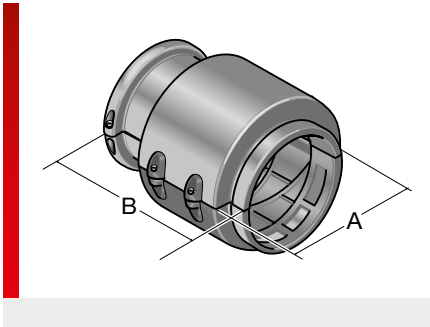
	-40.00 – 230.00 °F short term 284.00 °F
	Type SH : Mod. polyamide Type SH ... -M: Mod. polyamide Type SH ... -A: Aluminum
	Acc. to UL94 V0



Type	Order No.	Color	A inch	B inch	C inch	E inch	Pack qty.
System holder without continuous fin							
SH-P / M25-M32	83691462	Black	2.87	2.44	1.02	0.34	1
SH-P / M40-M50	83691460	Black	4.11	3.54	1.30	0.35	1
SH 56/70	83691490	Black	5.31	4.72	1.30	0.35	1
SH 80/95	83691506	Black	5.91	5.79	1.57	0.35	1
System holder with continuous fin							
SH-F / M40-M50	83691450	Black	4.11	3.54	1.30	0.35	1
SH-PF / M40-M50 ¹⁾	83691470	Black	4.11	3.54	1.30	0.35	1
System holder with metal closing							
SH M40/M50-M	83691501	Black	4.65	3.54	1.30	0.35	1
SH 56/70-M	83691502	Black	5.31	4.72	1.30	0.35	1
System holder made of aluminum							
SH M40/M50-A	83691503	Anodized black	4.11	3.54	1.18	0.35	1
SH 56/70-A	83691504	Anodized black	5.12	4.76	1.38	0.35	1
Conduit holder inlay							
ELR M40-M50	83691480	Red					1

¹⁾ Continuous fin type ELR, included loose

KEG-AK telescopic joint



PRODUCT INFORMATION

The extendible KEG/AK telescopic joint makes a length adjustment of approx. 1.18 in 30 mm possible. The conduit connection piece can be pivoted by approx. 20° in all directions and can therefore adapt to the dresspack movements.

If used in conjunction with the strain-relief systems ZS-70 or ZS-70-KB it provides optimum wear protection, even when using heavy media packages.

SPECIFICATIONS

 -40.00 – 230.00 °F

 Mod. polyamide

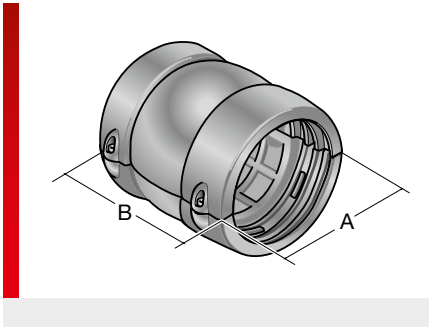
 Acc. to UL94 V0

Type	Order No.	Color	Suitable for Murrflex	Suitable for System holder	Version	A inch	B inch	Pack qty.
KEG/AK-70 ¹⁾	83692480	Black	NW70	SH 56/70	divisible	4.13	4.72	1

¹⁾ Tightening torque 1.5Nm

KEG/K ball bearing



with SH and V-ZLT-70

PRODUCT INFORMATION

The KEG-K is used wherever cables or cords exit from the cable protection conduit. The type KEG-K ball joint, which can be installed into the SH system holder easily and quickly, is the optimum fit for cords, cables and conduit throughputs; especially because its integratable strain relief is freely configurable to the needs of the application.

The KEG-K is the ideal connection of the Murrflex cable protection conduit to the SH system holder. The cables are sealed and strain is relieved at the same time.

SPECIFICATIONS


-40.00 – 230.00 °F


Mod. polyamide


Acc. to UL94 V0

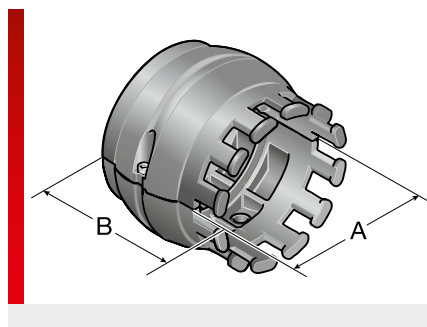




Type	Order No.	Color	Suitable for Murrflex	Suitable for System holder	Version	A inch	B inch	Pack qty.
KEG/K-M25	83692458	Black	M25/P21	SH-P / M25-M32	divisible	1.83	1.91	1
KEG/K-M32	83692460	Black	M32/P29	SH-P / M25-M32	divisible	1.83	1.91	1
KEG/K-M40	83692462	Black	M40/P36	SH-P / M40-M50	divisible	2.76	2.64	1
KEG/K-M50	83692464	Black	M50/P48	SH-P / M40-M50	divisible	2.76	2.64	1
KEG/K-56 ¹⁾	83692466	Black	NW56	SH 56/70	divisible	3.96	4.82	1
KEG/K-70 ¹⁾	83692468	Black	NW70	SH 56/70	divisible	3.96	4.82	1
KEG/K-80 sw ¹⁾	83692470	Black	NW80	SH 80/95	divisible	4.96	6.69	1
KEG/K-95 sw ¹⁾	83692472	Black	NW95	SH 80/95	divisible	4.96	6.69	1

¹⁾ Tightening torque 1.5Nm

KEG/ZL ball bearing



PRODUCT INFORMATION

The KEG-ZL is used wherever cords or cables exit from the cable protection conduit with strain relief.

The detachably connected type KEG-ZL ball joint with integrated strain relief can easily and quickly be placed into the SH system holder and thus connected to the Murrflex cable protection conduits and the robot.

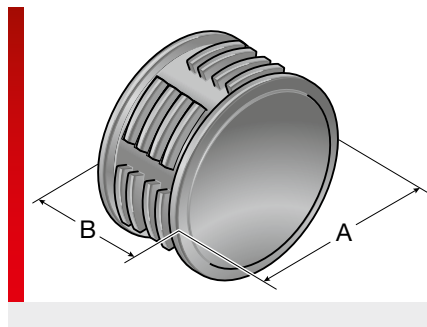
The cords, conduits and cables are connected to the integrated strain relief with cable ties.

SPECIFICATIONS

 -40.00 – 230.00 °F
 Mod. polyamide
 Acc. to UL94 V0

Type	Order No.	Color	Suitable for Murrflex	Suitable for System holder	Version	A inch	B inch	Pack qty.
KEG/ZL-M25	83692258	Black	M25/P21	SH-P / M25-M32	divisible	1.67	1.52	1
KEG/ZL-M32	83692260	Black	M32/P29	SH-P / M25-M32	divisible	1.67	1.52	1
KEG/ZL-M40	83692262	Black	M40/P36	SH-P / M40-M50	divisible	2.72	2.22	1
KEG/ZL-M50	83692264	Black	M50/P48	SH-P / M40-M50	divisible	2.72	2.22	1

Strain relief cable star



ZS-70-KB

PRODUCT INFORMATION

The cable star grommet is the optimum and most cord friendly strain relief for your cables, also offering the highest degree of tear-out resistance. The elongated KB version is fastened with an additional conduit clamp to facilitate even extreme loads. Another benefit of the cable star grommet is its preventive properties against the ingress of contamination into the dresspack.

Simply drill holes of the appropriate cable diameter into the R-ZL.
Or, with a minimum order of 10 pieces, we can produce your customized hole pattern, using our waterjet technology.
Talk to us!

SPECIFICATIONS

	-40.00 – 230.00 °F
	Elastomer
	Acc. to UL94 HB
	
	
	

Type	Order No.	Color	Suitable for System holder	A inch	B inch	Pack qty.
Strain relief as blank for do-it-yourself assembly						
R-ZL/N1 21/29 ¹⁾	83951606	Black		1.32	0.71	1
R-ZL/N1 36/48 ¹⁾	83951610	Black		2.17	0.71	1
V-ZLT-70 ²⁾	83692802	Black		3.25	1.54	1
V-ZLT-70KB ²⁾	83692804	Black		3.25	2.62	1
V-ZLT-95 ⁴⁾	83692830	Black		4.02	1.54	1
V-ZLT-95KB ⁴⁾	83692832	Black		4.02	2.60	1
Strain relief system						
ZS-70 ³⁾	83692806	Black	SH 56/70	3.97	2.38	1
ZS-70-KB ³⁾	83692808	Black	SH 56/70	3.97	3.36	1
ZS-95 stain relief system ³⁾	83692834	Black	SH 80/95	4.02	2.24	1
ZS-95-KB stain relief system ³⁾	83692836	Black	SH 80/95	4.02	3.23	1

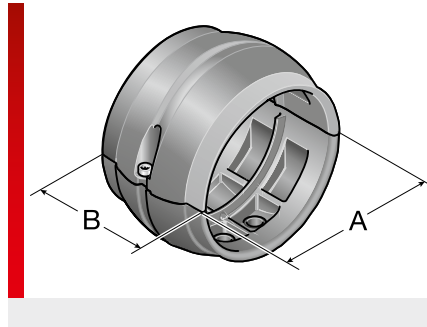
¹⁾ suitable for KEG-K M25 and KEG-K M32

²⁾ suitable for KEG-K 56 and KEG-K 70

³⁾ Tightening torque 1.5Nm

⁴⁾ suitable for KEG-K 80 and KEG-K 95

KMG/F ball bearing - SRF conduit ring



PRODUCT INFORMATION

The KMG/F and SRF have been designed for robot applications and other moving handling equipment.

The SH system holder can be mounted easily and quickly in the detachably connected inlays and is the perfect fit for fixing Murrflex cable protection conduits.

The KMG-F and SRF are made of especially modified polyamide.

The special advantages of the KMG-F center ball joint and of the SRF hose ring are:

- Suitable for conversions or subsequent installation
- May be used statically fixed (KMG-F + SRF) or detachable at the axis (KMG-F)
- Long service life
- easy assembly and disassembly
- Murrflex cable protection conduits are firmly fastened and are therefore securely routed

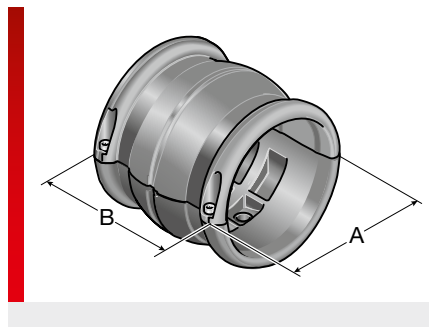
SPECIFICATIONS

	-40.00 – 230.00 °F short term 284.00 °F
	Mod. polyamide
	Acc. to UL94 V0



Type	Order No.	Color	Suitable for Murrflex	Suitable for System holder	Version	A inch	B inch	Pack qty.
Center ball joint (fixed) for fastening cable protection conduits								
KMG-F-M25	83691658	Black	M25/P21	SH-P / M25-M32	divisible	1.67	1.08	1
KMG-F-M32	83691660	Black	M32/P29	SH-P / M25-M32	divisible	1.67	1.08	1
KMG-F-M40	83691662	Black	M40/P36	SH M40-M50	divisible	2.72	1.73	1
KMG-F-M50	83691664	Black	M50/P48	SH M40-M50	divisible	2.72	1.73	1
Set consists of KMG/F + SH-P M40/M50								
Set KMG-F-M40	83691663	Black	M40/P36		divisible	2.72	1.73	1
Set KMG-F-M50	83691665	Black	M50/P48		divisible	2.72	1.73	1
Hose ring (fixed) for fastening cable protection conduits								
SRF-M40/P36 ¹⁾	83692288	Black	M40/P36	SH 56/70	divisible	3.52	1.06	1
SRF-M50/P48 ¹⁾	83692289	Black	M50/P48	SH 56/70	divisible	3.52	1.06	1
SRF-56	83692290	Black	NW56	SH 56/70	divisible	3.52	1.06	1
SRF-68	83692291	Black	NW68	SH 56/70	divisible	3.52	1.06	1
SRF-70	83692292	Black	NW70	SH 56/70	divisible	3.52	1.06	1
SRF-80 sw	83692294	Black	NW80	SH 80/95	divisible	4.69	1.81	1
SRF-95 sw	83692296	Black	NW95	SH 80/95	divisible	4.69	1.81	1
Set consist of SRF + SH 56/70								
Set SRF-68	83692246	Black	NW68		divisible	3.52	1.06	1

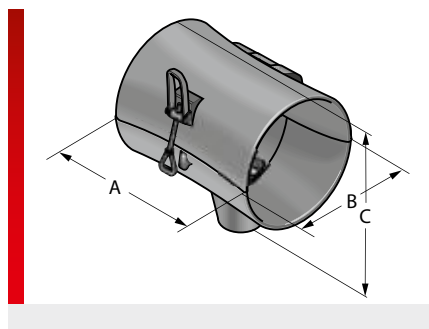
¹⁾ * mainly developed for use in the R-Tec Box-36/48 for continuous laying of a Murrplastik corrugated conduit.



is moving in the longitudinal direction. This makes the KMG-G the perfect fastening system of the Murrflex cable protection conduits to the SH system holder. Therefore lines and cords can be routed and protected with absolute process protection and length adaptability, even in highly dynamic applications.

	-40.00 – 230.00 °F
	Mod. polyamide
	Acc. to UL94 V0

Type	Order No.	Color	Suitable for Murrflex	Suitable for System holder	Version	A inch	B inch	Pack qty.
KMG/G-M25	83691858	Black	M25/P21	SH-P / M25-M32	divisible	1.67	1.42	1
KMG/G-M32	83691860	Black	M32/P29	SH-P / M25-M32	divisible	1.67	1.42	1
KMG/G-M40	83691862	Black	M40/P36	SH-P / M40-M50	divisible	2.76	2.76	1
KMG/G-M50	83691864	Black	M50/P48	SH-P / M40-M50	divisible	2.76	2.76	1

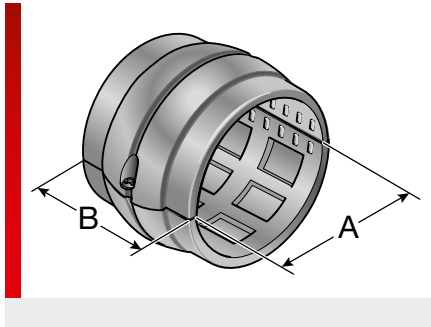


SPECIFICATIONS

 -40.00 – 230.00 °F
 Mod. polyamide PA 6
 Acc. to UL94 V0

[illegible]

KMG-F H ball bearing



PRODUCT INFORMATION

The detachably connected KMG/F-H is the perfect fixation for coiled heat conduits. Our ball joint can be placed into the SH-system holder quickly and easily and is mostly used for robot applications and other smaller handling equipment.

This way your heat conduits are routed and protected for any application with absolute process safety.

SPECIFICATIONS


-40.00 – 230.00 °F


Mod. polyamide


Acc. to UL94 V0





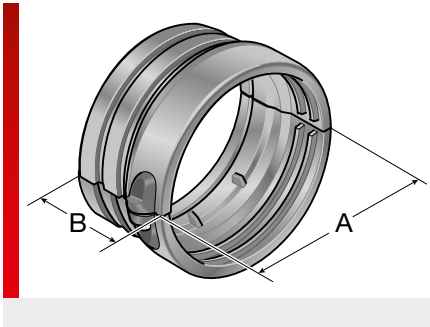
Type	Order No.	Color	Suitable for System holder	Version	A inch	B inch	Pack qty.
KMG-F H45/13	83691670	Black	SH-P / M40-M50	divisible	1.80	1.73	1
KMG-F H55/16	83691672	Black	SH-P / M40-M50	divisible	2.18	1.73	1
KMG-F H66/25	83691674	Black	SH 56/70	divisible	2.62	1.77	1
KMG-F H45/13 set ¹⁾	83691602	Black		divisible			1
KMG-F H55/16 set ²⁾	83691604	Black		divisible			1
KMG-F H66/25 set ³⁾	83691606	Black		divisible			1

¹⁾ Set consists of KMG-F H45/13 and SH M40/M50

²⁾ Set consists of KMG-F H55/16 and SH M40/M50

³⁾ Set consists of KMG-F H 66/25 and SH 56/70

A-RS conduit adapter



PRODUCT INFORMATION

The A-RS conduit adapter is intended for corrugated tubes from third party manufacturers that may have different diameters. They facilitate secure maneuvering at the robot arm with optimum hold.

SPECIFICATIONS

-40.00 – 230.00 °F

Mod. polyamide

Acc. to UL94 V0

RoHS

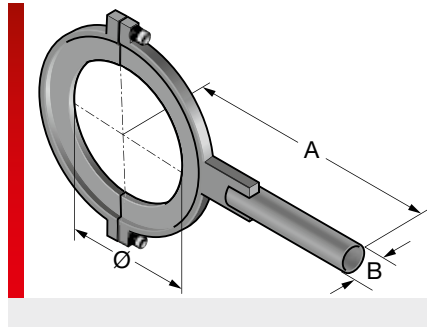
HF



Type	Order No.	Color	Suitable for Murrflex	Version	A inch	B inch	Pack qty.
A-RS-56 sw ¹⁾	83692280	Black	NW52	divisible	4.04	1.81	1
A-RS-70 sw ¹⁾	83692282	Black	NW70	divisible	4.04	1.81	1

¹⁾Tightening torque 1.5Nm

Tension clamp (axis 6)



with FKE 32 and SH 56/70-M

PRODUCT INFORMATION

The R-SSR wrist support serves to provide a fixing point on axis 6. Additional fastening elements can be affixed to the wrist support as required.

SPECIFICATIONS



Powder coated sheet steel

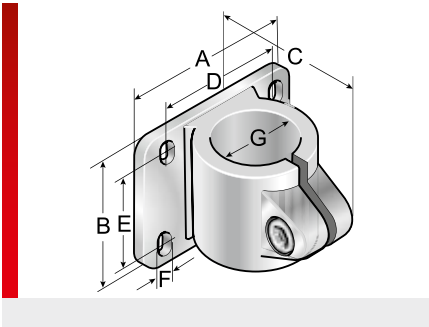


Type	Order No.	Color	Ø inch	A inch	B inch	Pack qty.
Kuka KR6, KR 10 retaining plate, axis 6	83692753	Black	1.56	3.27		1
R-SSR D 50 tension clamp with angled sheet	83952697	Black	1.97	3.52		1
R-SSR D63 tension clamp UR3 ¹⁾	83693201	Black	2.48	2.13		1
R-SSR D 63 tension clamp with angled sheet ²⁾	83952699	Black	2.48	3.91		1
R-SSR D63 tension clamp UR5 ¹⁾	83693202	Black	2.95	2.36		1
R-SSR D63 tension clamp UR10 ¹⁾	83693203	Black	3.54	2.68		1
R-SSR 100-1 tension clamp with pipe 15°	83952626	Black	3.94	11.38	1.26	1
R-SSR 116-2 tension clamp with pipe, straight	83692712	Black	4.57	11.85	1.26	1
R-SSR 125-1 tension clamp with pipe 15°	82952696	Black	4.92	14.24	1.26	1
R-SSR 125-2 tension clamp with pipe, straight	82390044	Black	4.92	13.88	1.26	1
R-SSR 140-2 tension clamp with pipe, straight	82390067	Black	5.51	13.98	1.26	1
R-SSR 160-1 tension clamp with pipe 15°	83952628	Black	6.30	14.74	1.26	1
R-SSR 160-2 tension clamp with pipe, straight	83952629	Black	6.30	14.57	1.26	1
R-SSR 172-1 tension clamp with pipe 15°	83952634	Black	6.77	15.12	1.26	1
R-SSR 180-1 tension clamp with pipe 15°	82390032	Black	7.09	15.12	1.26	1
R-SSR 190-1 tension clamp with pipe 15°	83952638	Black	7.48	15.12	1.26	1
R-SSR 200-1 tension clamp with pipe 15°	83952642	Black	7.87	15.28	1.26	1
R-SSR 220-1 tension clamp with pipe 15°	83952640	Black	8.66	15.44	1.26	1
R-SSR 250-1 tension clamp with pipe 15°	83952646	Black	9.84	16.23	1.26	1
R-SSR 315-1 tension clamp with pipe 15°	83692711	Black	12.40	19.44	1.26	1

¹⁾ Suitable for system holder SH M25/M32

²⁾ Suitable for system holder SH M40/M50

Pipe clamp



PRODUCT INFORMATION

The R-FKM and R-FKE pipe clamps facilitate connecting R-SSR tension clamps with other components. Clamping on the entire pipe circumference. With hub flange for pivot bearings and base plate.
The R-FKM pipe clamps need the R-FKG base plate for fixing a system holder.

The Type R-FKE pipe clamp does not need the additional base plate; the system holder can be attached directly.

SPECIFICATIONS

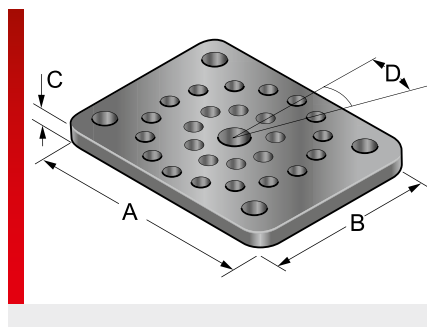
 Aluminum



Type	Order No.	Color	A inch	B inch	C inch	D Angle °	E inch	F inch	G inch	Pack qty.
R-FKE 32	83952614	Anodized black	2.36	2.36	3.66				1.26	1
R-FKM 32 ¹⁾	83952610	Silver	4.13	3.15	3.35	3.15	2.28	0.33	1.26	1
R-FKM 40 ¹⁾	83952612	Silver	4.13	3.15	3.35	3.15	2.28	0.33	1.57	1

¹⁾ Adapter plate R-FKG is required for the installation of a system holder.

Base plate



PRODUCT INFORMATION

The base plate serves to retain type SH system holders. The 8-part split enables mounting the system holders at a rotation of up to 45°. The mounting holes are aligned with our R-FKM pipe clamp.

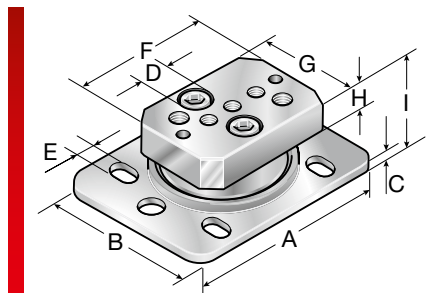
SPECIFICATIONS



Powder coated sheet steel

[illegible]

Pivot bearing



R-DLM with TR0 70

PRODUCT INFORMATION

The pivot bearing can be rotated by 360° and sits on a ball bearing.

- R-DZM pivot bearings with adapter plates for mounting type SH system holders
- R-DLM individual pivot bearing for use with TRO 70 trumpet

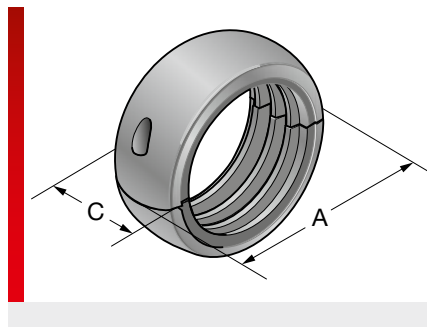
SPECIFICATIONS



Steel
Steel, powder coated

[illegible]

PR/SV Protector



PRODUCT INFORMATION

The PR/SV protectors are made of specially modified polyamide 6. The material is halogen, phosphor and cadmium-free. The protectors are used for impact protection and connecting cable protection conduits and also protect against wear.

The PR/SV protectors feature the following advantages:

- Flat construction
- Simple assembly with a sliding lock and optional lock screw assembly
- High tear-out strength

SPECIFICATIONS

	-40.00 – 230.00 °F short term 284.00 °F
	UL listed material Mod. polyamide PA 6
	Acc. to UL94 V0 self-extinguishing
	
	
	

Type	Order No.	Color	Suitable for Murrflex	Suitable for Murrflex EWX	A inch	C inch	Pack qty.
Standard design for cable protection conduits with standard corrugation, type EW-xx / type EWT-xx							
PR/SV-EW 21	83691058	Black	M25/P21		2.03	2.02	10
PR/SV-EW 29	83691060	Black	M32/P29		2.28	2.01	10
PR/SV-EW 36	83691062	Black	M40/P36		2.60	2.03	10
PR/SV-EW 48	83691064	Black	M50/P48		3.07	1.95	10
PR/SV-EW 56	83691065	Black	NW56		3.57	2.01	5
PR/SV-EW 21	83691018	Gray	M25/P21		2.03	2.02	10
PR/SV-EW 29	83691020	Gray	M32/P29		2.28	2.01	10
PR/SV-EW 36	83691022	Gray	M40/P36		2.60	2.03	10
PR/SV-EW 48	83691024	Gray	M50/P48		3.07	1.95	10
PR/SV-EW 56	83691025	Gray	NW56		3.57	2.01	5
Standard design for cable protection conduits with high corrugation, type EWX-xx							
PR/SV-EWX 21	83691258	Black	M25/P21		2.03	2.04	10
PR/SV-EWX 29	83691260	Black	M32/P29		2.28	2.01	10
PR/SV-EWX 36	83691262	Black	M40/P36		2.60	2.03	10
PR/SV-EWX 48	83691264	Black	M50/P48		3.07	1.95	10
PR/SV-EWX 56	83691265	Black	NW56		3.57	2.01	5
PR/SV-EWX 21	83691218	Gray	M25/P21		2.03	2.04	10
PR/SV-EWX 29	83691220	Gray	M32/P29		2.28	2.01	10
PR/SV-EWX 36	83691222	Gray	M40/P36		2.60	2.03	10
PR/SV-EWX 48	83691224	Gray	M50/P48		3.07	1.95	10
PR/SV-EWX 56	83691225	Gray	NW56		3.57	2.01	5

PR/SV Protector (Continued...)

[illegible]



Accessories

Tube-Cut (Conduit knife for cable protection conduits)



PRODUCT INFORMATION

The Tube-Cut conduit knife allows subsequent slitting of closed cable protection conduits. It can be used by both the right and left-handed. The sliding foot is made of extremely hard-wearing Teflon-coated metal. The Tube-Cut conduit knife features the following advantages:

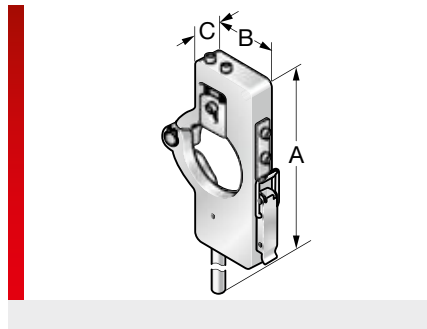
- Extremely easy handling
- Two different versions available
- Safe to use with a material hold-down device that also shields the blade
- Fast and safe blade change
- Very low weight

SPECIFICATIONS

	Plastic
	Steel
	Not suitable for NW95 with high corrugation

[illegible]

m-cut corrugated conduit cutter



PRODUCT INFORMATION

The type m-cut corrugated conduit cutter is made of aluminum and makes length adjustments for Murrplastik cable protection conduits easy and safe. It can be used by both the right and left-handed. A sturdy double-edged blade has been installed to achieve perfectly cut edges. Furthermore, the corrugated pipe cutters feature the following advantages:

- Extremely easy handling
- Safe handling, because of its spring-loaded blade cover, which covers the blade when the cutter is not in use.
- Faster and more secure blade exchange -> blades are available as spare parts
- Low weight

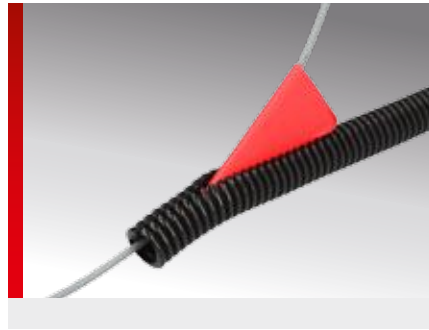
SPECIFICATIONS



Aluminum

[illegible]

KE wire insertion tool



PRODUCT INFORMATION

The KE wire insertion tool is made of specially modified polyamide. It allows subsequent insertion of cables into slotted and split cable protection conduits and features the following advantages:

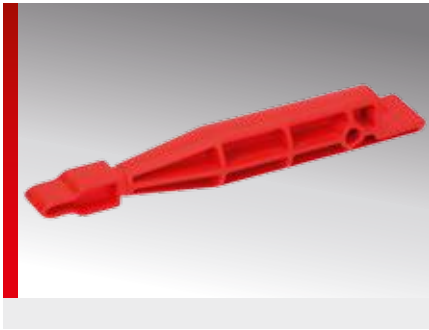
- Very easy handling
- Fast insertion of cables
- No unnecessary deformation of the conduit

SPECIFICATIONS



Mod. polyamide PA 6

Robotic opening tool

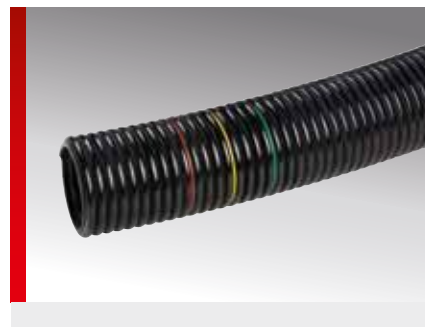
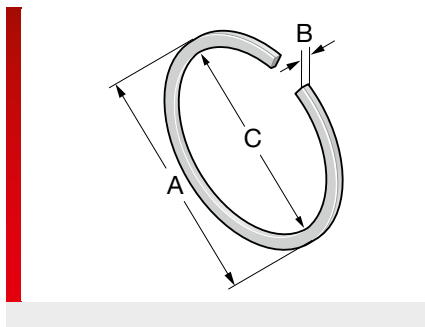


PRODUCT INFORMATION

Tools for releasing the SC safety clips on the R-Tec Box and system holders. Our special opening tool makes quick and easy opening without risk of damage possible.

[illegible]

Position marker



PRODUCT INFORMATION

Conduit marking for any number of uses in robotics and mechanical engineering applications.

Can be installed in seconds on EW and EWX cable protection conduits.

SPECIFICATIONS



-4.00 - 221.00 °F



Acc. to UL94 HB

[illegible]

Robot lubricant



PRODUCT INFORMATION

Optimol is a light yellow special lubricant based on polyalphaolefin for the lubrication of cables and cords in dynamic applications. Optimol facilitates the easy and low-wear shifting and sliding of cables and cords in their protective conduits.

Applications: Optimol is applied as a thin layer for the lifetime lubrication of cords. Connections as well as strain relief are to be kept free of lubricants.

Advantages:

- Good water resistance
- Good compatibility with plastics and elastomers
- Highly compatible with painted surfaces
- No wet paint impairments
- Resistant to weld splatter

SPECIFICATIONS

 -58.00 – 248.00 °F
 Based on polyalphaolefin

[illegible]

Pound Watt Hektopascal kHz
 Quadratmeter m/s² Cubic Zoll
 Dezibel Inch
 Gigahertz Liter
 Square Millibar Kiloherz Bar Foot
 Meter foot Kilogramm
 Yard Quadratzentimeter
 hPa GHz db(A) m² MHz in²

Appendix



Base plates and recirculation systems for KUKA robots

●	Base plate required
○	Base plate optional

KUKA ROBOT TYPE

	83692760 Base plate KUKA KR10 R 1100	83692750 Base plate KUKA KR16	83692757 Base plate KUKA KR30 - KR60	83692620 Recirculation system M25/M32	R-Tec Box-S M32/M40	R-Tec Box M40/M50	R-Tec Liner
KR 3 R540 (KR AGILUS)	●			●			
KR 6 R700 five (KR AGILUS)	●			●			
KR 6 R700 sixx (KR AGILUS)	●			●			
KR 6 R700 sixx WP (KR AGILUS)	●			●			
KR 6 R900 five (KR AGILUS)	●			●			
KR 6 R900 sixx (KR AGILUS)	●			●			
KR 6 R900 sixx WP (KR AGILUS)	●			●			
KR 10 R900 sixx (KR AGILUS)	●			●			
KR 10 R900 sixx WP (KR AGILUS)	●			●			
KR 10 R1100 five (KR AGILUS)	●			●			
KR 10 R1100 sixx (KR AGILUS)	●			●			
KR 10 R1100 sixx WP (KR AGILUS)	●			●			
KR 5 arc		●		●			
KR 6-2		●		●			
KR 16-2		●		●			
KR 16 L6-2		●		●			
KR 20-3		●		●			
KR 5-2 arc HW		●		●			
KR 16 arc HW		●		●			
KR 16-2 F		●		●			
KR 16-2 KS-F		●		●			
KR 16 L6-2 KS		●		●			
KR 16-2 CR		●		●			
KR 30-3			●	●			
KR 30 L16-2			●	●			
KR 60-3			●	●			
KR 30-3 F			●	●			
KR 30-4 KS-F			●	●			
KR 30-4 KS			●	●			
KR 30-3 CR			●	●			
KR 30 HA (High Accuracy)			●	●			
KR 60-3 F			●	●			
KR 60-4 KS-F			●	●			
KR 60-4 KS			●	●			
KR 60 L16-2 KS			●	●			
KR 90 R2700 pro (KR QUANTEC pro)			●		●	●	○
KR 120 R2500 pro (KR QUANTEC pro)			●		●	●	○
KR 90 R3100 extra (KR QUANTEC extra)			●		●	●	○
KR 120 R2900 extra (KR QUANTEC extra)			●		●	●	○
KR 150 R2700 extra (KR QUANTEC extra)			●		●	●	○
KR 210 R2700 extra (KR QUANTEC extra)			●		●	●	○
KR 180 R2500 extra (KR QUANTEC extra)			●		●	●	○
KR 90 R3100 extra F-HP (KR QUANTEC extra)			●		●	●	○
KR 120 R2900 extra F-HP (KR QUANTEC extra)			●		●	●	○
KR 150 R2700 extra F-HP (KR QUANTEC extra)			●		●	●	○
KR 180 R2500 extra F-HP (KR QUANTEC extra)			●		●	●	○

Continued on the next page

Base plates and recirculation systems for KUKA robots

●	Base plate required
○	Base plate optional

KUKA ROBOT TYPE

	83692760 Base plate KUKA KR10 R 1100	83692750 Base plate KUKA KR16	83692757 Base plate KUKA KR30 - KR60	83692620 Recirculation system M25/M32	R-Tec Box-S M32/M40	R-Tec Box M40/M50	R-Tec Liner
KR 150 R3100 prime (KR QUANTEC prime)			●		●	●	○
KR 180 R2900 prime (KR QUANTEC prime)			●		●	●	○
KR 210 R2700 prime (KR QUANTEC prime)			●		●	●	○
KR 240 R2500 prime (KR QUANTEC prime)			●		●	●	○
KR 240 R2700 prime (KR QUANTEC)			●		●	●	○
KR 90 R3700 prime K (KR QUANTEC prime)			●		●	●	○
KR 120 R3500 prime K (KR QUANTEC prime)			●		●	●	○
KR 150 R3300 prime K (KR QUANTEC prime)			●		●	●	○
KR 180 R3100 prime K (KR QUANTEC prime)			●		●	●	○
KR 210 R2900 prime K (KR QUANTEC prime)			●		●	●	○
KR 210 R2700 prime F (KR QUANTEC prime)			●		●	●	○
KR 210 R3100 ultra (KR QUANTEC ultra)			●		●	●	○
KR 240 R2900 ultra (KR QUANTEC ultra)			●		●	●	○
KR 270 R2700 ultra (KR QUANTEC ultra)			●		●	●	○
KR 300 R2500 ultra (KR QUANTEC ultra)			●		●	●	○
KR 210 R3100 ultra F (KR QUANTEC ultra)			●		●	●	○
KR 120 R3900 ultra K (KR QUANTEC ultra)			●		●	●	○
KR 150 R3700 ultra K (KR QUANTEC ultra)			●		●	●	○
KR 180 R3500 ultra K (KR QUANTEC ultra)			●		●	●	○
KR 210 R3300 ultra K (KR QUANTEC ultra)			●		●	●	○
KR 240 R3100 ultra K (KR QUANTEC ultra)			●		●	●	○
KR 270 R2900 ultra K (KR QUANTEC ultra)			●		●	●	○
KR 240 R2900 ultra F (KR QUANTEC ultra)			●		●	●	○
KR 270 R2700 ultra F (KR QUANTEC ultra)			●		●	●	○
KR 300 R2500 ultra F (KR QUANTEC ultra)			●		●	●	○
KR 240 R3330 (KR 360 FORTEC)			●		●	●	○
KR 280 R3080 (KR 360 FORTEC)			●		●	●	○
KR 360 R2830 (KR 360 FORTEC)			●		●	●	○
KR 340 R3330 (KR 500 FORTEC)			●		●	●	○
KR 420 R3080 (KR 500 FORTEC)			●		●	●	○
KR 480 R3330 MT (KR 500 FORTEC)			●		●	●	○
KR 500 R2830 (KR 500 FORTEC)			●		●	●	○
KR 500 R2830 MT (KR 500 FORTEC)			●		●	●	○
KR 420 R3330 (KR 600 FORTEC)			●		●	●	○
KR 510 R3080 (KR 600 FORTEC)			●		●	●	○
KR 600 R2830 (KR 600 FORTEC)			●		●	●	○
KR 120 R3200 PA (KR QUANTEC)			●		●	●	○
KR 180 R3200 PA (KR QUANTEC)			●		●	●	○
KR 240 R3200 PA (KR QUANTEC)			●		●	●	○
KR 300-2 PA			●		●	●	○
KR 470-2 PA			●		●	●	○
KR 700 PA			●		●	●	○

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Base plates and recirculation systems for ABB robots

●	Base plate required
○	Base plate optional

ABB ROBOT TYPE	83692762 Base plate ABB IRB Series 1600	83692763 Base plate ABB IRB 2600	83692625 Base plate ABB SERIE 4600	83692623 Base plate ABB SERIE 6400	83692627 Base plate ABB IRB SERIE 6620	83692622 Base plate ABB SERIE 6600	83692761 Recirculation system M25/M32	83692761 R-Tec Box S M32/M40	83692761 R-Tec Box M40/M50	83692761 R-Tec Liner
ABB IRB 1600	●									
ABB IRB 2600		●								
ABB IRB 4600			●					●	●	●
ABB IRB 6400				●					●	●
ABB IRB 6600					●			●	●	●
ABB IRB 6620					●			●	●	●
ABB IRB 6640					●			●	●	●
ABB IRB 6650					●			●	●	●
ABB IRB 6650S					●			●	●	●
ABB IRB 6660					●			●	●	●
ABB IRB 6700					●			●	●	●
ABB IRB 7600						●		●	●	●

Base plates and recirculation systems for Yaskawa-Motoman robots

●	Base plate required
○	Base plate optional

YASKAWA-MOTOMAN ROBOT TYPE	83692629 Base plate Motoman MS165, MH180	83692628 Base plate Motoman MH50	83692629 Recirculation system M25/M32	83692629 R-Tec Box S M32/M40	83692629 R-Tec Box M40/M50	83692629 R-Tec Liner
Yaskawa-Motoman ES165RDII	●			●	●	●
Yaskawa-Motoman ES200RDII	●			●	●	●
Yaskawa-Motoman MH50-20II		●		●		
Yaskawa-Motoman MH180-120	●			●	●	●
Yaskawa-Motoman MH180	●			●	●	●
Yaskawa-Motoman MH225	●			●	●	●
Yaskawa-Motoman MH280II	●			●	●	●
Yaskawa-Motoman MS165	●			●	●	●
Yaskawa-Motoman MS210	●			●	●	●
Yaskawa-Motoman ES280-D	●			●	●	●



TYPE	PAGE
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[illegible]