



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)

ROBOTIC EQUIPMENT

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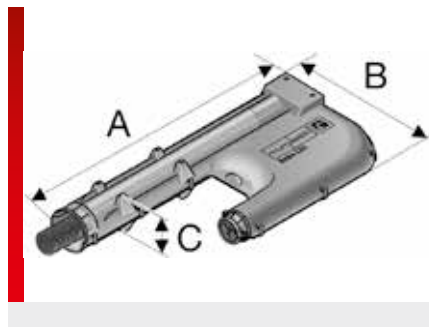
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R-Tec Box

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.

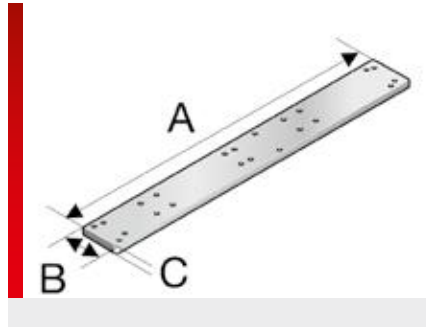
SPECIFICATIONS

- 40 – 140 °C short term 160 °C
- Mod. polypropylene
-

| Type | Order No. | Colour | Suitable for conduit type EW-PAE | Suitable for conduit type EWX-PAE | A mm | B mm | C mm | Stroke mm | Pack qty. |
|--|-----------|--------|----------------------------------|-----------------------------------|--------|--------|--------|-----------|-----------|
| R-Tec Box-S EW 29 MP - 35N | 83692693 | Black | M32/P29 | | 507.00 | 285.00 | 110.00 | 270.00 | 1 |
| R-Tec Box-S EWX 29 MP - 35N | 83692695 | Black | | M32/P29 | 507.00 | 285.00 | 110.00 | 270.00 | 1 |
| R-Tec Box-S EW 36 MP - 35N | 83692696 | Black | M40/P36 | | 507.00 | 285.00 | 110.00 | 270.00 | 1 |
| R-Tec Box-S EWX 36 MP - 35N | 83692697 | Black | | M40/P36 | 507.00 | 285.00 | 110.00 | 270.00 | 1 |
| R-Tec Box EW 36 MP - 80N | 83692650 | Black | M40/P36 | | 730.00 | 343.00 | 138.00 | 400.00 | 1 |
| R-Tec Box EWX 36 MP - 80N | 83692652 | Black | | M40/P36 | 730.00 | 343.00 | 138.00 | 400.00 | 1 |
| R-Tec Box EW 48 MP - 100N | 83692654 | Black | M50/P48 | | 730.00 | 343.00 | 138.00 | 400.00 | 1 |
| R-Tec Box EWX 48 MP - 100N | 83692656 | Black | | M50/P48 | 730.00 | 343.00 | 138.00 | 400.00 | 1 |
| R-Tec Box EWX 48-KB MP - 100N ¹⁾ | 83692633 | Black | | M50/P48 | 730.00 | 343.00 | 138.00 | 400.00 | 1 |
| R-Tec Box EW 48 MP - 120N | 83692664 | Black | M50/P48 | | 730.00 | 343.00 | 138.00 | 400.00 | 1 |
| R-Tec Box EWX 48 MP - 120N | 83692665 | Black | | M50/P48 | 730.00 | 343.00 | 138.00 | 400.00 | 1 |
| R-Tec Box EW/EWX 56 MP - 200N | 83692658 | Black | 56 Jumbo | 56 Jumbo | 937.50 | 430.00 | 176.00 | 600.00 | 1 |
| R-Tec Box EW/EWX 70 MP - 200N | 83692660 | Black | 70 Jumbo | 70 Jumbo | 937.50 | 430.00 | 176.00 | 600.00 | 1 |
| R-Tec Box EW/EWX 70-KB MP - 200N ¹⁾ | 83692662 | Black | 70 Jumbo | 70 Jumbo | 937.50 | 430.00 | 176.00 | 600.00 | 1 |

¹⁾ with strain relief V-ZLT-70KB

System plate for R-Tec Box



PRODUCT INFORMATION

System plate for mounting a R-Tec Box on axis 3. Adjusted to production series of various manufacturers.

The listed system plates are examples only. Contact us for the proper size for you.

SPECIFICATIONS

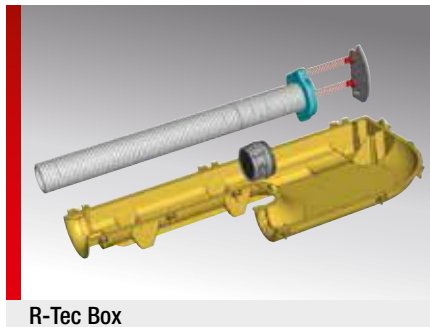


Powder coated sheet steel



| Type | Order No. | Colour | 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 |
| base plate Kuka KR1000 Titan-F | 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 |

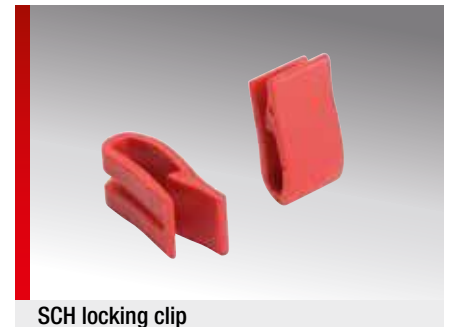
Replacement parts for R-Tec Box



R-Tec Box



Wear ring



SCH locking clip

PRODUCT INFORMATION

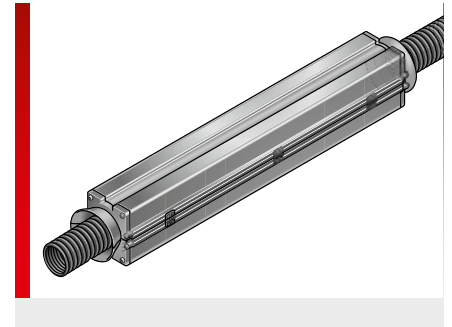
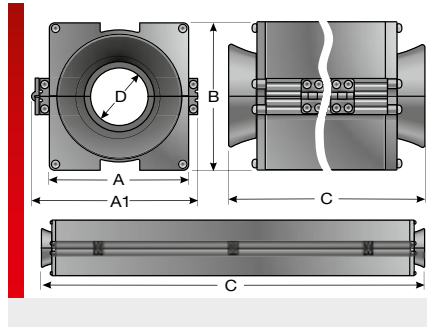
Replacement parts for R-Tec Box

| Type | Order No. | Colour | 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 | | | |
| R-Tec Box-S EW 29 slider set ²⁾ | 83692671 | Black | 1 |
| R-Tec Box-S EWX 29 slider set ²⁾ | 83692673 | Black | 1 |
| R-Tec Box-S EW 36 slider set 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 | | | |
| Mounting set 29/36 ³⁾ | 83692681 | - | 1 |
| Mounting set 36/48 ³⁾ | 83692682 | - | 1 |



R-Tec Liner

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 aluminium housing with the integrated and patented spring return system the energy packet is guided in a low-wearing and effective manner.

- extremely strong aluminium 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 – 140 °C short term 160 °C
- Aluminium
Mod. polypropylene
- Acc. to UL94 V2

RoHS
 HF

| Type | Order No. | Colour | Suitable for conduit type EW-PAE | Suitable for conduit type EWX-PAE | A mm | A1 mm | B mm | C mm | Stroke mm | Pack qty. |
|--|-----------|--------|----------------------------------|-----------------------------------|--------|--------|--------|--------|-----------|-----------|
| R-Tec Liner 350mm EW/EWX 56 ¹⁾ | 83693076 | Black | NW 56 | 56 Jumbo | 150.00 | 195.00 | 150.00 | 655.00 | 350.00 | 1 |
| R-Tec Liner 550mm EW/EWX 56 ¹⁾ | 83693078 | Black | NW 56 | 56 Jumbo | 150.00 | 195.00 | 150.00 | 855.00 | 550.00 | 1 |
| R-Tec Liner 350mm EW/EWX 70 ¹⁾ | 83693080 | Black | NW 70 | 70 Jumbo | 150.00 | 195.00 | 150.00 | 655.00 | 350.00 | 1 |
| R-Tec Liner 550mm EW/EWX 70 ¹⁾ | 83693082 | Black | NW 70 | 70 Jumbo | 150.00 | 195.00 | 150.00 | 855.00 | 550.00 | 1 |
| R-Tec Liner 350mm EW/EWX 80 - 200N ¹⁾ | 83693084 | Black | NW 80 | 80 Jumbo | 175.00 | 215.00 | 185.00 | 655.00 | 350.00 | 1 |
| R-Tec Liner 550mm EW/EWX 80 - 200N ¹⁾ | 83693086 | Black | NW 80 | 80 Jumbo | 175.00 | 215.00 | 185.00 | 855.00 | 550.00 | 1 |
| R-Tec Liner 350mm EW/EWX 95 - 200N ¹⁾ | 83693088 | Black | NW 95 | 95 Jumbo | 175.00 | 215.00 | 185.00 | 655.00 | 350.00 | 1 |
| R-Tec Liner 550mm EW/EWX 95 - 200N ¹⁾ | 83693090 | Black | NW 95 | 95 Jumbo | 175.00 | 215.00 | 185.00 | 855.00 | 550.00 | 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



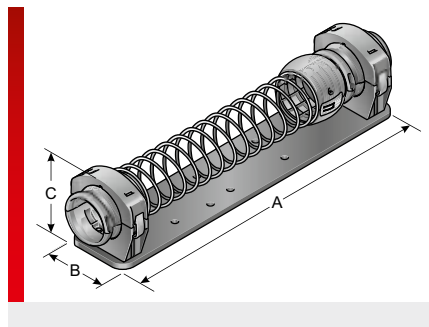
PRODUCT INFORMATION

| Type | Order No. | Colour | Suitable for conduit type EW-PAE | Suitable for conduit type EWX-PAE | A mm | B mm | Pack qty. |
|--|-----------|----------------------|----------------------------------|-----------------------------------|-------|------|-----------|
| Spring set | | | | | | | |
| Spring Set 56/70 200N, 350 mm 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 | | | 59.10 | 1.75 | 1 |
| Position marker - set 70 | 83692698 | Green / yellow / red | | | 70.50 | 1.75 | 1 |
| Position marker - set 80 | 83692733 | Green / yellow / red | | | 82.60 | 1.75 | 1 |
| Position marker - set 95 | 83692737 | Green / yellow / red | | | 95.00 | 1.75 | 1 |

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



Recirculation system 21/29



PRODUCT INFORMATION

The recirculation system is designed to be an easy, space-saving alternative to the Murrplastik R-Tec Box-S and can handle a length adjustment of 150 mm. The system is very suitable for small robots, such as FANUC M20iA or KUKA KR6/KR10.

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.

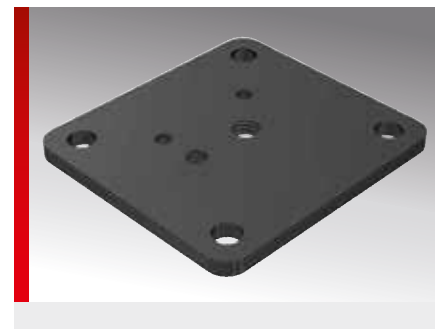
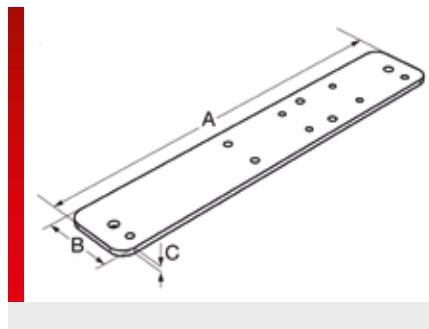
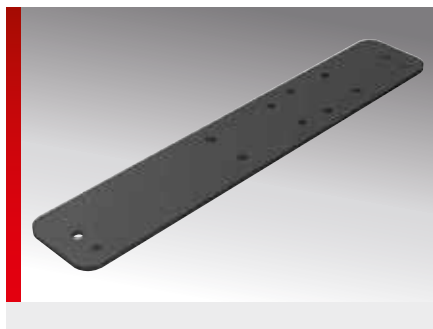
SPECIFICATIONS

- 40 – 110 °C
- Mod. polyamide PA 6
Base plate: Aluminium
Spring Steel
- Acc. to UL94 V0



| Type | Order No. | Colour | A mm | B mm | C mm | Pack qty. |
|-----------------------------------|-----------|--------|--------|-------|-------|-----------|
| EW 21 - 20N recirculation system | 83692721 | Black | 290.00 | 72.50 | 70.00 | 1 |
| EWX 21 - 20N recirculation system | 83692722 | Black | 290.00 | 72.50 | 70.00 | 1 |
| EW 29 - 20N recirculation system | 83692723 | Black | 290.00 | 72.50 | 70.00 | 1 |
| EWX 29 - 20N recirculation system | 83692724 | Black | 290.00 | 72.50 | 70.00 | 1 |

Recirculation system, system plate 21/29



PRODUCT INFORMATION

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

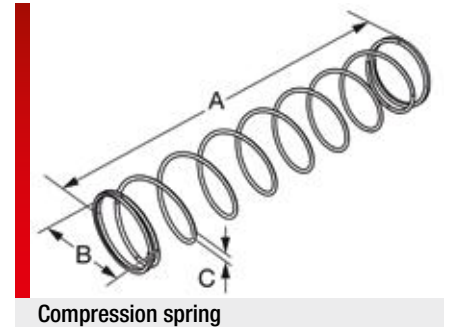
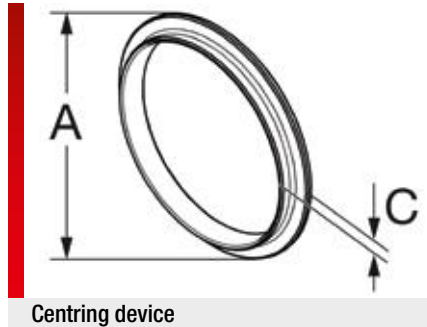
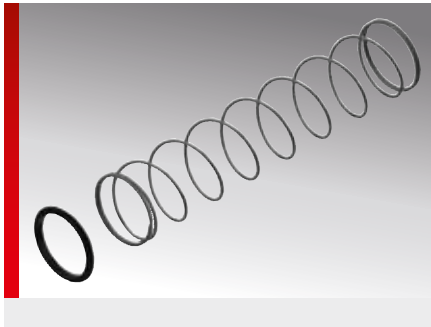
SPECIFICATIONS

Aluminium

| Type | Order No. | Colour | A mm | B mm | C mm | Pack qty. |
|---|-----------|----------------|--------|-------|------|-----------|
| A3 Fanuc M20iA adapter plate | 83692759 | Anodised black | 65.00 | 60.00 | 4.00 | 1 |
| Kuka KR10 R 1100 base plate ¹⁾ | 83692760 | Anodised black | 280.00 | 50.00 | 4.00 | 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

| Type | Order No. | Colour | A mm | B mm | C mm | Pack qty. |
|----------------------------|-----------|--------|---------|---------|---------|--------------|
| M25/P21 compression spring | 83692754 | Silver | 164.00 | 34.00 | 1.50 | 1 |
| M32/P29 compression spring | 83692756 | Silver | 164.00 | 41.80 | 1.80 | 1 |
| M25/P21 centring device | 83692702 | Black | 36.00 | | 4.30 | 1 |
| M32/P29 centring device | 83692704 | Black | 42.00 | | 7.00 | 1 |



Flexible support system

FHS-SH support bracket



FHS-SH on UR5

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. | Colour | Length of Velcro tape mm | Pack qty. |
|--------------------------|-----------|-------------|--------------------------|-----------|
| FHS-SH 350 | 83693423 | Black / Red | 350.0 | 1 |
| FHS-SH 450 | 83693425 | Black / Red | 450.0 | 1 |
| FHS-SH 550 | 83693427 | Black / Red | 550.0 | 1 |
| FHS-SH 750 | 83693429 | Black / Red | 750.0 | 1 |
| FHS-SH Set ¹⁾ | 83693422 | Black / Red | 350.0 – 750.0 | 1 |

¹⁾Set with 4 Velcro tapes

FHS-C support bracket



FHS-C on UR5

PRODUCT INFORMATION

The FHS-C has been designed for the direct insertion of lines 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. Advantages:

- 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



| Type | Order No. | Colour | Length of Velcro tape mm | Pack qty. |
|-------------------------|-----------|-------------|--------------------------|-----------|
| FHS-C 350 | 83693443 | Black / Red | 350.0 | 1 |
| FHS-C 450 | 83693445 | Black / Red | 450.0 | 1 |
| FHS-C 550 | 83693447 | Black / Red | 550.0 | 1 |
| FHS-C 750 | 83693449 | Black / Red | 750.0 | 1 |
| FHS-C Set ¹⁾ | 83693442 | Black / Red | 350.0 – 750.0 | 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. | Colour | Length of Velcro tape mm | Pack qty. |
|---|-----------|-------------|--------------------------|-----------|
| Suitable for Murrflex EW and EWX | | | | |
| FHS-UHE M32/P29 350 | 83693466 | Black / Red | 350.0 | 1 |
| FHS-UHE M32/P29 450 | 83693467 | Black / Red | 450.0 | 1 |
| FHS-UHE M32/P29 550 | 83693468 | Black / Red | 550.0 | 1 |
| FHS-UHE M32/P29 750 | 83693469 | Black / Red | 750.0 | 1 |
| FHS-UHE M32/P29 ¹⁾ | 83693465 | Black / Red | 350.0 – 750.0 | 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

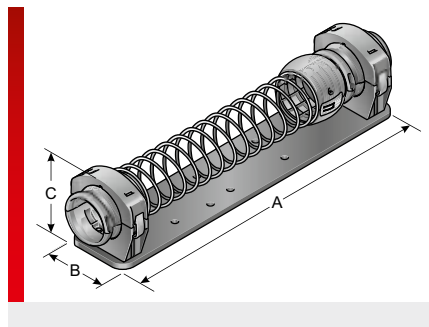


Polypropylene (PP)
Thermoplastic elastomer
Mod. polyamide



| Type | Order No. | Colour | 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 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 – 110 °C
-  Mod. polyamide PA 6
Base plate: Aluminium
Spring Steel
-  Acc. to UL94 V0
-  

| Type | Order No. | Colour | Pack qty. |
|---------------------|-----------|--------|-----------|
| FHS-RS EW 21 - 20N | 83693411 | Black | 1 |
| FHS-RS EW 29 - 20N | 83693413 | Black | 1 |
| FHS-RS EWX 21 - 20N | 83693412 | Black | 1 |
| FHS-RS EWX 29 - 20N | 83693414 | Black | 1 |

KKR-Fix Velcro tape



KKR-Fix on FHS-C

PRODUCT INFORMATION

The KKR-Fix Velcro tapes are used for the quick and easy fastening of our flexible holder systems, as well as for bundling and fixing of cable strands.

Applications range from their use in robotics throughout mechanical engineering and on to house installations.


The back side of the Velcro tape has been specially coated. This ensures a tight and slip-resistant grip of the tape on almost any



surface. These special properties of the KKR-Fix makes it quite a gentle solution for low torque fastening of cables.

Advantages:

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

SPECIFICATIONS

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

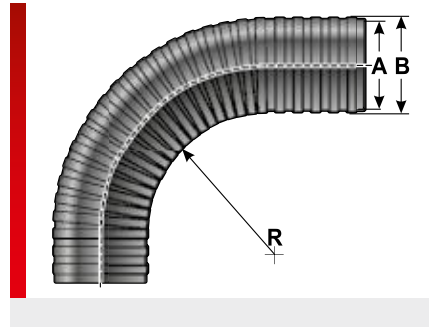



| Type | Order No. | Colour | Length of Velcro tape mm | Pack qty. |
|------------------------|-----------|--------|--------------------------|-----------|
| FHS Velcro tape | | | | |
| KKR-Fix 350 | 83693402 | Black | 350.0 | 10 |
| KKR-Fix 450 | 83693404 | Black | 450.0 | 10 |
| KKR-Fix 550 | 83693406 | Black | 550.0 | 10 |
| KKR-Fix 750 | 83693408 | Black | 750.0 | 10 |



Cable protection conduit

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 characterised 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 – 120 °C short term 150 °C
- Mod. polyamide PA 12
- Acc. to UL94 HB
- In conformity with IEC EN 61386: > 500 N

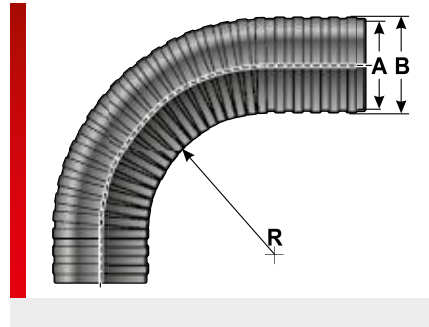
| Type | Order No. | Colour | A Ø mm | B Ø mm | R stat. mm | R dyn. mm | Weight kg/100m | Pack m |
|-----------------------------|-----------|--------|--------|--------|------------|-----------|----------------|--------|
| Standard corrugation | | | | | | | | |
| EW-PAE-06 | 83181650 | Black | 6.50 | 9.80 | 15.00 | 40.00 | 1.8 | 50 |
| EW-PAE-M10/P7 | 83181652 | Black | 8.50 | 11.50 | 20.00 | 45.00 | 2.1 | 50 |
| EW-PAE M12/P09, 200m | 83988262 | Black | 9.60 | 12.80 | 21.00 | 51.00 | 2.8 | 200 |
| EW-PAE-M12/P9 | 83181654 | Black | 9.60 | 12.80 | 21.00 | 51.00 | 2.8 | 50 |
| EW-PAE-M16/P11 | 83181656 | Black | 11.90 | 15.60 | 28.00 | 68.00 | 3.8 | 50 |
| EW-PAE-M20/P16 | 83181658 | Black | 15.50 | 20.80 | 36.00 | 70.00 | 5.8 | 50 |
| EW-PAE M20/P16, 200m | 83988263 | Black | 15.50 | 20.80 | 36.00 | 70.00 | 5.8 | 200 |
| EW-PAE-M25/P21 | 83181660 | Black | 21.80 | 28.30 | 49.00 | 109.00 | 9.5 | 50 |
| EW-PAE-M32/P29 | 83181662 | Black | 27.80 | 34.40 | 67.00 | 142.00 | 12.6 | 25 |
| EW-PAE M32/P29, 200m | 83988264 | Black | 27.80 | 34.40 | 67.00 | 142.00 | 12.6 | 200 |
| EW-PAE-M40/P36 | 83181664 | Black | 34.90 | 42.00 | 81.00 | 191.00 | 17.0 | 25 |
| EW-PAE-M50/P48 | 83181666 | Black | 47.00 | 54.00 | 102.00 | 237.00 | 22.8 | 25 |
| EW-PAE-56 Jumbo | 83181678 | Black | 56.00 | 67.30 | 110.00 | 310.00 | 40.0 | 25 |
| EW-PAE-70 Jumbo | 83181680 | Black | 67.40 | 79.00 | 200.00 | 390.00 | 48.0 | 25 |
| EW-PAE-80 Jumbo | 83181681 | Black | 79.00 | 93.00 | 220.00 | 440.00 | 62.0 | 15 |
| EW-PAE-95 Jumbo | 83181682 | Black | 89.70 | 105.00 | 265.00 | 500.00 | 83.0 | 10 |
| | | | | | | | | |
| EW-PAE-06 ¹⁾ | 83181610 | Grey | 6.50 | 9.80 | 15.00 | 40.00 | 2.0 | 50 |
| EW-PAE-M10/P7 | 83181612 | Grey | 8.50 | 11.50 | 20.00 | 45.00 | 2.1 | 50 |
| EW-PAE-M12/P9 | 83181614 | Grey | 9.60 | 12.80 | 21.00 | 51.00 | 2.6 | 50 |
| EW-PAE-M16/P11 | 83181616 | Grey | 11.90 | 15.60 | 28.00 | 68.00 | 3.6 | 50 |
| EW-PAE-M20/P16 | 83181618 | Grey | 15.50 | 20.80 | 36.00 | 70.00 | 5.8 | 50 |
| EW-PAE-M25/P21 | 83181620 | Grey | 21.80 | 28.30 | 49.00 | 109.00 | 9.5 | 50 |
| EW-PAE-M32/P29 | 83181622 | Grey | 27.80 | 34.40 | 67.00 | 142.00 | 12.6 | 25 |
| EW-PAE-M40/P36 | 83181624 | Grey | 34.90 | 42.00 | 81.00 | 191.00 | 17.0 | 25 |

Type EW-PAE (Continued...)

| Type | Order No. | Colour | A Ø mm | B Ø mm | R stat. mm | R dyn. mm | Weight kg/100m | Pack m |
|-------------------------------|-----------|--------|--------|--------|------------|-----------|----------------|--------|
| EW-PAE-M50/P48 | 83181626 | Grey | 47.00 | 54.00 | 102.00 | 237.00 | 22.8 | 25 |
| EW-PAE-56 Jumbo ¹⁾ | 83181638 | Grey | 56.00 | 67.30 | 110.00 | 310.00 | 35.0 | 25 |
| EW-PAE-70 Jumbo ¹⁾ | 83181640 | Grey | 67.40 | 79.30 | 200.00 | 390.00 | 56.0 | 25 |
| EW-PAE-95 Jumbo ¹⁾ | 83181642 | Grey | 89.70 | 105.80 | 265.00 | 500.00 | 80.0 | 10 |

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

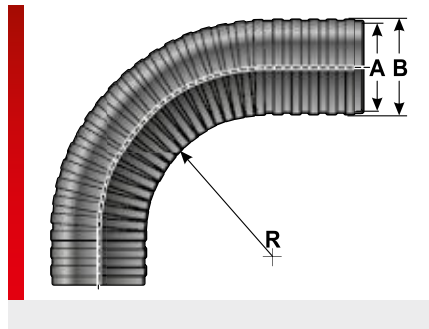
- 40 – 120 °C short term 150 °C
- Mod. polyamide PA 12
- Acc. to UL94 HB
- In conformity with IEC EN 61386: > 1200 N

RoHS
 HF
 UV
 Hand

| Type | Order No. | Colour | A Ø mm | B Ø mm | R stat. mm | R dyn. mm | Weight kg/100m | Pack m |
|--------------------------------|-----------|--------|--------|--------|------------|-----------|----------------|--------|
| High corrugation | | | | | | | | |
| EWX-PAE-M25/P21 | 83182058 | Black | 18.20 | 28.10 | 49.00 | 104.00 | 13.0 | 50 |
| EWX-PAE-M32/P29 | 83182060 | Black | 22.80 | 34.10 | 57.00 | 117.00 | 22.0 | 25 |
| EWX-PAE-M40/P36 | 83182062 | Black | 28.70 | 42.40 | 71.00 | 146.00 | 28.0 | 25 |
| EWX-PAE-M50/P48 | 83182064 | Black | 36.70 | 53.50 | 87.00 | 167.00 | 36.0 | 25 |
| EWX-PAE-56 Jumbo | 83182078 | Black | 52.20 | 67.70 | 95.00 | 220.00 | 40.0 | 25 |
| EWX-PAE-70 Jumbo | 83182080 | Black | 64.00 | 80.30 | 115.00 | 235.00 | 56.0 | 25 |
| EWX-PAE-70 Jumbo | 83182084 | Black | 64.00 | 80.30 | 115.00 | 235.00 | 52.0 | 110 |
| EWX-PAE-80 Jumbo | 83182081 | Black | 76.00 | 92.80 | 195.00 | 380.00 | 66.0 | 15 |
| EWX-PAE-95 Jumbo | 83182082 | Black | 88.20 | 105.50 | 220.00 | 450.00 | 92.5 | 10 |
| | | | | | | | | |
| EWX-PAE-M25/P21 | 83182018 | Grey | 18.20 | 28.10 | 49.00 | 104.00 | 11.0 | 50 |
| EWX-PAE-M32/P29 | 83182020 | Grey | 22.80 | 34.10 | 57.00 | 117.00 | 22.0 | 25 |
| EWX-PAE-M40/P36 ¹⁾ | 83182022 | Grey | 28.70 | 42.40 | 71.00 | 146.00 | 28.0 | 25 |
| EWX-PAE-M50/P48 ¹⁾ | 83182024 | Grey | 36.70 | 53.50 | 87.00 | 167.00 | 36.0 | 25 |
| EWX-PAE-70 Jumbo ¹⁾ | 83182040 | Grey | 64.00 | 80.30 | 115.00 | 235.00 | 56.0 | 25 |

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

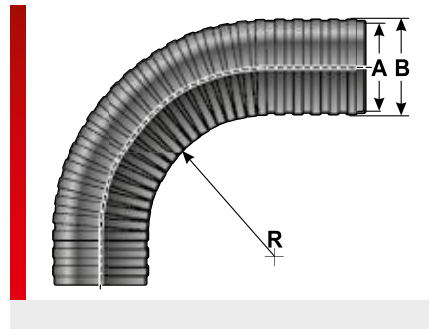
SPECIFICATIONS

- 40 – 120 °C short term 150 °C
- Mod. polyamide PA 12
- Acc. to UL94 HB

| Type | Order No. | Colour | A Ø mm | B Ø mm | R stat. mm | R dyn. mm | Weight kg/100m | Pack m |
|-----------------------------------|-----------|--------|--------|--------|------------|-----------|----------------|--------|
| High corrugation | | | | | | | | |
| EWX-PAE-LS-M20/P16 | 83182256 | Black | 13.30 | 21.10 | 36.00 | 77.00 | 6.0 | 50 |
| EWX-PAE-LS-M25/P21 | 83182258 | Black | 19.20 | 28.20 | 49.00 | 104.00 | 11.0 | 50 |
| EWX-PAE-LS-M32/P29 | 83182260 | Black | 23.10 | 34.50 | 57.00 | 117.00 | 14.0 | 25 |
| EWX-PAE-LS-M40/P36 | 83182262 | Black | 28.50 | 42.20 | 71.00 | 146.00 | 18.2 | 25 |
| EWX-PAE-LS-M50/P48 | 83182264 | Black | 36.50 | 53.60 | 87.00 | 167.00 | 24.0 | 25 |
| EWX-PAE-LS-56 Jumbo ¹⁾ | 83182278 | Black | 51.70 | 67.70 | 95.00 | 220.00 | 40.0 | 25 |
| EWX-PAE-LS-70 Jumbo | 83182280 | Black | 64.30 | 80.30 | 115.00 | 235.00 | 52.0 | 25 |

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 stabilised.

The EW-HY cable protection conduits are characterised 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

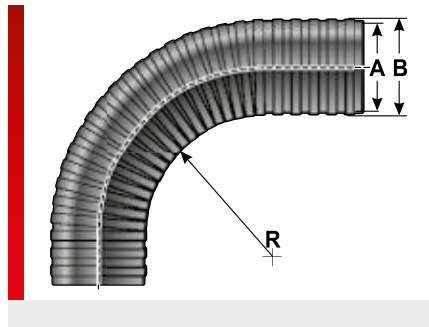
- 45 – 160 °C short term 180 °C
- Thermoplastic elastomer
- Acc. to UL94 HB
- In conformity with IEC EN 61386: > 500 N



| Type | Order No. | Colour | A Ø mm | B Ø mm | R stat. mm | R dyn. mm | Weight kg/100m | Pack m |
|-----------------------------|-----------|--------|--------|--------|------------|-----------|----------------|--------|
| Standard corrugation | | | | | | | | |
| EW-HY-06 | 83121048 | Black | 6.40 | 9.90 | 18.00 | 40.00 | 2.4 | 50 |
| EW-HY-M12/P9 | 83121050 | Black | 9.40 | 12.80 | 21.00 | 51.00 | 3.2 | 50 |
| EW-HY-M16/P11 | 83121052 | Black | 12.10 | 15.60 | 28.00 | 68.00 | 4.0 | 50 |
| EW-HY-M20/P16S | 83121054 | Black | 16.70 | 20.70 | 38.00 | 95.00 | 7.0 | 50 |
| EW-HY-M25/P21 | 83121056 | Black | 21.80 | 28.00 | 49.00 | 109.00 | 12.0 | 50 |
| EW-HY-M32/P29 | 83121058 | Black | 27.70 | 34.20 | 67.00 | 142.00 | 17.0 | 25 |
| EW-HY-M40/P36 | 83121060 | Black | 35.20 | 42.20 | 81.00 | 191.00 | 21.0 | 25 |
| EW-HY-M50/P48 | 83121062 | Black | 47.30 | 53.40 | 102.00 | 237.00 | 28.0 | 25 |
| EW-HY-70 Jumbo | 83121066 | Black | 66.20 | 79.50 | 140.00 | 330.00 | 51.5 | 25 |
| EW-HY-95 Jumbo | 83121070 | Black | 90.00 | 105.00 | 150.00 | 400.00 | 90.0 | 10 |
| Narrow corrugation | | | | | | | | |
| EW-HY-M12/P9 ¹⁾ | 83121010 | Grey | 9.40 | 12.80 | 21.00 | 51.00 | 2.8 | 50 |
| EW-HY-M16/P11 | 83121012 | Grey | 12.10 | 15.60 | 28.00 | 68.00 | 4.0 | 50 |
| EW-HY-M25/P21 | 83121016 | Grey | 21.80 | 28.00 | 49.00 | 109.00 | 12.0 | 50 |
| EW-HY-M32/P29 | 83121018 | Grey | 27.70 | 34.20 | 67.00 | 142.00 | 17.0 | 25 |
| EW-HY-M40/P36 | 83121020 | Grey | 35.20 | 42.20 | 81.00 | 191.00 | 21.0 | 25 |
| EW-HY-M50/P48 | 83121022 | Grey | 47.30 | 53.40 | 102.00 | 237.00 | 29.5 | 25 |
| EW-HY-70 Jumbo | 83121026 | Grey | 66.20 | 79.50 | 140.00 | 330.00 | 51.5 | 25 |
| EW-HY-95 Jumbo | 83121030 | Grey | 90.00 | 105.00 | 150.00 | 400.00 | 90.0 | 10 |

¹⁾ Min. order quantity 2100m

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 stabilised. The EWX-HY cable protection conduits are characterised 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.

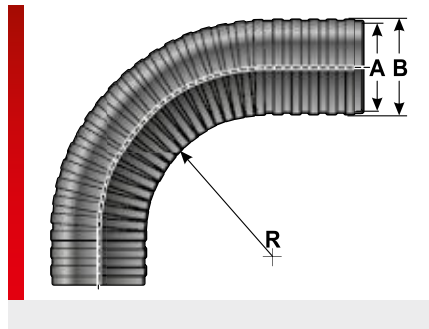
SPECIFICATIONS

- 45 – 160 °C short term 180 °C
 - Thermoplastic elastomer
 - Acc. to UL94 HB
 - In conformity with IEC EN 61386: > 900 N
-

| Type | Order No. | Colour | A Ø mm | B Ø mm | R stat. mm | R dyn. mm | Weight kg/100m | Pack m |
|-------------------------------|-----------|--------|--------|--------|------------|-----------|----------------|--------|
| High corrugation | | | | | | | | |
| EWX-HY-M25/P21 | 83121258 | Black | 18.60 | 27.80 | 49.00 | 104.00 | 13.0 | 50 |
| EWX-HY-M32/P29 | 83121260 | Black | 23.00 | 34.20 | 57.00 | 117.00 | 17.5 | 25 |
| EWX-HY-M40/P36 | 83121262 | Black | 28.90 | 42.30 | 71.00 | 146.00 | 28.0 | 25 |
| EWX-HY-M50/P48 | 83121264 | Black | 36.80 | 53.70 | 87.00 | 167.00 | 30.4 | 25 |
| EWX-HY-56 Jumbo | 83121278 | Black | 53.00 | 67.80 | 95.00 | 220.00 | 45.0 | 25 |
| EWX-HY-70 Jumbo | 83121280 | Black | 64.40 | 80.50 | 140.00 | 330.00 | 63.0 | 25 |
| EWX-HY-95 Jumbo ¹⁾ | 83121282 | Black | 91.00 | 105.50 | 150.00 | 400.00 | 89.0 | 10 |

¹⁾ Min. order quantity 40m

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

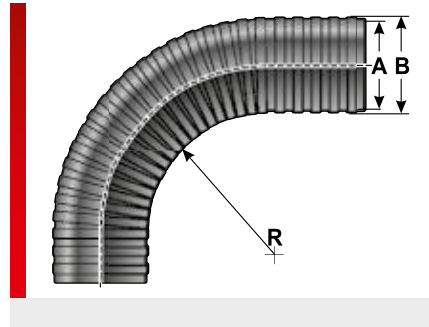
SPECIFICATIONS

- 45 – 160 °C short term 180 °C
- Thermoplastic elastomer
- Acc. to UL94 HB
- RoHS
- HF
- UV
- Hand

| Type | Order No. | Colour | A Ø mm | B Ø mm | R stat. mm | R dyn. mm | Weight kg/100m | Pack m |
|----------------------------------|-----------|--------|--------|--------|------------|-----------|----------------|--------|
| High corrugation | | | | | | | | |
| EWX-HY-LS-M25/P21 | 83122258 | Black | 19.80 | 28.10 | 49.00 | 104.00 | 11.5 | 50 |
| EWX-HY-LS-M32/P29 | 83122260 | Black | 24.10 | 34.50 | 57.00 | 117.00 | 17.5 | 25 |
| EWX-HY-LS-M40/P36 | 83122262 | Black | 29.70 | 42.10 | 71.00 | 146.00 | 22.0 | 25 |
| EWX-HY-LS-M50/P48 | 83122264 | Black | 38.00 | 54.10 | 87.00 | 167.00 | 30.4 | 25 |
| EWX-HY-LS-56 Jumbo ¹⁾ | 83122278 | Black | 52.00 | 68.00 | 95.00 | 220.00 | 45.0 | 25 |
| EWX-HY-LS-70 Jumbo ¹⁾ | 83122282 | Black | 64.00 | 80.00 | 115.00 | 235.00 | 63.0 | 25 |

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 the robot technology 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

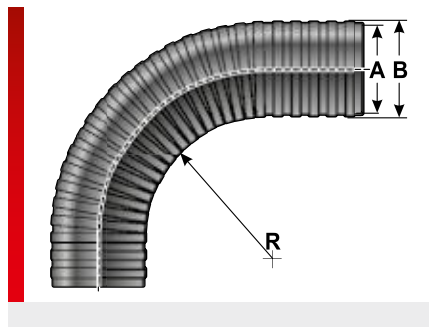
SPECIFICATIONS

- 40 – 105 °C short term 150 °C
- Mod. polyamide PA 12
- Acc. to UL94 V2 self-extinguishing
- In conformity with IEC EN 61386: > 1100 N



| Type | Order No. | Colour | A Ø mm | B Ø mm | R stat. mm | R dyn. mm | Weight kg/100m | Pack m |
|-------------------------------|-----------|--------|--------|--------|------------|-----------|----------------|--------|
| Standard corrugation | | | | | | | | |
| EW-PRF-M10/P7 | 83181252 | Black | 8.50 | 11.60 | 21.00 | 46.00 | 2.0 | 50 |
| EW-PRF-M12/P9 | 83181254 | Black | 9.80 | 13.00 | 22.00 | 51.00 | 2.5 | 50 |
| EW-PRF-M16/P11 | 83181256 | Black | 11.80 | 15.90 | 28.00 | 68.00 | 3.6 | 50 |
| EW-PRF-M20/P16 | 83181258 | Black | 15.60 | 21.10 | 38.00 | 95.00 | 5.5 | 50 |
| EW-PRF-M25/P21 | 83181262 | Black | 21.60 | 28.50 | 49.00 | 109.00 | 10.0 | 50 |
| EW-PRF-M32/P29 | 83181264 | Black | 28.00 | 34.50 | 67.00 | 142.00 | 12.0 | 25 |
| EW-PRF-M40/P36 | 83181266 | Black | 35.00 | 42.50 | 81.00 | 191.00 | 17.0 | 25 |
| EW-PRF-M50/P48 | 83181268 | Black | 47.00 | 54.30 | 102.00 | 237.00 | 23.0 | 25 |
| EW-PRF-70 Jumbo | 83181272 | Black | 68.40 | 80.00 | 200.00 | 390.00 | 44.0 | 25 |
| EW-PRF-95 Jumbo ¹⁾ | 83181274 | Black | 89.40 | 106.10 | 265.00 | 500.00 | 80.5 | 10 |
| Grey variants | | | | | | | | |
| EW-PRF-M10/P7 | 83181212 | Grey | 8.50 | 11.60 | 21.00 | 46.00 | 2.1 | 50 |
| EW-PRF-M12/P9 ¹⁾ | 83181214 | Grey | 9.80 | 13.00 | 22.00 | 51.00 | 2.5 | 50 |
| EW-PRF-M16/P11 ¹⁾ | 83181216 | Grey | 11.80 | 15.90 | 28.00 | 68.00 | 3.6 | 50 |
| EW-PRF-M20/P16 ¹⁾ | 83181218 | Grey | 15.60 | 21.10 | 38.00 | 95.00 | 5.8 | 50 |
| EW-PRF-M25/P21 | 83181222 | Grey | 21.60 | 28.50 | 49.00 | 109.00 | 9.5 | 50 |
| EW-PRF-M32/P29 | 83181224 | Grey | 28.00 | 34.50 | 67.00 | 142.00 | 12.0 | 25 |
| EW-PRF-M40/P36 ¹⁾ | 83181226 | Grey | 35.00 | 42.50 | 81.00 | 191.00 | 16.5 | 25 |
| EW-PRF-M50/P48 ¹⁾ | 83181228 | Grey | 47.00 | 54.30 | 102.00 | 237.00 | 23.0 | 25 |
| EW-PRF-70 Jumbo ¹⁾ | 83181232 | Grey | 68.40 | 80.00 | 200.00 | 390.00 | 48.0 | 25 |
| EW-PRF-95 Jumbo ¹⁾ | 83181234 | Grey | 89.40 | 106.10 | 265.00 | 500.00 | 81.0 | 10 |
| Narrow corrugation | | | | | | | | |
| EW-PRF-M20/P16S | 83181260 | Black | 16.70 | 21.10 | 35.00 | 90.00 | 5.6 | 50 |
| EW-PRF-M25/P21S ¹⁾ | 83181462 | Black | 23.00 | 28.30 | 44.00 | 104.00 | 10.0 | 50 |

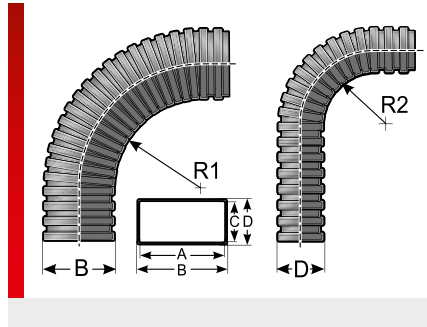
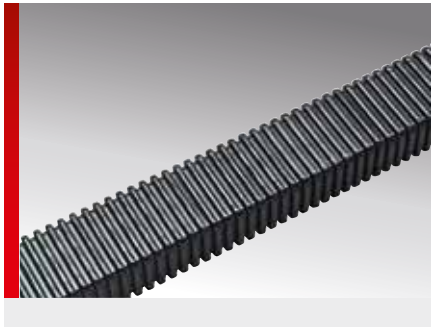
Type EW-PRF (Continued...)



| Type | Order No. | Colour | A Ø mm | B Ø mm | R stat. mm | R dyn. mm | Weight kg/100m | Pack m |
|-------------------------------|-----------|--------|--------|--------|------------|-----------|----------------|--------|
| EW-PRF-M32/P29S | 83181464 | Black | 28.50 | 34.30 | 62.00 | 132.00 | 14.0 | 25 |
| EW-PRF-M20/P16S ¹⁾ | 83181220 | Grey | 16.70 | 21.10 | 35.00 | 90.00 | 5.6 | 50 |
| EW-PRF-M25/P21S ¹⁾ | 83181422 | Grey | 23.00 | 28.30 | 44.00 | 104.00 | 9.5 | 50 |
| EW-PRF-M32/P29S ¹⁾ | 83181424 | Grey | 28.50 | 34.30 | 62.00 | 132.00 | 14.0 | 25 |

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 characterised 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 lines
- 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

- 45 – 160 °C short term 180 °C
- Thermoplastic elastomer
- Acc. to UL94 HB
- In conformity with IEC EN 61386: 1000 N

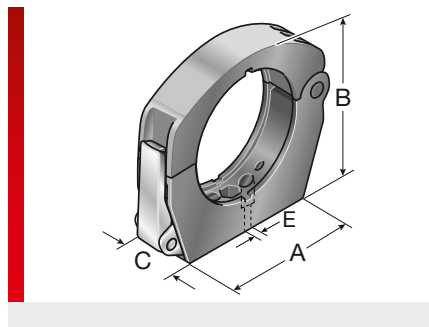


| Type | Order No. | Colour | A mm | B mm | C mm | D mm | R1 stat./dyn. mm | R2 stat./dyn. mm | Weight kg/100m | Pack m |
|----------|-----------|--------|-------|-------|-------|-------|------------------|------------------|----------------|--------|
| EF 26042 | 83361012 | Black | 42.00 | 50.00 | 26.00 | 34.00 | 110.0 / 320.0 | 60.0 / 120.0 | 22.0 | 3 |



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 and SH 56/70-M system holder is made of a modified, impact resistant polyamide, whereas the SH 56/70-A is made of black anodised aluminium.

- 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

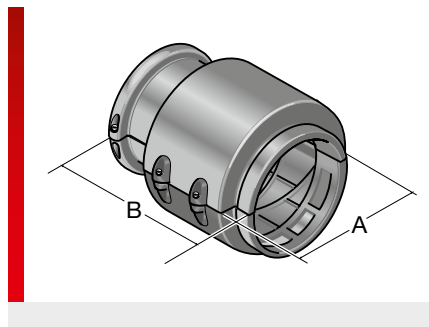
| | |
|---|---|
|  | -40 – 110 °C short term 140 °C |
|  | Type SH ... : Mod. polyamide Type SH ... -M: Mod. polyamide Type SH ... -A: Aluminium |
|  | Acc. to UL94 V0 |



| Type | Order No. | Colour | A mm | B mm | C mm | E mm | Pack qty. |
|---|-----------|----------------|---------|---------|---------|---------|--------------|
| System holder without continuous fin | | | | | | | |
| SH-P/M25-M32 | 83691462 | Black | 73.00 | 62.00 | 26.00 | 8.60 | 1 |
| SH-P/M40-M50 | 83691460 | Black | 104.50 | 90.00 | 33.00 | 8.80 | 1 |
| SH 56/70 | 83691490 | Black | 135.00 | 120.00 | 33.00 | 8.80 | 1 |
| SH 80/95 | 83691506 | Black | 150.00 | 147.00 | 40.00 | 8.80 | 1 |
| System holder with continuous fin | | | | | | | |
| SH-F / M40-M50 | 83691450 | Black | 104.50 | 90.00 | 33.00 | 8.80 | 1 |
| SH-PF / M40-M50 ¹⁾ | 83691470 | Black | 104.50 | 90.00 | 33.00 | 8.80 | 1 |
| System holder with metal closing | | | | | | | |
| SH M40/M50-M | 83691501 | Black | 118.00 | 90.00 | 33.00 | 8.80 | 1 |
| SH 56/70-M | 83691502 | Black | 135.00 | 120.00 | 33.00 | 8.80 | 1 |
| System holder made of aluminium | | | | | | | |
| SH M40/M50-A | 83691503 | Anodised black | 104.50 | 90.00 | 30.00 | 8.80 | 1 |
| SH 56/70-A | 83691504 | Anodised black | 130.00 | 121.00 | 35.00 | 8.80 | 1 |
| Conduit holder inlay | | | | | | | |
| ELR M40-M50 | 83691480 | Red | | | | | 1 |

¹⁾ Continuous fin type ELR, included loose

KEG/AK telescopic joint



with SH and ZS-70

PRODUCT INFORMATION

The extendible KEG/AK telescopic joint makes a length adjustment of approx. 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 – 110 °C
-  Mod. polyamide
-  Acc. to UL94 V0

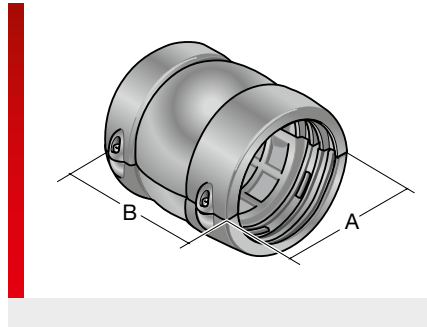




| Type | Order No. | Colour | Suitable for Murrflex | Suitable for System holder | Version | A mm | B mm | Pack qty. |
|-------------------------|-----------|--------|-----------------------|----------------------------|-----------|--------|--------|-----------|
| KEG/AK-70 ¹⁾ | 83692480 | Black | NW70 | SH 56/70 | divisible | 105.00 | 120.00 | 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

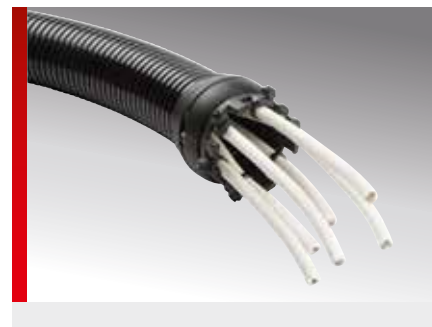
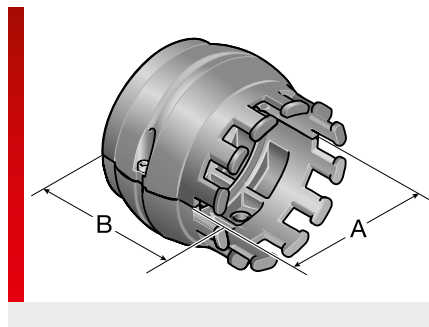
- 40 – 110 °C
- Mod. polyamide
- Acc. to UL94 V0

RoHS
 HF

| Type | Order No. | Colour | Suitable for Murrflex | Suitable for System holder | Version | A mm | B mm | Pack qty. |
|---------------------------|-----------|--------|-----------------------|----------------------------|-----------|--------|--------|-----------|
| KEG/K-M25 | 83692458 | Black | M25/P21 | SH-P / M25-M32 | divisible | 46.50 | 48.50 | 1 |
| KEG/K-M32 | 83692460 | Black | M32/P29 | SH-P / M25-M32 | divisible | 46.50 | 48.50 | 1 |
| KEG/K-M40 | 83692462 | Black | M40/P36 | SH-P / M40-M50 | divisible | 70.00 | 67.00 | 1 |
| KEG/K-M50 | 83692464 | Black | M50/P48 | SH-P / M40-M50 | divisible | 70.00 | 67.00 | 1 |
| KEG/K-56 ¹⁾ | 83692466 | Black | NW56 | SH 56/70 | divisible | 100.50 | 122.40 | 1 |
| KEG/K-70 ¹⁾ | 83692468 | Black | NW70 | SH 56/70 | divisible | 100.50 | 122.40 | 1 |
| KEG/K-80 sw ¹⁾ | 83692470 | Black | NW80 | SH 80/95 | divisible | 126.00 | 170.00 | 1 |
| KEG/K-95 sw ¹⁾ | 83692472 | Black | NW95 | SH 80/95 | divisible | 126.00 | 170.00 | 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.

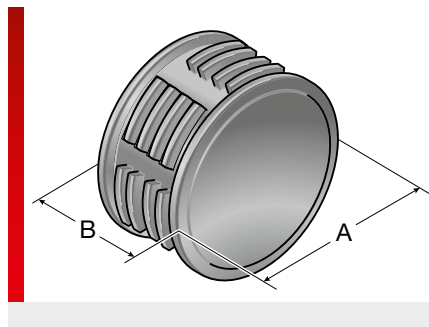
The cords, conduits and cables are connected to the integrated strain relief with cable ties.

SPECIFICATIONS

- 40 – 110 °C
- Mod. polyamide
- Acc. to UL94 V0

| Type | Order No. | Colour | Suitable for Murrflex | Suitable for System holder | Version | A mm | B mm | Pack qty. |
|------------|-----------|--------|-----------------------|----------------------------|-----------|-------|-------|-----------|
| KEG/ZL-M25 | 83692258 | Black | M25/P21 | SH-P / M25-M32 | divisible | 42.50 | 38.50 | 1 |
| KEG/ZL-M32 | 83692260 | Black | M32/P29 | SH-P / M25-M32 | divisible | 42.50 | 38.50 | 1 |
| KEG/ZL-M40 | 83692262 | Black | M40/P36 | SH-P / M40-M50 | divisible | 69.00 | 56.50 | 1 |
| KEG/ZL-M50 | 83692264 | Black | M50/P48 | SH-P / M40-M50 | divisible | 69.00 | 56.50 | 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 customised hole pattern, using our waterjet technology.
Talk to us!

SPECIFICATIONS

| | |
|--|-----------------|
|  | -40 – 110 °C |
|  | Elastomer |
|  | Acc. to UL94 HB |
|  | |
|  | |
|  | |

| Type | Order No. | Colour | Suitable for System holder | A mm | B mm | Pack qty. |
|--|-----------|--------|----------------------------|--------|-------|-----------|
| Strain relief as blank for self-made assembly | | | | | | |
| R-ZL/N1 21/29 ¹⁾ | 83951606 | Black | | 33.50 | 18.00 | 1 |
| R-ZL/N1 36/48 ¹⁾ | 83951610 | Black | | 55.00 | 18.00 | 1 |
| V-ZLT-70 ²⁾ | 83692802 | Black | | 82.50 | 39.00 | 1 |
| V-ZLT-70KB ²⁾ | 83692804 | Black | | 82.50 | 66.50 | 1 |
| V-ZLT-95 ⁴⁾ | 83692830 | Black | | 102.00 | 39.00 | 1 |
| V-ZLT-95KB ⁴⁾ | 83692832 | Black | | 102.00 | 66.00 | 1 |
| Strain relief system | | | | | | |
| ZS-70 ³⁾ | 83692806 | Black | SH 56/70 | 100.90 | 60.35 | 1 |
| ZS-70-KB ³⁾ | 83692808 | Black | SH 56/70 | 100.90 | 85.40 | 1 |
| ZS-95 stain relief system ³⁾ | 83692834 | Black | SH 80/95 | 102.00 | 57.00 | 1 |
| ZS-95-KB stain relief system ³⁾ | 83692836 | Black | SH 80/95 | 102.00 | 82.00 | 1 |

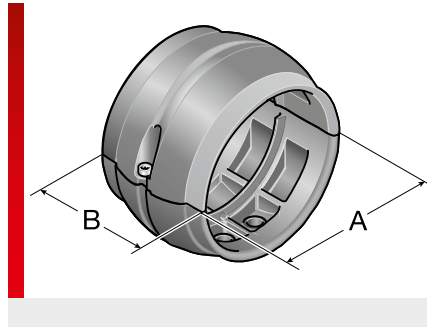
¹⁾ suitable for KEG-K M25 and KEG-K M32

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 centre 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

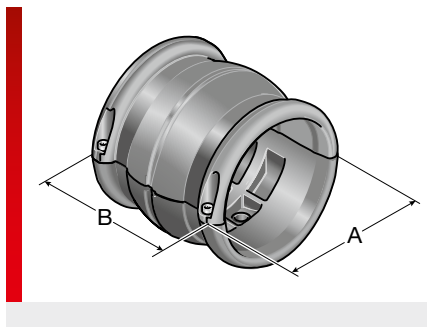
| | |
|---|--------------------------------|
|  | -40 – 110 °C short term 140 °C |
|  | Mod. polyamide |
|  | Acc. to UL94 V0 |



| Type | Order No. | Colour | Suitable for Murrflex | Suitable for System holder | Version | A mm | B mm | Pack qty. |
|--|-----------|--------|-----------------------|----------------------------|-----------|--------|-------|-----------|
| Centre ball joint (fixed) for fastening cable protection conduits | | | | | | | | |
| KMG-F-M25 | 83691658 | Black | M25/P21 | SH-P / M25-M32 | divisible | 42.50 | 27.50 | 1 |
| KMG-F-M32 | 83691660 | Black | M32/P29 | SH-P / M25-M32 | divisible | 42.50 | 27.50 | 1 |
| KMG-F-M40 | 83691662 | Black | M40/P36 | SH M40-M50 | divisible | 69.00 | 44.00 | 1 |
| KMG-F-M50 | 83691664 | Black | M50/P48 | SH M40-M50 | divisible | 69.00 | 44.00 | 1 |
| Set consists of KMG/F + SH-P M40/M50 | | | | | | | | |
| Set KMG-F-M40 | 83691663 | Black | M40/P36 | | divisible | 69.00 | 44.00 | 1 |
| Set KMG-F-M50 | 83691665 | Black | M50/P48 | | divisible | 69.00 | 44.00 | 1 |
| Hose ring (fixed) for fastening cable protection conduits | | | | | | | | |
| SRF-M40/P36 ¹⁾ | 83692288 | Black | M40/P36 | SH 56/70 | divisible | 89.50 | 27.00 | 1 |
| SRF-M50/P48 ¹⁾ | 83692289 | Black | M50/P48 | SH 56/70 | divisible | 89.50 | 27.00 | 1 |
| SRF-56 | 83692290 | Black | NW56 | SH 56/70 | divisible | 89.50 | 27.00 | 1 |
| SRF-68 | 83692291 | Black | NW68 | SH 56/70 | divisible | 89.50 | 27.00 | 1 |
| SRF-70 | 83692292 | Black | NW70 | SH 56/70 | divisible | 89.50 | 27.00 | 1 |
| SRF-80 sw | 83692294 | Black | NW80 | SH 80/95 | divisible | 119.00 | 46.00 | 1 |
| SRF-95 sw | 83692296 | Black | NW95 | SH 80/95 | divisible | 119.00 | 46.00 | 1 |
| Set consist of SRF + SH 56/70 | | | | | | | | |
| Set SRF-68 | 83692246 | Black | NW68 | | divisible | 89.50 | 27.00 | 1 |

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

KMG/G ball bearing



PRODUCT INFORMATION

The KMG-G is mainly used for dynamic applications, as you may find in robots and other movable handling devices. The detachably connected type KMG-G centre ball joint can be mounted at the SH system holder easily and quickly. The KMG-G facilitates a smooth gliding movement through the longitudinal axis whenever the cable protection 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 cables can be routed and protected with absolute process protection and length adaptability, even in highly dynamic applications.

SPECIFICATIONS

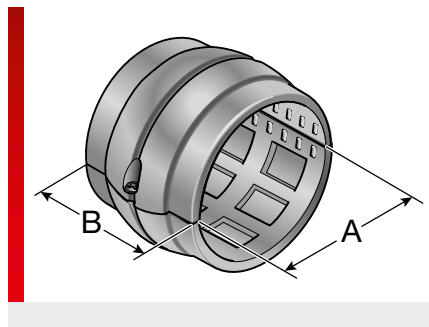
-  -40 – 110 °C
-  Mod. polyamide
-  Acc. to UL94 V0





| Type | Order No. | Colour | Suitable for Murrflex | Suitable for System holder | Version | A mm | B mm | Pack qty. |
|-----------|-----------|--------|-----------------------|----------------------------|-----------|-------|-------|-----------|
| KMG/G-M25 | 83691858 | Black | M25/P21 | SH-P / M25-M32 | divisible | 42.50 | 36.00 | 1 |
| KMG/G-M32 | 83691860 | Black | M32/P29 | SH-P / M25-M32 | divisible | 42.50 | 36.00 | 1 |
| KMG/G-M40 | 83691862 | Black | M40/P36 | SH-P / M40-M50 | divisible | 70.00 | 70.00 | 1 |
| KMG/G-M50 | 83691864 | Black | M50/P48 | SH-P / M40-M50 | divisible | 70.00 | 70.00 | 1 |

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 – 110 °C
- Mod. polyamide
- Acc. to UL94 V0

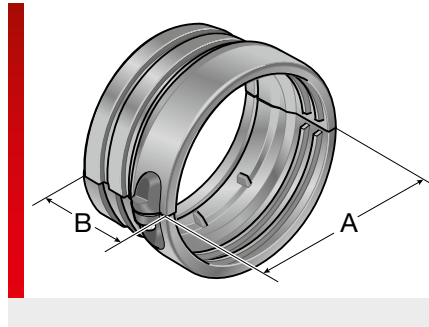
| Type | Order No. | Colour | Suitable for System holder | Version | A mm | B mm | Pack qty. |
|--------------------------------|-----------|--------|----------------------------|-----------|-------|-------|-----------|
| KMG-F H45/13 | 83691670 | Black | SH-P / M40-M50 | divisible | 45.70 | 44.00 | 1 |
| KMG-F H55/16 | 83691672 | Black | SH-P / M40-M50 | divisible | 55.25 | 44.00 | 1 |
| KMG-F H66/25 | 83691674 | Black | SH 56/70 | divisible | 66.50 | 45.00 | 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 manoeuvring at the robot arm with optimum hold.

SPECIFICATIONS

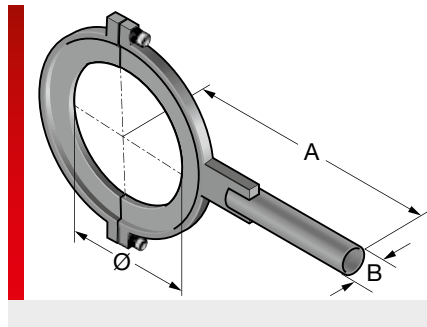
-  -40 – 110 °C
-  Mod. polyamide
-  Acc. to UL94 V0

| Type | Order No. | Colour | Suitable for Murrflex | Version | A mm | B mm | Pack qty. |
|--------------------------|-----------|--------|-----------------------|-----------|--------|-------|-----------|
| A-RS-56 sw ¹⁾ | 83692280 | Black | NW52 | divisible | 102.50 | 46.00 | 1 |
| A-RS-70 sw ¹⁾ | 83692282 | Black | NW70 | divisible | 102.50 | 46.00 | 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. Addition fastening elements can be affixed to the wrist support as required.

SPECIFICATIONS

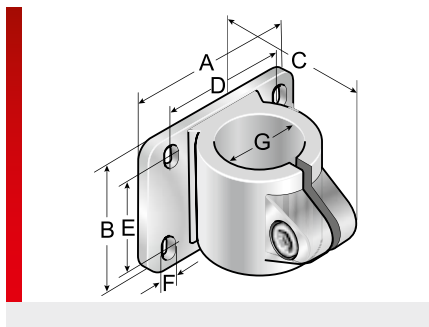
Powder coated sheet steel

| Type | Order No. | Colour | Ø mm | A mm | B mm | Pack qty. |
|--|-----------|--------|--------|--------|-------|-----------|
| Kuka KR6, KR 10 retaining plate, axis 6 | 83692753 | Black | 39.50 | 83.00 | | 1 |
| R-SSR D 50 tension clamp with angled sheet | 83952697 | Black | 50.00 | 89.50 | | 1 |
| R-SSR D63 tension clamp UR3 ¹⁾ | 83693201 | Black | 63.00 | 54.00 | | 1 |
| R-SSR D 63 tension clamp with angled sheet ²⁾ | 83952699 | Black | 63.00 | 99.30 | | 1 |
| R-SSR D63 tension clamp UR5 ¹⁾ | 83693202 | Black | 75.00 | 60.00 | | 1 |
| R-SSR D63 tension clamp UR10 ¹⁾ | 83693203 | Black | 90.00 | 68.00 | | 1 |
| R-SSR 100-1 tension clamp with pipe 15° | 83952626 | Black | 100.00 | 289.00 | 32.00 | 1 |
| R-SSR 116-2 tension clamp with pipe, straight | 83692712 | Black | 116.00 | 301.00 | 32.00 | 1 |
| R-SSR 125-1 tension clamp with pipe 15° | 82952696 | Black | 125.00 | 361.60 | 32.00 | 1 |
| R-SSR 125-2 tension clamp with pipe, straight | 82390044 | Black | 125.00 | 352.50 | 32.00 | 1 |
| R-SSR 140-2 tension clamp with pipe, straight | 82390067 | Black | 140.00 | 355.00 | 32.00 | 1 |
| R-SSR 160-1 tension clamp with pipe 15° | 83952628 | Black | 160.00 | 374.40 | 32.00 | 1 |
| R-SSR 160-2 tension clamp with pipe, straight | 83952629 | Black | 160.00 | 370.00 | 32.00 | 1 |
| R-SSR 172-1 tension clamp with pipe 15° | 83952634 | Black | 172.00 | 384.00 | 32.00 | 1 |
| R-SSR 180-1 tension clamp with pipe 15° | 82390032 | Black | 180.00 | 384.00 | 32.00 | 1 |
| R-SSR 190-1 tension clamp with pipe 15° | 83952638 | Black | 190.00 | 384.00 | 32.00 | 1 |
| R-SSR 200-1 tension clamp with pipe 15° | 83952642 | Black | 200.00 | 388.20 | 32.00 | 1 |
| R-SSR 220-1 tension clamp with pipe 15° | 83952640 | Black | 220.00 | 392.30 | 32.00 | 1 |
| R-SSR 250-1 tension clamp with pipe 15° | 83952646 | Black | 250.00 | 412.30 | 32.00 | 1 |
| R-SSR 315-1 tension clamp with pipe 15° | 83692711 | Black | 315.00 | 493.70 | 32.00 | 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.

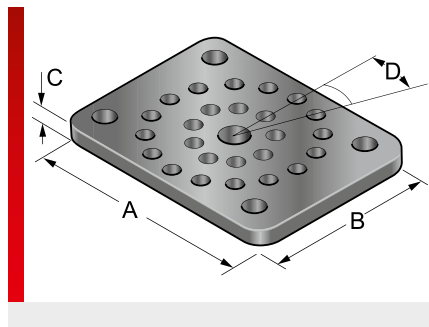
SPECIFICATIONS

Aluminium

| Type | Order No. | Colour | A mm | B mm | C mm | D Angle ° | E mm | F mm | G mm | Pack qty. |
|------------------------|-----------|----------------|--------|-------|-------|-----------|-------|------|-------|-----------|
| R-FKE 32 | 83952614 | Anodised black | 60.00 | 60.00 | 93.00 | | | | 32.00 | 1 |
| R-FKM 32 ¹⁾ | 83952610 | Silver | 105.00 | 80.00 | 85.00 | 80.00 | 58.00 | 8.50 | 32.00 | 1 |
| R-FKM 40 ¹⁾ | 83952612 | Silver | 105.00 | 80.00 | 85.00 | 80.00 | 58.00 | 8.50 | 40.00 | 1 |

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

Base plate



with R-FKM

PRODUCT INFORMATION

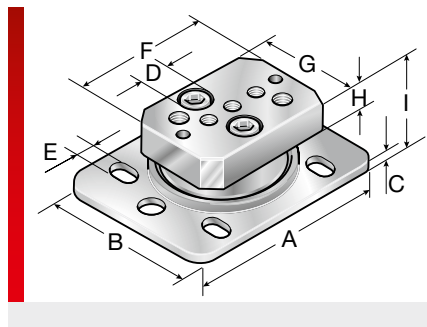
The base plate serves to retain type SH system holders. The 8-part split enables mounting the system holders at a rotation of up to 45°. The mounting holes are aligned with our R-FKM pipe clamp.

SPECIFICATIONS

Powder coated sheet steel

| Type | Order No. | Colour | A mm | B mm | C mm | D Angle ° | Pack qty. |
|-------|-----------|--------|--------|-------|------|-----------|-----------|
| R-FKG | 83952620 | Black | 110.00 | 80.00 | 8.00 | 22.50 | 1 |

Pivot bearing



R-DLM with TRO 70

PRODUCT INFORMATION

The pivot bearing can be rotated in 360° and is 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

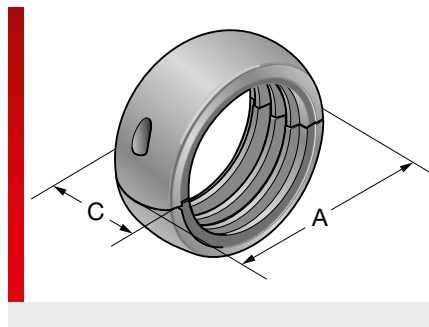
RoHS

| Type | Order No. | Colour | A mm | B mm | C mm | E mm | F mm | G mm | H mm | I mm | K Thread | Pack qty. |
|-------|-----------|--------|--------|-------|------|------|------|------|------|------|----------|-----------|
| R-DLM | 83952210 | Silver | 120.00 | 85.00 | 5.00 | 9.00 | | | | | M10x1,5 | 1 |

Pivot bearing with adapter plate

| | | | | | | | | | | | | |
|-------|----------|----------------|--------|-------|------|------|-------|-------|-------|-------|---------|---|
| R-DZM | 83952212 | Silver / Black | 120.00 | 85.00 | 5.00 | 9.00 | 80.00 | 45.00 | 15.00 | 34.00 | M10x1,5 | 1 |
|-------|----------|----------------|--------|-------|------|------|-------|-------|-------|-------|---------|---|

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 – 110 °C short term 140 °C
- UL listed material Mod. polyamide PA 6
- Acc. to UL94 V0 self-extinguishing

| Type | Order No. | Colour | Suitable for Murrflex | Suitable for Murrflex EWX | A mm | C mm | 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 | | 51.60 | 51.20 | 10 |
| PR/SV-EW 29 | 83691060 | Black | M32/P29 | | 57.90 | 51.00 | 10 |
| PR/SV-EW 36 | 83691062 | Black | M40/P36 | | 66.00 | 51.50 | 10 |
| PR/SV-EW 48 | 83691064 | Black | M50/P48 | | 78.00 | 49.50 | 10 |
| PR/SV-EW 56 | 83691065 | Black | NW56 | | 90.80 | 51.00 | 5 |
| Standard design for cable protection conduits with high corrugation, type EWX-xx | | | | | | | |
| PR/SV-EW 21 | 83691018 | Grey | M25/P21 | | 51.60 | 51.20 | 10 |
| PR/SV-EW 29 | 83691020 | Grey | M32/P29 | | 57.90 | 51.00 | 10 |
| PR/SV-EW 36 | 83691022 | Grey | M40/P36 | | 66.00 | 51.50 | 10 |
| PR/SV-EW 48 | 83691024 | Grey | M50/P48 | | 78.00 | 49.50 | 10 |
| PR/SV-EW 56 | 83691025 | Grey | NW56 | | 90.80 | 51.00 | 5 |
| Standard design for cable protection conduits with high corrugation, type EWX-xx | | | | | | | |
| PR/SV-EWX 21 | 83691258 | Black | M25/P21 | | 51.60 | 51.90 | 10 |
| PR/SV-EWX 29 | 83691260 | Black | M32/P29 | | 57.90 | 51.00 | 10 |
| PR/SV-EWX 36 | 83691262 | Black | M40/P36 | | 66.00 | 51.50 | 10 |
| PR/SV-EWX 48 | 83691264 | Black | M50/P48 | | 78.00 | 49.50 | 10 |
| PR/SV-EWX 56 | 83691265 | Black | NW56 | | 90.80 | 51.00 | 5 |
| PR/SV-EWX 21 | 83691218 | Grey | M25/P21 | | 51.60 | 51.90 | 10 |
| PR/SV-EWX 29 | 83691220 | Grey | M32/P29 | | 57.90 | 51.00 | 10 |
| PR/SV-EWX 36 | 83691222 | Grey | M40/P36 | | 66.00 | 51.50 | 10 |
| PR/SV-EWX 48 | 83691224 | Grey | M50/P48 | | 78.00 | 49.50 | 10 |
| PR/SV-EWX 56 | 83691225 | Grey | NW56 | | 90.80 | 51.00 | 5 |



Accessories

Tube-Cut (Conduit knife for cable protection conduits)



Tube-Cut/Z



Tube-Cut/D

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:

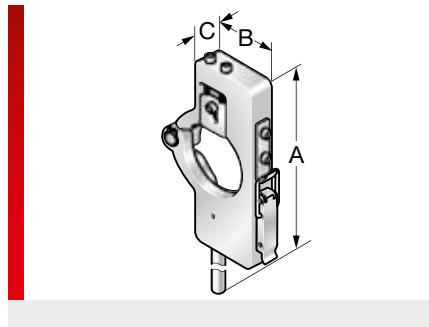
- Extremely easy handling
- Two different versions available
- Safe to use with a material hold-down device that also shields the blade
- Fast and safe blade change
- Very low weight

SPECIFICATIONS

- Plastic
Steel
- Not suitable for NW95 with high corrugation

| Type | Order No. | Length mm | Suitable for Murrflex | Pack qty. |
|------------|-----------|-----------|--|-----------|
| Tube-Cut/D | 83729214 | 120.00 | Standard corrugation M12/P09 to NW 95, High corrugation (EWX) to NW 70 | 1 |
| Tube-Cut/Z | 83729212 | 120.00 | Standard corrugation M12/P09 to NW 95, NW70 | 1 |

m-cut corrugated conduit cutter



PRODUCT INFORMATION

The type m-cut corrugated conduit cutter is made of aluminium 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:

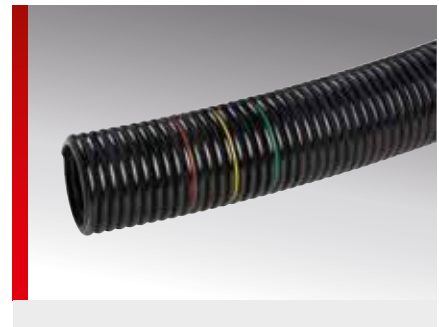
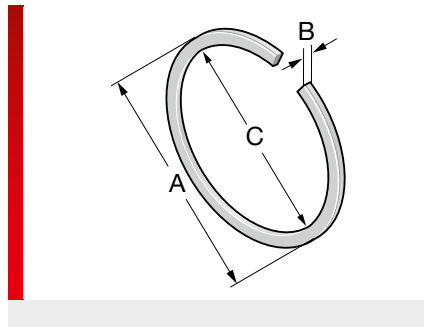
- Extremely easy handling
- Safe handling, because of its spring-loaded blade cover, which covers the blade when the cutter is not in use.
- Faster and more secure blade exchange -> blades are available as spare parts
- Low weight

SPECIFICATIONS



| Type | Order No. | Suitable for Murrflex | Pack qty. |
|-------------------------|-----------|-----------------------|-----------|
| m-cut M40 B | 83729222 | M40/P36 | 1 |
| m-cut M50 B | 83729224 | M50/P48 | 1 |
| m-cut 56 B | 83729226 | NW56 | 1 |
| m-cut 70 B | 83729228 | NW70 | 1 |
| m-cut 95 B | 83729230 | NW95 | 1 |
| m-cut replacement blade | 83729232 | | 1 |

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

- 20 – 105 °C
- Acc. to UL94 HB
-

| Type | Order No. | Colour | A mm | B mm | Pack qty. |
|--|-----------|--------|-------|------|-----------|
| Position markers for EW, EW-LS, EWT and EWX | | | | | |
| Position marker - 36 - yellow | 83692641 | Yellow | 32.70 | 1.75 | 5 |
| Position marker - 36 - green | 83692636 | Green | 32.70 | 1.75 | 5 |
| Position marker - 36 - red | 83692646 | Red | 32.70 | 1.75 | 5 |
| Position marker - 48 - yellow | 83692642 | Yellow | 41.20 | 1.75 | 5 |
| Position marker - 48 - green | 83692637 | Green | 41.20 | 1.75 | 5 |
| Position marker - 48 - red | 83692647 | Red | 41.20 | 1.75 | 5 |
| Position marker - 56 - yellow | 83692643 | Yellow | 59.10 | 1.75 | 5 |
| Position marker - 56 - green | 83692638 | Green | 59.10 | 1.75 | 5 |
| Position marker - 56 - red | 83692648 | Red | 59.10 | 1.75 | 5 |
| Position marker - 70 - yellow | 83692644 | Yellow | 70.50 | 1.75 | 5 |
| Position marker - 70 - green | 83692639 | Green | 70.50 | 1.75 | 5 |
| Position marker - 70 - red | 83692649 | Red | 70.50 | 1.75 | 5 |
| Position marker - set 36 | 83692690 | | 32.70 | 1.75 | 1 |
| Position marker - set 48 | 83692692 | | 41.20 | 1.75 | 1 |
| Position marker - set 56 | 83692694 | | 59.10 | 1.75 | 1 |
| Position marker - set 70 | 83692698 | | 70.50 | 1.75 | 1 |



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 Base plate KUKA KR30 - KR60 | 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 Base plate KUKA QUANTEC/SERIE 2000 | Recirculation system M25/M32 | R-Tec Box-S M32/M40 | R-Tec Box M40/M50 | R-Tec Box 56/70 | 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 SERIE 6600 | 83692622 Base plate ABB SERIE 6620 | 83692761 Base plate ABB SERIE 7600 | Recirculation system M25/M32 | R-Tec Box-S M32/M40 | R-Tec Box M40/M50 | 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 | | | | | | ● | | ● | ● | ● | ● |
| | | | | | | | | | | | |
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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 | Recirculation system M25/M32 | R-Tec Box-S M32/M40 | R-Tec Box M40/M50 | 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 | ● | | ● | ● | ● | |
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