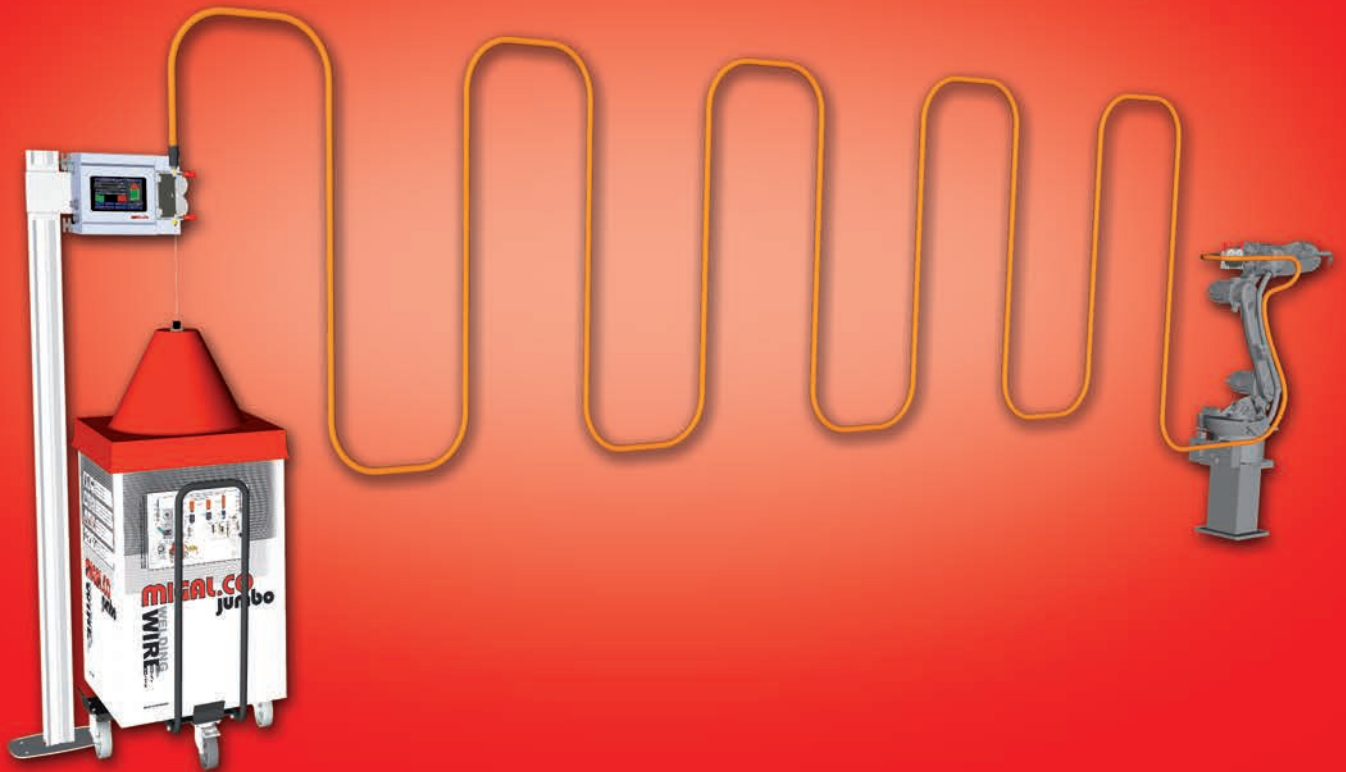


# Your key

to perfect wire transport.



## Products

Transport devices  
Drum hoods and decoiling aids  
Couplings and connectors to wire feeders  
Conduits  
Wire feed and wire feed management  
Pulley, Wire straightening device  
Wire end control  
Ceramic surface protection

**MIGAL.CO**

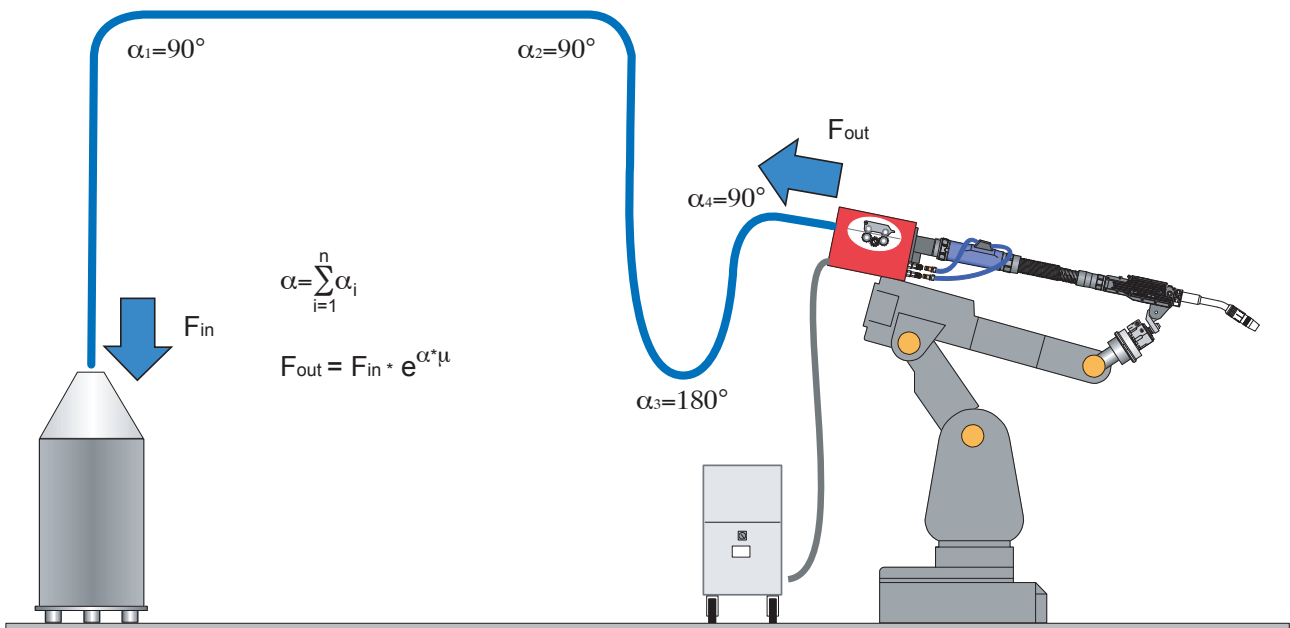


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## Wire transport

### Proper design of wire transport systems



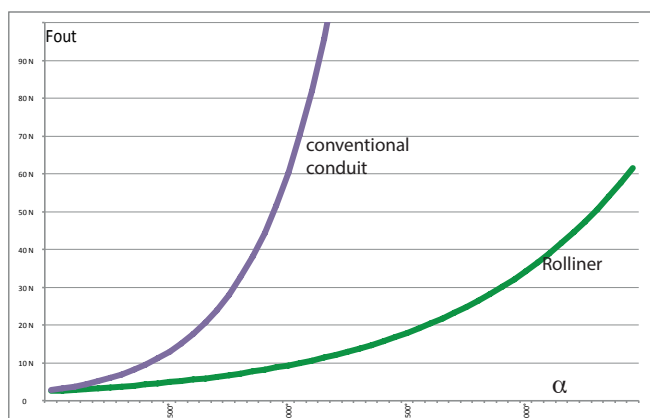
Schematic presentation of a robotic welding system with bulk wire supply

With the application of bulk wire systems (drums, large spools) instead of standard coils (7 kg in aluminum, 15 kg in steel) the use of conduits is necessary. At the same time the constancy of the wire feed speed is a crucial parameter in arc- or beamwelding. The movement of the electrode wire in the wire guide hose is inhibited by friction and it can very easily lead to situations in which the wire speed required can no longer be maintained.

Thus, the correct design of the entire wire guide system is crucial. Own research and practical experience from MIGAL.CO has shown that the formula from Euler-Eytelwein is sufficiently accurate to design wire transport systems for a stable long-term operation. The following informations are necessary:

- Required force in Newton to pull the wire out of the bulk pack
- Pulling force of the wire feeder in Newton which can be safely maintained during continuous operation
- Friction coefficient of conduit
- Sum of the radii of the conduit in degrees

The products of MIGAL.CO are uniquely matched to each other, thereby guaranteeing optimum wire transport and reliable welding processes in large scale production.



Exponential curves of two different conduits

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

## Wire transport

### Friction coefficient of MIGAL.CO conduits

Conduit	Type of friction	Friction coefficient
Rolliner 3G	Rolling friction	0.08
Rolliner XL2	Rolling friction	0.08
Toughliner	Sliding friction	0.20 *
Softliner	Sliding friction	0.20

\* for steel wires only. Toughliner cannot transport aluminum wires!

### Extraction force from MIGAL.CO drums

Type of drum	Extraction force [N]
Eco-drum aluminum with decoiling aid ASH 81	1.5 N (ML4043 1.6 mm)
Jumbo-drum with decoiling aid TOU400/580	1.0 N (ML5087 1.2 mm)
Eco-drum CrNi with decoiling ring	0.6 N (ML 18.8 Mn 1.2 mm)

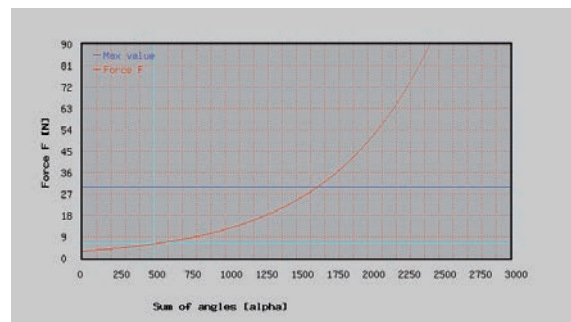
### Calculation of transport forces for the proper design of wire transport systems

With the following calculation form the application of the Euler-Eytelwein formula for designing a wire transport system is possible.

The following entries are to be made:

- Drag force in Newton - how much is for example the force required to pull the wire out of the drum (see table)
- Angle  $\alpha$  in degrees - Sum of the bending angles with which the conduit is installed
- Friction coefficient  $\mu$  (see table)

It calculates the force with which the wire feed motor has to pull. You can enter a maximum value (e. g. 30 N). The values are also displayed graphically in the diagram.

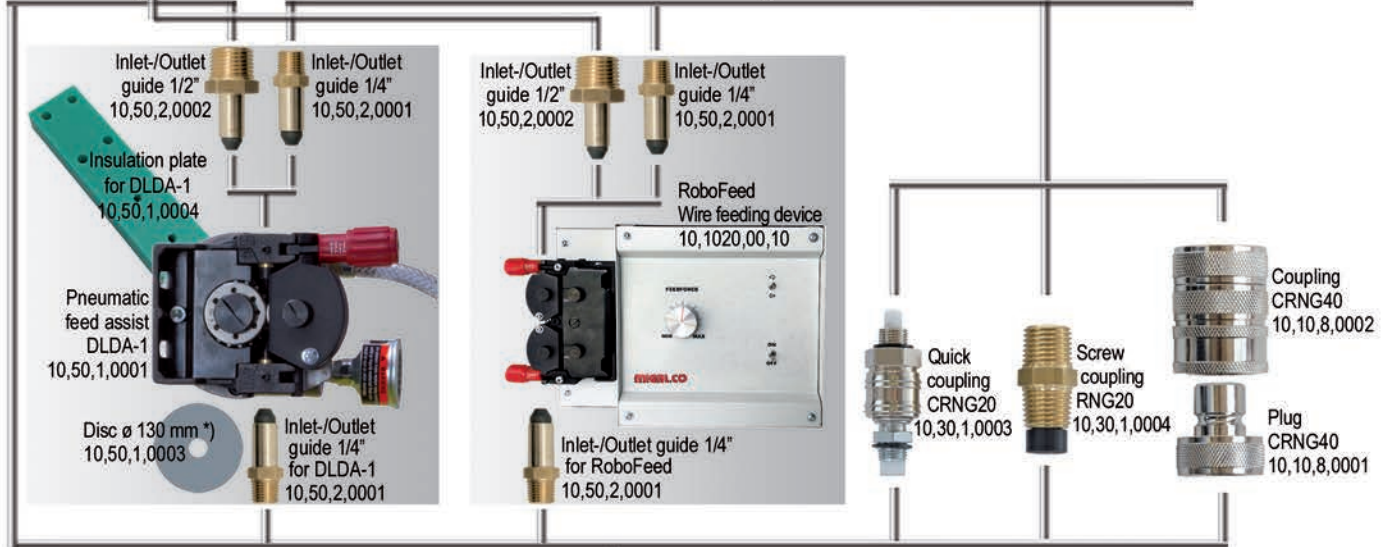
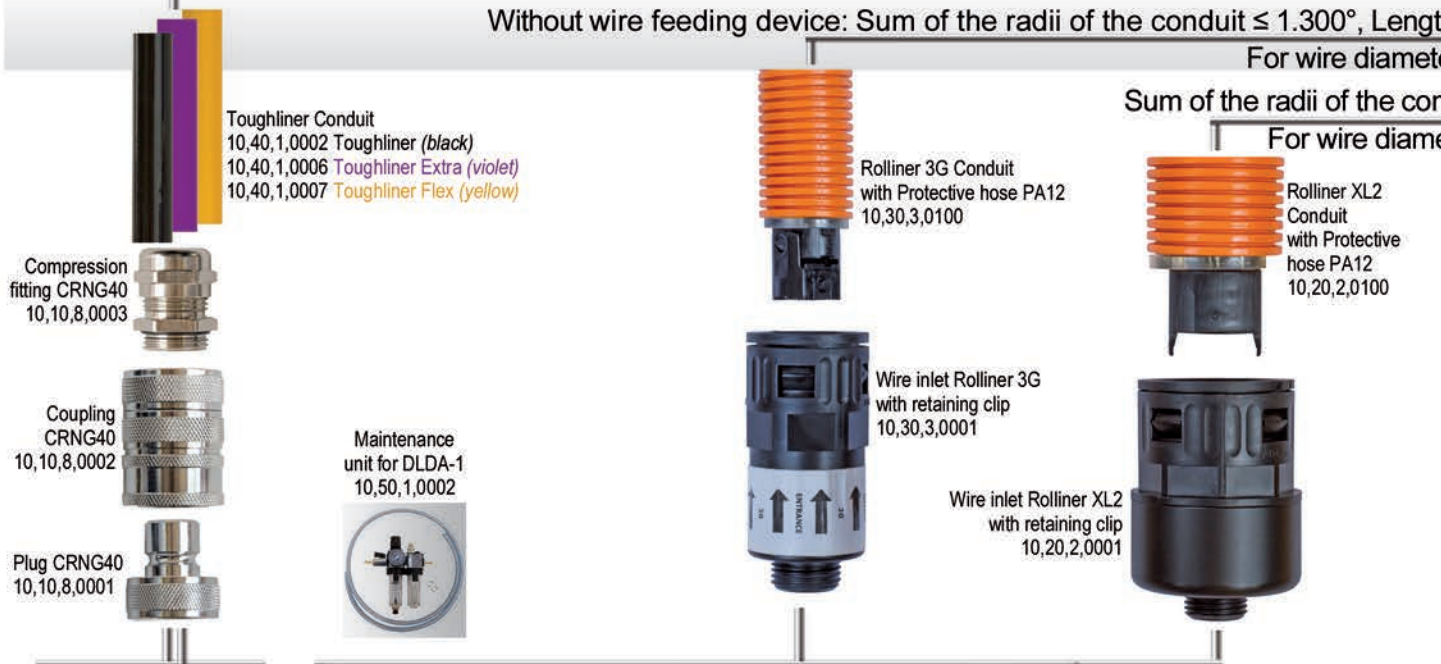


Drag force G [N]	Sum of angles $\alpha$ [°]	Friction coefficient $\mu$	Maximum force $F_{max}$ [N]	Force F [N]
<input type="text" value="3"/>	<input type="text" value="500"/>	<input type="text" value="0.08"/>	<input type="text" value="30"/>	<input type="text" value="6.03"/>
<input type="button" value="Calculate"/>				

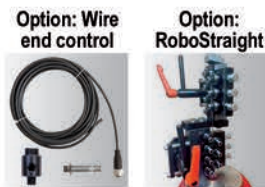
An interactive form for the calculation of transport forces is available at [www.migal.co](http://www.migal.co)

# Wire transport for un- and low-alloy steel wires

For wire diameters up to 2.4 mm. Without wire feeding device (DLDA1, RoboFeed): Sum of the radii of the conduit ≤ 1.300°, Length of the conduit ≤ 1.300 m



\*) When using the Pneumatic feed assist DLDA-1, the discs delivered with the decolling aid ASH 81 must be replaced by 2 pcs. Disc ø 130 mm 10,50,1,0003.



of the conduit  $\leq 360^\circ$ , Length  $\leq 5$  m • With wire feeding device: Sum of the radii  $\leq 1.800^\circ$ , Length  $\leq 50$  m

h  $\leq 25$  m • With wire feeding device: Sum of the radii  $\leq 2.500^\circ$ , Length  $\leq 75$  m

eters up to 1.6 mm.

duit  $\leq 1.300^\circ$ , Length  $\leq 25$  m

eters up to 4 mm.

Rolliner XL2 Conduit  
with Protective hose  
PA12  
10,20,2,0100



Rolliner 3G Conduit  
with Protective hose PA12  
10,30,3,0100



Toughliner Conduit  
10,40,1,0002 Toughliner (schwarz)  
10,40,1,0006 Toughliner Extra (violet)  
10,40,1,0007 Toughliner Flex (yellow)



Compression  
fitting CRNG40  
10,10,8,0003



Plug CRNG40  
10,10,8,0001



Coupling  
CRNG40  
10,10,8,0002



Wire outlet  
Rolliner XL2  
with retaining clip  
10,20,2,0002



Wire outlet Rolliner 3G  
with retaining clip  
10,30,3,0002



Adapter 1/2" - 1/4"  
with internal thread  
10,10,8,0006



Connector  
CLOOS  
10,20,1,0009



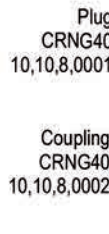
Universal connector  
for wire feeders  
ASRPR with plastic insert  
10,20,1,0012



Screw  
coupling  
RNG20  
10,30,1,0004



Connector  
SKS-PF5  
10,20,1,0011



Plug  
CRNG40  
10,10,8,0001



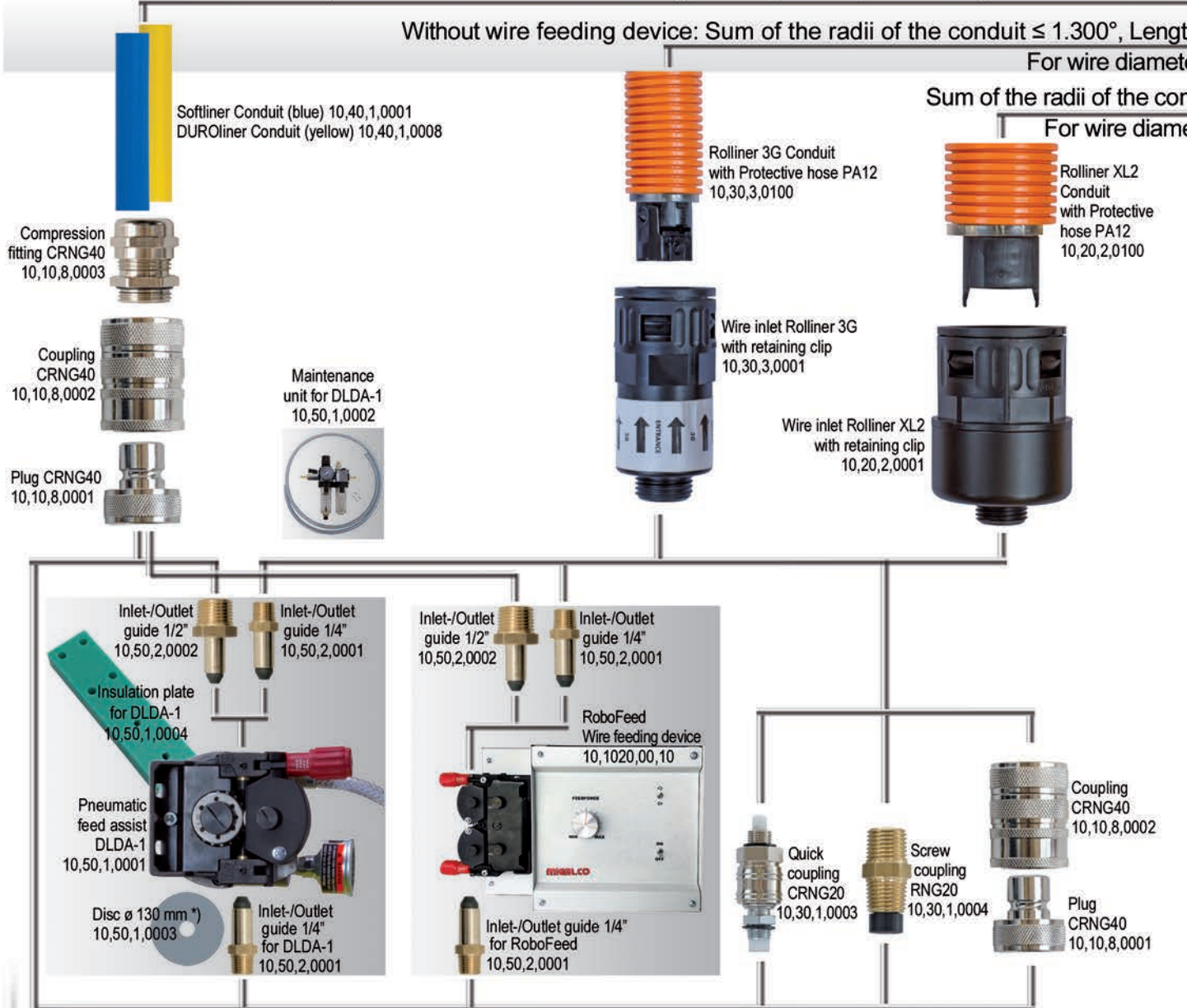
Coupling  
CRNG40  
10,10,8,0002

Adapter 1/2" - M20  
10,20,1,0014

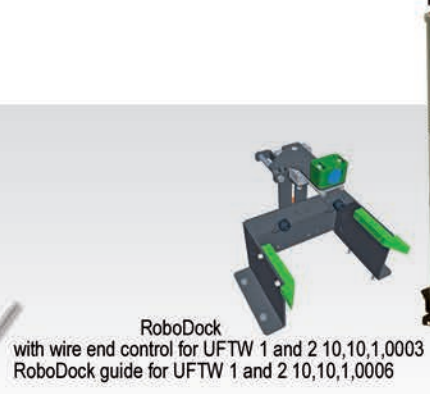
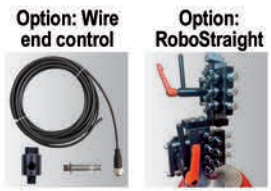


# Wire transport for high-alloy steel wires and non-ferrous alloys

For wire diameters up to 2.4 mm. Without wire feeding device (DLDA1, RoboFeed): Sum of the radii of the conduit ≤ 1.300°, Length of the conduit ≤ 1.300 m



\*) When using the Pneumatic feed assist DLDA-1, the discs delivered with the decolling aid ASH 81 must be replaced by 2 pcs. Disc ø 130 mm 10,50,1,0003.





of the conduit  $\leq 360^\circ$ , Length  $\leq 5$  m • With wire feeding device: Sum of the radii  $\leq 1.800^\circ$ , Length  $\leq 50$  m

h  $\leq 25$  m • With wire feeding device: Sum of the radii  $\leq 2.500^\circ$ , Length  $\leq 75$  m

eters up to 1.6 mm.

duit  $\leq 1.300^\circ$ , Length  $\leq 25$  m

eters up to 4 mm.

Rolliner XL2 Conduit  
with Protective hose  
PA12  
10,20,2,0100



Rolliner 3G Conduit  
with Protective hose PA12  
10,30,3,0100



Softliner Conduit (blue) 10,40,1,0001  
DUROLiner Conduit (yellow) 10,40,1,0008



Compression  
fitting CRNG40  
10,10,8,0003



Plug CRNG40  
10,10,8,0001



Coupling  
CRNG40  
10,10,8,0002



Wire outlet  
Rolliner XL2  
with retaining clip  
10,20,2,0002



Wire outlet Rolliner 3G  
with retaining clip  
10,30,3,0002



Adapter 1/2" - 1/4"  
with internal thread  
10,10,8,0006



Connector  
CLOOS  
10,20,1,0009



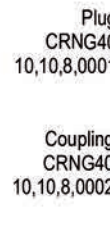
Universal connector  
for wire feeders  
ASRPR with plastic insert  
10,20,1,0012



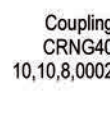
Screw  
coupling  
RNG20  
10,30,1,0004



Connector  
SKS-PF5  
10,20,1,0011



Plug  
CRNG40  
10,10,8,0001



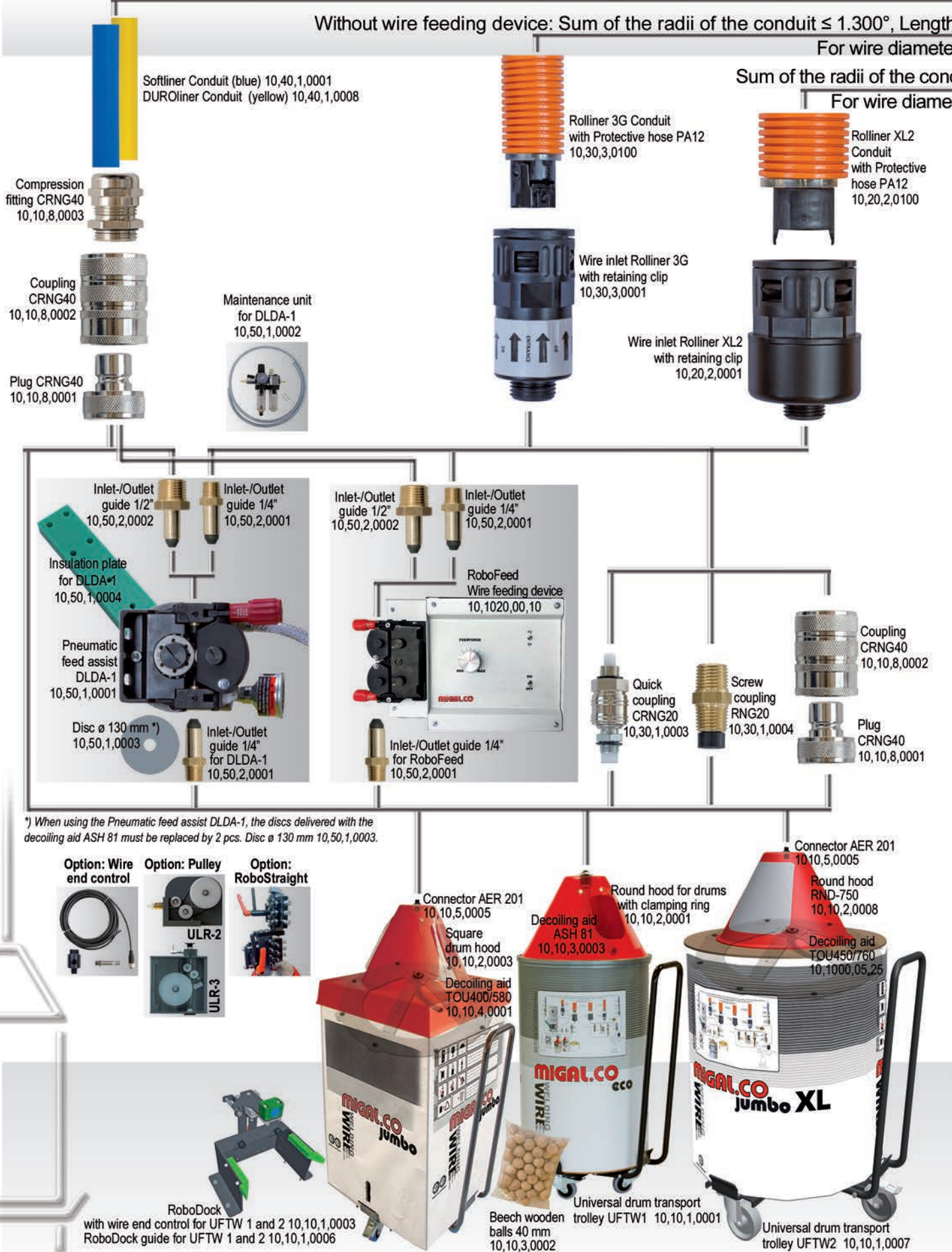
Coupling  
CRNG40  
10,10,8,0002

Adapter 1/2" - M20  
10,20,1,0014



# Wire transport for aluminium alloys with MIGAL.CO Eco- or Jumbo

For wire diameters up to 2.4 mm. Without wire feeding device (DLDA1, RoboFeed): Sum of the radii of the conduit ≤ 1.300°



of the conduit  $\leq 360^\circ$ , Length  $\leq 5$  m • With wire feeding device: Sum of the radii  $\leq 1.800^\circ$ , Length  $\leq 50$  m

h  $\leq 25$  m • With wire feeding device: Sum of the radii  $\leq 2.500^\circ$ , Length  $\leq 75$  m

ers up to 1.6 mm.

duit  $\leq 1.300^\circ$ , Length  $\leq 25$  m

ters up to 4 mm.

Rolliner XL2 Conduit  
with Protective hose  
PA12  
10,20,2,0100



Rolliner 3G Conduit  
with Protective hose PA12  
10,30,3,0100



Softliner Conduit (blue) 10,40,1,0001  
DUROliner Conduit (yellow) 10,40,1,0008



Compression  
fitting CRNG40  
10,10,8,0003



Plug CRNG40  
10,10,8,0001



Coupling  
CRNG40  
10,10,8,0002



Wire outlet  
Rolliner XL2  
with retaining clip  
10,20,2,0002



Wire outlet Rolliner 3G  
with retaining clip  
10,30,3,0002



Adapter 1/2" - 1/4"  
with internal thread  
10,10,8,0006



Connector  
CLOOS  
10,20,1,0009



Universal connector  
for wire feeders  
ASRPR with plastic insert  
10,20,1,0012



Screw  
coupling  
RNG20  
10,30,1,0004

Plug  
CRNG40  
10,10,8,0001



Coupling  
CRNG40  
10,10,8,0002

Connector  
SKS-PF5  
10,20,1,0011

Adapter 1/2" - M20  
10,20,1,0014



Universal spreader bar ULT1  
10,10,1,0002

## Transport devices

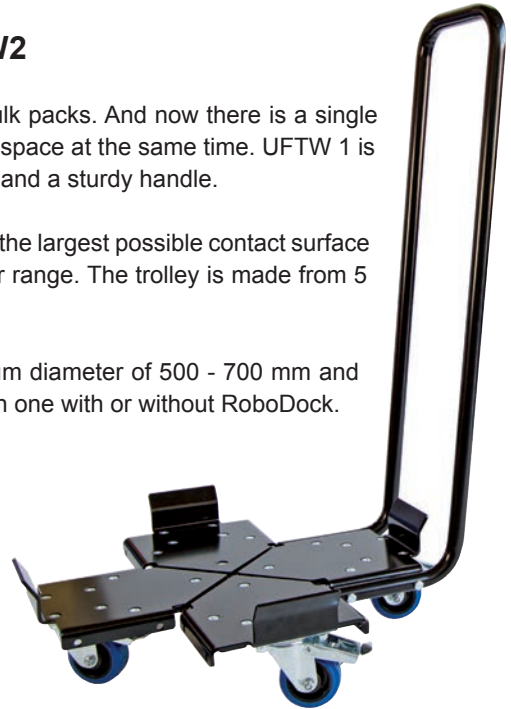
### Universal drum transport trolley UFTW1 and UFTW2

There are round, octagonal, square, small, large, light and heavy wire bulk packs. And now there is a single trolley that can deal with all these barrels without unnecessarily taking up space at the same time. UFTW 1 is adjustable by 40 mm steps in five levels, has four lockable plastic wheels and a sturdy handle.



The UFTW 1 is constructed so that the drums have the largest possible contact surface precisely where it is needed - in the outer diameter range. The trolley is made from 5 mm steel and powder coated.

UFTW is available in 4 versions: UFTW1 for a drum diameter of 500 - 700 mm and UFTW2 for a drum diameter of 620 - 780 mm, each one with or without RoboDock.



An empty UFTW 1 can be pushed easily by the handle.

#### Technical Data

Maximum load	1.000 kg
L x B x H over all	850 x 740 x 915 mm
Product weight	18.4 kg
Roll diameter	125 mm
UFTW1 suitable for drum diameter	500 - 700 mm
UFTW2 suitable for drum diameter	620 - 780 mm

### Universal drum transport trolley UFTW1 RoboDock and UFTW2 RoboDock

Increasingly, welding wire drums are being used for automated production lines. These are characterised by long operation without interruptions for changing a wire spool. However, it is unpleasant when the wire runs out at some point during operation. The connection of a proximity sensor at the outlet of the drum offers a possibility here, but only alarms at the immediate end and thus often too late.

RoboDock from MIGAL.CO is a pre-warning solution in combination with a drum transport trolley. RoboDock positions the trolley at a predetermined point and contains a height-adjustable proximity sensor. This is pressed against the drum wall under spring pressure. As soon as the wire level in the drum drops below the sensor position, the corresponding signal is sent to a system controller. This informs the system operator that a standstill is to be expected in the near future



The design sheet for the UFTW1 as well as the video explaining the RoboDock is available on [www.migal.co](http://www.migal.co)

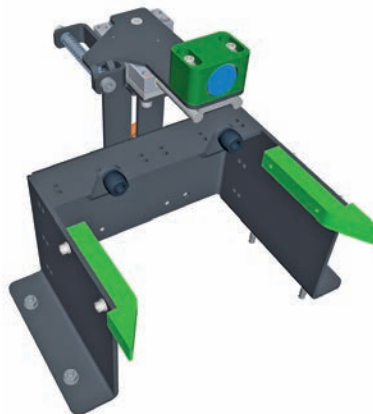
## Transport devices



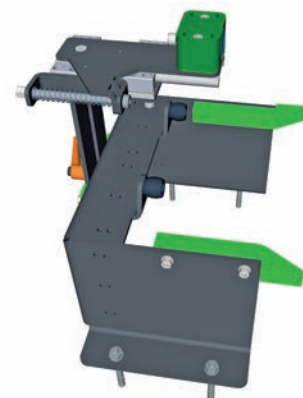
RoboDock with MIGAL.CO Jumbo-drum

and that a new drum must be brought to the system as soon as possible. A combination with a sensor at the drum outlet can be very useful. The sensor can detect all materials such as steel, stainless steel, copper alloys and aluminium.

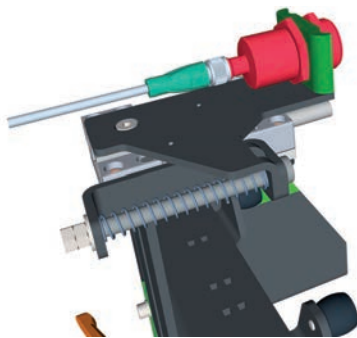
The guide corresponds to the RoboDock without sensor. This means that the barrel is always positioned in the same place.



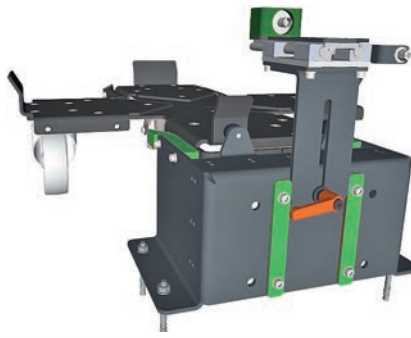
RoboDock front view



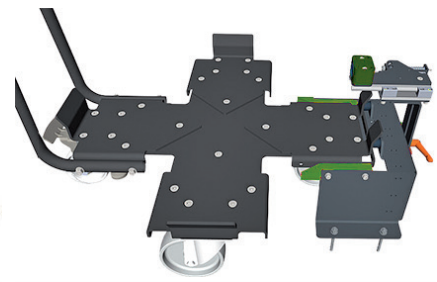
RoboDock side view



Proximity sensor detects the wire level in the drum



RoboDock rear view



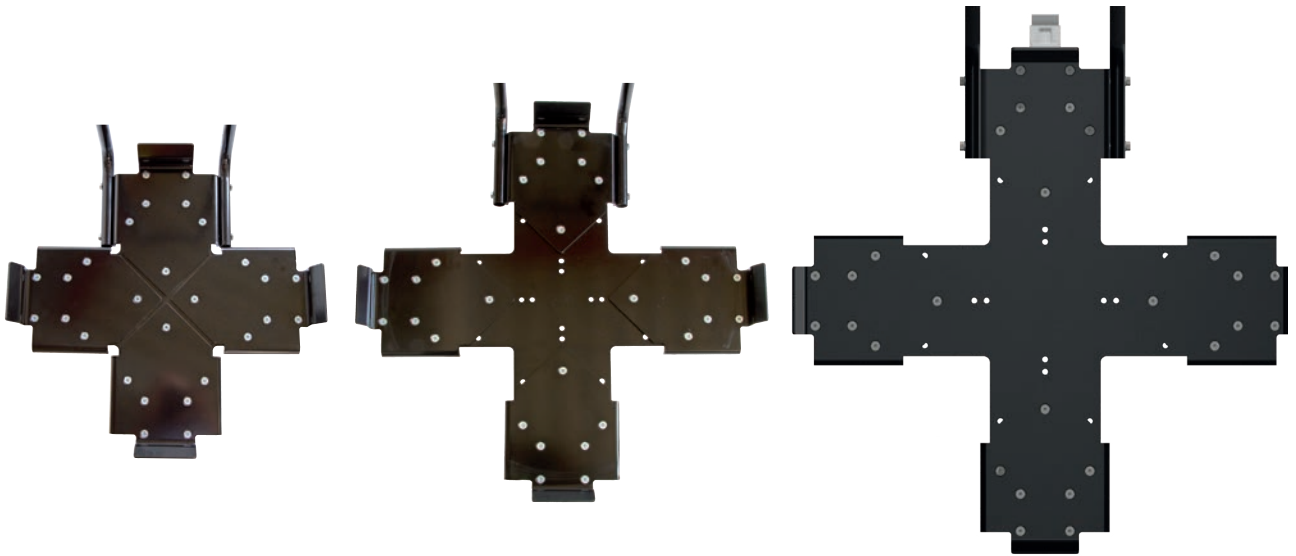
UFTW 1 with RoboDock side view

### Overview table

Item number	Designation	Weight
10,10,1,0001	Universal drum transport trolley UFTW 1	18,4 kg
10,10,1,0005	Universal drum transport trolley UFTW 1 RoboDock	18,4 kg
10,10,1,0007	Universal drum transport trolley UFTW 2	18,4 kg
10,10,1,0008	Universal drum transport trolley UFTW 2 RoboDock	18,4 kg
10,10,1,0003	RoboDock with wire end control for UFTW 1 and 2	7 kg
10,10,1,0006	RoboDock guide for UFTW 1 und 2	7 kg

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

## Transport devices



*UFTW 1 in position 540 mm*

*UFTW 1 in position 700 mm*

*UFTW 2 in position 780 mm*



*UFTW 1 with Eco-drum*

*UFTW1 with Jumbo-drum*

*UFTW 2 with JumboXL-drum*

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

## Drum hoods

### Drum hoods for round, octagonal and square drums

Drum hoods serve to attach the conduit and protect the drum contents from contamination. The hoods of MIGAL.CO are made of LDPE and fully recyclable. The two opposite slits are covered with a PVC window.



**RND-520S**  
Round drum hood with lip for drums without clamping ring diameter 500 - 520 mm.



**RND-520**  
Round hood for drums with clamping ring diameter 520 mm.



**QUA-600**  
Square cap for drums with 600 mm edge length.



**OCT-520 bzw. OCT-590**  
Octagonal hood for drums with 520 mm (590 mm) incircle diameter.



**RND-750**  
Round hood for JumboXL-drum

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

## Drum hoods

### Overview table

Item number	Designation	Dimensions	Weight
10,10,2,0001	Round drum hood for drums with clamping ring RND-520	520 mm outside diameter	1.7 kg
10,10,2,0002	Round drum hood with lip RND-520S	for drums with 500 - 520 mm outside diameter	1.7 kg
10,10,2,0003	Square drum hood QUA-600	for drums with 600 mm edge length	2.7 kg
10,10,2,0004	Octagonal drum hood OCT-520	520 mm incircle diameter	2.4 kg
10,10,2,0006	Octagonal drum hood OCT-590	590 mm incircle diameter	2.5 kg
10,10,2,0008	Round drum hood RND-750 for JumboXL-drum	750 mm incircle diameter	3.6 kg

### Reference table

Manufacturer	Type	Round drum hood 520	Round drum hood with lip	Square drum hood	Round drum hood 750
MIGAL.CO	Eco-drum aluminum- and copper alloys	x			
MIGAL.CO	Eco-drum CrNi		x		
MIGAL.CO	Jumbo-drum			x	
MIGAL.CO	JumboXL-drum				x

A reference table for drums of other manufacturers is available at [www.migal.co](http://www.migal.co)

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)



## Decoiling aids

### MIGAL.CO - decoiling aids - decades of experience for wire without knots

The wire extraction from drums and coils is fundamentally different. While coils rotate through the extraction and the wire is drawn tangentially, drums stand still and the wire is usually taken vertically upward in the axial direction.

This leads to a twist of the wire (torsion). Depending on the mechanical properties of the wire, it may cause a sudden entanglement preventing further withdrawal of the wire electrode. Such tangles are also often referred to as knots. Especially aluminum wires of alloys of the 5000 group are particularly vulnerable, but basically, this can also occur in other steel and non-ferrous alloys.

### Decoiling aid ASH 81 for Eco-drums



Our ECO-drums are mainly used for aluminum alloys of the 4000 series, as well as for copper alloys. Here, our decoiling finger built-into the drum hood has been proven in conjunction with 70 wooden balls (40 mm diameter) thousands of times.

Using this decoiling finger no further connector for the conduit is necessary. The decoiling aid provides a 1/4" internal thread and a 1/2" external thread.



*Decoiling aid ASH 81  
Rotating decoiling finger for integration into drum hood.*

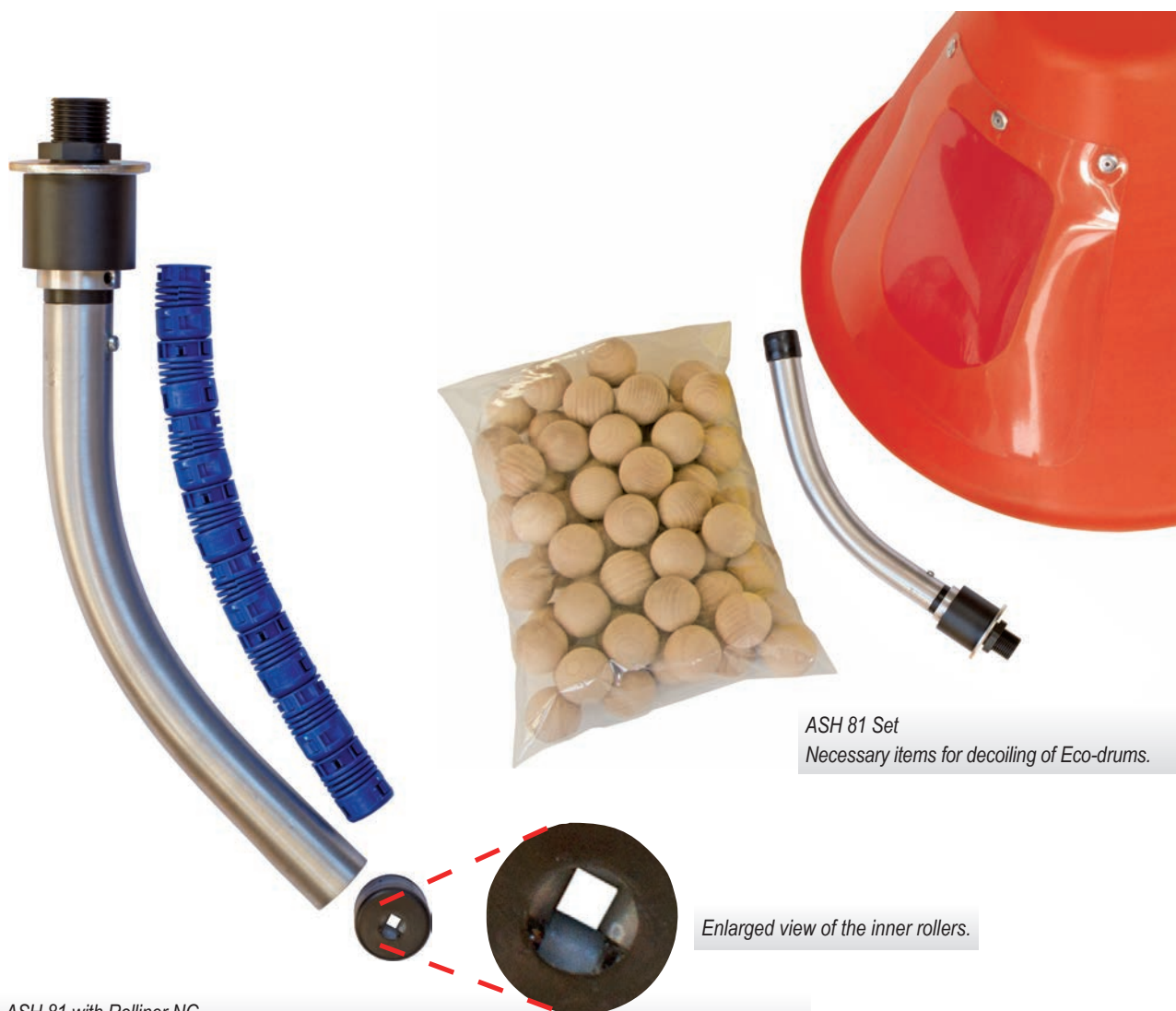
*ASH 80 built into drum hood RND-520*

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

## Decoiling aids

### Overview table

Item number	Designation	Weight
10,10,3,0003	Decoiling aid ASH 81	0.9 kg
10,10,3,0004	Inlet for ASH 81	0.05 kg
10,10,3,0002	Beech wooden ball 40 mm	0.023 kg



ASH 81 Set  
Necessary items for decoiling of Eco-drums.

Enlarged view of the inner rollers.

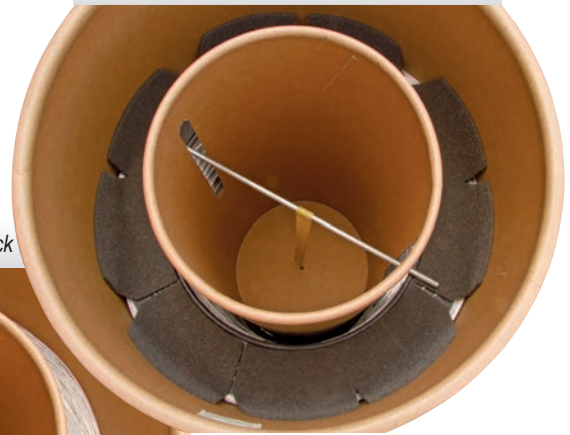
ASH 81 with Rolliner NG  
The Rolliner NG which is built into the decoiling finger cares for wear free and low friction operation.

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

## Decoiling aids

### Installation of Eco-drums

1. Eco-drum in the state of delivery



2. Eco-drum with removed transport lock



3. Eco-drum with 70 wooden balls à 40 mm diameter



4. Eco-drum ready equipped for trouble-free operation



For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

## Decoiling aids

### Decoiling aid TOU400/580 for Jumbo-drums

Our jumbo drums are mainly used for aluminum alloys of the 5000 series, but also for copper alloys. Specifically the 5000 alloys are particularly prone to knot formation.



The newly developed decoiling aid of MIGAL.CO reliably prevents the formation of wire knotting. Due to the plastic ring directly sitting on the wire, the individual turns can not escape unintentionally. A rotating decoiling finger guides the wire as much as possible and avoids free loops of wire which otherwise could form knots. The decoiling finger is equipped with the Rolliner NG and therefore shows extremely low friction and wear.

During wire removal, the decoiling aid falls to the bottom of the wire drum, is withdrawn and used in the next drum.

Thus, costly downtime and system failures can be avoided. The decoiling aid is protected by the utility model DE 20 2011 108 769.0.

*TOU400/580  
Decoiling aid for Jumbo packs with rotating decoiling finger.*



*TOU400/580 Set  
Necessary items for decoiling of Jumbo packs (Aluminum- and copper alloys).*

#### Overview table

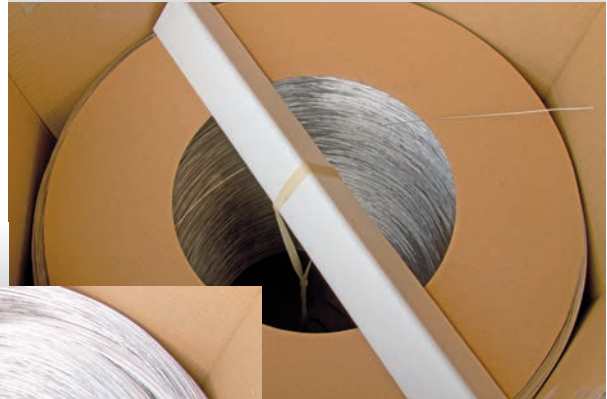
Item number	Designation	Weight
10,10,4,0001	Decoiling aid TOU400/580	1.0 kg

A video of the decoiling aid in action is available at [www.migal.co](http://www.migal.co)

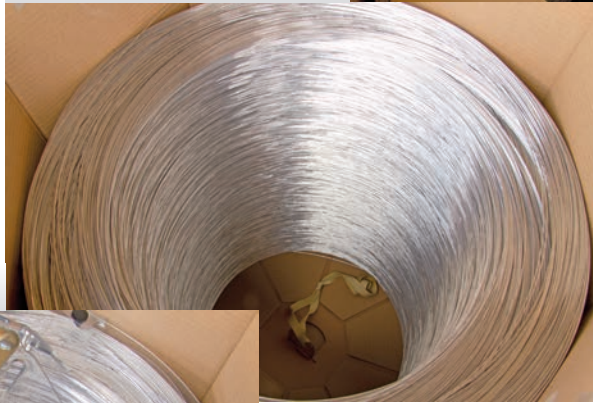
## Decoiling aids

### Installation of Jumbo-drums

1. Jumbo-drum in the state of delivery



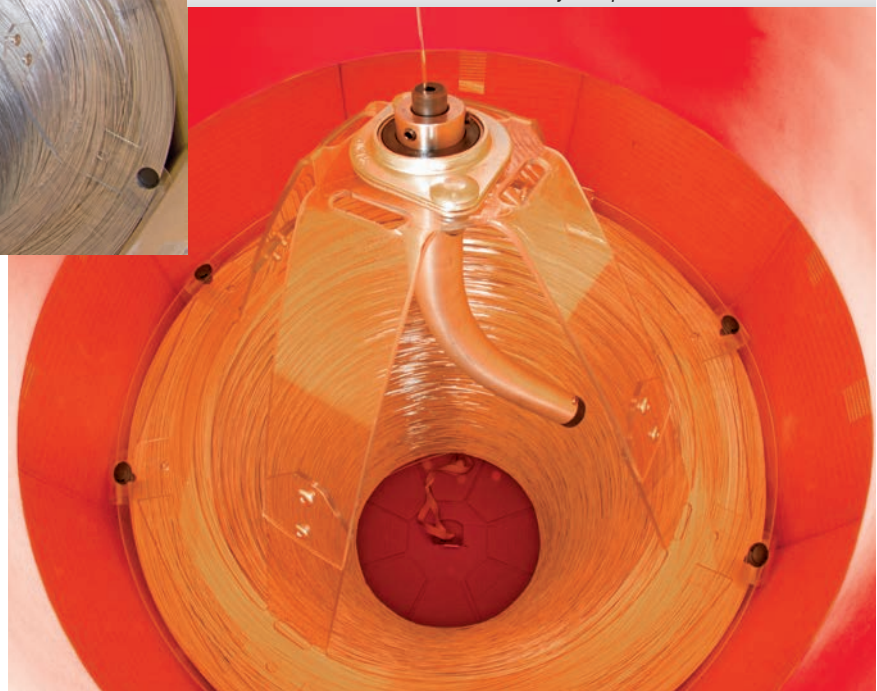
2. Jumbo-drum with removed transport lock



3. Jumbo-drum with decoiling aid



4. Jumbo-drum ready for operation



For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

## Decoiling aids

### Decoiling aid ASH-XL2 for wire diameters up to 4 mm



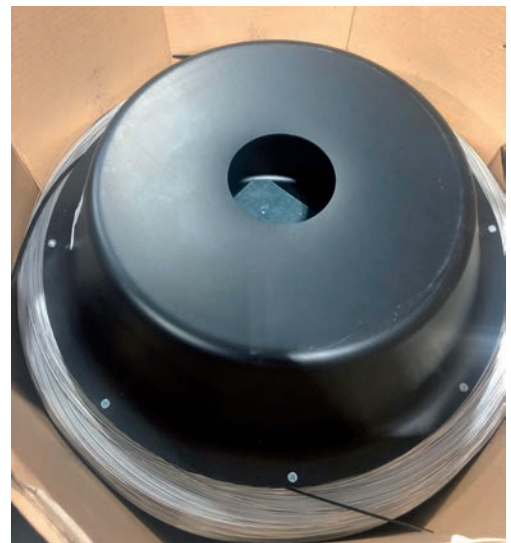
Decoiling aid ASH-XL2

The decoiling aid ASH-XL2 can be used for wire diameters from 2.0 to 4.0 mm.

Using this decoiling finger no further connector for the conduit is necessary. The decoiling aid provides a 1/4" internal thread and a 1/2" external thread.



Decoiling aid Jumbo DC 380/580



Decoiling aid Jumbo DC 380/580 ready for operation in the Jumbo drum

### Decoiling aid Jumbo DC 380/580

This decoiling aid is used with the Jumbo-drum and 4043 wire in 1,2 mm diameter. For application just remove the cardboard ring and put it on the wire. Make sure to remove everything inside the drum (bottom) so the decoiling aid can settle down straight when the drum becomes empty.

#### Overview table

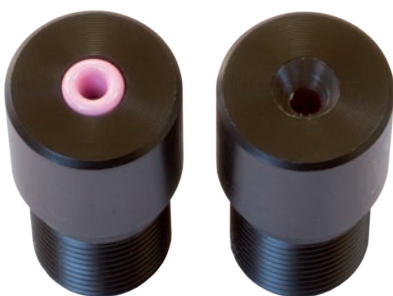
Item number	Designation	Weight
10,10,3,0006	Decoiling aid ASH-XL2	0.9 kg
10,10,4,0005	Decoiling aid Jumbo DC 380/580	3.42 kg

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

## Drum connector

### Connector for drum hoods

A connector is required to attach the conduit to the drum hood. This provides a 1/4" internal thread and a 1/2" external thread. All conduits from our product range can be connected. A variant with a ceramic insert is available for steel wires.



*AER201-K Inlet AER201  
Inlet for Aluminum- and copper alloys (right),  
and for steel with ceramic insert (left)*



*Individual parts of drum connector AER 201*



*Inlet for drum hood complete*



*Sideview of the AER 201 built into drum hood*

### Overview table

Item number	Designation	Weight	Additional information
10,10,5,0005	Connector drum hood AER201	0.05 kg	Plastic inlet for aluminum and copper alloys
10,10,5,0006	Connector drum hood AER201-K	0.05 kg	Ceramic inlet for steel wires

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

## Pulley

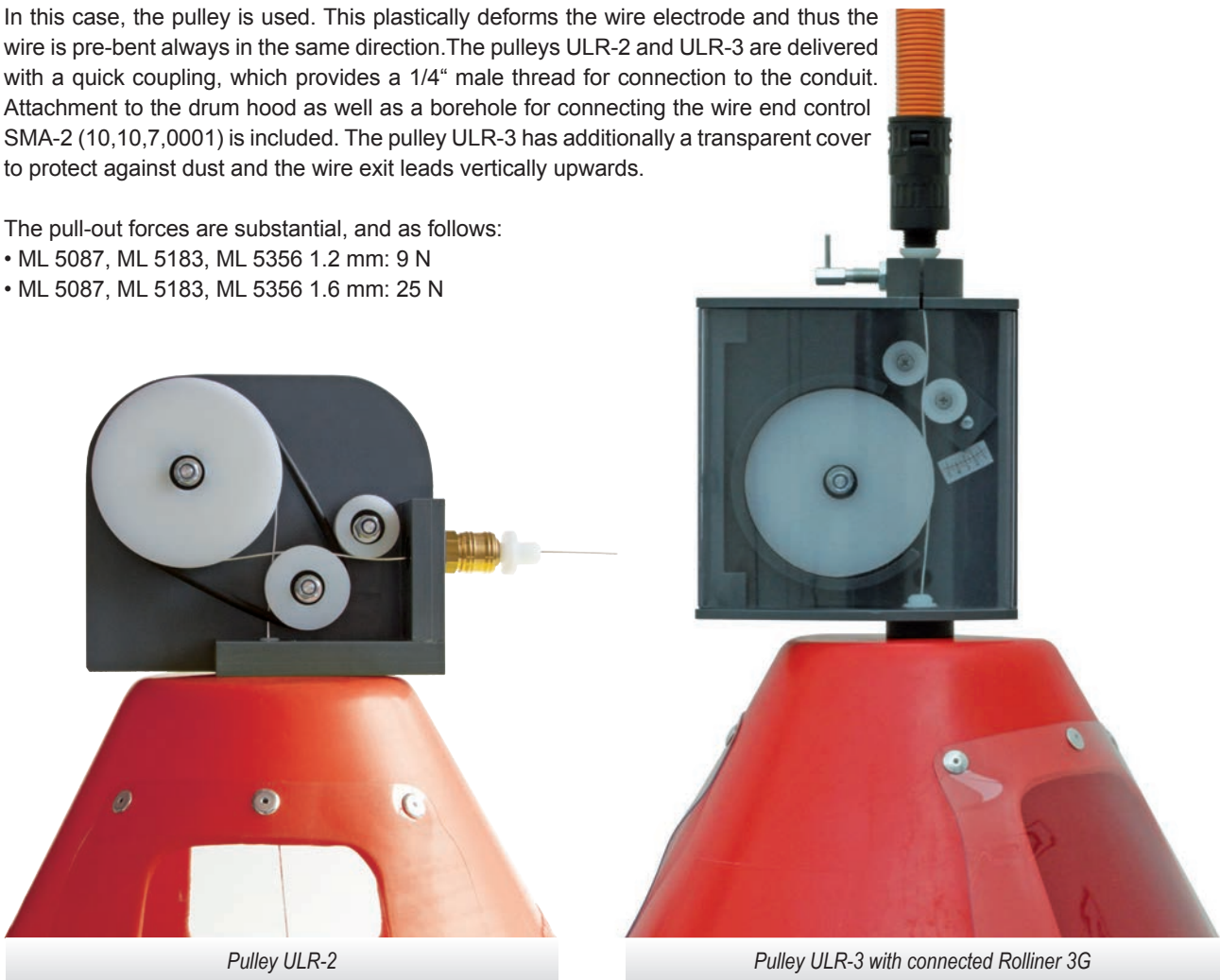
### Pulley for straight welds

Wire from drums with alloys of the 5000 series is preformed sinusoidal. In mechanized welding this may lead to inaccurate positioning of the wire and specifically when small weld cross sections are welded with large wire diameters (e.g. a4 fillet weld with 1.6 mm wire diameter).

In this case, the pulley is used. This plastically deforms the wire electrode and thus the wire is pre-bent always in the same direction. The pulleys ULR-2 and ULR-3 are delivered with a quick coupling, which provides a 1/4" male thread for connection to the conduit. Attachment to the drum hood as well as a borehole for connecting the wire end control SMA-2 (10,10,7,0001) is included. The pulley ULR-3 has additionally a transparent cover to protect against dust and the wire exit leads vertically upwards.

The pull-out forces are substantial, and as follows:

- ML 5087, ML 5183, ML 5356 1.2 mm: 9 N
- ML 5087, ML 5183, ML 5356 1.6 mm: 25 N



*Pulley ULR-2*

*Pulley ULR-3 with connected Rolliner 3G*

#### Overview table

Item number	Designation	Weight
10,10,6,0001	Pulley ULR-2	0.85 kg
10,10,6,0002	Pulley ULR-3	1.05 kg

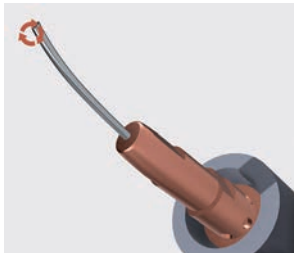
For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)



## Wire straightener

### Straightening device RoboStraight

Welding wires that are taken from wire drums are usually characterised by relatively large bounce, i.e. they are fairly straight.



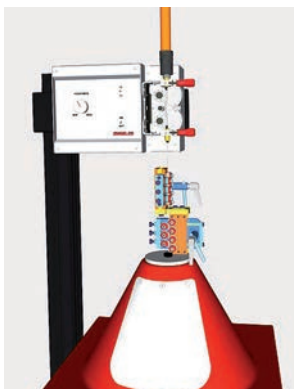
*Circling wire tip when wire is not straight*

Nevertheless, it can be seen that the wires often come out of the drum slightly wavy, or even in a spiral shape. This can lead to considerable process disturbances in sensitive applications such as laser processes or gas-shielded welding of small sheet thicknesses, as the wire tip then changes position from the wire outlet nozzle in a circular, or sometimes erratic, manner.

The use of a wire straightener directly at the barrel outlet is able to straighten even considerably deformed wires reliably. The use of a total of 14 adjustable straightening rollers in conjunction with a quick opener enables stable operation.

Adjusting the wire straightener is amazingly easy and takes only a few minutes. For aluminium, a separate set of rollers (U-shaped) is required for each wire diameter; for steel, a single set of rollers (V-shaped) covers the entire diameter range from 0.8 to 2.0 mm.

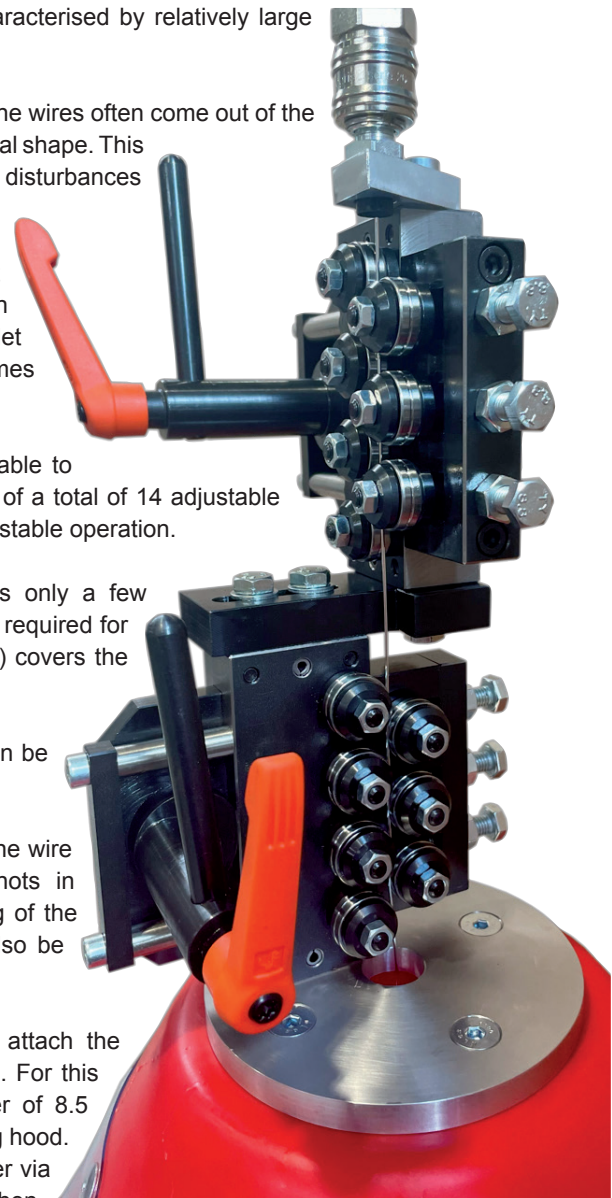
A higher conveying force must be taken into account, which can be overcome, for example, by an auxiliary drive (RoboFeed).



*Wire straightener with RoboFeed mounted above it*

It has been shown that by using the wire straightener, the formation of knots in the wire barrels and the bouncing of the wire within the guide tube can also be avoided.

A mounting plate is supplied to attach the straightener to the decoiling hood. For this purpose, 4 holes with a diameter of 8.5 mm must be drilled in the decoiling hood. The wire can then be fed out either via a quick coupling CRNG-20 and then further e.g. with a Rolliner. Alternatively, a wire feeder, e.g. RoboFeed, can be mounted directly above it.



*RoboStraight mounted on drum hood by means of a mounting plate*

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

## Wire end control

### Overview table

Item number	Designation	Weight
10,10,6,0006	Straightening device RoboStraight 14-rolls 1.6 mm	5.82 kg
10,10,6,0007	Straightening device RoboStraight 14-rolls 1.2 mm	5.82 kg
10,10,6,0008	Straightening device RoboStraight 14-rolls 1.0 mm	5.82 kg
10,10,6,0009	Straightening device RoboStraight 14-rolls 0.7 - 2.2 mm steel	5.82 kg

### End of wire clearly detected

For the detection of the wire end a non-contact sensor is available. The proximity switch is closed when welding wire is available. The operating voltage is 24 Volts. Included is the power cable (10 m), the sensor block and the proximity switch. The terminal block on the inlet side has a 1/4" male thread (connection to drum connector AER-201 or decoiling aid ASH-81) and the outlet side a 1/4" internal thread and a 1/2" external thread (connection to the conduit).



### Overview table

Item number	Designation	Weight
10,10,7,0001	Sensor with power cable SMA-2	0.05 kg
10,10,7,0002	Wire end sensor block DES-2	0.03 kg

A data sheet of the sensor is available at [www.migal.co](http://www.migal.co)

## Conduits

### Toughliner - for un-, low- and high-alloy steel wires

Toughliner is the conduit with extremely high wear resistance and low coefficient of friction at the same time.



The spiral is made of flat steel wire with rounded edges and a tensile strength of more than 1,500 N/mm<sup>2</sup>. The tube is encased in two layers with PE inside and outside with PA12. This gives an excellent durability, achieved even under extreme conditions. The hose is so stiff on one hand, that it always sets the largest possible bending radius (as shown on photograph page 20) and yet so flexible that even strong robot movements over a long time can be tolerated.

With the coupling CRNG40 the Tough liner is connected without interfering transitions.



Toughliner detail with quick coupling CRNG40



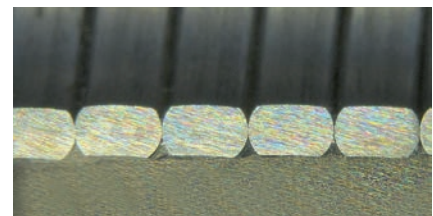
*Toughliner with plug CRNG40*  
The Toughliner is completely passed through the coupling, and the wire doesn't touch the coupling at any point. The Toughliner is directly connected by the coupling and there are no problems during wire inching.



*Toughliner with quick coupling CRNG40*  
The Toughliner is completely passed through the coupling, and the wire doesn't touch the coupling at any point. The Toughliner is directly connected by the coupling and there are no problems during wire inching.

#### Technical data Toughliner, Extra, Flex

Weight of product	0.25 kg/m
Coefficient of friction	0.20
Outside-/Inside diameter	11.7 mm / 5.7 mm
Diameter of welding wire	up to 2.4 mm



*Section Toughliner*  
The Toughliner is made of flat rolled round wire. Thus, the edges are rounded and sharp edges are avoided.

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

## Conduits

### Toughliner EXTRA - for extreme demands

Toughliner Extra is built of a flat steel wire with rounded edges and an additional fortification with longitudinal wires. This allows Toughliner Extra to withstand extreme tensile stress. The couplings CRNG40 may be used the same way as with Toughliner.



Structure of Toughliner EXTRA



Cross section of Toughliner EXTRA

### Toughliner FLEX - extremely flexible

Toughliner Flex consists of a round wire spiral with a soft sheathing and is thus extremely flexible. Toughliner Flex can be used in areas with extreme flexibility requirements. The couplings CRNG40 may be used the same way as with Toughliner.



Structure of Toughliner FLEX



extremely flexible

#### Overview table

Item number	Designation	Weight
10,40,1,0002	Conduit Toughliner	0.25 kg/m
10,10,7,0006	Conduit Toughliner EXTRA	0.25 kg/m
10,10,7,0007	Conduit Toughliner FLEX	0.25 kg/m

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

## Conduits

### Softliner - for non-ferrous metals and high alloyed steels

Softliner is a high density PE hose with a low coefficient of sliding friction and yet good resistance.



Softliner detail with quick coupling CRNG40

Softliner is used for filler metals made of aluminium and copper alloys, as well as for high-alloy steels. This hose is recommended for more static applications. For use with robots and strong movements, the DUROLINER should be used. With the CRNG40 coupling, the softliner is connected without any interfering transitions.



*Softliner with plug CRNG40*  
The Softliner is completely passed through the coupling, and the wire doesn't touch the coupling at any point. The Softliner is directly connected by the coupling and there are no problems during wire inching.



*Softliner with quick coupling CRNG40*  
The Softliner is completely passed through the coupling, and the wire doesn't touch the coupling at any point. The Softliner is directly connected by the coupling and there are no problems during wire inching.

### DUROLiner - for non-ferrous metals and high-alloy steels with extreme kink resistance

DUROLINER is a significantly improved PE hose with high hardness and low coefficient of sliding friction. DUROLINER is used where breaks occur with Softliner due to strong axial movements, especially in the area of the connections. In addition, DUROLINER is identical to Softliner. With the CRNG40 coupling, the DUROLINER is connected without disturbing transitions.



DUROLiner

For cutting Softliner and DUROLiner we recommend our Cutty tool.

#### Technical data (Softliner and DUROLiner)

Weight	0.05 kg/m
Coefficient of friction	0.20
Outside-/Inside diameter	11.7 mm / 7.7 mm
Diameter of welding wire	up to 2.4 mm

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

## Conduits

### Overview table

Item number	Designation	Weight
10,40,1,0001	Conduit Softliner	0.05 kg/m
10,10,7,0008	Conduit DUROLiner	0.05 kg/m

### Wall brackets for Toughliner, Softliner and DUROLiner

For the attachment of Toughliner, Toughliner Extra, Toughliner Flex, Softliner and DUROLiner to a wall a suitable bracket is available. The internal thread is M6.



### Overview table

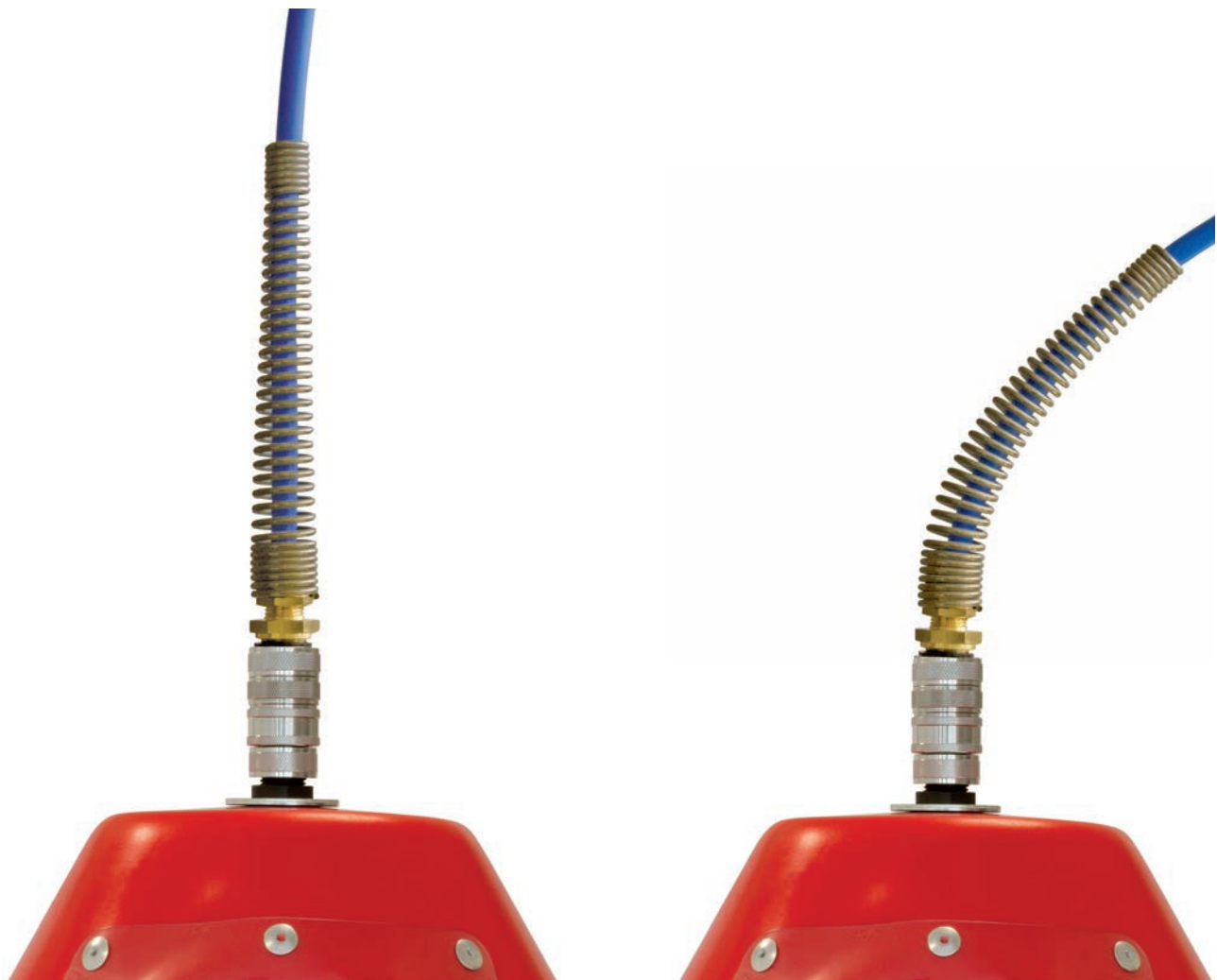
Item number	Designation	Weight
10,40,1,0005	Wall bracket Toughliner, Softliner, DUROLiner	0.01 kg

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

**Conduits**

**Strain relief for Toughliner, Softliner and DUROLiner**

Kinking of the conduit directly behind the connection can be avoided. The strain relief is recommended for extremely fast robot movements.



*Strain relief suitable for Toughliner, Softliner and DUROLiner protects the conduit against kinking.*

**Overview table**

Item number	Designation	Weight
10,40,1,0003	Strain relief Toughliner, Softliner, DUROLiner	0.25 kg

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

## Conduits

### Rolliner NG - the second generation

ROLLINER NG is the second generation of a completely new approach to wire feeding.

Away from friction in liners, away from abrasion, from fluctuating feeding and from unnecessary maintenance. With ROLLINER feeding occurs through rolls only, shifted by 90° - without any sliding friction. ROLLINER NG has a diameter of 20 mm and may be shortened or lengthened easily – without any tools. The maximum bending radius is 120 mm and the weight was substantially reduced – ideal for highly dynamic movements.

ROLLINER NG is the ultimate solution for any wire feeding!

#### Application

- Connecting bulk-wire systems to the wire-feeder
- Connecting wire-feeders to welding guns

#### Advantages

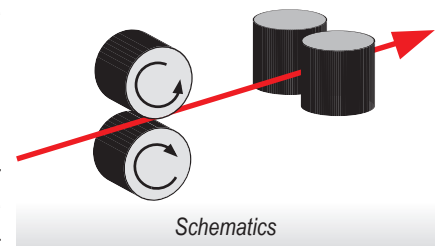
- No abrasion due to extremely small forces on the wire
- Reduced cost due to the reduction to one wire drive only, and no maintenance necessary
- Stable arc due to precise wire feeding
- Simplified setup of welding systems due to more freedom in situating the bulk-wire system

#### Technical data

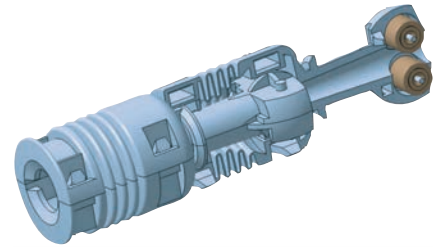
Outside diameter	20 mm
Weight / meter	150 grams
Min. bending radius for wire inching	150 mm
Min. bending radius	120 mm
Maximum torsion	180° / meter
Max. inner diameter	2 mm (wire 1.6)
Recommended wire diameter	0.6 - 1.2 mm
Length per packaging unit	25 m
Coefficient of friction	0.08

#### Warranty

For Rolliner we provide a warranty of 1 year!



Schematics



Rolliner NG elements

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)



## Conduits

### Rolliner NG - the second generation

#### Delivery form

ROLLINER NG is supplied by the meter. The required connectors can be easily fitted by the user. The connector ENG20S represents a 1/4" female thread. For the connection to the drum hood connector AER-200 either a screw connector RNG20 or a quick connector CRNG20 is required. Alternatively, the wire end control (page 17) can be used.

For the connection to the wire feeder by the universal connector ASR-PR no additional coupling is required.

*Note: The connector ENG20S with strain relief RES20 replaces the earlier product ENG20!*



*Rolliner NG with connector ENG20S,  
strain relief RES20, quick coupling CRNG20,  
connector drum hood AER201.*



*Rolliner NG in standard configuration with connector ENG20S and strain relief RES20.*

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

## Conduits

### Rolliner NG - the second generation



Connector ENG20S



Strain relief RES20

#### Overview table

Item number	Designation	Weight
10,30,1,0100	Rolliner NG	0.15 kg/m
10,30,1,0016	Connector ROLLINER NG ENG20S	0.04 kg
10,30,1,0017	Strain relief for Rolliner NG RES20	0.05 kg

### Perfect cutting of Softliner and Rolliner NG

For cutting of Softliner and Rolliner NG the cutting tool CTY1 is available. It makes perfect cuts in no time.



#### Overview table

Item number	Designation	Weight
10,40,1,0004	Cutty - cutting tool for Rolliner and Softliner	0.05 kg

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

## Conduits

### Rolliner 3G - up to 1.6 mm wire diameter and no tools needed for assembly

Rolliner 3G is the continuation of the roll-guided wire feed hose, which has been successful for 10 years, with significant improvements. The individual elements contain a pair of rollers and are connected to one another via joints. Each element is turned by 90 ° to the adjacent element, whereby the welding wire is guided entirely by rollers. As a result, the friction is significantly reduced in comparison to conventional wire guide hoses. Between the individual pairs of rollers there is a conical guide, which during threading leads the wire to the next pair of rollers, thus ensuring trouble-free threading over narrow radii.

Effortless threading by means of a patented, conical guide of the wire from roller pair to roller pair!



#### Advantages

- Due to its low friction, Rolliner 3G allows significantly longer wire runs between the pay-off pack and the wire feeder. In many cases it is possible to avoid additional drives.
- Rolliner 3G is not a wearing part and is maintenance-free for many years. The welding process becomes more stable as less slippage occurs due to the low forces in the wire transport system.
- Rolliner 3G can be shortened or extended without tools. For shorting the use of a separation tool is recommended.

#### Technical Data

Lengths	any - maximum length of protective hose 25 m, can be extended with hose connector
Outside diameter	28.5 mm
Bending radius	minimum 70 mm at wire threading and during operation
Maximum wire diameter	1.6 mm
Conveyable alloys	all material types can be transported by Rolliner 3G (round wires), i. e. steel, stainless steel, aluminum, copper, etc.
Maximum wire feed speed	30 meters per minute
Weight per meter	200 grams
Wire temperature	max. 40° Celsius
Coefficient of friction	0.08

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

## Conduits

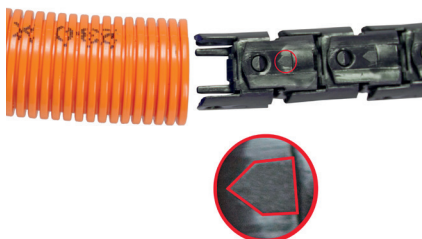
### Rolliner 3G - up to 1.6 mm wire diameter and no tools needed for assembly

#### Overview table

Item number	Designation	Weight
10,30,3,0001	Connector wire inlet Rolliner 3G with retaining clip	0.05 kg
10,30,3,0002	Connector wire outlet Rolliner 3G with retaining clip	0.05 kg
10,30,3,0003	Retaining clip Rolliner 3G	0.004 kg
10,30,3,0100	Rolliner 3G with protective hosePA12	0.2 kg/m
10,20,2,0004	Connector protective hose PA12 Rolliner 3G	0.03 kg
10,40,2,0001	Separation tool Rolliner 3G	0.05 kg
10,30,1,0003	Quick coupling CRNG20 complete (plug and coupling)	0.08 kg
10,10,8,0001	Plug CRNG40	0.07 kg
10,10,8,0002	Coupling CRNG40	0.16 kg



Rolliner 3G without protective hose, view of single element



Arrows on each element of the Rolliner 3G show the wire feed direction as well as the insertion direction

#### Easy assembly

- Insert elements into protective hose
- Insert the holding clips at the inlet and outlet
- Connect the wire inlet and outlet



Rolliner 3G elements without protective hose

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

## Conduits

### Rolliner 3G - up to 1.6 mm wire diameter and no tools needed for assembly

#### Connectors

The inlets and outlets of the Rolliner 3G have a 1/4" internal thread and a 1/2" external thread. As a result, the CRNG20 or CRNG40 quick couplings can be used.

For an overview of all couplings with fotos and item numbers see page 40.



Rolliner 3G complete with protective hose connector and quick coupling CRNG 40



Separation tool in a correct position



Retaining clip Rolliner 3G



Wire inlet Rolliner 3G



Wire outlet Rolliner 3G

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

## Conduits

### Hose holder and accessories

For Rolliner NG, Rolliner 3G, as well as the protective hose PA12 suitable brackets and wear rings are offered.

#### Overview table

Item number	Designation	Weight
10,30,1,0008	Wall bracket for Rolliner NG SNG20	0.02 kg
10,30,1,0010	Wall bracket for protective hose PA12	0.05 kg
10,30,1,0009	Wear ring for protective hose PA12	0.02 kg
10,30,1,0014	Hose holder for Rolliner NG, 3G and protective hose PA12	0.1 kg



Wall bracket for protective hose PA12



Wall bracket for Rolliner NG SNG20



Wear ring for protective hose PA12



Hose holder for Rolliner NG and protective hose PA12



For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

## Conduits

### Rolliner XL2 - up to 4 mm wire diameter and no tools needed for assembly

Rolliner XL2 is the continuation of the roll-guided wire feed hose, which has been successful for 10 years, with significant improvements. The individual elements contain a pair of rollers and are connected to one another via joints. Each element is turned by 90 ° to the adjacent element, whereby the welding wire is guided entirely by rollers. As a result, the friction is significantly reduced in comparison to conventional wire guide hoses. Between the individual pairs of rollers there is a conical guide, which during threading leads the wire to the next pair of rollers, thus ensuring trouble-free threading over narrow radii.

Effortless threading by means of a patented, conical guide of the wire from roller pair to roller pair!

#### Advantages

- Due to its low friction, Rolliner XL2 allows significantly longer wire runs between the pay-off pack and the wire feeder. In many cases it is possible to avoid additional drives.
- Rolliner XL2 is not a wearing part and is maintenance-free for many years. The welding process becomes more stable as less slippage occurs due to the low forces in the wire transport system.
- Rolliner XL2 can be shortened or extended without tools.

#### Technical Data

Lengths	any - maximum length of protective hose 25 m, can be extended with hose connector
Outside diameter	42.5 mm (55 mm at the connectors)
Bending radius	minimum 150 mm at wire threading and during operation
Maximum wire diameter	4 mm
Conveyable alloys	all material types can be transported by Rolliner XL2 (round wires), i. e. steel, stainless steel, aluminum, copper, etc.
Maximum wire feed speed	30 meters per minute
Weight per meter	500 grams
Wire temperature	maximum 40° Celsius
Coefficient of friction	0.08

#### Connectors

The inlets and outlets of the Rolliner XL2 have a 1/4" internal thread and a 1/2" external thread. As a result, the CRNG20 or CRNG40 quick couplings can be used. For an overview of all couplings with fotos and item numbers see page 40.

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)



## Conduits

### Rolliner XL2 - up to 4 mm wire diameter and no tools needed for assembly

#### Overview table

Item number	Designation	Weight
10,20,2,0001	Connector wire inlet Rolliner XL2 with retaining clip	0.1 kg
10,20,2,0002	Connector wire outlet Rolliner XL2 with retaining clip	0.1 kg
10,20,2,0003	Retaining clip Rolliner XL2	0.004 kg
10,20,2,0100	Rolliner XL2 with protective hose PA12	0.5 kg/m
10,30,3,0004	Connector protective hose PA12 Rolliner XL2	0.03 kg
10,30,1,0003	Quick coupling CRNG20 complete (plug and coupling)	0.08 kg
10,10,8,0001	Plug CRNG40	0.07 kg
10,10,8,0002	Coupling CRNG40	0.16 kg

#### Easy assembly

- Insert elements into protective hose
- Insert the holding clips at the inlet and outlet
- Connect the wire inlet and outlet



Rolliner XL2 Elements



Arrows on each element of the Rolliner XL2 show the wire feed direction as well as the insertion direction

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)



**Conduits**

**Rolliner XL2 - up to 4 mm wire diameter and no tools needed for assembly**



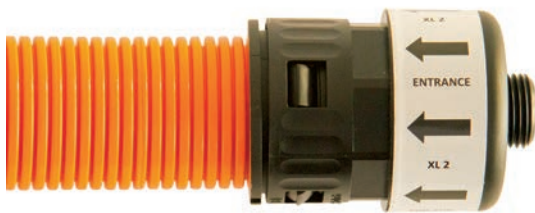
*Retaining clip Rolliner XL2*



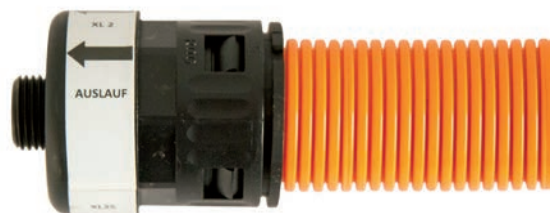
*Wire inlet and wire outlet with retaining clip*



*Hose connector for PA 12*



*Wire inlet Rolliner XL2*



*Wire outlet Rolliner XL2*



*Rolliner XL2 with quick coupling CRNG40*

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

## Conduits

### Rolliner XL2 - up to 4 mm wire diameter and no tools needed for assembly

#### Wall bracket

By means of a wall bracket the Rolliner XL2 can be attached to a wall.



Wall bracket Rolliner XL2 sideview



Wall bracket Rolliner XL2 diagonal view

#### Overview table

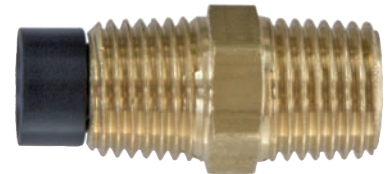
Item number	Designation	Weight
10,20,2,0005	Wall bracket for Rolliner XL2	0.02 kg

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**Couplings & Connectors**

**Screw- and quick couplings for Rolliner NG, Rolliner 3G and Rolliner XL2**

These couplings are used to connect the Rolliner NG with the drum hood connector AER-201 or the wire end control. A plastic insert protects the wire against damage. It must be inserted in the direction of the wire transport. The outer thread is 1/4".



*Screw coupling RNG20*



*Quick coupling CRNG20*



*Quick coupling CRNG20 divided*

**Overview table**

Item number	Designation	Weight
10,30,1,0004	Screw coupling RNG20	0.025 kg
10,30,1,0003	Quick coupling CRNG20	0.08 kg

**Coupling CRNG40 for Toughliner, Softliner, DUROLiner, Rolliner 3G and Rolliner XL2**

The coupling CRNG40 is used to connect the conduits Toughliner, Softliner, DUROLiner, Rolliner 3G or Rolliner XL2.

The special feature of this coupling is that the wire can never touch the metal parts of the coupling. This is achieved by the fact that the conduits are directly routed through the coupling and face each other nearly without a gap. The coupling provides a 1/2" internal thread. Toughliner, Softliner or DUROLiner are fixed by a compression fitting.

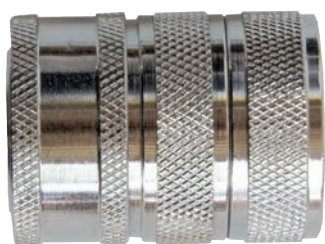
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## Couplings & Connectors

### Coupling CRNG40 for Toughliner, Softliner, DUROLiner, Rolliner 3G and Rolliner XL2

#### Overview table

Item number	Designation	Weight
10,10,8,0001	Plug CRNG40	0.07 kg
10,10,8,0002	Coupling CRNG40	0.16 kg
10,10,8,0003	Compression fitting CRNG40	0.03 kg
10,10,8,0006	Adapter 1/2"-1/4" with internal thread	0.07 kg



*Coupling CRNG40*



*Plug CRNG40*



*Compression fitting CRNG40*



*Adapter 1/2" - 1/4" with internal thread  
Connects to various connectors for wire  
feeders.*

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

**Couplings & Connectors**

**Coupling CRNG40 for Toughliner, Softliner, DUROLiner, Rolliner 3G and Rolliner XL2**



*Quick coupling CRNG40 with Softliner on drum hood.*



*Plug CRNG40 on drum hood.*

**Connectors to wire feeders**

To connect the Rolliner, as well as Softliner and Toughliner various fittings to wire feeders are available.



*Connector for wire feeders ASRPR with plastic insert  
Fits for Fronius, EWM, Lorch, Rehm, Kemppi (9,5/11,5/12/13 mm).  
Suitable for aluminum- and copper alloys.*

*Universal connector for wire feeders ASRPR brass  
Suitable for Fronius, EWM, Lorch, Rehm, Kemppi  
(9,5/11,5/12/13 mm). For steel wires only.*

For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)

## Couplings & Connectors

### Connectors to wire feeders



Connector CLOOS



Connector SKS-PF5



Connector SKS-Q591D



Adapter 1/2" to M20

### Reference and overview table

Item number	Designation	Fits for	Weight	Additional information
10,20,1,0012	Universal connector for wire feeders ASRPR with plastic insert	Fronius, EWM, Lorch, Rehm	0.07 kg	for non ferrous metals
10,20,1,0013	Universal connector for wire feeders ASRPR with brass insert	Fronius, EWM, Lorch, Rehm	0.07 kg	for steels
10,20,1,0014	Adapter 1/2" to M20	Fronius	0.007 kg	
10,20,1,0009	Connector CLOOS	CLOOS	0.005 kg	all alloys
10,20,1,0011	Connector SKS PF5	SKS PF5	0.05 kg	all alloys
10,20,1,0010	Connector SKS Q591D	SKS Q591D	0.05 kg	all alloys

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## Wire feeder

### Pneumatic feed assist DLDA1 for extreme wire feeding distances

The friction of the wire in the conduit is caused by the fact that the wire rests against the inside of the tube. This grows exponentially with the bending angle and, depending on the coefficient of friction rapidly to a complete blocking of the wire electrode.

The pneumatic feed assist DLDA1 exerts a permanent and continuously adjustable pressure to the wire electrode. The latter is pressed against the outer wall of the conduit, where it causes about the same friction as otherwise against the inner wall. Ideally, the air pressure is adjusted so that the wire at the outlet of the conduit may be pulled or blocked with just two fingers (few Newtons). The wire feeder can then supply any quantity of wire with the least amount of force.

The Euler-Eytelwein formula fails here. However, approximately the double angle can be achieved by using the DLDA1.

The DLDA1 can either be placed on the drum hood with the connector AER200 or decoiling aid ASH-80, or just snapped in between the conduit (Toughliner, Softliner, Rolliner). The coupling CRNG40 is provided for standard use with the DLDA1.



*Pneumatic feed assist DLDA-1 on drum hood  
Using the inlet guide 1/4" the pneumatic feed assist  
connects to the drum connector AER-201  
or the decoiling finger ASH-81.*

#### Technical data

Wire feed speed	0 - 30 m/min
Feeding force	0-60 N (adjustable by air pressure 0-6 Bar)
Dimensions L x B x H	100 x 140 x 160 mm
Weight	5.1 kg
Wire diameter	0.8 - 1.6 mm
Air consumption	approx. 20 - 30 cbm/h

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## Wire feeder

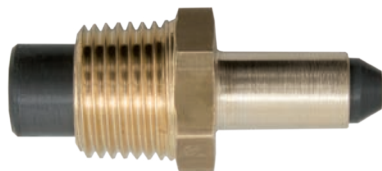
### Pneumatic feed assist DLDA1 for extreme wire feeding distances

#### Overview table

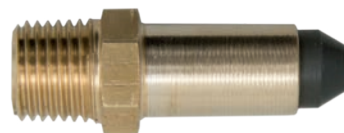
Item number	Designation	Weight
10,50,1,0001	Pneumatic feed assist DLDA-1	5.1 kg
10,50,1,0002	Maintenance unit for DLDA-1	0.9 kg
10,50,2,0001	Inlet/outlet guide 1/4" für DLDA-1	0.02 kg
10,50,2,0002	Inlet/outletguide 1/2" für DLDA-1	0.04 kg
10,50,3,0008	Set feed rolls 0,8 mm Fe	0.11 kg
10,50,3,0010	Set feed rolls 1,0 mm Fe	0.11 kg
10,50,3,0012	Set feed rolls 1,2 mm Fe	0.11 kg
10,50,3,0016	Set feed rolls 1,6 mm Fe	0.11 kg
10,50,4,0008	Set feed rolls 0,8 mm Al	0.11 kg
10,50,4,0010	Set feed rolls 1,0 mm Al	0.11 kg
10,50,4,0012	Set feed rolls 1,2 mm Al	0.11 kg
10,50,4,0016	Set feed rolls 1,6 mm Al	0.11 kg



*Pneumatic feed assist DLDA-1 with conduit in in- and outlet*



*Inlet/outlet guide 1/2" for DLDA-1  
The quick connector CRNG-40 connects to the DLDA-1 with the inlet guide 1/2".*



*Inlet/outlet guide 1/4" for DLDA-1  
Connects to the drum connector AER-201, the decoiling finger ASH-81 or to the Rolliner.*

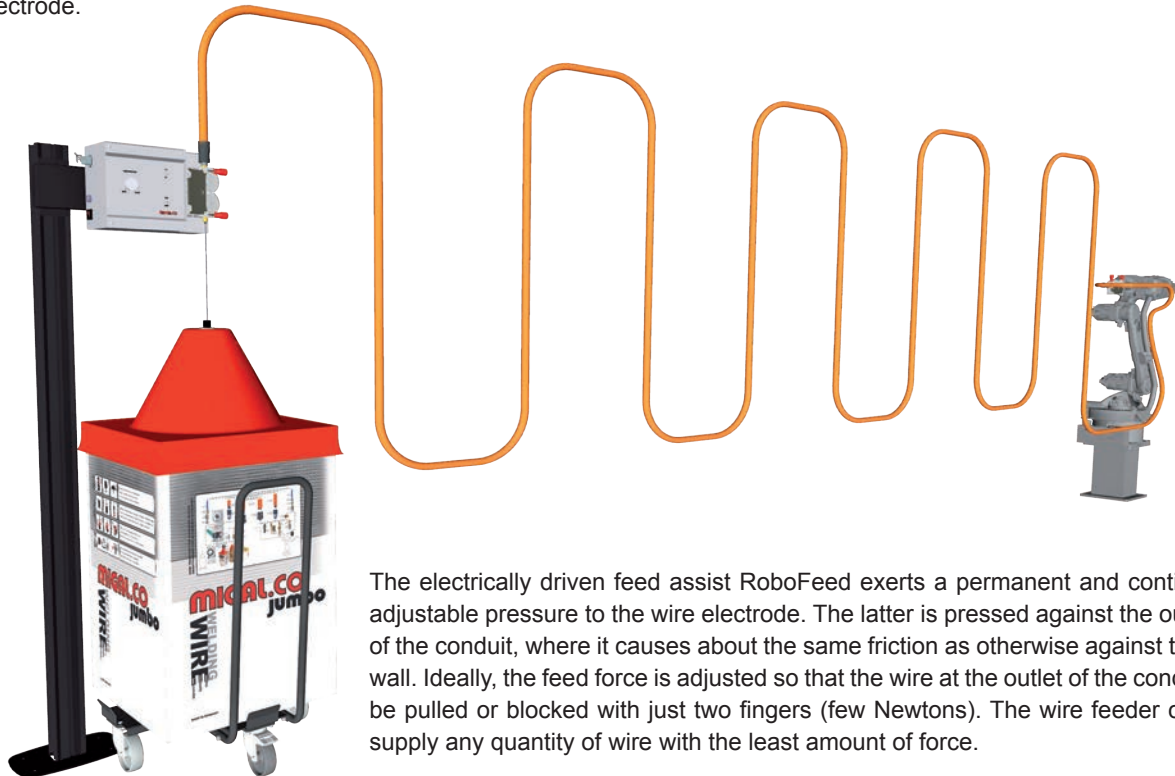
For latest details regarding the content of this page see [www.migal.co](http://www.migal.co)



## Wire feeder

### RoboFeed - pushing the limits of wire transport

The friction of the wire in the conduit is caused by the fact that the wire rests against the inside of the tube. This grows exponentially with the bending angle and, depending on the coefficient of friction rapidly to a complete blocking of the wire electrode.



The electrically driven feed assist RoboFeed exerts a permanent and continuously adjustable pressure to the wire electrode. The latter is pressed against the outer wall of the conduit, where it causes about the same friction as otherwise against the inner wall. Ideally, the feed force is adjusted so that the wire at the outlet of the conduit may be pulled or blocked with just two fingers (few Newtons). The wire feeder can then supply any quantity of wire with the least amount of force.

An electrical connection between RoboFeed and the main drive is not necessary. RoboFeed comes to a standstill by itself when the main drive stops and delivers the right amount of wire by itself when the main drive is running, up to wire speeds of 50 m/min. Even in welding processes with rapidly changing wire speeds, RoboFeed reliably delivers the required wire speed. If an electrical connection is still required to relieve the drive during long breaks, RoboFeed also provides this in any case.

#### Technical data

Wire feed speed	0 - 50 m/min
Feeding force	0 - 165 N (maximum force can be limited with cfg-file)
Dimensions L x B x H	440 x 255 x 190 mm
Weight	9.4 kg (RoboFeed Wire Manager 9.9 kg)
Wire diameter	0.8 - 1.6 mm (larger diameter on request)
Power supply	115 - 230 volts / 50 - 60 Hz

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## Wire feeder

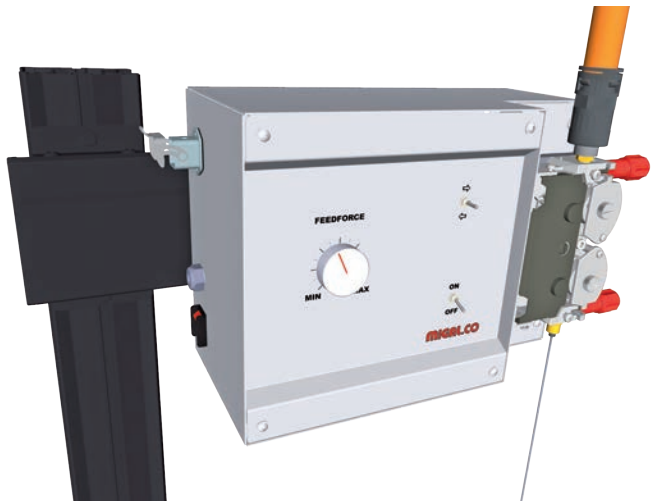
### RoboFeed - pushing the limits of wire transport

RoboFeed has a powerful wire feed motor with 100 Watts of power at its drive shaft. It assists the main wire feed motor by supplying always sufficient welding wire even at large distances from the wire-pack to the welding robot.

Optionally, RoboFeed can also be used as a stand-alone wire feeder with constant, adjustable wire speed from 0 - 50 /min.

It allows a liner length of more than 50 m and therefore makes the welding cell design more flexible. The forces in the wire feed system are significantly reduced which cares for less wire feeding problems and a more stable welding process. It can operate fully independent and saves the time consuming wire insert by hand during wire pack change.

- Quad roll drive
- RoboFeed applies a constant feed force, no electrical connection to the welding power source or welding robot required, but possible
- Parameters like maximum feed force, wire feed direction, maximum wire feed speed, maximum speed and force during keying operation (wire forward/backward) can be set in a configuration file via a USB-connector.
- Liner length between wire pack and robot of more than 50 m
- Prepared for wall mount (brackets are included)
- Floor mount with optional stand
- Can be used with Rolliner NG, 3G, XL2 and with all standard liners
- The panel can be rotated for vertical or horizontal wire feed direction
- Electrical interface (24 Volts) for Start/Stop and wire forward/backward
- Operating mode with constant, adjustable wire speed as option



RoboFeed side view



RoboFeed front view



View from left side

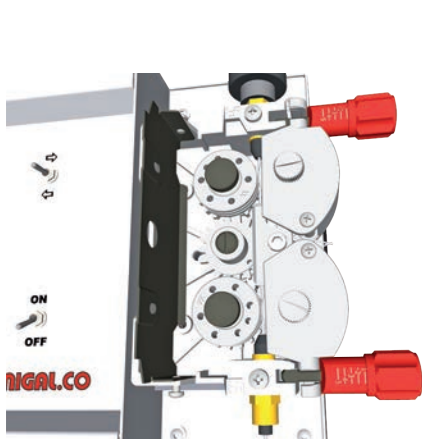
#### Overview table

Item number	Designation	Weight
10,1020,00,10	RoboFeed - Feed assist	9.4 kg

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**Wire feeder**

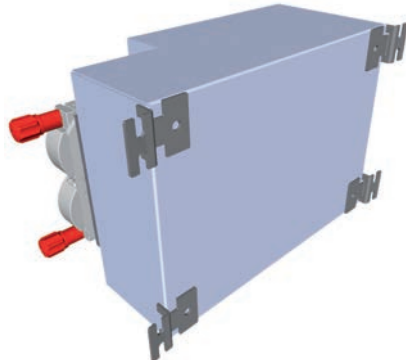
**RoboFeed - pushing the limits of wire transport**



*Powerful quad wire drive*



*Panel rotated for horizontal wire direction*



*Backside with brackets for wall mount*

**Accessories for RoboFeed and RoboFeed-WireManager**



*In- Outlet guide 1/2"  
for RoboFeed*



*In- outlet guide 1/4"  
for RoboFeed*



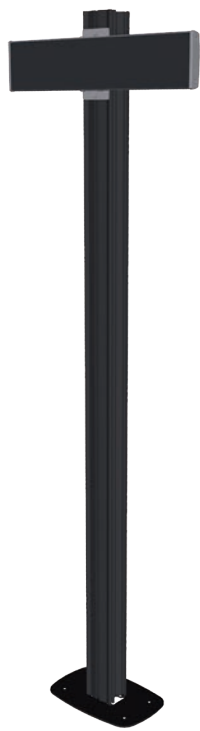
*Feed rolls for  
ferrous metals*



*Feed rolls for  
non ferrous metals*



*Barcode Scanner  
for QR- and Datamatrix Code*



*Stand for floor mount*

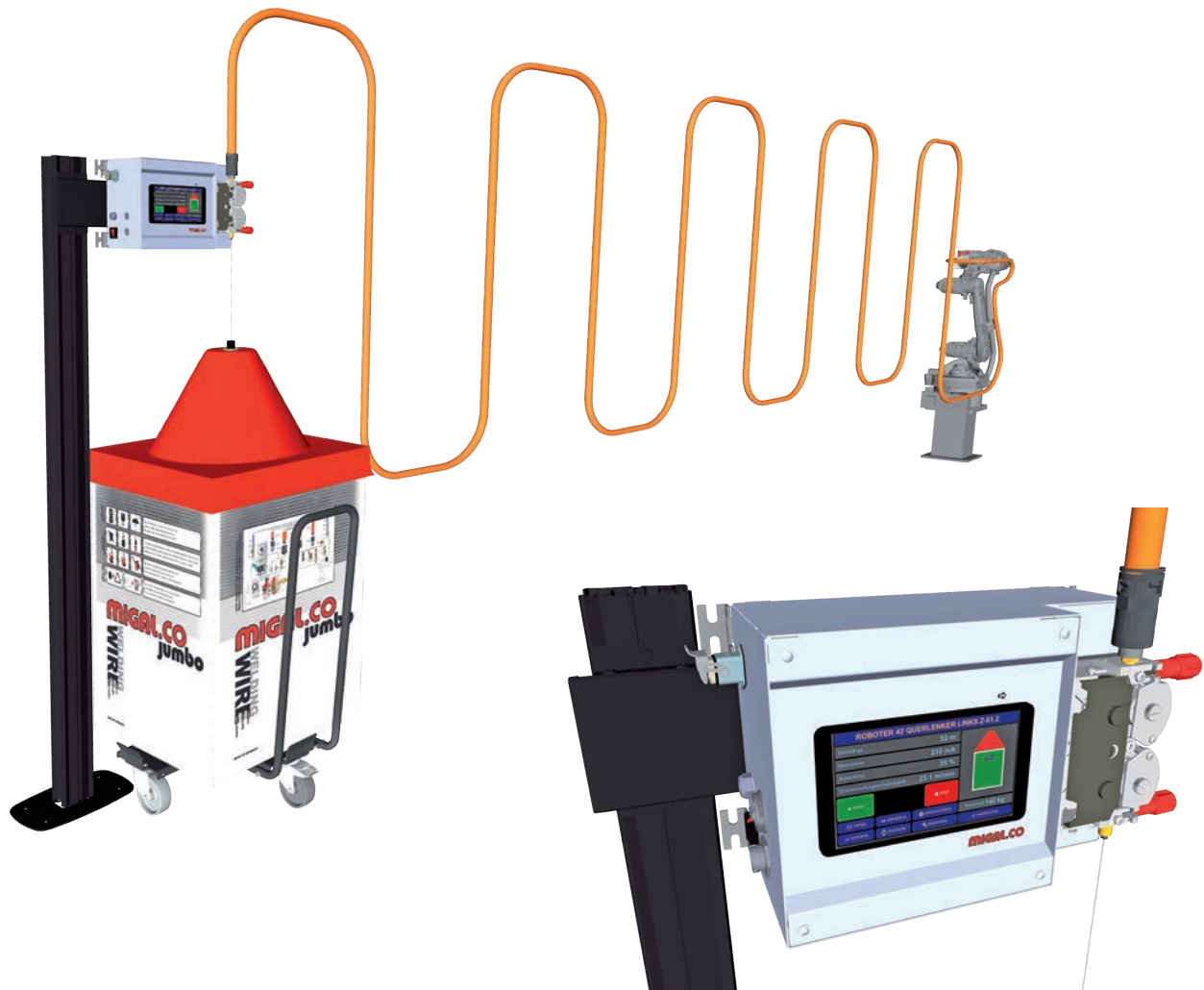
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## Wire feed and wire management

### RoboFeed-WireManager - pushing the limits of wire transport and wire management

RoboFeed-WireManager has a powerful wire feed motor with 100 Watts of power at its drive shaft. It assists the main wire feed motor by supplying always sufficient welding wire even at large distances from the wire-pack to the welding robot. Additionally it records the wire consumption, warns when the remaining wire quantity is low, inserts the wire at a specific length, shows statistical data, provides a stopwatch and talks to other devices via MQTT or OPC UA.

It allows a liner length of more than 50 m and therefore makes the welding cell design more flexible. The forces in the wire feed system are significantly reduced which cares for less wire feeding problems and a more stable welding process. It can operate fully independent and saves the time consuming wire insert by hand during wire pack change.



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## Wire feed and wire management

### RoboFeed-WireManager - pushing the limits of wire transport and wire management

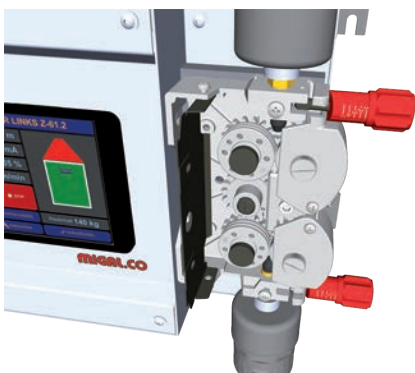
- Quad roll drive
- RoboFeed - WireManager applies a constant feed force, no electrical connection to the welding power source or welding robot required, but possible
- Optional barcode reader to recognize quantity, item number, batch number and manufacturing date of the wire (VDA-label)
- Rejects wire pack change if wire item number is not correct
- Statistics function
- Shows remaining wire content with pre-warning and warning thresholds
- Signal output, email and SMS as end-of-wire warning
- MQTT protocol for IoT (batch, drum content, wire speed)
- OPC UA server for IoT (batch, drum content, wire speed)
- CANopen (currently internal)
- Liner length between wire pack and robot of more than 50 m
- Prepared for wall mount (brackets are included)
- Floor mount with optional stand
- Can be used with Rolliner NG, 3G, XL2 and with all standard liners
- The panel can be rotated for vertical or horizontal wire feed direction
- Electrical interface (24 Volts) for Start/Stop and wire forward/backward
- Setup function for commissioning
- Jogging with wireless remote control (battery-free EnOcean), 2 speeds
- Automatic threading (setting of feed force and length)
- Wire retraction during threading if wire gets stuck
- Stopwatch function for wire length, weight, duty cycle
- Settings with PIN code



RoboFeed Wire Manager view from left side



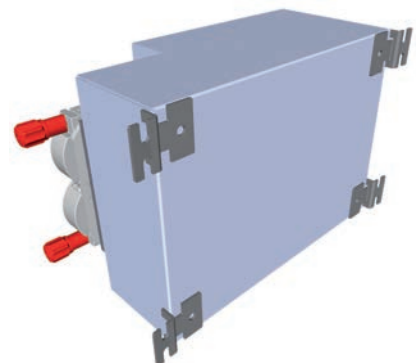
RoboFeed Wire Manager side view



Powerful quad wire drive



Panel rotated for horizontal wire direction

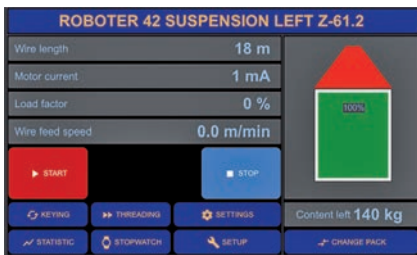


Backside with brackets for wall mount

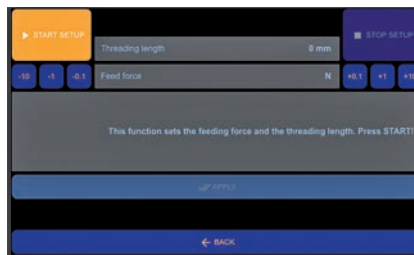
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## Wire feed and wire management

### RoboFeed-WireManager - pushing the limits of wire transport and wire management



Normal operation display



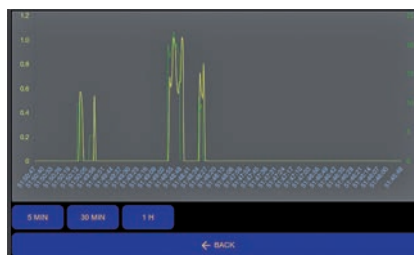
Screen for Setup to determine feeding force and threading length



Stopwatch function for wire consumption and duty cycle



Screen for keying (jogging) - wire forward/backward



Statistics display for wire speed and feeding force



Screen for threading function - feeds the wire into the liner with a preset length



Datamatrix code code on VDA label for batch number, weight, production date and item number



QR code on wire label for batch number, weight, production date and item number



#### Overview table

Item number	Designation	Weight
10,1020,00,20	RoboFeed-WireManager	9.9 kg

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## Basket spool adapters

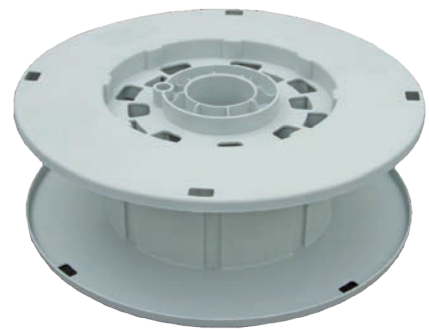
### Adapters - for basket spools

Adapters are required for some applications and some spool. Additionally to the shown variants we also have the option for custom designs. Please contact us.

#### Adapter for basket spool B 300

The wire basket B-300 is very environmentally friendly as it can easily be disposed as scrap steel. With this adapter, the wire basket can be attached to the common 52 mm mandrel of all standard wire feeders.

The adapter is easy to put together using zip closure. All basket spools B 300 according to EN ISO 544:2011 can be used.



#### Overview table

Item number	Designation	Weight
10,70,1,0001	Adapter for basket spool B 300	0,8 kg

## Anti spatter

### Ceramic surface protection KRA-1000 for fixtures and welding torches

The ceramic surface protection spray KRA-1000 protects surfaces exposed to temperatures up to 1000° C. The lifetime of MSG gas nozzles and contact tubes, electrodes of resistance welding machines and outlet nozzles of cold wire feeders for laser and plasma welding will be prolonged significantly. Surfaces of welding fixtures and clamping elements are optimally protected from weld spatter or other sparks.

#### Benefits

- Spatter will either stick not to the surface or will be much easier to remove from nozzles or fixtures
- Less downtime and maintenance costs due to less frequent cleaning
- Up to ten times lifetime of nozzles and devices
- Stable welding processes, and thus less scrap



Samples of gas nozzles and contact tips with ceramic coating

#### Application

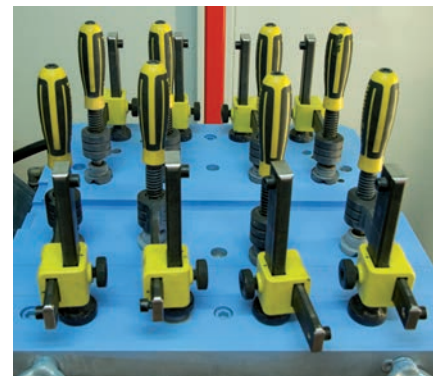
Shake the can for at least 30 seconds before each use. Spray a thin film from a distance of approx. 30 cm. Avoid repeated overspray and consequent thick layers.

Allow sprayed film to dry before use for 30 seconds!



#### Warning

- Extremely flammable. Keep away from open flames or other sources!
- Irritating to eyes and mucous membranes
- Pressurized container
- Skin contact may cause skin dryness or cracking
- Inhalation of vapors may cause drowsiness and dizziness
- Do not expose aerosol to direct sunlight or temperatures above 50° C
- Do not pierce or burn, even after use
- Do not spray on an open flame or any hot surfaces
- Keep away from sources of ignition - No smoking!
- Keep out of the reach of children
- Use only in well-ventilated areas
- Avoid contact with skin and eyes



Welding fixture with ceramic coating

#### Overview table

Item number	Designation	Weight
10,60,1,0001	Ceramic spray KRA-1000 400 ml	0,38 kg

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