MULTIFLEX Chain

Multiflex chain has been engineered for multi-dimensional movements with special focus on robot applications and new generation machining centers.

This chain completes the range of products included in Brevetti Stendalto's robot series and offer to the option to dress completely the robots trough a single supplier.

The chain is completely closed but easy to open and easy to wire thanks to the covers that can be simply removed by means of a screwdriver.

Every part of the chain can be internally inspected opening the covers at any point.

Easily shortenable and easily extendable.

Chain's Part Number: **MFC65100,** Link's Part Number: **MMC65100,** Cover's Part Number**: C65.**

Code key:

MF	**C**	**65**	**100**
Multi **F**lex	**C**losed version	Chain Size	Minimum Bending Radius

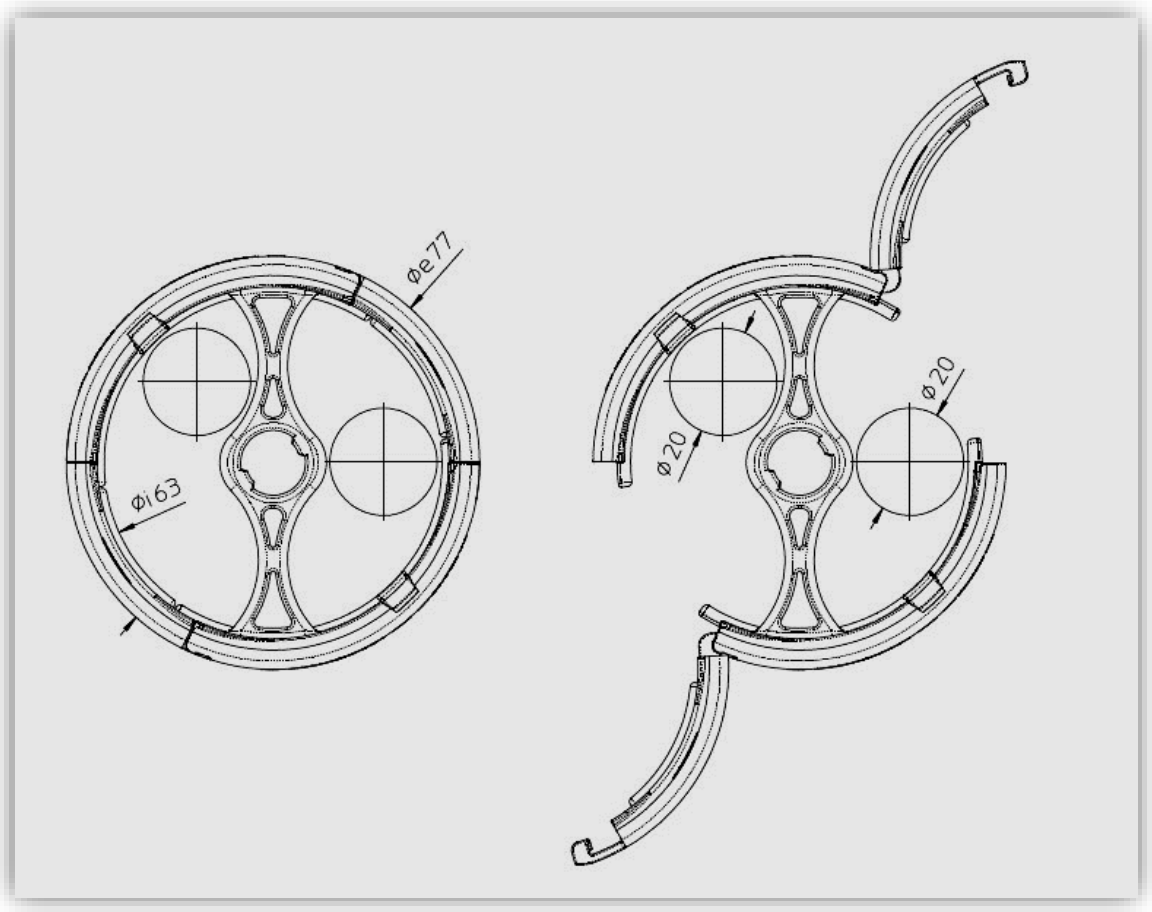
MAIN DATA:

Øi inner diameter	63 mm
Ø outer diameter	77 mm
Minimum bending radius	100 mm

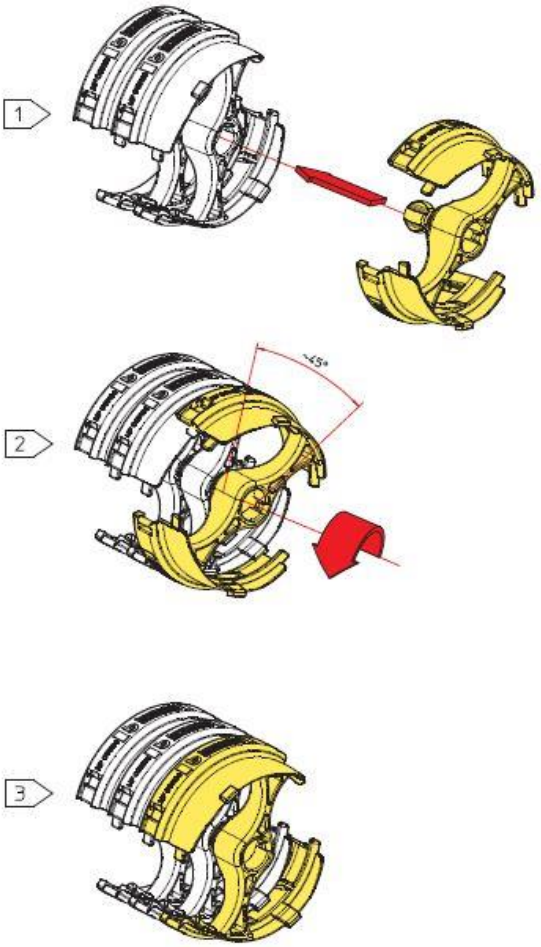
Pitch	18.5 mm
links/m	54
Weight	1.6 Kg/m

Torsion angle of a single link ~ ± 10°

Ø Allowed maximum cable's diameter 20 mm

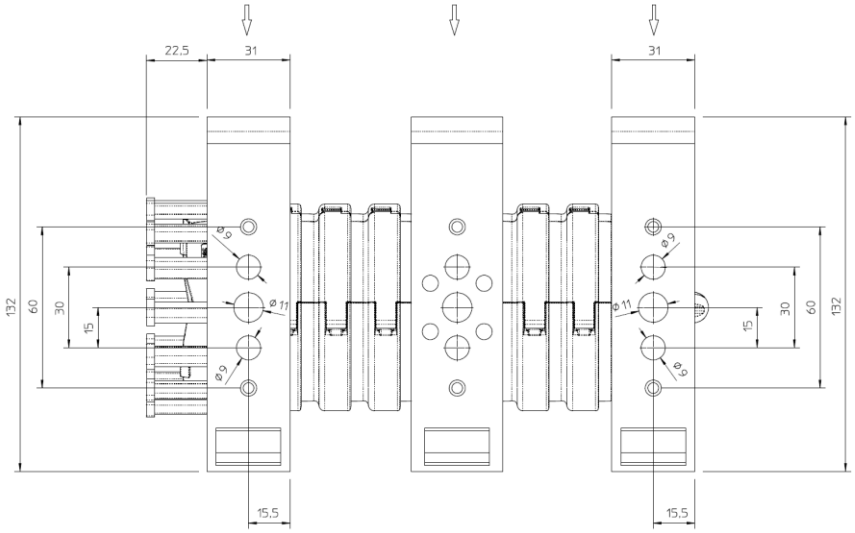


ASSEMBLING INSTRUCTIONS



ASSEMBLING STANDARD END BRACKETS

STANDARD END BRACKET WITH TIE-WRAP CLAMPS **Cod. AMF65K01**	STANDARD BRACKET FOR INTERMEDIATE LINK **Cod. AMF65K02**	STANDARD END BRACKET WITHOUT TIE-WRAP CLAMPS **Cod. AMF65K02**

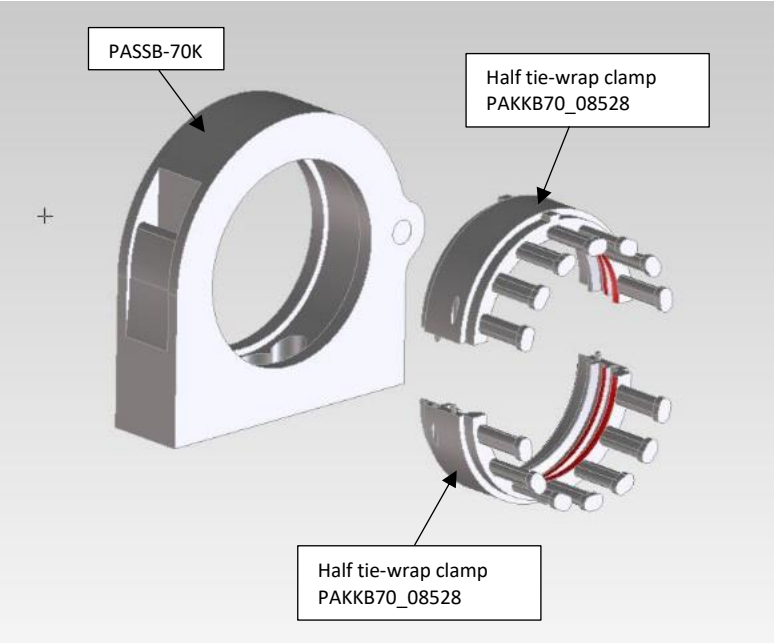


ACCESSORIES:

Note: Last numbers meaning
01= End clamp with tie wraps
02= End clamp without tie wraps
03= Intermediate clamp with sliding ring.

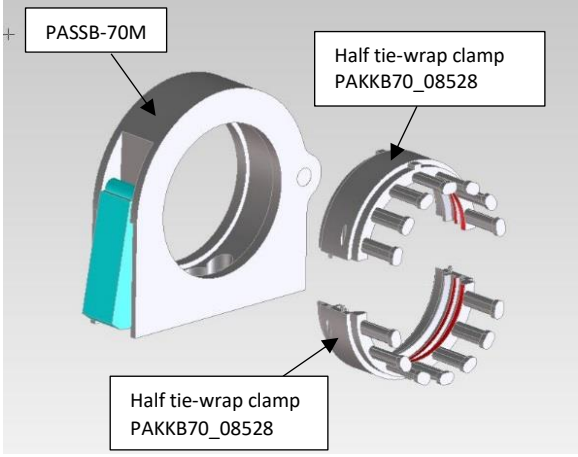
PART NUMBER AMF65K01

Standard end bracket with tie-wrap clamps



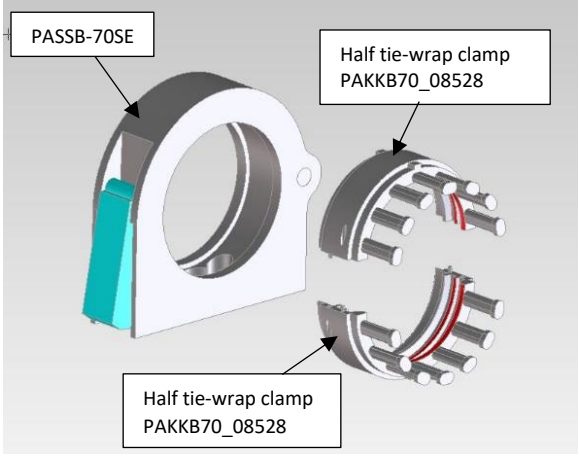
PART NUMBER AMF65M01

End bracket with galvanized steel fastener and tie-wrap clamps.



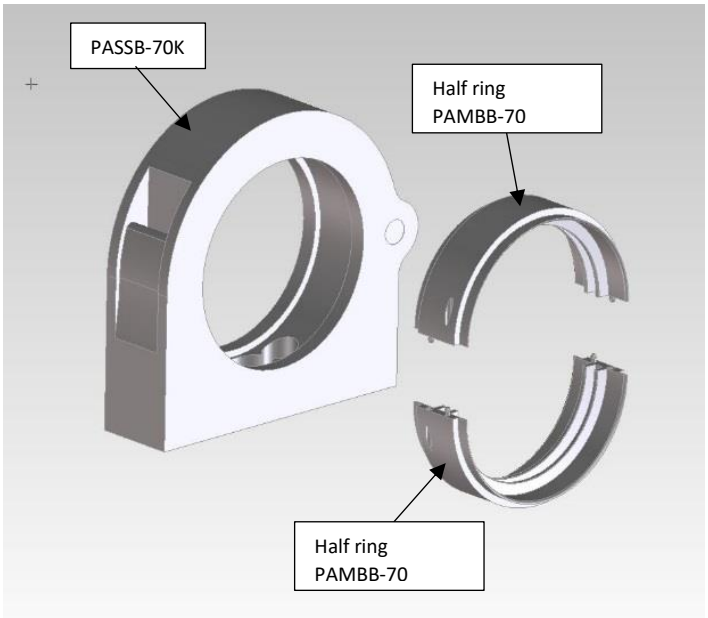
PART NUMBER AMF65X01

End bracket with stainless steel fastener and tie-wrap clamps.



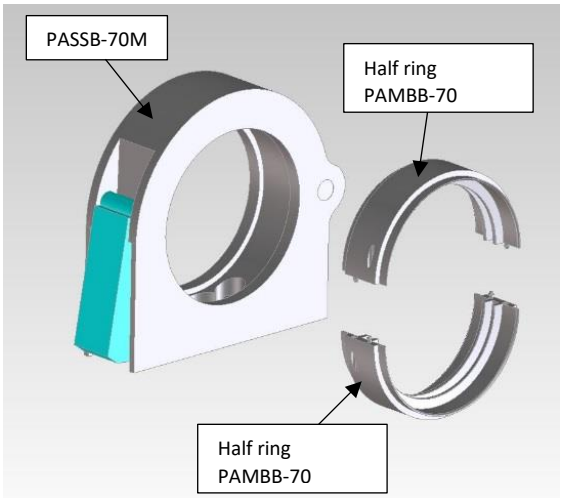
PART NUMBER AMF65K02

Standard end bracket w/o tie-wrap clamps



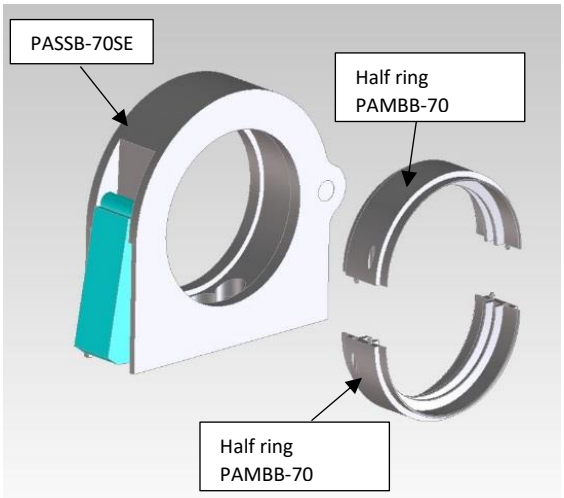
PART NUMBER AMF65M02

End bracket with galvanized steel fastener w/o tie-wrap clamps.



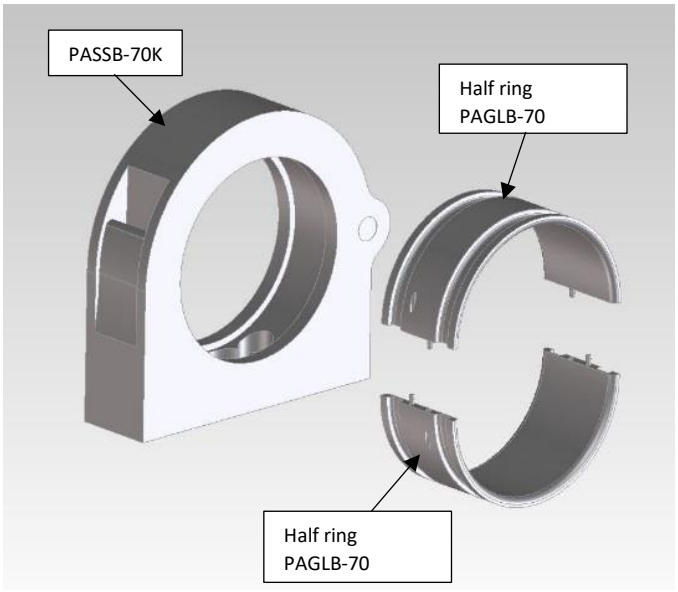
PART NUMBER AMF65X02

End bracket with stainless steel fastener w/o tie-wrap clamps.



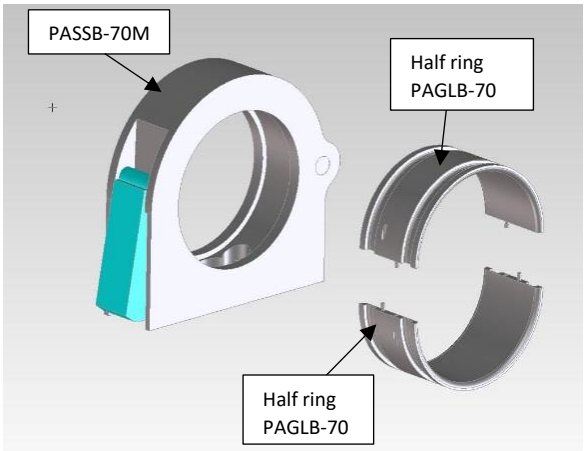
PART NUMBER AMF65K03

Standard end bracket with sliding ring



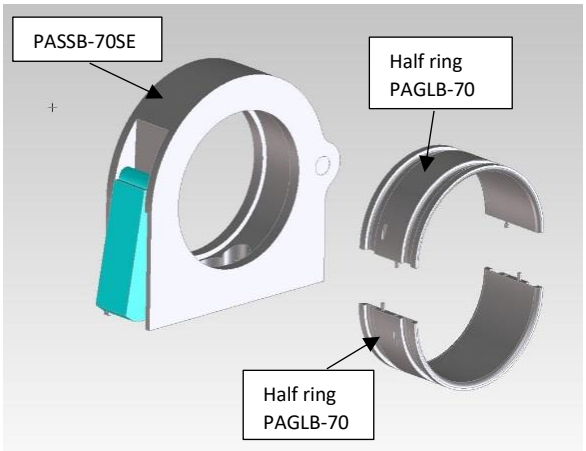
PART NUMBER AMF65M03

End bracket with galvanized steel fastener and sliding ring.



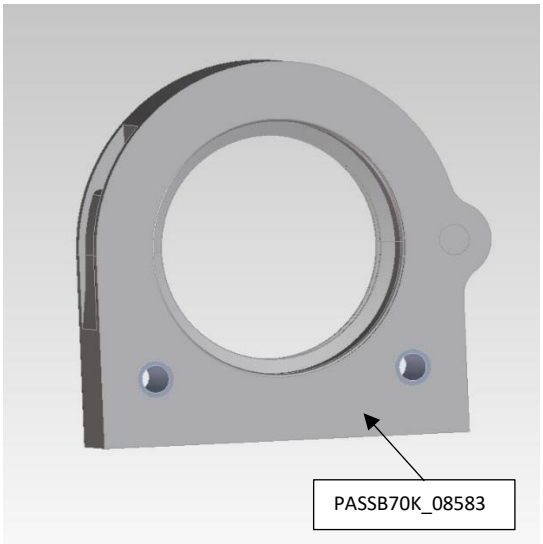
PART NUMBER AMF65X03

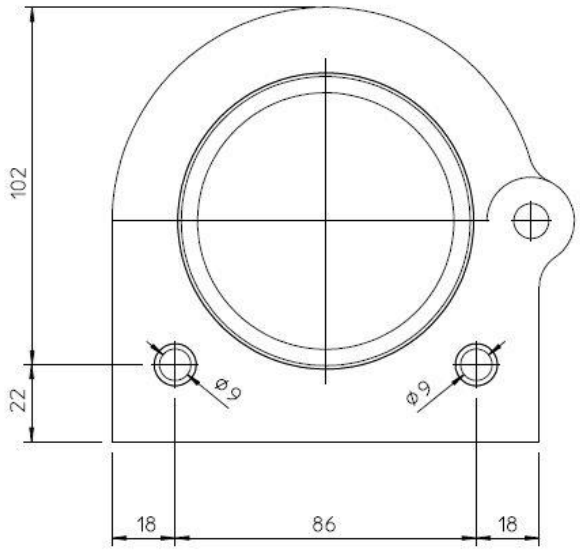
End bracket with stainless steel fastener and sliding ring.



Note: Last numbers meaning
01F= End clamp for frontal fixation with tie-wraps.
02F= End clamp for frontal fixation without tie-wraps.
03F= Intermediate clamp for frontal fixation with sliding ring.

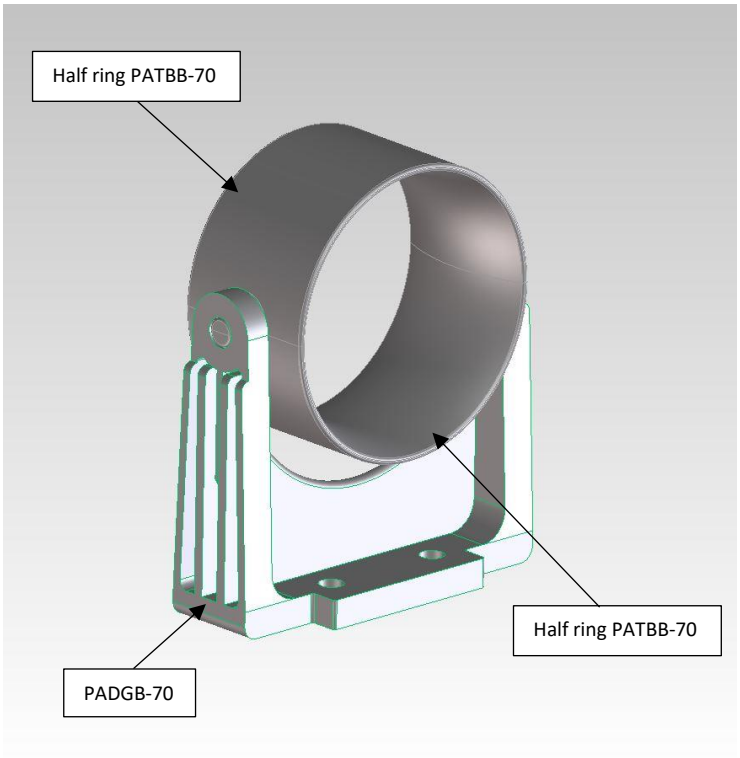
Example Cod. AMF65K02F





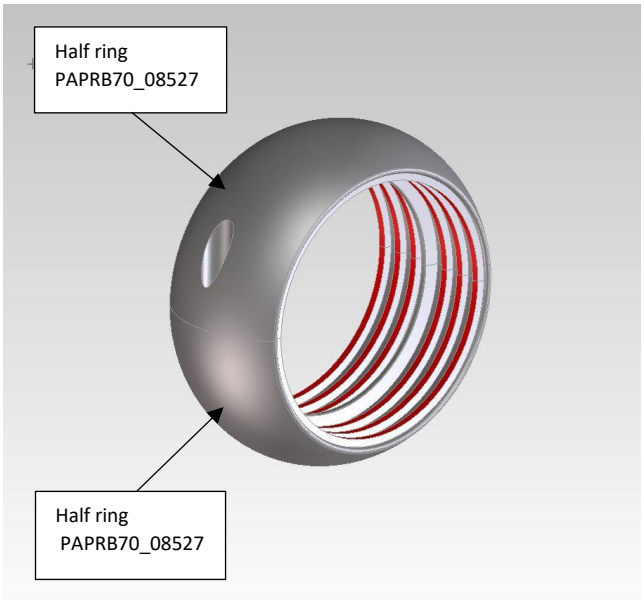
PART NUMBER ASO65

Bracket with oscillating sliding ring

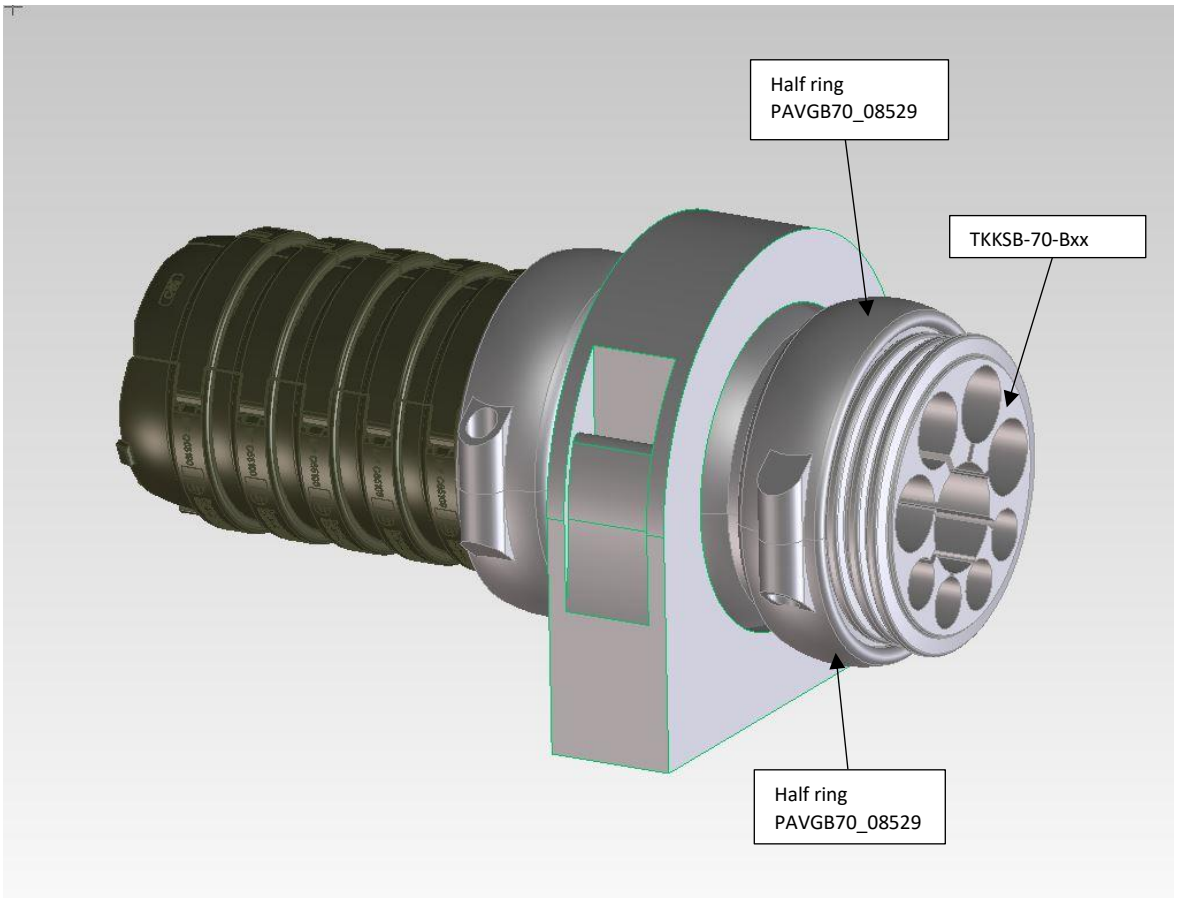


PART NUMBER PCM65

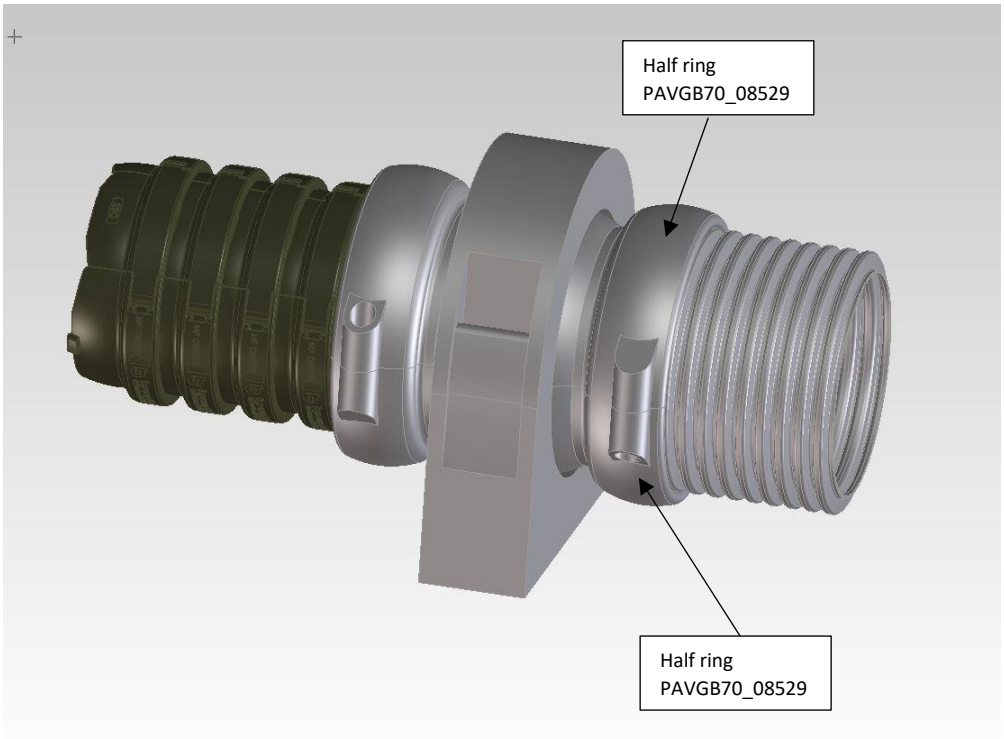
Bumper / Protection.



UNION FITTING WITH MULTIPLE HOLES RUBBER PLUG



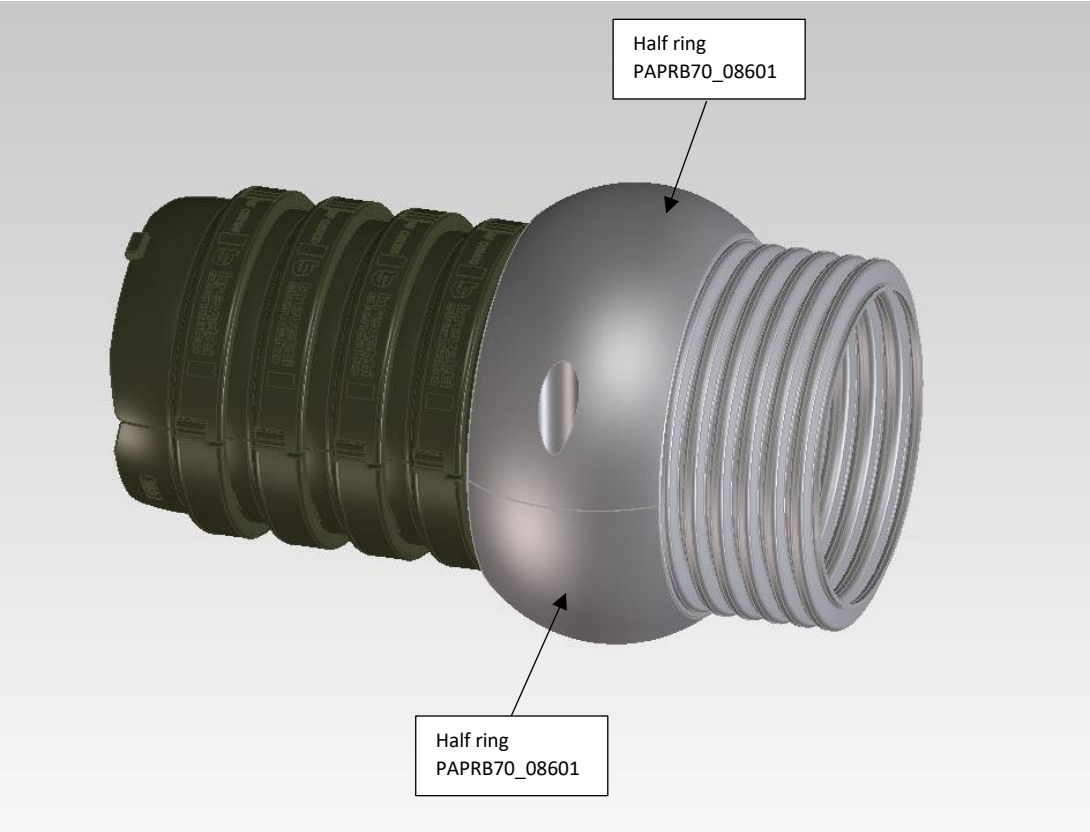
Connection between Multiflex and conduit



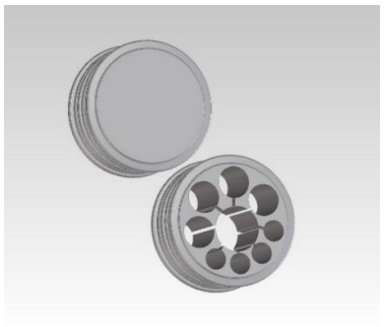
Connection between Multiflex and conduit

Cod. GJM65

(Globe Joint)

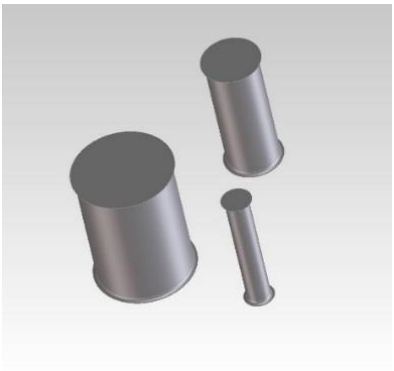


MULTIPLE HOLES RUBBER PLUGS



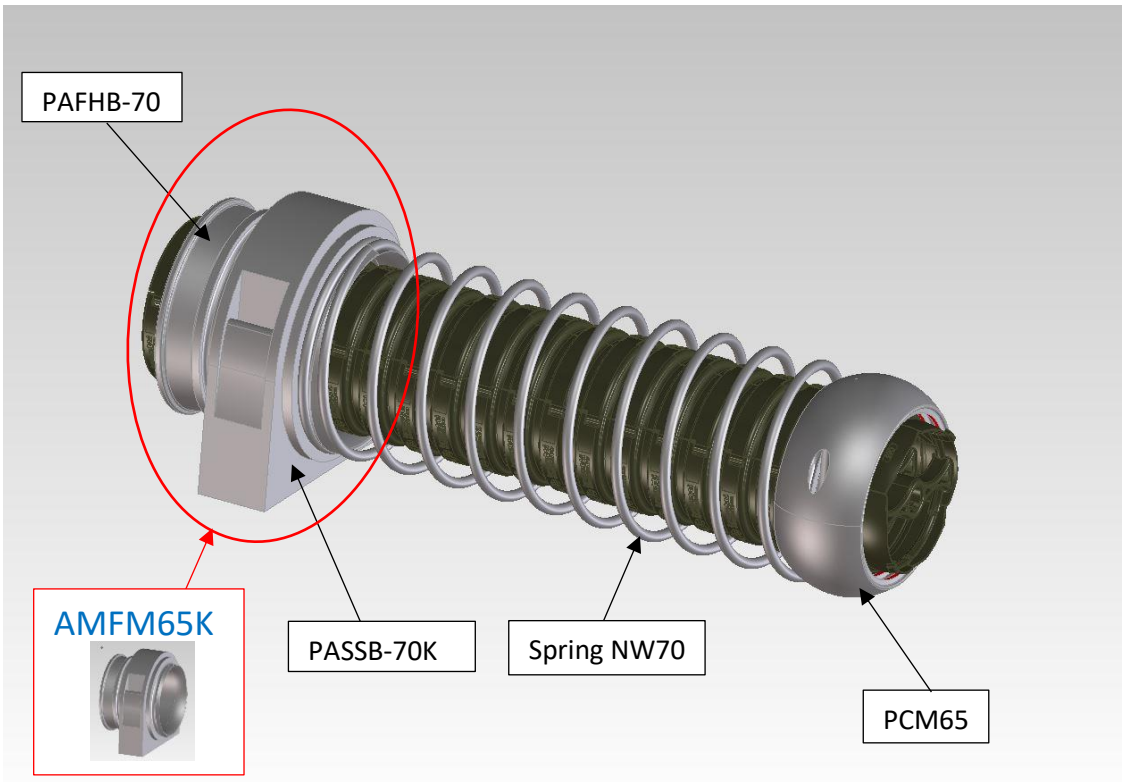
PARTS NUMBER	Ø7.5	Ø10	Ø12.5	Ø14	Ø15.5	Ø17	Ø18	Ø19	Ø20
TKKSB-70-B01				4					4
TKKSB-70-B02	1	1	2						4
TKKSB-70-B03			1	1	2				3
TKKSB-70-B04	2	1	1		1				2
TKKSB-70-B05			1	2		1	3	1	
TKKSB-70-B07			1	1	2				4
TKKSB-70-BLIND	-	-	-	-	-	-	-	-	-

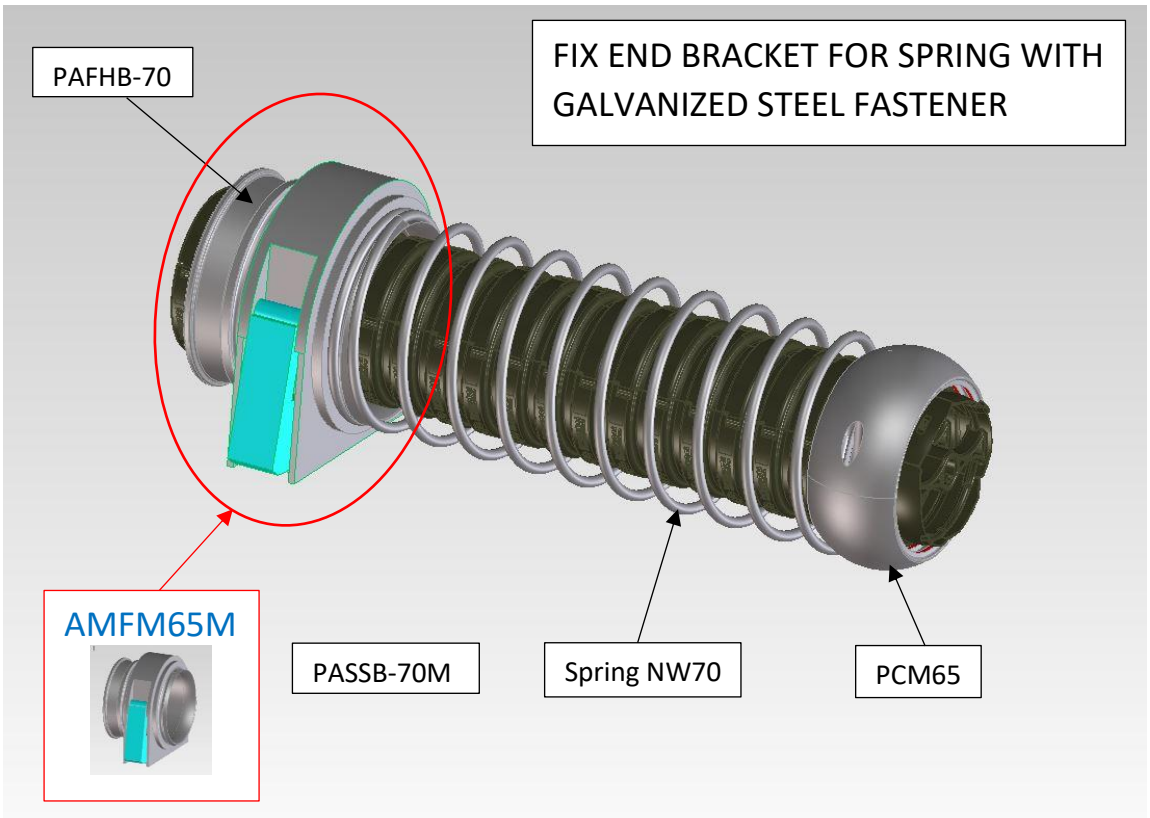
RUBBER PLUGS

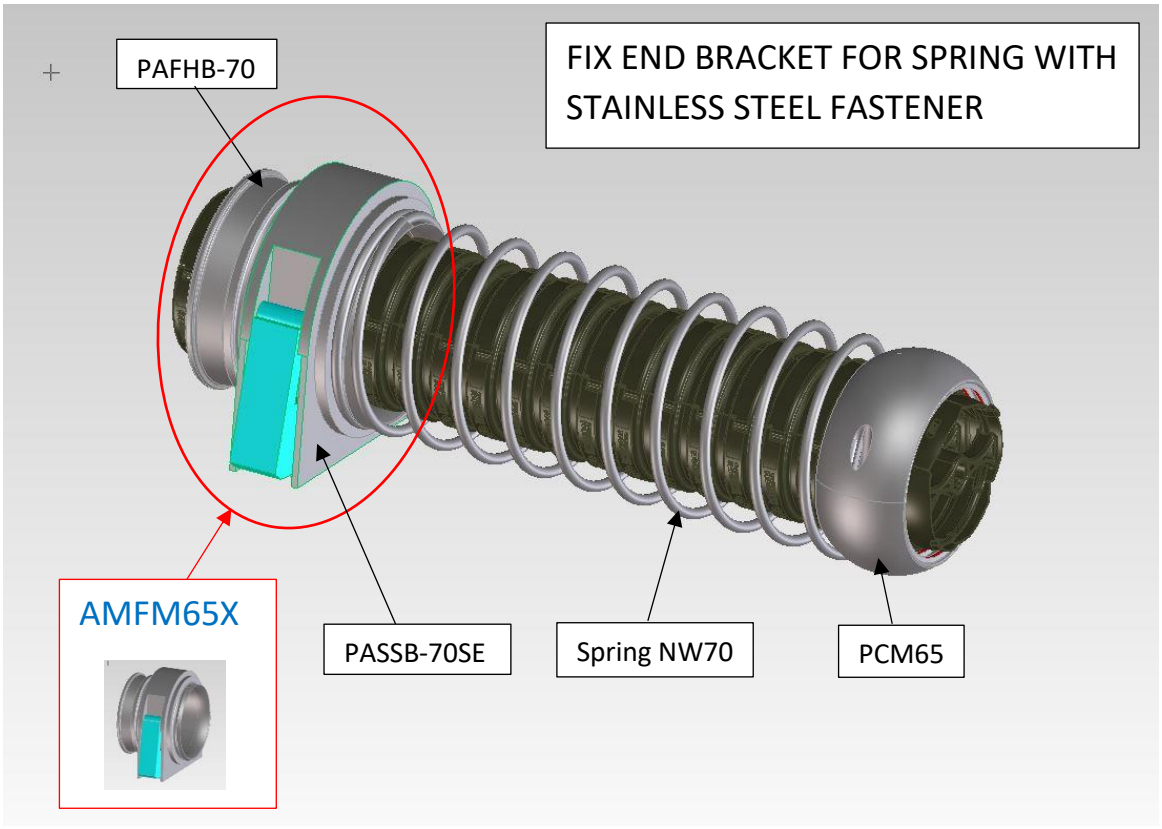


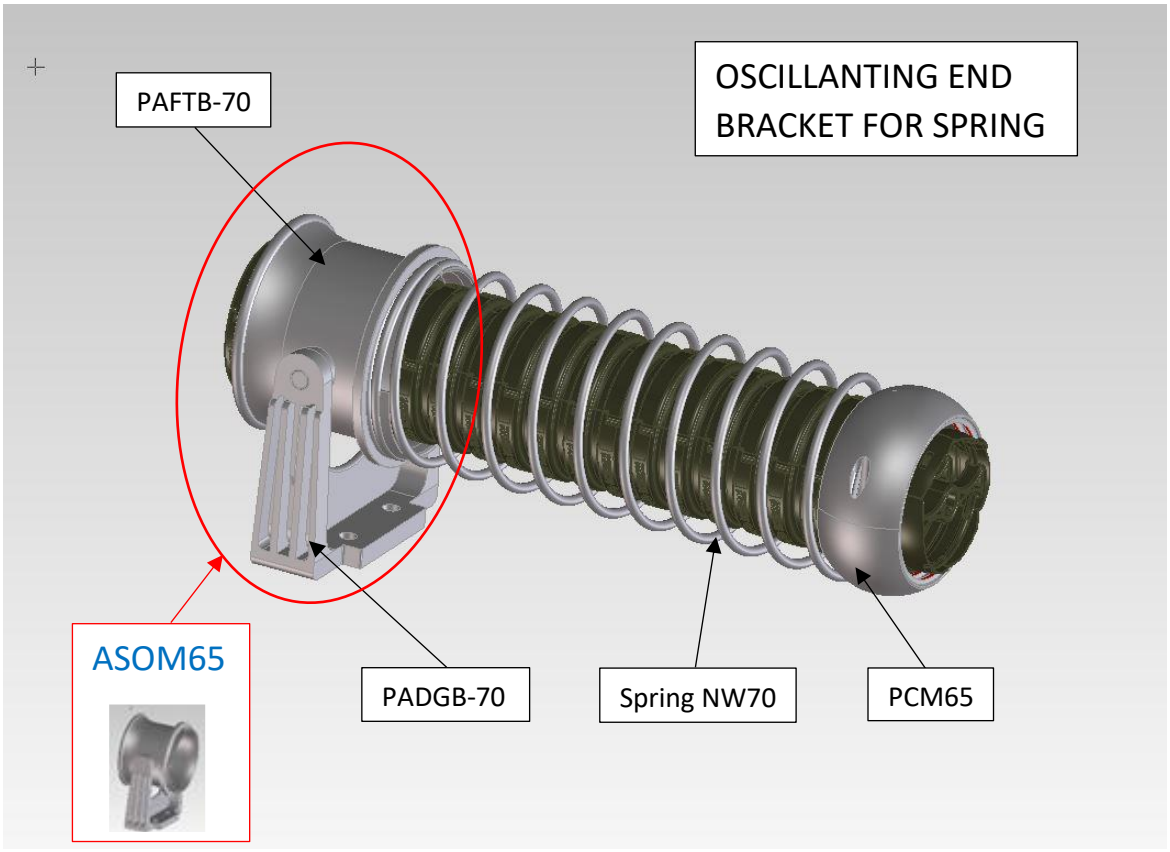
PARTS NUMBER	DIAMETER	STANDARD PACKAGE Q.TY.
TKBSB-7.5	7.5	10
TKBSB-10	10	10
TKBSB-12.5	12.5	10
TKBSB-14	14	10
TKBSB-15.5	15.5	10
TKBSB-19.5	19.5	10

ACCESSORIES FOR SPRINGS



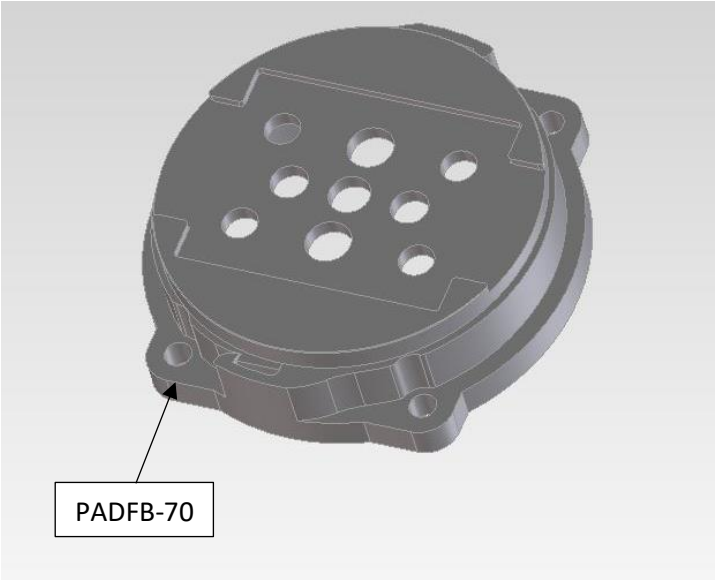



PAFHB-70
FIX END BRACKET FOR SPRING WITH STAINLESS STEEL FASTENER
AMFM65X
PASSB-70SE
Spring NW70
PCM65

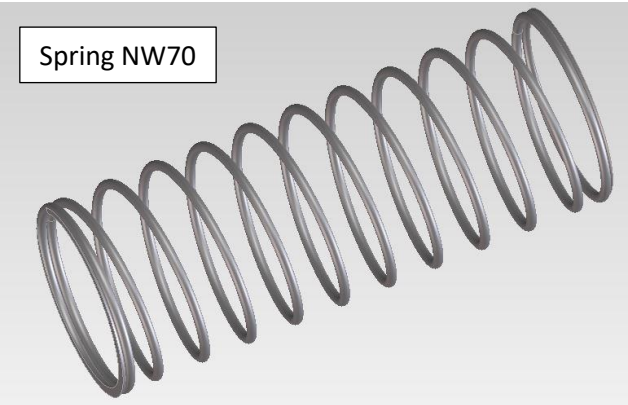

PAFTB-70
OSCILLANTING END BRACKET FOR SPRING
ASOM65
PADGB-70
Spring NW70
PCM65

Pivoting Base

Mounting on all fastening clamp



SPRINGS OVERVIEW



Spring type ***Part number***	NW70 FSVF-70-1000	NW70 FSMF-70-1000	NW70 FSMF-70-550
To be used with	AMFM65M - K - X , ASOM65		
Classification	heavy	medium	medium
Spring rate (N/mm)	0.219	0.108	0.246
Form/Material	cylindrical a)	cylindrical b)	cylindrical a)
Wire dia. Ø (mm)	5.0	4.2	4.5
Inner dia. Ø (mm)	89.0	89.0	89.0
Length (mm)	1000	1000	550
Tolerance (mm)	+/- 82	+/- 82	+/- 75
Weight Kg/Each	1.5	1.4	0.7
Application type	Handling/Mig/Mag/Spot-welding		

Materials: a) EN 10270-3 / 1.4310 (X12 CrNi 1808) stainless steel
b) EN 10270-1 SH (Type C)

HEAT PROTECTION KEVLAR JACKET

The heat protection jacket features an internal tissue made in Aramid/Kevlar, and an outer tissue made in aluminium. It is used to wrap the MULTIFLEX chain. It protects the chain from weld slags up to 540 °C, and reflects thermal radiations up to 95%.
Kevlar tissue offers good resistance against oils, greases, acids, bases, and solvents in low concentration. The outer tissue also has good resistance against UV rays.

Technical data:

Thickness:	0.35 mm
Specific weight:	1.44 / 1.45 g/cm^3
Tear resistance:	2500 N/50 mm
Flammability:	non-flammable (DIN 4102 B1)

Non-opening jacket					
Ø	***Part number***	***Standard lengths (mm)***			
80	*KA04S080*	*500*	*1000*	*1500*	*2000*

Jacket with Velcro straps					
Ø	***Part number***	***Standard lengths (mm)***			
80	*KA04S080G*	*500*	*1000*	*1500*	*2000*

*Different lengths, diameters and shapes available on request.

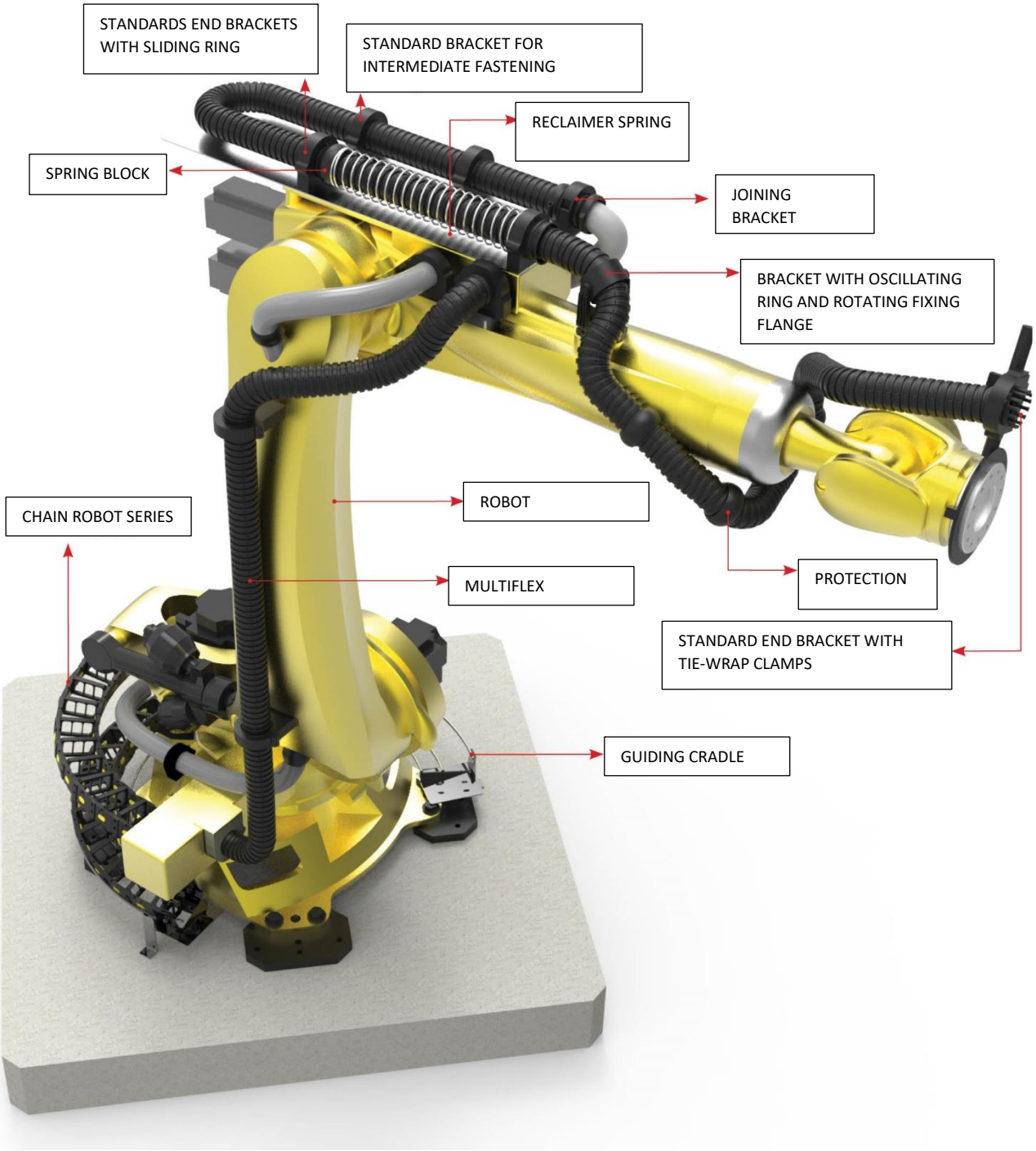
SOME PICTURES:

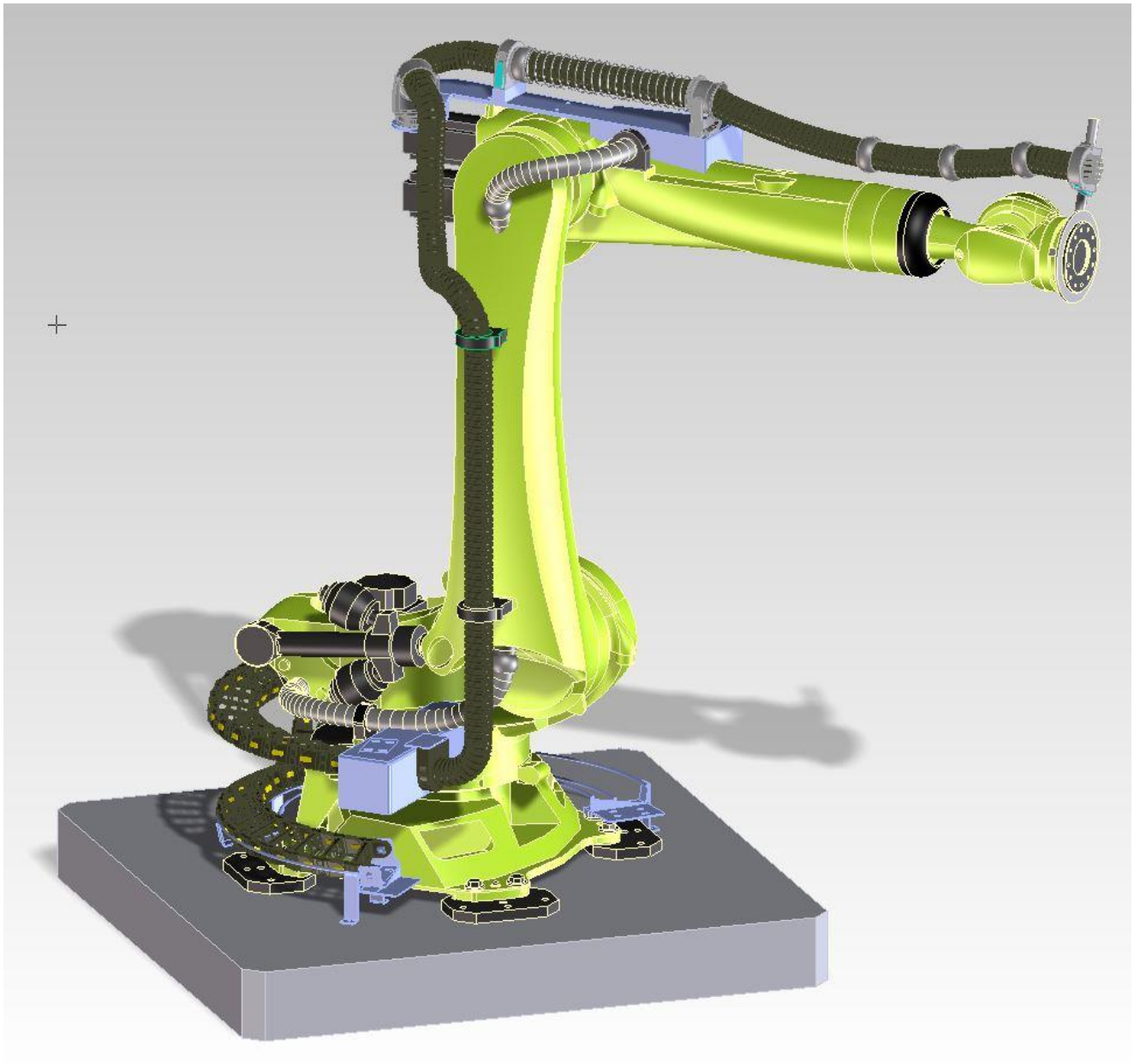
JUNCTION BETWEEN MULTIFLEX AND CABLE CONDUITS

ADVANTAGE: Multiflex can be inspected at any point

EXAMPLES OF APPLICATIONS

With the combination of our Robot and Multiflex chains, we can completely dress any antropomorphic Robot!





TESTER MACHINERY IN BREVETTI STENDALTO

- Test started 01/06/2017
- N° 31 movements per minute, +360°/-360°
- Operating 24h/24h.

So far (26 of July, 2017), we made about 2,5M of Cycles without any problem.

Multiflex chain is on display at EMO Hannover 2017

Video: Fast insertion of cables into Brevetti's new 3D Multiflex chain

https://www.youtube.com/watch?time_continue=5&v=Ys3_KZsfz5w