

4-Port Dual-Beam Antenna

B1

B2

KATHREIN

Frequency Range

1710–2200

1710–2200

Dual Polarization

X

X

HPBW

40°

40°

Adjust. Electr. DT

2°–14°

2°–14°

Azimuth Beam Direction

(–30°)

(+30°)

Optimized Horizontal Sidelobes

18dB

18dB

Downtilt set by hand or by optional RCU (Remote Control Unit)



4-Port Dual-Beam Antenna 1710–2200/1710–2200 40°(–30°)/40°(+30°) 17/17dBi
2°–14°/2°–14°T

Type No.		80010605		
Highbands		B1, B2		
		1710–2200		
Frequency range	MHz	1710 – 1880	1850 – 1990	1920 – 2200
Azimuth direction		Beam A (–30°), Beam B (+30°)		
Polarization	°	+45, –45	+45, –45	+45, –45
Gain at mid tilt	dBi	16.3	16.8	17.3
Gain over all tilts	dBi	16.2 ± 0.7	16.7 ± 0.5	17.1 ± 0.8
Horizontal Pattern:				
Half-power beam width (offset beams ±30°)	°	43	40	37
Front-to-back ratio	dB	Copolar: > 30 Total power: > 25		
Cross polar ratio				
Maindirection –30°; +30° Sector –60°; 0°; 0°; +60°	dB	Typically: 15 > 8	Typically: 15 > 8	Typically: 15 > 8
Sidelobe suppression for sidelobes beside main beam	dB	> 18		
Vertical Pattern:				
Half-power beam width	°	14.5	14	13
Electrical tilt	°	2–14, continuously adjustable		
Sidelobe suppression for first sidelobe above main beam	dB	> 16		
Impedance		50		
VSWR		< 1.5		
Isolation, between ports	dB	> 28		
Intermodulation IM3	dBc	< –150 (2 x 43 dBm carrier)		
Max. power per input	W	200 (at 50 °C ambient temperature)		
Max. power for the antenna	W	600 (at 50 °C ambient temperature)		



Mechanical specifications			
Input		4 x 7-16 female	
Connector Position		bottom	
Adjustment Mechanism		2x, Position bottom continuously adjustable	
Wind load (at Rated Wind Speed: 150 km/h)	N lbf	Frontal: 260 Maximal: 280	58 63
Max. Wind Velocity	km/h mph	200 124	
Height / Width / Depth	mm inches	698 / 380 / 150 27.5 / 15.0 / 5.9	
Category of Mounting Hardware		M (Medium)	
Weight	kg lb	12.0 / 14.2 (clamps incl.) 26.5 / 31.3 (clamps incl.)	
Packing Size	mm inches	1080 / 402 / 172 42.5 / 15.8 / 6.8	
Scope of Supply		Panel and 2 units of clamps for 42–115 mm 1.7–4.5 inches diameter	

936.4839/b Subject to alteration.

All specifications are subject to change without notice.
The latest specifications are available at www.kathreinusa.com

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Accessories General Information

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Accessories (order separately if required)

Type No.	Description	Remarks mm inches	Weight approx. kg lb	Units per antenna
731651	1 clamp	Mast diameter: 28 – 60 1.1 – 2.4	0.8 1.8	2
85010002	1 clamp	Mast diameter: 110 – 220 4.3 – 8.7	2.7 6.0	2
85010003	1 clamp	Mast diameter: 210 – 380 8.3 – 15.0	4.8 10.6	2

Accessories (included in the scope of supply)

738546	1 clamp	Mast diameter: 42 – 115 1.7 – 4.5	1.1 2.4	2
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For wall mounting: Azimuth Adjustment Kit 85010016.

For 3 Panel Arrangement: 3 Sector Clamp Kit 742034.

Please note: The dual-beam antenna must not be used in combination with any downtilt kit.

Material:

Reflector screen: Aluminum. **Radiator:** Tin-plated zinc.

Fiberglass radome: The grey fiberglass radomes of these antennas are very stable and extraordinarily stiff. They are resistant to ultraviolet radiation and can also be painted to match their surroundings.

All screws and nuts: Stainless steel.

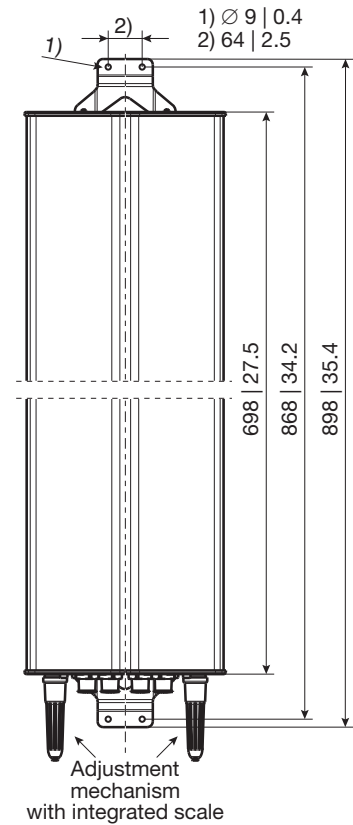
Grounding:

The metal parts of the antenna including the mounting kit and the inner conductors are DC grounded.



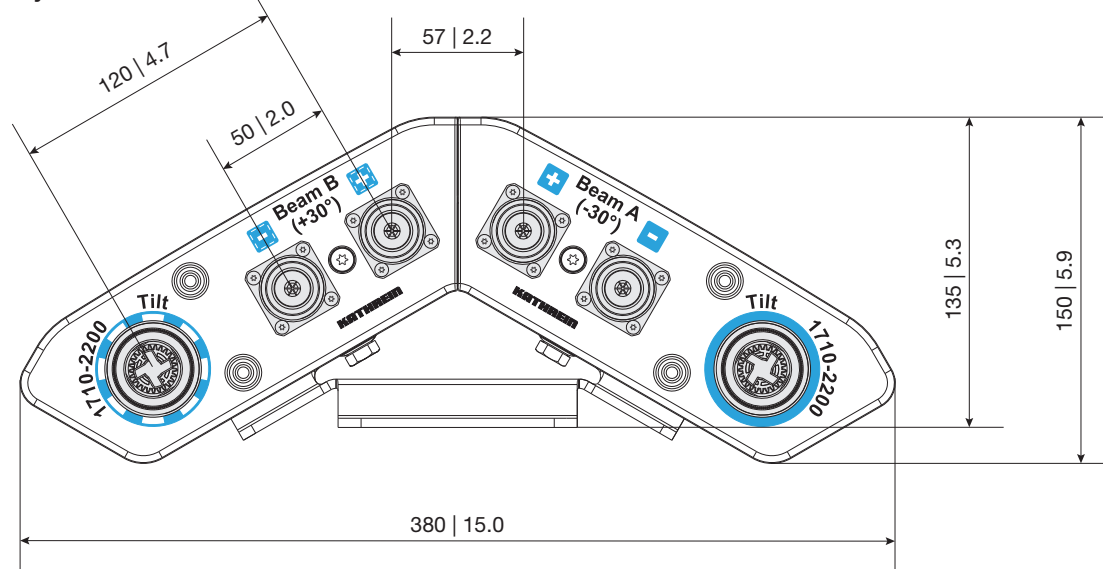
Correlation Table

Frequency range	Array	
1710–2200 MHz	B1	Beam B
1710–2200 MHz	B2	Beam A



All dimensions
in mm | inches

Layout of interface:



Bottom view

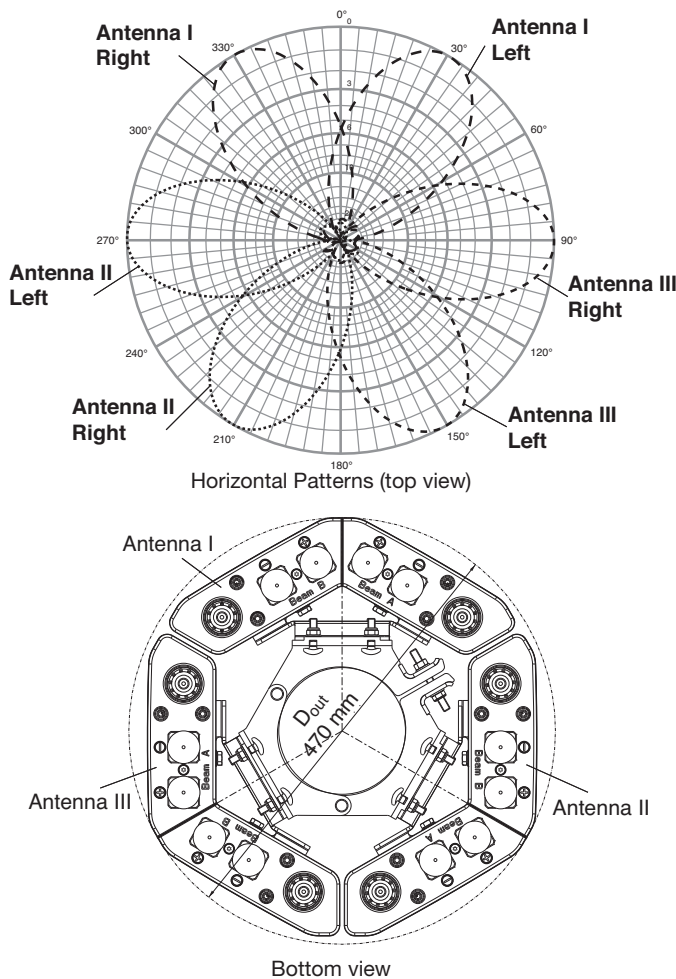
All dimensions in mm | inches

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Proposal for 6 Sector Deployment

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Example of 6 Sectors by using 3x 80010656 and 3 Sector Clamp Kit 742034



For the above 3 Panel Arrangement please use the 3 Sector Clamp Kit 742034 (order separately).

3 Panel Arrangement

Mechanical specifications				
Weight	kg	40		
	lb	88.2		
Wind load (at Rated Wind Speed: 150 km/h)	N lbf	Frontal	560	126
		Lateral	560	126
		Rearside	560	126
Max. Wind Velocity	km/h	200		
	mph	124		

936.4839/b Subject to alteration.

Any previous data sheet issues have now become invalid.

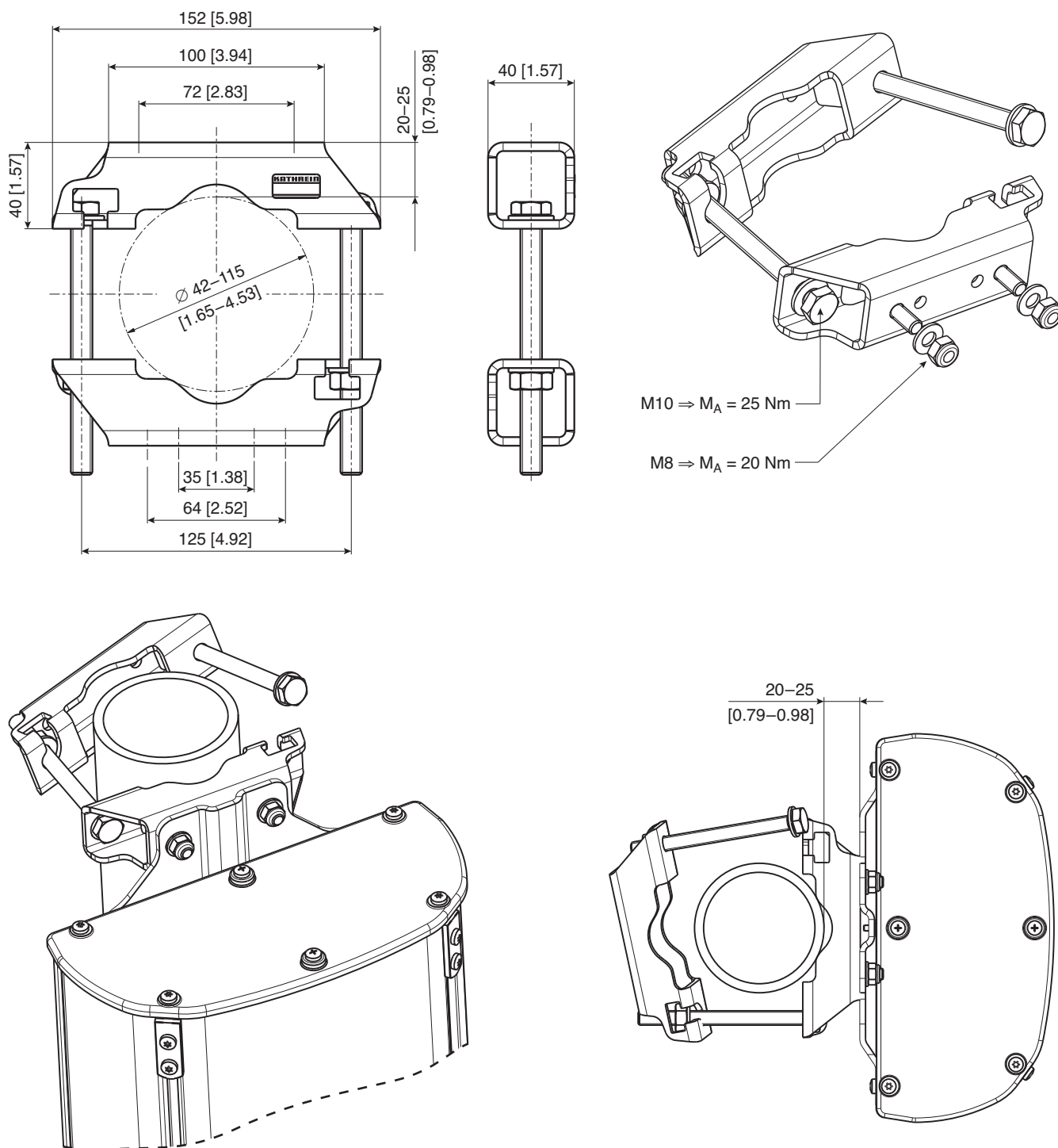
All specifications are subject to change without notice.
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Mounting Hardware Clamp Included in the Scope of Supply

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Suitable for mast diameter	(mm) [inches]	42 – 115 [1.65 – 4.53]
Antenna – mast distance	(mm) [inches]	20 – 25 [0.79 – 0.98]
Material of clamp and screws		Hot-dip galvanized steel / stainless steel
Weight	(kg) [lb]	1.1 [2.43]



936.3920/c Subject to alteration.

**Please note: Kathrein does not recommend to use counter nuts.
The additional nuts supplied are only meant as spares.**

All dimensions in mm and [inches]

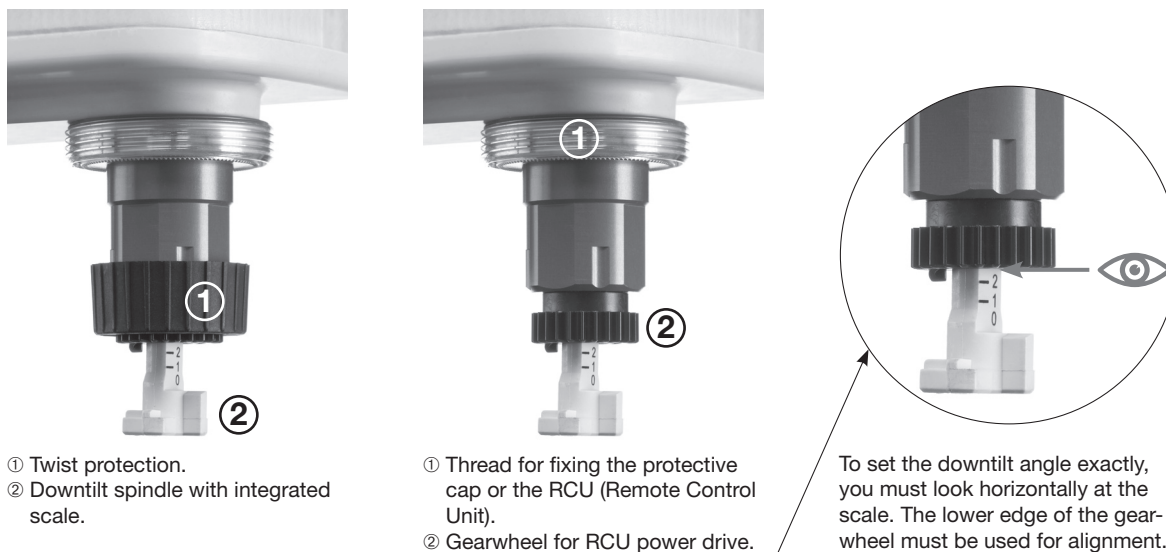
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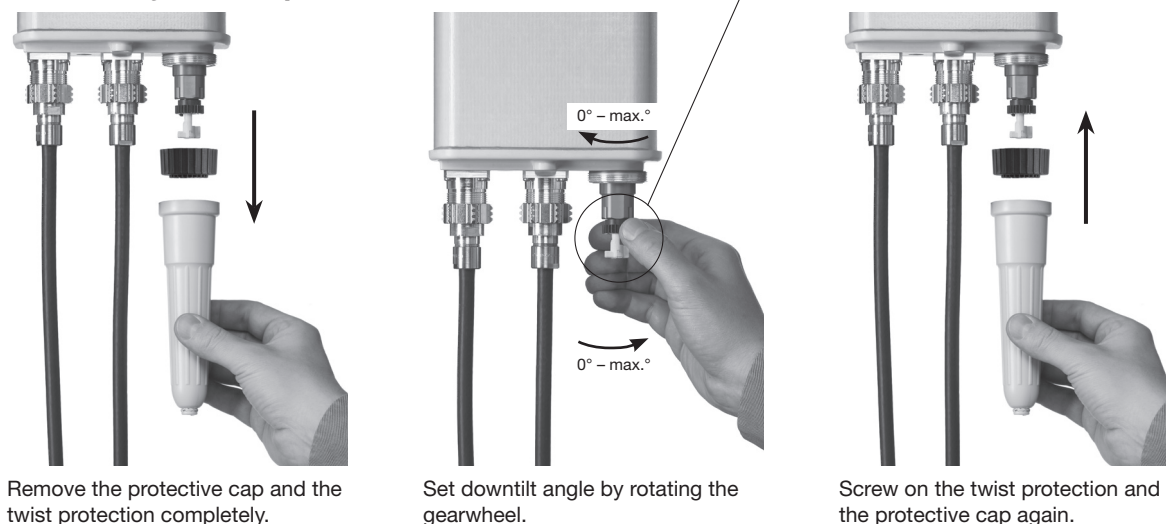
General Instructions for Adjustment Mechanism

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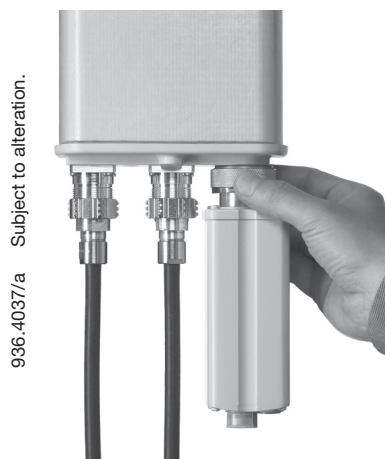
Description of the adjustment mechanism (protective cap removed):



Manual adjustment procedure:



Optional: RCU (Remote Control Unit) for remote-controlled downtilt adjustment:



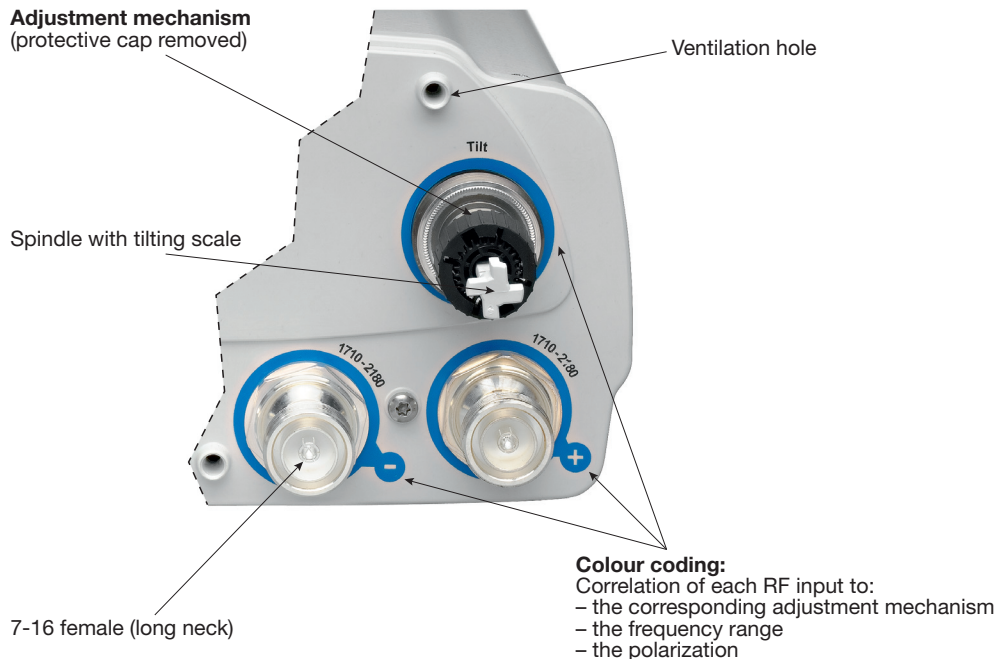
For a description of RCU installation please refer to the respective data sheet.

General Instructions for Feederline and RCU Installation for Antennas

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Please note: In order not to damage the interfaces, please make sure that only the right tools are used. Tighten the feederline connector interfaces solely by using a common torque-wrench with a suitable wrench width.

Description of bottom end cap (exemplary picture):



Installation of the feederline connector and RCU (optional):

In order to protect the adjustment mechanism, the protective caps have to be attached during feederline installation!



Carefully place the connector and fix the nut using a torque-wrench (according to the manufacturers guidelines).

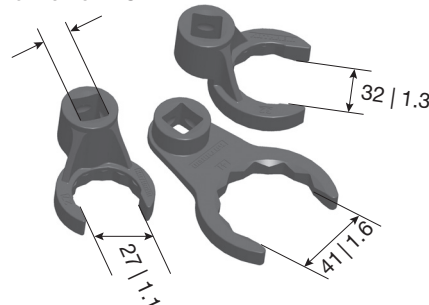


After feederline installation, the optional remote control units (RCUs) can be mounted.

Kathrein installation set: Type No. 85010077 Set has to be ordered separately!

Set consists of three spanners of divers width 27, 32 and 41 mm | 1.1, 1.3 and 1.6 inches

1/2" square actuation
according to
DIN 3120 Form C



All dimensions in mm | inches

These tools are suitable for 7-16 connectors with a wrench size of 27 or 32 mm | 1.1 or 1.3 inches, and the RCU attachment nut with a wrench size of 41 mm | 1.6 inches.

Tighten nuts within a torque range of 25 – 33 Nm depending on connector manufacturers' specifications, respectively the RCU nut with a torque range of 15 – 18 Nm.

936.4037/a Subject to alteration.