

# RJ45 CONNECTORS

## up to 10 Gbit/s



enclosures:  
size "21.21" page:

**insulating type** ..... 526 - 527  
(CK IN, CKG/MKG VN/VAN \*)

**metallic type**  
(CKAX I, CKAX/MKAX IAP/AP/VG) 223 and 528  
(CKAG/MKAG V/VA \*) ..... 529

**IP68** ..... 416 - 418  
(CGK I, CGK/MGK IAP, CGK/MGK V)

\*) angled enclosures cannot be used with CX 8 J6IM

refer to catalogue page CN.16

- characteristics according to EN 61984:

- 1A 50V 0,8kV 3**
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life:  $\geq 500$  cycles
- temperature range: from  $-40^\circ\text{C}$  to  $+70^\circ\text{C}$
- we recommend to fix the cable with cable tie

description

- socket insert with 1 RJ45 female connector,
- plug inserts for 1 RJ45 male crimp connector,
- 8 data contacts (without RJ45 connector,
- to be ordered separately)
- plug insert for 1 RJ45 male IDC connector,
- 8 data contacts (without RJ45 connector,
- to be ordered separately)

- RJ45 male crimp connector, 8 data contacts
- RJ45 male IDC connector, 8 data contacts

#### CJK 8FT technical data:

- RJ45 female insert, Cat. 6 Class E<sub>A</sub>
- shielding housing: zinc diecast
- housing finish: nickel-plated
- current carrying capacity at  $50^\circ\text{C}$ : 1A
- adequate for Power over Ethernet:
- PoE according to IEEE 802.3af
- connectors: IEC 60603-7-5
- adequate for 10 Gigabit Ethernet:
- 10 Gigabit Ethernet acc. to IEEE 802.3an
- custom-designed cabling systems: PROFINET
- Installation Guideline
- generic cabling systems:
- ANSI/TIA/EIA-568-C.2
- ISO/IEC 11801
- EN50173-1
- ISO/IEC 24702
- EN 61918
- class E<sub>A</sub> (channel): ISO/IEC 11801, EN 50173-1

#### CX 8 J6M technical data:

- RJ45 male crimp connectors Cat. 6<sub>A</sub>
- crimp pliers: **CJPZ T**
- screened cable stripper: **CJST**
- Cu-conductor diameter
- solid: 0,40 - 0,51 mm (AWG 26/1 - 24/1)
- stranded: 0,46 - 0,61 mm (AWG 27/7 - 24/7)
- insulation diameter: 0,85 - 1,05 mm
- cable diameter: 5,0 - 7,0 mm
- connectors: IEC 60603-7-51
- 10 Gigabit Ethernet acc. to IEEE 802.3an:
- adequate for 10 Gigabit Ethernet
- category 6<sub>A</sub>: ISO/IEC 11801; EN 50173-1
- class E<sub>A</sub>: ISO/IEC 11801; EN 50173-1
- category 6<sub>A</sub>: ANSI/TIA/EIA-568-C.2

#### CX 8 J6IM technical data:

- RJ45 male IDC connectors Cat. 6 Class E<sub>A</sub>
- Cu-conductor diameter
- solid: 0,41 - 0,64 mm (AWG 26/1 - 22/1)
- stranded: 0,48 - 0,76 mm (AWG 26/7 - 22/7)
- insulation diameter: 0,85 - 1,6 mm
- cable diameter: 5,5 - 8,5 mm
- connectors: IEC 60603-7-5
- category 6<sub>A</sub>: ISO/IEC 11801; DIN EN 50173-1
- wrenches pliers for CX 8 J6IM: **CJPW K**
- 10 Gigabit Ethernet acc. to IEEE 802.3an:
- adequate for 10 Gigabit Ethernet
- class E<sub>A</sub>: ISO/IEC 11801; EN 50173-1
- category 6: ANSI/TIA/EIA-568-C.2
- custom-designed cabling systems:
- according to PROFINET Installation Guideline

dimensions shown are not binding  
and may be changed without notice

adapters for RJ45 male connectors,  
RJ45 female-female connectors



**NEW**

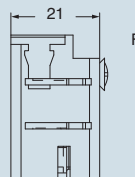
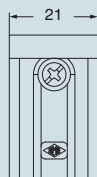
part No.

**CJK 8FT**  
**CJK 8MT**

**CJK 8IMT**

dimensions in mm

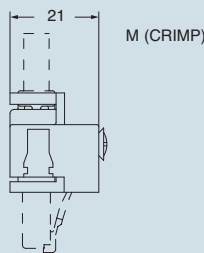
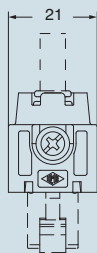
**CJK 8FT**



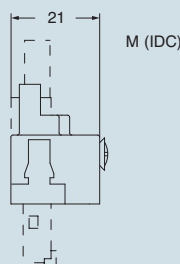
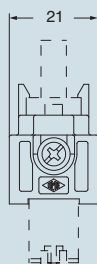
**Female-Female**



**CJK 8MT** <sup>1)</sup>



**CJK 8IMT** <sup>1)</sup>



<sup>1)</sup> to be used with hoods

RJ45 male connectors,  
crimp IDC and termination

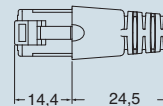
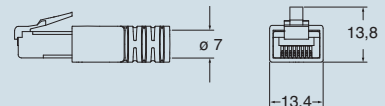


part No.

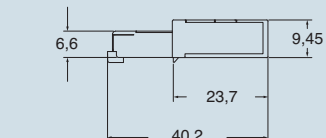
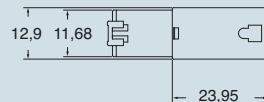
**CX 8 J6M**  
**CX 8 J6IM**

dimensions in mm

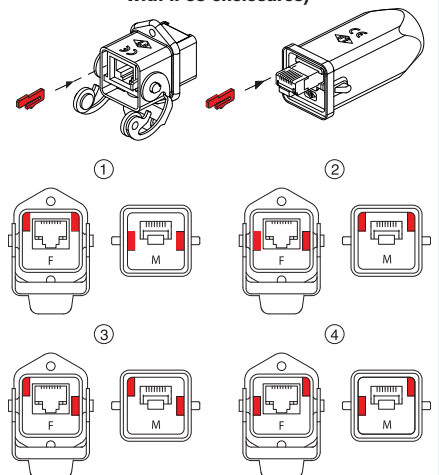
**CX 8 J6M** (can be used with CJK 8MT)



**CX 8 J6IM** (can be used with CJK 8IMT)



**How to use CR KC coding pins (cannot be used  
with IP68 enclosures)**



enclosures:  
size "21.21" page:

**insulating type** ..... 526 - 527  
(CK IN, CKG/MKG VN/VAN \*)

**metallic type**  
(CKAX I, CKAX/MKAX IAP/AP/VG) 223 and 528  
(CKAG/MKAG V/VA \*) ..... 529

**IP68** ..... 416 - 418  
(CGK I, CGK/MGK IAP, CGK/MGK V)

\*) angled enclosures cannot be used with CX 8 J6IM

refer to catalogue page CN.16

- characteristics according to EN 61984:

- 1A 50V 0,8kV 3**
- insulation resistance:  $\geq 10 \text{ G}\Omega$
- made of self-extinguishing thermoplastic resin UL 94 V0
- mechanical life:  $\geq 500$  cycles
- temperature range: from  $-40^\circ\text{C}$  to  $+70^\circ\text{C}$
- we recommend to fix the cable with cable tie

adapters for RJ45 male connectors,  
RJ45 female - cable IDC connectors



**NEW**

RJ45 male connectors,  
IDC termination



description

part No.

part No.

- socket insert with 1 RJ45 female connector,
- plug insert for 1 RJ45 male IDC connector,
- 8 data contacts (without RJ45 connector, to be ordered separately)

**CJK 8IFT**  
**CJK 8IMT**

- RJ45 male IDC connector, 8 data contacts

**CX 8 J6IM**

**CJK 8IFT technical data:**

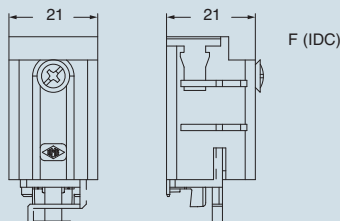
- RJ45 female insert, Cat. 6<sub>A</sub>
- shielding housing: zinc diecast
- housing finish: nickel-plated
- current carrying capacity at  $50^\circ\text{C}$ : 1A
- adequate for Power over Ethernet: PoE according to IEEE 802.3af
- connectors: IEC 60603-7-5
- adequate for 10 Gigabit Ethernet: 10 Gigabit Ethernet acc. to IEEE 802.3an
- custom-designed cabling systems: PROFINET Installation Guideline
- generic cabling systems: ANSI/TIA/EIA-568-C.2
- ISO/IEC 11801
- EN50173-1
- ISO/IEC 24702
- EN 61918
- class E<sub>A</sub> (channel): ISO/IEC 11801, EN 50173-1

**CX 8 J6IM technical data:**

- RJ45 male IDC connectors Cat. 6 Class E<sub>A</sub>
- Cu-conductor diameter  
solid: 0,41 - 0,64 mm (AWG 26/1 - 22/1)  
stranded: 0,48 - 0,76 mm (AWG 26/7 - 22/7)
- insulation diameter: 0,85 - 1,6 mm
- cable diameter: 5,5 - 8,5 mm
- connectors: IEC 60603-7-5
- category 6<sub>A</sub>: ISO/IEC 11801; DIN EN 50173-1
- wrenches pliers for CX 8 J6IM: **CJPW K**
- 10 Gigabit Ethernet acc. to IEEE 802.3an: adequate for 10 Gigabit Ethernet
- class E<sub>A</sub>: ISO/IEC 11801; EN 50173-1
- category 6: ANSI/TIA/EIA-568-C.2
- custom-designed cabling systems: according to PROFINET Installation Guideline

dimensions in mm

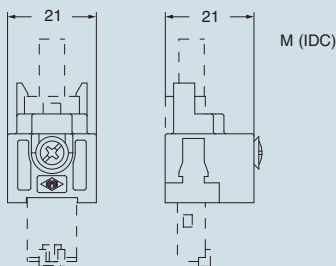
**CJK 8IFT**



**Female-Cable IDC**



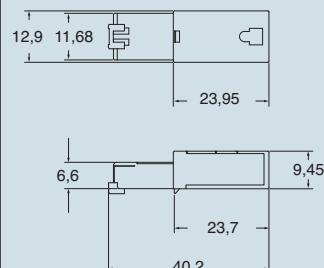
**CJK 8IMT <sup>1)</sup>**



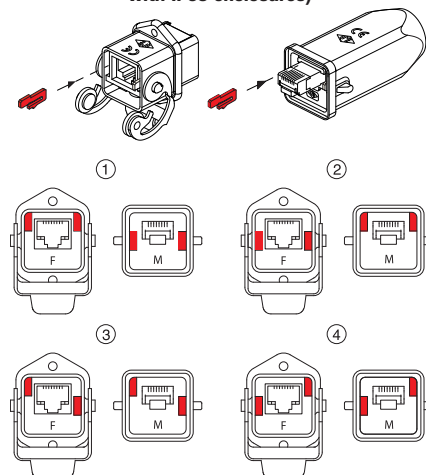
<sup>1)</sup> to be used with hoods

dimensions in mm

**CX 8 J6IM** (can be used with CJK 8IMT)



**How to use CR KC coding pins (cannot be used with IP68 enclosures)**



dimensions shown are not binding  
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# RJ45 CONNECTORS

## Field-assembly without any tools



Cat.6A

10 GBE

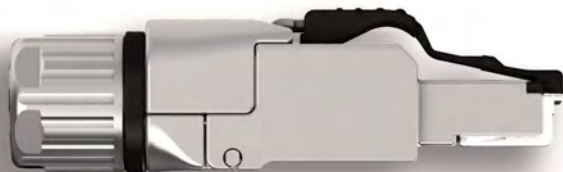
500  
MHzfully  
shielded

PoE+



### CJ 8 V6IM

Full-metal RJ45 field-assembly plug featuring four-step cable relief.



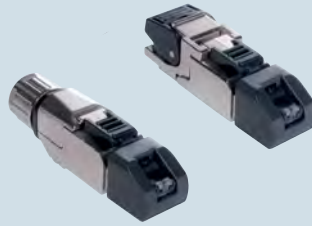
### CJ 8 V6IMP

Full-metal RJ45 field-assembly plug featuring metallic cable strain relief for cable outer diameter up to 10 mm.



### CJ 8 VA6IM

Full-metal RJ45 field-assembly plug featuring right-angle cable entry from four directions and metallic cable strain relief. Most suited in confined spaces like sitch or control cabinets.

RJ45 male connectors,  
crimp IPC termination

NEW

RJ45 male connectors,  
IPC termination  
cable entry in 4 different directions

NEW

description	part No.	part No.
<ul style="list-style-type: none"> <li>- RJ45 male IPC connector, 8 data contacts</li> <li>- RJ45 male IPC connector, 8 data contacts for cable diameter up to 10 mm</li> </ul>	<b>CJ 8 V6IM</b> <b>CJ 8 V6IMP</b>	
RJ45 male IPC connector, 8 data contacts		<b>CJ 8 VA6IM</b>
<p><b>CJ 8 V6IM technical data:</b> Full-metal RJ45 field-assembly plug featuring four-step cable relief. Most suited for data center, enterprise and residential cabling. Category 6A acc. to ISO/IEC 11801 - Plug: IEC 60603-7-51 compliant - Life: <math>\geq 750</math> mating cycles - Shielding housing material: die-cast nickel-plated zinc - Cu conductor diameter:   solid 0,51 - 0,64 mm (AWG 24/1 - 22/1)   stranded 0,46 - 0,76 mm (AWG 27/7 - 22/7)   stranded 0,61 - 0,78 mm (AWG 24/19 - 22/19)   core diameter: 1,0 - 1,6 mm - Outer diameter: 5,0 - 9,0 mm - Reusable IPC: <math>\leq 4</math> cycles - Temperature range: -40 °C to 85 °C - Power over Ethernet plus (PoE+) acc. to IEEE 802.3at - IP20; UL listed - according to PROFINET Installation Guideline</p> <p><b>CJ 8 V6IMP technical data:</b> Full-metal RJ45 field-assembly plug featuring metallic cable strain relief for cable outer diameter up to 10 mm. Category 6A acc. to ISO/IEC 11801 - Plug: IEC 60603-7-51 compliant - Life: <math>\geq 750</math> mating cycles - Shielding housing material: die-cast nickel-plated zinc - Cu conductor diameter:   solid 0,51 - 0,64 mm (AWG 24/1 - 22/1)   stranded 0,46 - 0,76 mm (AWG 27/7 - 22/7)   stranded 0,61 - 0,78 mm (AWG 24/19 - 22/19)   core diameter: 1,0 - 1,6 mm - Outer diameter: 5,5 - 10,0 mm - Reusable IPC: <math>\leq 4</math> cycles - Temperature range: -40 °C to 85 °C - Power over Ethernet plus (PoE+) acc. to IEEE 802.3at - IP20 - Cable strain relief: AF13</p> <p><b>CJ 8 VA6IM technical data:</b> Full-metal RJ45 field-assembly plug featuring four-step cable relief. Cable entry from 4 directions (4x90°) Category 6A acc. to ISO/IEC 11801 - Plug: IEC 60603-7-51 compliant - Life: <math>\geq 750</math> cycles - Shielding housing material: die-cast nickel-plated zinc - Cu conductor diameter:   solid 0,51 - 0,64 mm (AWG 24/1 - 22/1)   stranded 0,46 - 0,76 mm (AWG 27/7 - 22/7)   stranded 0,61 - 0,78 mm (AWG 24/19 - 22/19)   core diameter: 1,0 - 1,6 mm - Outer diameter: 5,5 - 10,0 mm - Reusable IDC: <math>\leq 4</math> cycles - Temperature range: -40 °C to 85 °C - Power over Ethernet plus (PoE+) acc. to IEEE 802.3at - IP20; UL listed - Cable strain relief: AF13</p>	<p>Can be used in bulkhead enclosures only, with RJ45 adaptors in the rear RJ45 female entry (internal housings cabling)</p> <ul style="list-style-type: none"> <li>- MIXO RJ45</li> </ul> <div data-bbox="614 963 973 1214" data-label="Image"> </div> <ul style="list-style-type: none"> <li>- CJK 8FT adaptors</li> </ul> <div data-bbox="614 1348 973 1599" data-label="Image"> </div>	<p>Full-metal RJ45 field-assembly plug featuring right-angle cable entry from four directions and metallic cable strain relief.</p> <div data-bbox="1069 940 1492 1355" data-label="Image"> </div>



enclosures:  
size "21.21" page:

**insulating type** ..... 526 - 527  
(CK IN, CKG/MKG VN/VAN \*)

**metallic type**  
(CKAX I, CKAX/MKAX IAP/AP/VG) 223 and 528  
(CKAG/MKAG V/VA \*) ..... 529

**IP68** ..... 416 - 418  
(CGK I, CGK/MGK IAP, CGK/MGK V)

\*) angled enclosures cannot be used with CX 8 J6IM

refer to catalogue page CN.16

USB female - female connectors



NEW

patch cable USB



description

- female insert with USB 2.0 female - female connector  
- female insert with USB 3.0 female - female connector

part No.

**CUK 2FT**  
**CUK 3FT**

part No.

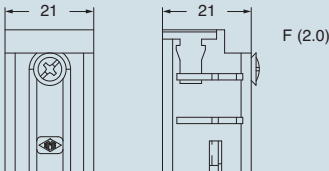
patch cable USB-A / USB-A, 2 m \*\*

\*\* 5 m on request

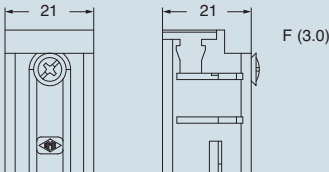
**USB connector features:**  
- USB-A / USB-A Hi-Speed - 2.0 or 3.0 insert  
- temperature range: from -25 °C to +80 °C

dimensions in mm

CUK 2FT



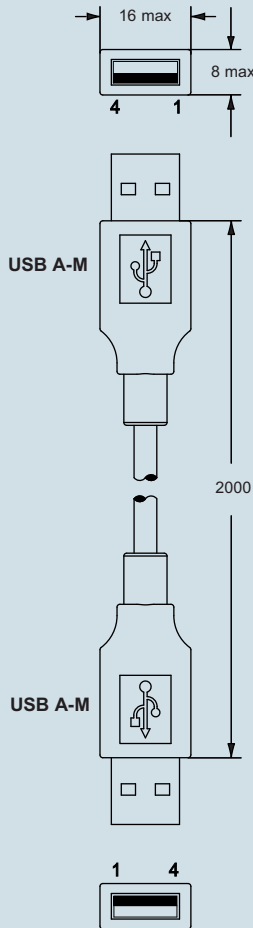
CUK 3FT



CW 2 UAM

dimensions in mm

CW UAM



dimensions shown are not binding  
and may be changed without notice





Technical Data

Mechanical Characteristics

<b>Materials</b>	
Housing	PA UL94 V0 - black
Nut	PA UL94 V0 - black
Bulkhead protective cap	EPDM
Elastic band / Seal	EPDM
EC Directive 2002/95/EC (RoHS)	RoHS-compliant

Environmental Requirements

<b>Protection against ingress</b>	
Particulate ingress	IP6X
Water / Immersion	IPX5
Degrees of protection provided by enclosures (IP code)	IEC 60529
<b>Climatical and chemical</b>	
Ambient temperature	-40 °C bis / to + 70 °C

cover for RJ45/USB/LC connectors



NEW

RJ45/USB/LC connectors for ATR C22

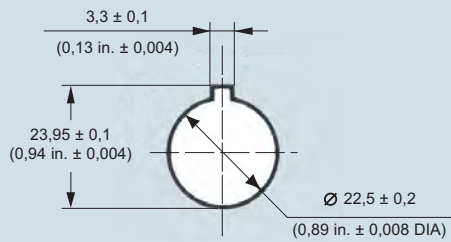


NEW

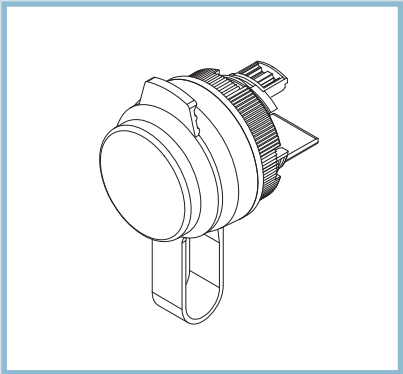
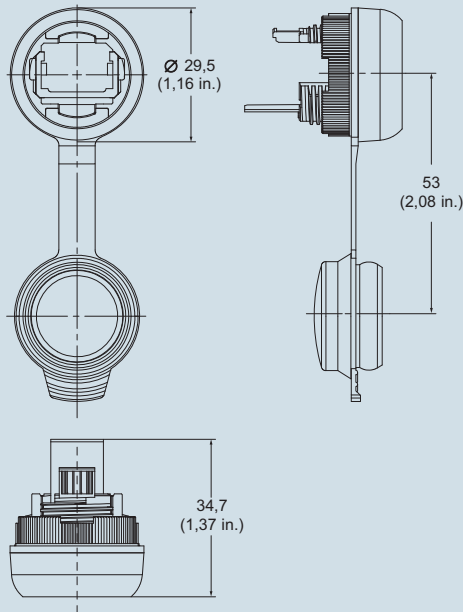
description	part No.	part No.
communication interface bulkhead IP65	ATR C22	
- RJ45 jack A Cat.6A *		AT 8IFT
- RJ45 coupler Cat.6		AT 8FT
- USB 2.0 coupler F-F Type A		AT U2F
- USB 3.0 coupler F-F Type A		AT U3F
- LC-Duplex adapter MM		AT LCMM
- LC-Duplex adapter SM		AT LCSM
* jack B and jack P on request		

Mounting dimensions

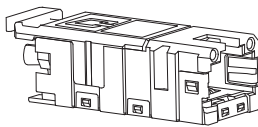
wall thickness 1-5 mm (0,039-0,197 in.)



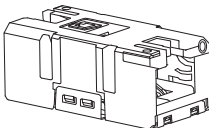
dimensions in mm



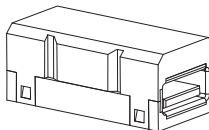
AT 8IFT (RJ45 IDC-FEMALE)



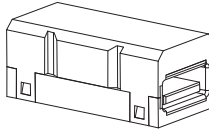
AT 8FT (RJ45 FEMALE-FEMALE)



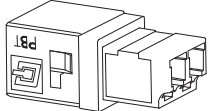
AT U2F (USB 2.0)



AT U3F (USB 3.0)



AT LCMM - AT LCSM (LC DUPLEX)

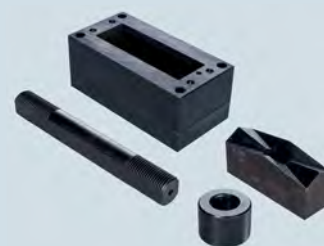


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## hydraulic panel punch


**NEW**

## punching die


**NEW**

description	part No.	part No.
hydraulic punching tool (excluding punching die)	<b>CCW CT</b>	
punching unit - for M25 hole		<b>CCW M25 2)</b>
punching units for panel cut out of bulkhead mounting housings - for size 21.21 CK/CKA - for size 21.21 CKG IP68 - for size 49.16 - for size 66.16 - for size 44.27 - for size 57.27 - for size 77.27 - for size 104.27		<b>CCW PD 03 CCW PD 03G CCW PD 15 CCW PD 25 CCW PD 06 CCW PD 10 CCW PD 16 CCW PD 24</b>

Rectangular punch mm	ILME Product Number	Draw stud 3)	Suggested	Sheet thickness pilot hole	Manual screw-wrench use	Hydraulic use
21,3 x 21,3	<b>CCW PD 03</b>	13,0/11,0 mm	14,5 mm	St./Fe. 2 mm	x	x (*)
22,2 x 22,2	<b>CCW PD 03 G</b>	13,0/11,0 mm	14,5 mm	St./Fe. 2 mm	x	x (*)
24,0 x 57,0	<b>CCW PD 15</b>	19,0/14,0 mm	20,4 mm M20	St./Fe. 3 mm		x
24,0 x 73,0	<b>CCW PD 25</b>	19,0/14,0 mm	20,4 mm M20	St./Fe. 3 mm		x
36,0 x 52,0	<b>CCW PD 06</b>	25,0/21,0 mm	25,4 mm M25 2)	St./Fe. 3 mm		x
36,0 x 65,0	<b>CCW PD 10</b>	25,0/21,0 mm	25,4 mm M25 2)	St./Fe. 3 mm		x
36,0 x 86,0	<b>CCW PD 16</b>	25,0/21,0 mm	25,4 mm M25 2)	St./Fe. 3 mm		x
36,0 x 112,0	<b>CCW PD 24</b>	25,0/21,0 mm	25,4 mm M25 2)	St./Fe. 3 mm		x

accessory	ILME Product Number	Draw stud	Suggested pilot hole	Sheet thickness	Manual screw-wrench use	Hydraulic use
punch and die 25,4 M25	<b>CCW M25 (***)</b>	3/8" 3)	10 mm	St./Fe. 2 mm		x (**)
Hydraulic hand pump	<b>CCW CT</b>					

(\*) Adaptor (delivered with **CCW PD 03/03G**) and spacer (delivered with **CCW CT**) needed.

(\*\*) Adaptor M25 and spacer (delivered with **CCW CT**) needed.

**(\*\*\*) CCW M25 can be used  
to drill M25 hole**


3), 6 and 7 delivered with **CCW CT**
**LEGEND:**

- ③ Draw stud 3/8"
- ⑥ Spacer
- ⑦ Adaptor 3/8" - 3/4" UNF



## Hydraulic operating instructions (CCW PD ..)

1. Screw the short thread of the 13,0/11,0 mm draw stud (3) into the 3/4" UNF adaptor (7) (CCW PD 03/03 G only).
2. Screw the 13,0/11,0 mm draw stud (3) complete with the 3/4" UNF adaptor (7) onto the hydraulic cylinder or screw the short thread of any of the larger draw studs (3) (without the adaptor) directly onto the hydraulic cylinder (CCW PD 03/03 G only).
3. Put the die (4) onto the draw stud (3) and move it towards the hydraulic cylinder. If necessary, place the spacer (6) between the hydraulic cylinder and die (4).
4. Insert draw stud (3) with pre-mounted die through the pilot hole in the sheet until the die abuts the sheet.
5. Place the punch (2) onto the draw stud and move it towards the sheet until it abuts the sheet.
6. Screw the counter nut (1) onto the thread of the draw stud (3).
7. Adjust punch rectangularly (4 marks on die) and tighten counter nut manually.

### Punching

8. Operate hydraulic punch CCW CT driver until punch is drawn through sheet.
9. Depressurise hydraulic punch driver after punching.
10. Remove the counter nut (1) and punch (2) from the draw stud (3).
11. Remove the die (4) from the draw stud (3) and remove slugs from the die (4).

### Drilling mounting holes

When punching, the position of mounting holes are marked. Use suitable spiral drill to drill mounting holes.

## Manual operating instructions (CCW PD 03 / 03G only)

### Knockout punch mounting

1. Screw the ball-bearing nut (5) onto the long thread of the draw stud 13,0/11,0 mm (3). Put the die (4) onto the draw stud (3) and move it towards the ball bearing nut (5).
2. For further steps refer to hydraulic operating instructions steps 4 to 7.

### Punching

3. Use screw wrench SW 24 to rotate ball-bearing nut (5) until punch is drawn through sheet.
4. For further steps refer to hydraulic operating instructions steps 10 to 11.

### Prior to commissioning please read operating instructions

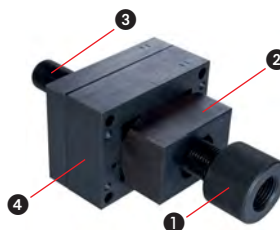
Components under voltage must not be machined. Prior to operating ensure tensionless state of the work environment (e.g. switch cabinet) or the material to be machined.

## Punching tool components

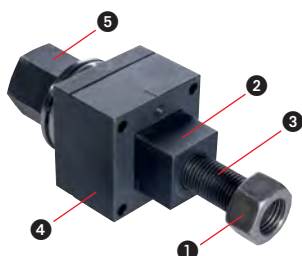
### CCW CT



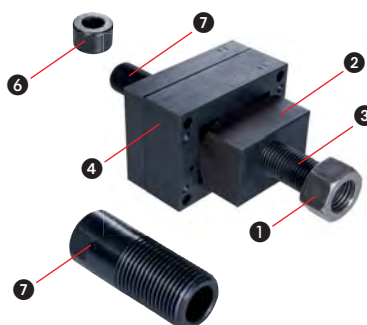
### Hydraulic operating CCW PD .. (except CCW PD 03/03G)



### Manual operating (CCW PD 03/03G only)



### Hydraulic operating (CCW PD 03/03G only)



### LEGEND:

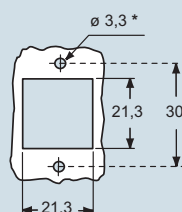
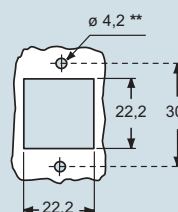
- ① Counter nut
- ② Punch
- ③ Draw stud
- ④ Die
- ⑤ Ball-bearing nut
- ⑥ Spacer
- ⑦ Adaptor

## Accessories

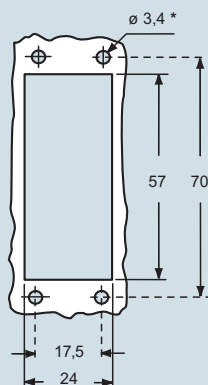
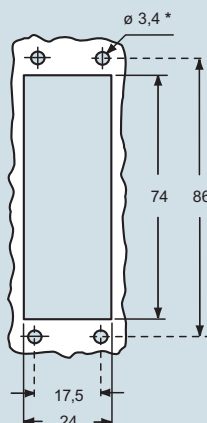
Bulkhead housings Size	Punching die	Pilot hole	Mounting configuration	Draw stud Delivered with	Adaptor Delivered with	Spacer Delivered with
21.21	CCW PD 03	Ø 14,5 mm	<b>Hydraulic tool operation CCW CT</b> with adaptor and with spacer <b>Manual operation</b> with screw ballbearing nut (no adaptor and spacer)	CCW PD 03	CCW PD 03	CCW CT
21.21 (IP68)	CCW PD 03 G			CCW PD 03 G	CCW PD 03 G	CCW CT
49.16	CCW PD 15	Ø 20,4 mm	<b>Hydraulic tool operation CCW CT</b> without adaptor and without spacer	CCW PD 15	ND	ND
66.16	CCW PD 25			CCW PD 25	ND	ND
44.27	CCW PD 06	Ø 25,4 mm	<b>Hydraulic tool operation CCW CT</b> without adaptor and without spacer	CCW PD 06	ND	ND
57.27	CCW PD 10			CCW PD 10	ND	ND
77.27	CCW PD 16			CCW PD 16	ND	ND
104.27	CCW PD 24			CCW PD 24	ND	ND
M25 hole or MKA IAF25 housings	CCW M25 dimensions Ø 25 mm	Ø 10 mm	<b>Hydraulic tool operation CCW CT</b> with adaptor and with spacer	CCW CT	CCW CT	CCW CT

ND = Not Needed

## Panel cut-out (in mm)

for size **21.21**

for size **21.21 (IP68)**


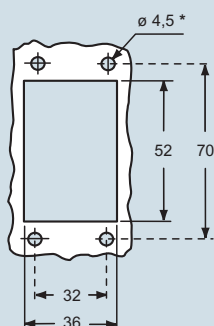
\*\* the fixing holes are not indicated

for size **49.16**

for size **66.16**


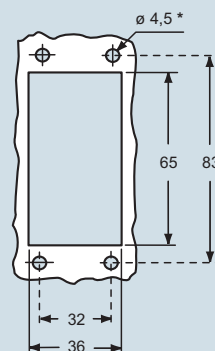
\* fixing holes (to be pierced)

# Panel cut-out (in mm)

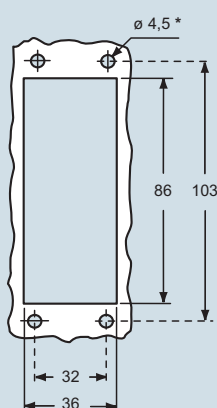
for size **44.27**



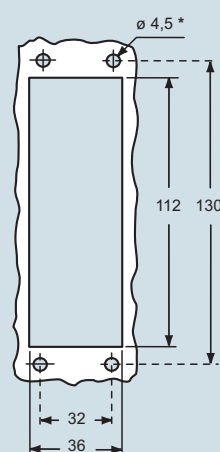
for size **57.27**



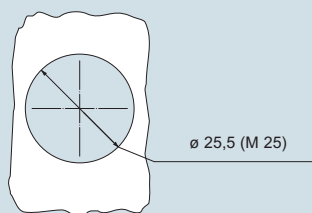
for size **77.27**, in mm



for size **104.27**



for size **21.21** (MKA IAF25)



\* fixing holes (to be pierced)