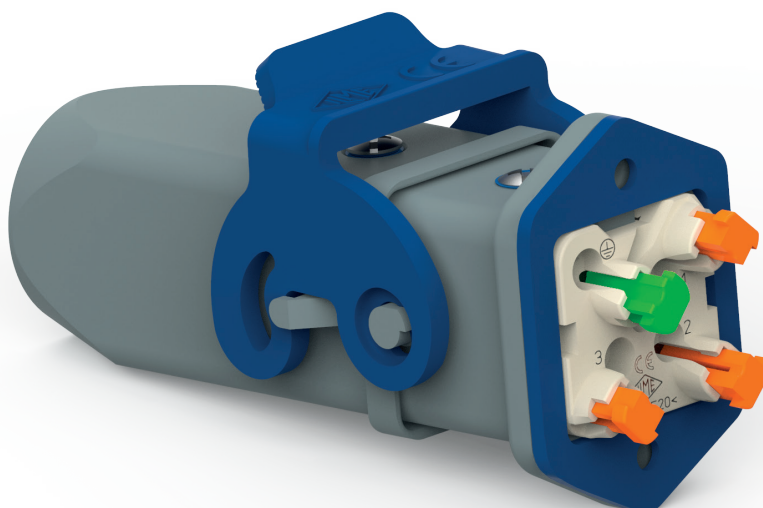


---

## CKH - MKH HYGIENIC ENCLOSURES SIZE "21.21"

---



Made by thermoplastic insulating materials  
suitable for splash area, qualified for resistance  
to cleaning agents by ECOLAB and in compliance  
with EHEDG Guideline no. 32



Find more  
information on  
our products at  
[www.ilme.com](http://www.ilme.com)

# TECHNICAL FEATURES

## CKH - MKH HYGIENIC ENCLOSURES

The new series **CKH – MKH HYGIENIC** size “21.21” enclosures, completes the offer of HYGIENIC connector enclosures of series T-TYPE HYGIENIC, by adding enclosures for the growing family of size “21.21” connector inserts, currently comprising the models listed in **Table 1** (power, signal and data connectors, including fibre optics).

The sealing gasket of those male inserts that include it (see **Table 1**, items marked with ●) has to be replaced with the special HYGIENIC sealing gasket **CR 21.21 GMH**, blue coloured, for easier detection in case of loss in the food path.

The **CR 21.21 GMH** gasket is included in each hood package, where specified in **Table 2**.

**Table 1 – “21.21” connector inserts suitable for CKH-MKH HYGIENIC enclosures**

CKF /M 03 /04 ●
CKSHF /M 03 /04 ●
CDF /M 07 ●
CDF /M 08 ●
CQF /M 05 ●
CQF /M 07 ●
CQF /M 12 ●
CQF /M 21 ●
CQ4F /M 03 ●
CQ4F /M 02 ●
CQ4F /M 02 H ●
CQ4F /M 03/2 ●
CX 1/2 BDF /M ○
CXL SF /SM, CXL 2/4 SF /SM, CXL 2/4 PF /PM, CXL 2/4 PFH /PMH, CXL PF /PM ○
CLK 04 SCF /SCF-H /SCM ○
CUK 2FT, CUK 3FT○
CJ KF /KM ○
CKJ 8M ○
CJK 8FT /8MT ○
CJK 8IFT, CJK 8BIFT, CJK 8PIFT, CJK 8 IMT ○
● The male insert of these models are provided with a standard sealing gasket. For HYGIENIC applications with CKH – MKH HYGIENIC enclosures this gasket must be replaced with the special HYGIENIC gasket <b>CR 21.21 GMH</b> .
○ The male inserts of these models are not provided with that sealing gasket on the male insert, hence for hygienic applications they are deemed to be used only in hygienic enclosures with glued hygienic gasket (identified by letter G in the first portion of their part No.).

The available models of CKH – MKH HYGIENIC enclosures are described in the following **Table 2**.

All of them are provided with both kits **CKRH 65** and **CKRH 65 D** (for CD 07 and CD 08 inserts), screw with food grade gasket (blue coloured). The kit corresponding to the insert (**CKRH 65** for all but CD 07 and CD 08 inserts, **CKRH 65 D** for CD 07 and CD 08 inserts) must replace either the standard screw or the screw with gasket provided with the insert.

**Table 2 – CKH – MKH Hygienic enclosures size “21.21”**

Part no.	Description
CKH 03 I	bulkhead mounting housing
CKH 03 IA	angled bulkhead mounting housing
MKH IAP20	angled bulkhead mounting housing with M20 cable entry
MKH V20	hood with pegs, top entry M20 <b>with CR 21.21 GMH HYGIENIC gasket included</b>
MKH V25	hood with pegs, top entry M25 <b>with CR 21.21 GMH HYGIENIC gasket included</b>
MKH VA20	hood with pegs, side entry M20 <b>with CR 21.21 GMH HYGIENIC gasket included</b>
MKH VG20	hood with lever, top entry M20
MKH VG25	hood with lever, top entry M25
CKH 03 C	cover with pegs and gasket, for female inserts (eyelet cord)
CKH 03 CS	cover with pegs and gasket, for female inserts (loop cord)
CKH 03 CA	cover with pegs, for male inserts (eyelet cord)
CKH 03 CAS	cover with pegs, for male inserts (loop cord)
CKH 03 CX	cover with lever and gasket, for female inserts (eyelet cord)
CKH 03 CXA	cover with lever, for male inserts (loop cord)
MKGH V20	hood with pegs and glued gasket, top entry M20
MKGH V25	hood with pegs and glued gasket, top entry M25
MKGH VA20	hood with pegs and glued gasket, angled entry M20

This new series offers three **bulkhead mounting housings** (the straight model and two angled models, one closed, the other with M20 side cable entry), five **hoods** differing by the size of cable entry (M20, M25) and either presence or absence of locking pegs or lever, e.g. for cable-to-cable joints, and the same **models with glued gasket** (letter G in the first portion of their part no.), for those inserts that by design do not include the sealing gasket on the male insert (models marked by ○ in the above table). The series is completed with all range of covers (6 models) matching the various applications.

- Series **CKH-MKH Hygienic** made (like T-Type Hygienic) by thermoplastic insulating materials compatible with the temperature range of standard hygienic applications and qualified for resistance to a wide set of cleaning agents by ECOLAB, and in compliance with the EHEDG Guideline no. 32. Same for the material of the locking lever and that of the sealing gaskets (flange, interface and under the head of fixing screw).
- Moving parts (locking lever) or parts that might be lost (sealing gaskets) blue coloured to be easily detectable by remote image detection systems.
- Locking lever detectable by metal detectors in case of accidental loss and fall inside the conveyor belt (food path).
- IP degree of protection: **IP66/IP67/IP69**.
- Upper and Lower Limiting Temperature (ULT – LLT): -40 °C ... +70 °C.

## inserts

CK	3 and 4 poles + ⊕	58
CKS	3 and 4 poles + ⊕	-
CKSH	3 and 4 poles + ⊕	63
CD	7 poles + ⊕	66
CD	8 poles	67
CQ4	2 poles + ⊕	182
CQ4 H	2 poles + ⊕	183
CQ4	3 poles + ⊕	184
CQ4	3+2 (aux) poles + ⊕	16 *
CQ	5 poles + ⊕	186
CQ	7 poles + ⊕	187
CQ	12 poles + ⊕	189
CQ	21 poles	190

only for I (straight) housings  
(if the counterpart has glued gasket):

CJ KF	223
CJK 8FT	226
CJK 8IFT	228
CUK 2FT, CUK 3FT	236
CLK 04 SC	239
CX 1/2 BD	243
CXL 2/4 SF, CXL 2/4 SM	250
CXL SF, CXL SM	250

■ refer to CN.19 pages

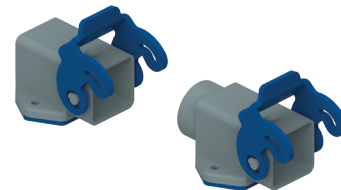
\* refer to NEWS 2020 pages

## pages:

## bulkhead mounting housings



## angled bulkhead mounting housings



description	part No.	part No.	part No. (entry M20)
-------------	----------	----------	-------------------------

with lever 2)

CKH 03 I

without cable entry, with lever 1) 2)

CKH 03 IA

with cable entry, lever 1) 2)

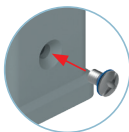
MKH IAP20

## 1) Not suitable for inserts:

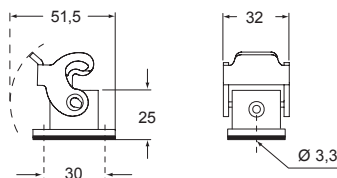
- CQ4 2 poles + ⊕
- CQ4 H 2 poles + ⊕
- CQ4 3 poles + ⊕
- CQ4 3+2 (aux) poles + ⊕

2) CKRH 65 and CKRH 65 D **included** with all hoods and housings, to replace the fixing screw provided with the insert: CKRH 65 D for CD 07 and CD 08 inserts, CKRH 65 all the others.

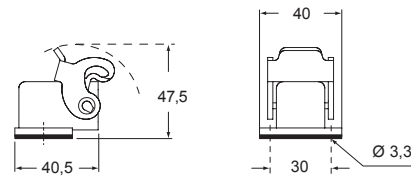
NOTE: The enclosure shown here is an example. The screw and sealing gasket kit can be used with all enclosures' part nos. in this page.



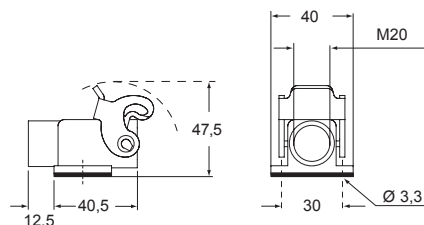
## CKH I



## CKH IA



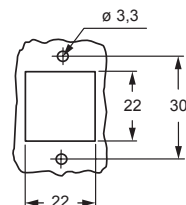
## MKH IAP



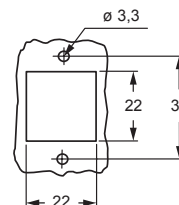
## HOUSING KIT EXAMPLE



## panel cut-out for enclosures



## panel cut-out for enclosures



CE mark (ECBT2.E115072, ECBT8.E115072)

Type 12, Type 4/4X only with CKRH 65 (D),

DNV certified;

CQC, BV pending



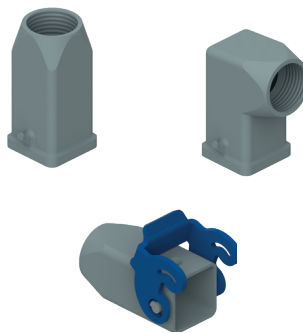
## inserts

pages:

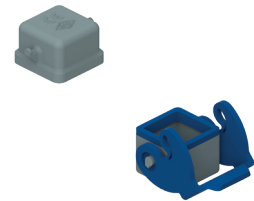
CK	3 poles + ⊕	58
CK	4 poles + ⊕	58
CKS	3 poles + ⊕	-
CKS	4 poles + ⊕	-
CKSH	3 poles + ⊕	63
CKSH	4 poles + ⊕	63
CD	7 poles + ⊕	66
CD	8 poles	67
CQ4M	2 poles + ⊕	182
CQ4M H	2 poles + ⊕	183
CQ4M	3 poles + ⊕	184
CQ4M	3+2 (aux) poles + ⊕	16 *
CQ	5 poles + ⊕	186
CQ	7 poles + ⊕	187
CQ	12 poles + ⊕	189
CQ	21 poles	190

refer to CN.19 pages

## hoods



## covers



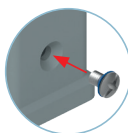
description	part No. (entry M20)	part No. (with eyelet)	part No. (with loop)
with pegs and CR 21.21 GMH gasket, top entry <sup>1) 2)</sup>	<b>MKH V20</b>		
with pegs and CR 21.21 GMH gasket, side entry <sup>1) 2)</sup>	<b>MKH VA20</b>		
with lever, top entry <sup>1) 2)</sup>	<b>MKH VG20</b>		
with pegs and gasket, for female inserts		<b>CKH 03 C</b>	<b>CKH 03 CS</b>
with pegs, for male inserts		<b>CKH 03 CA</b>	<b>CKH 03 CAS</b>
with lever and gasket, for female inserts			<b>CKH 03 CX</b>
with lever, for male inserts			<b>CKH 03 CXA</b>

## 1) Not suitable for inserts:

- **CQ4** 2 poles + ⊕
- **CQ4 H** 2 poles + ⊕
- **CQ4** 3 poles + ⊕
- **CQ4** 3+2 (aux) poles + ⊕

2) **CKRH 65** and **CKRH 65 D** **included** with all hoods and housings, to replace the fixing screw provided with the insert: CKRH 65 D for CD 07 and CD 08 inserts, CKRH 65 all the others.

NOTE: The enclosure shown here is an example. The screw and sealing gasket kit can be used with all enclosures' part nos. in this page.



**CR 21.21 GMH**  
**HYGIENIC gasket**  
**for male inserts**  
**"21.21" size**  
**included in the hoods,**  
**also available as spare**  
**parts (see page 114)**



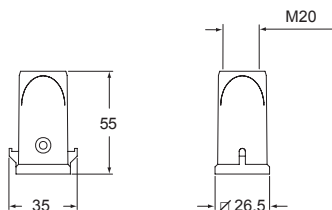
## HOOD KIT EXAMPLE



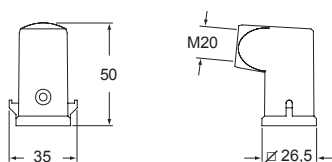
**us** (ECBT2.E115072, ECBT8.E115072)  
Type 12, Type 4/4X only with CKRH 65 (D),  
DNV certified;  
CQC, BV pending



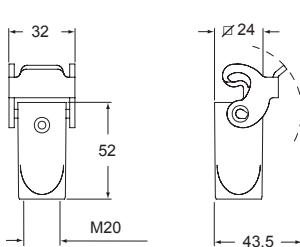
## MKH V



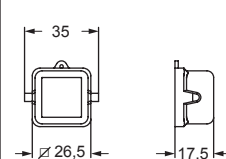
## MKH VA



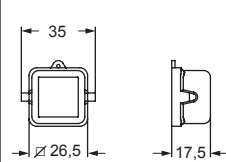
## MKH VG



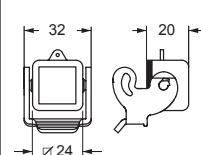
## CKH C - CKH CS



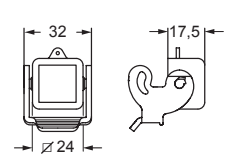
## CKH CA - CKH CAS



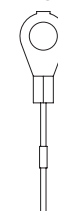
## CKH CX



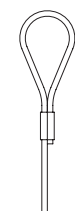
## CKH CXA

For fixing  
on housings

eyelet

For fixing  
on hoods

loop



## inserts

CK	3 and 4 poles + ⊕	58
CKS	3 and 4 poles + ⊕	-
CKSH	3 and 4 poles + ⊕	63
CD	7 poles + ⊕	66
CD	8 poles	67
CQ4	2 poles + ⊕	182
CQ4 H	2 poles + ⊕	183
CQ4	3 poles + ⊕	184
CQ4	3+2 (aux) poles + ⊕	16 *
CQ	5 poles + ⊕	186
CQ	7 poles + ⊕	187
CQ	12 poles + ⊕	189
CQ	21 poles	190

## pages:

## hood



refer to CN.19 pages

\* refer to NEWS 2020 pages

## description

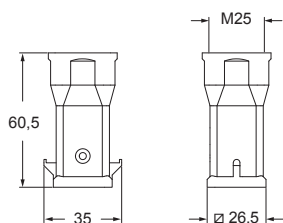
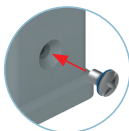
part No.  
(entry M25)

with pegs and CR 21.21 GMH gasket, top entry <sup>1)</sup>

**MKH V25**

<sup>1)</sup> **CKRH 65** and **CKRH 65 D** **included** with all hoods and housings, to replace the fixing screw provided with the insert: CKRH 65 D for CD 07 and CD 08 inserts, CKRH 65 all the others.

NOTE: The enclosure shown here is an example. The screw and sealing gasket kit can be used with all enclosures' part nos. in this page.



**CR 21.21 GMH**  
**HYGIENIC gasket**  
**for male inserts**  
**"21.21" size**  
**included** in the hoods,  
**also available** as spare  
**parts** (see page 114)



## HOOD KIT EXAMPLE



**CEC** (ECBT2.E115072, ECBT8.E115072)  
Type 12, Type 4/4X only with CKRH 65 (D),  
DNV certified;  
CQC, BV pending



## MKH production lines HYGIENIC SERIES

## inserts

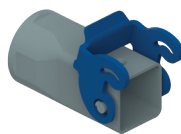
CK	3 and 4 poles + ⊕	58
CKS	3 and 4 poles + ⊕	-
CKSH	3 and 4 poles + ⊕	63
CD	7 poles + ⊕	66
CD	8 poles	67
CQ4	2 poles + ⊕	182
CQ4 H	2 poles + ⊕	183
CQ4	3 poles + ⊕	184
CQ4	3+2 (aux) poles + ⊕	16 *
CQ	5 poles + ⊕	186
CQ	7 poles + ⊕	187
CQ	12 poles + ⊕	189
CQ	21 poles	190
CLK 04 SC		239
CX 1/2 BD		243
CXL 2/4 PF, CXL 2/4 PFH		251
CXL 2/4 PM, CXL 2/4 PMH		251
CXL PF, CXL PM		251

refer to CN.19 pages

\* refer to NEWS 2020 pages

pages:

## hood



## description

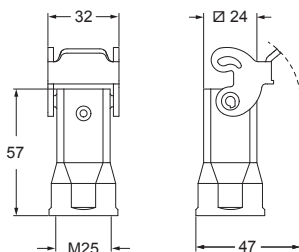
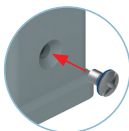
part No.  
(entry M25)

with lever, top entry 1)

## MKH VG25

1) **CKRH 65** and **CKRH 65 D** included with all hoods and housings, to replace the fixing screw provided with the insert: CKRH 65 D for CD 07 and CD 08 inserts, CKRH 65 all the others.

NOTE: The enclosure shown here is an example.  
The screw and sealing gasket kit can be used with all enclosures' part nos. in this page.



## HOOD KIT EXAMPLE



us (ECBT2.E115072, ECBT8.E115072)  
Type 12, Type 4/4X only with CKRH 65 (D),

DNV certified;

CQC, BV pending



## inserts

## pages:

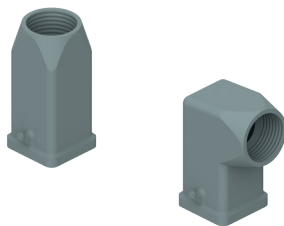
CJ KM	223
CJK 8MT	226
CJK 8IMT *	226, 228
CUK 2FT	236
CUK 3FT	236
CLK 04 SC *	239
CX 1/2 BD	243
CXL 2/4 PF	251
CXL 2/4 PFH	251
CXL 2/4 PM	251
CXL 2/4 PMH	251
CXL PF	251
CXL PM	251

\* cannot be used with angled enclosures  
(part No. MKGH VA20)

refer to CN.19 pages

## hood

## with glued gasket



## description

part No.  
(entry M20)

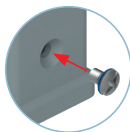
with pegs and glued gasket, top entry <sup>1)</sup>  
with pegs and glued gasket, side entry <sup>1)</sup>

MKGH V20  
MKGH VA20

▲ Suitable for DESINA® CXL inserts and male inserts without gasket.

<sup>1)</sup> CKRH 65 and CKRH 65 D **included** with all hoods and housings, to replace the fixing screw provided with the insert: CKRH 65 D for CD 07 and CD 08 inserts, CKRH 65 all the others.

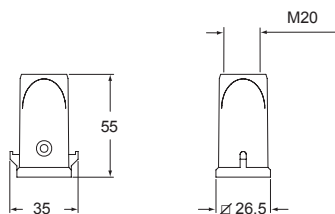
NOTE: The enclosure shown here is an example. The screw and sealing gasket kit can be used with all enclosures' part nos. in this page.



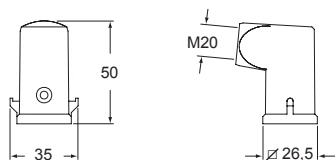
## HOOD KIT EXAMPLE



## MKGH V



## MKGH VA



CE (ECBT2.E115072, ECBT8.E115072)  
Type 12, Type 4/4X, DNV certified;  
CQC, BV pending



inserts	pages:
CJ KM	223
CJK 8MT	226
CJK 8IMT	226, 228
CJK 8M	233
CUK 2FT, CUK 3FT	236
CLK 04 SC	239
CX 1/2 BD	243
CXL 2/4 PF, CXL 2/4 PFH	251
CXL 2/4 PM, CXL 2/4 PMH	251
CXL PF, CXL PM	251

hood  
with glued gasket



refer to CN.19 pages

description

part No.  
(entry M25)

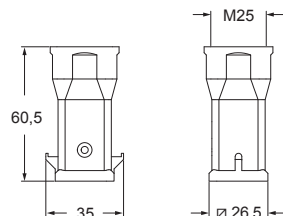
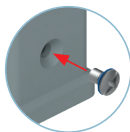
with pegs, top entry 1)

MKGH V25

▲ Suitable for DESINA® CXL inserts and male inserts without gasket.


1) CKRH 65 and CKRH 65 D **included** with all hoods and housings, to replace the fixing screw provided with the insert: CKRH 65 D for CD 07 and CD 08 inserts, CKRH 65 all the others.

NOTE: The enclosure shown here is an example. The screw and sealing gasket kit can be used with all enclosures' part nos. in this page.



#### HOOD KIT EXAMPLE



us (ECBT2.E115072, ECBT8.E115072)  
Type 12, Type 4/4X,  certified;  
CQC, BV pending

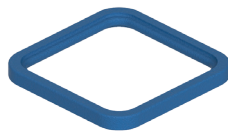




## inserts

<b>CKM</b>	3 and 4 poles + ⊕	<b>58</b>
<b>CKSM</b>	3 and 4 poles + ⊕	<b>-</b>
<b>CKSHM</b>	3 and 4 poles + ⊕	<b>63</b>
<b>CDM</b>	7 poles + ⊕	<b>66</b>
<b>CDM</b>	8 poles	<b>67</b>
<b>CQ4M</b>	2 poles + ⊕	<b>182</b>
<b>CQ4M H</b>	2 poles + ⊕	<b>183</b>
<b>CQ4M</b>	3 poles + ⊕	<b>184</b>
<b>CQ4M</b>	3+2 (aux) poles + ⊕	<b>16 *</b>
<b>CQM</b>	5 poles + ⊕	<b>186</b>
<b>CQM</b>	7 poles + ⊕	<b>187</b>
<b>CQM</b>	12 poles + ⊕	<b>189</b>
<b>CQM</b>	21 poles	<b>190</b>

## pages:

HYGIENIC gasket  
for "21.21" male insertsgasket and screw kit  
for HYGIENIC

refer to CN.19 pages

\* refer to NEWS 2020 pages

description

part No.

part No.

HYGIENIC gasket for male inserts "21.21" size

CR 21.21 GMH

gasket and screw kit  
for IP66/IP67/IP69

CKRH 65

gasket and screw kit for IP66/IP67/IP69  
specific for CD 07/08 inserts

CKRH 65 D

## ! CAUTION:

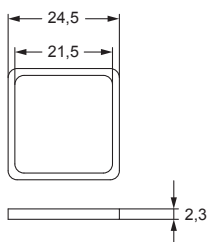
This gasket **CR 21.2 GMH** must replace the standard gasket on the male insert, that foresees a gasket.

## NOTE:

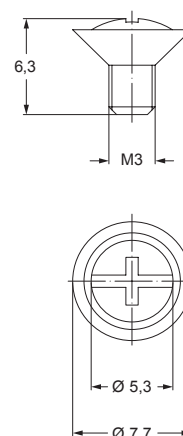
Just in case of use of the housing or hood with lever together with the male insert, and without ordering the corresponding hood, it is necessary to require separately the **CR 21.21 GMH** HYGIENIC gasket for male insert.

For consistency, also the covers are supplied in single pack.

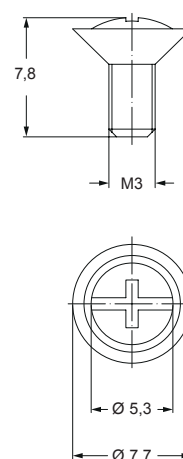
## CR 21.21 GMH



## CKRH 65



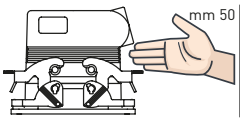
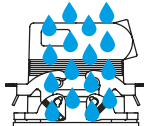
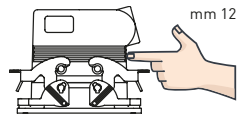
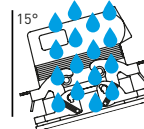
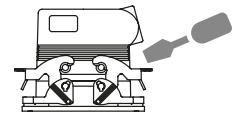
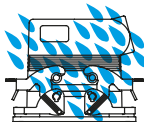
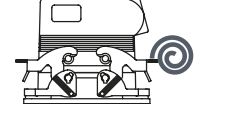
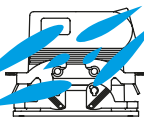
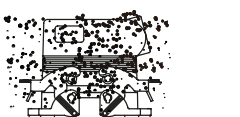
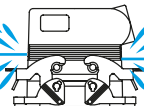
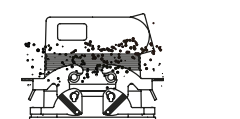
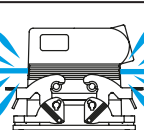
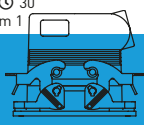
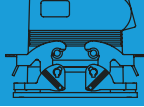
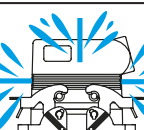
## CKRH 65 D



## THE DEGREE OF PROTECTION

The connector's housing, sealing and locking mechanism protect the connection from external influences such as mechanical shocks, foreign bodies, humidity, dust, water or other fluids such as cleansing and cooling agents, oils, etc. The degree of protection the housing offers is explained in the IEC 60529, DIN EN 60529, standards that categorize enclosures according to foreign body and water protection.

The following table shows the **IP (Ingress Protection) Ratings Guide**.

FIRST Index figure	Degree of protection SOLIDS		SECOND Index figure	Degree of protection WATER	
0		No protection	0		No protection
1		Protected against access to hazardous parts with the back of a hand and protected against solid foreign objects of Ø 50 mm and greater	1		Protected against vertically falling water drops
2		Protected against access to hazardous parts with a finger - protected against solid foreign objects of Ø 12,5 mm and greater	2		Protected against vertically falling water drops when enclosure tilted up to 15° (on either side of the vertical)
3		Protected against access to hazardous parts with a tool - protected against solid foreign objects of Ø 2,5 mm and greater	3		Protected against spraying water (at an angle up to 60° on either side of the vertical)
4		Protected against access to hazardous parts with a wire - protected against solid foreign objects of Ø 1,0 mm and greater	4		Protected against splashing water from any direction
5		Protected against access to hazardous parts with a wire dust-protected (no harmful dust deposit)	5		Protected against water jets from any direction
6		Protected against access to hazardous parts with a wire dust-tight (total protection against dust)	6		Protected against powerful water jets from any direction (similar to sea waves)
<b>RATING EXAMPLE</b>  <b>IP 65</b>			7		Protected against the effects of temporary immersion in water at a maximum depth of 1 metre for 30 min
			8		Protected against the effects of continuous immersion in water at depth and/or duration upon agreement, more severe than for numeral 7
			9		Protected against high pressure and temperature water jets from any direction

Description according to IEC 60529

## CHANGEOVER FROM PG THREADS TO METRIC

After 31<sup>st</sup> December 1999, the German safety standard DIN VDE 0619 (1987-09) and the standards it refers to - DIN 46319 for dimensions with metric threads and DIN 46320 (T1-T4), DIN 46255 and DIN 46259 for dimensions with Pg threads (Pg = Panzerrohr-Gewinde: literally "threads for armoured pipes") - were withdrawn and European standard EN 50262 "Metric cable glands for electrical installations" has been in force since 1<sup>st</sup> January 2000.

This standard defines the new sizes with metric threads for cable glands according to EN 60423 and establishes the safety prescriptions.

Conversely, it does not specify the dimensions, such as the size of the tightening wrench, the diagonal dimension, or the dimensions of the tightness seals, as was the case in the withdrawn DIN for Pg cable glands.

The standard came definitively into force on 1<sup>st</sup> April 2001, when the contrasting national standards were withdrawn.

It is valid in all member countries of CENELEC (European Electrical Standardisation Committee) and its publication has led to a broadening of the supply of enclosures for multi-pole connectors for industrial use, to include new enclosure versions with cable entry suitable for metric cable glands.

NOTE – In 2016 the new EN 62444:2013 standard "Cable glands for electrical installations" replaced the former to cover only cable gland with metric thread whose range is now M6 through M110 (previously up to M75).

Cable gland producers have introduced the new metric series to add to the Pg size series, to gradually replace the latter type. The transitional period indicated in the new standard should have ended on 1<sup>st</sup> March 2001, after which date the use of cable entry devices with Pg thread and, as a result, enclosures with Pg thread, should have ended in new installations. Nevertheless, both the cable entry devices and the relevant enclosures with Pg thread, may continue to be used as spare parts. For the mandatory **CE** marking of these items, observance of the safety conditions specified by the Low Voltage Directive is sufficient, however adherence to the safety requirements of EN 62444 provides presumption of conformity.

**To distinguish hoods and surface-mounting housings with metric entries from the relevant Pg versions (identified with a C pre-code), the ILME metric types are identified with an M pre-code. The transposition table below indicates the correspondence rule adopted in most cases by ILME for creating the new metric versions.**

### Pg → metric transposition table

Pg	Metric
Pg 11	M20
Pg 13.5	M20
Pg 16	M20
Pg 21	M25
Pg 29	M32
Pg 36	M40
Pg 42	M50

### Cable diameter for use with ILME cable glands

Ø in mm	Metric thread				
Series	20	25	32	40	50
<b>AS M..P</b>	6 - 12,5	10 - 18	14 - 24	15 - 24	23 - 30
<b>AS M..E</b>	8 - 12,5	13,5 - 18	17 - 24	—	—
<b>AG M..T</b>	6 - 8 - 10	11 - 14 - 17	19 - 21 - 24	26 - 29 - 32	35 - 38 - 41
<b>AG M..I</b>	5 - 12,5	9 - 18	14 - 25	18 - 32	24 - 38,5
<b>AG M..R</b>	6 - 8 - 10	11 - 14 - 17	19 - 21 - 24	—	—

For more information, please refer to the technical catalogue on [www.ilme.com](http://www.ilme.com)