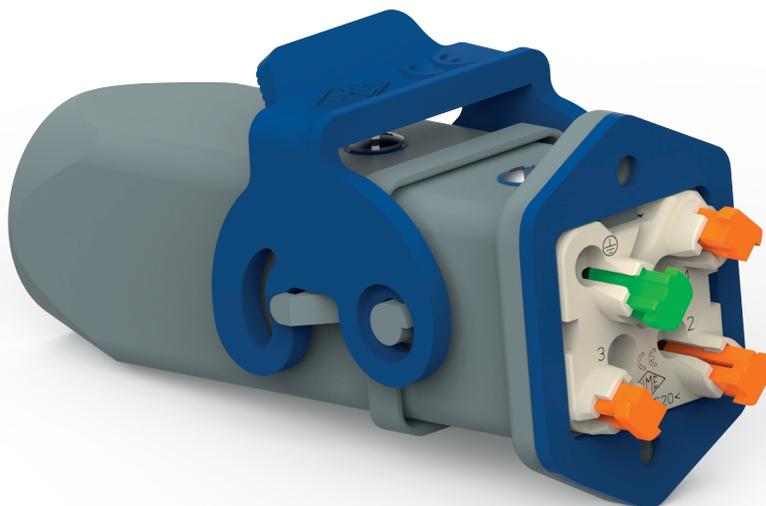

CKH - MKH HYGIENIC ENCLOSURES SIZE "21.21"



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

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 CR 21.21 GMH .
○ 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 with CR 21.21 GMH HYGIENIC gasket included
MKH V25	hood with pegs, top entry M25 with CR 21.21 GMH HYGIENIC gasket included
MKH VA20	hood with pegs, side entry M20 with CR 21.21 GMH HYGIENIC gasket included
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
CD4	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

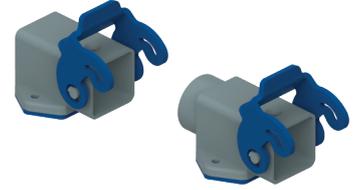
refer to CN.19 pages
* refer to NEWS 2020 pages

pages:

bulkhead mounting housings



angled bulkhead mounting housings



description	part No.	part No.	part No. (entry M20)
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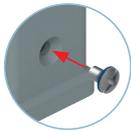
with lever 2)	CKH 03 I		
without cable entry, with lever 1) 2)		CKH 03 IA	
with cable entry, lever 1) 2)			MKH IAP20

1) Not suitable for inserts:

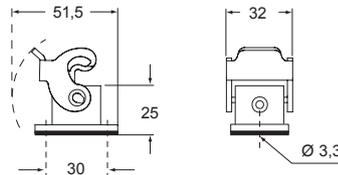
- CQ4 2 poles + ⊕
- CQ4 H 2 poles + ⊕
- CQ4 3 poles + ⊕
- CQ4 3+2 (aux) poles + ⊕

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.

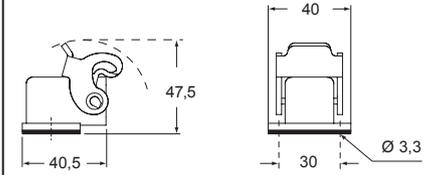
NOTE: The enclosure shown here is an example. The screw and sealing gasket kit can be used with all enclosures' part nos. in this page.



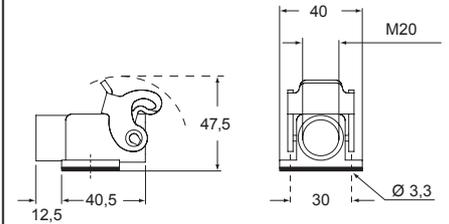
CKH I



CKH IA



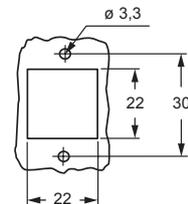
MKH IAP



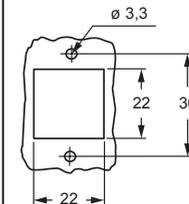
HOUSING KIT EXAMPLE



panel cut-out for enclosures



panel cut-out for enclosures



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



CKH - MKH production lines HYGIENIC SERIES

inserts

pages:

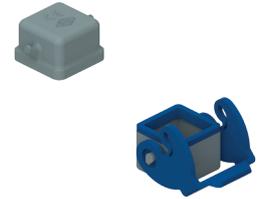
CK	3 poles + ⊕	58
CK	4 poles + ⊕	58
CKS	3 poles + ⊕	-
CKS	4 poles + ⊕	-
CKSH	3 poles + ⊕	63
CKSH	4 poles + ⊕	63
CD	7 poles + ⊕	66
CD	8 poles	67
CQ4M	2 poles + ⊕	182
CQ4M H	2 poles + ⊕	183
CQ4M	3 poles + ⊕	184
CQ4M	3+2 (aux) poles + ⊕	16 *
CQ	5 poles + ⊕	186
CQ	7 poles + ⊕	187
CQ	12 poles + ⊕	189
CQ	21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

refer to CN.19 pages

hoods



covers



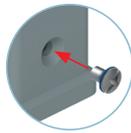
description	part No. (entry M20)	part No. (with eyelet)	part No. (with loop)
with pegs and CR 21.21 GMH gasket, top entry ^{1) 2)}	MKH V20		
with pegs and CR 21.21 GMH gasket, side entry ^{1) 2)}	MKH VA20		
with lever, top entry ^{1) 2)}	MKH VG20		
with pegs and gasket, for female inserts		CKH 03 C	CKH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

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)



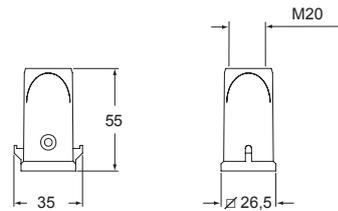
HOOD KIT EXAMPLE



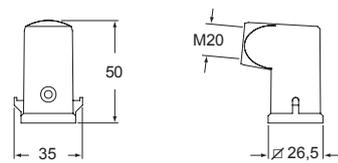
CE mark (ECBT2.E115072, ECBT8.E115072)
Type 12, Type 4/4X only with CKRH 65 (D),
DNV certified;
CQC, BV pending



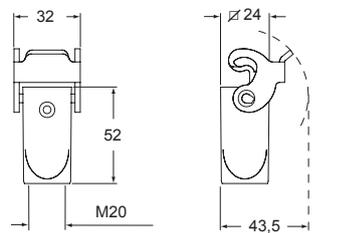
MKH V



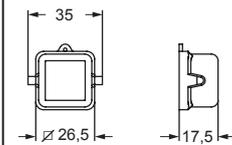
MKH VA



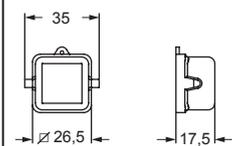
MKH VG



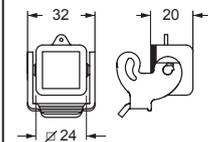
CKH C - CKH CS



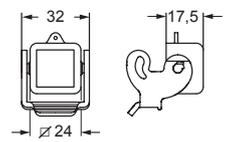
CKH CA - CKH CAS



CKH CX

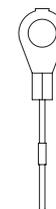


CKH CXA



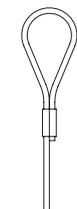
For fixing on housings

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

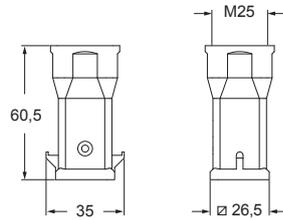
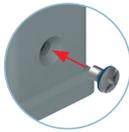
part No.
(entry M25)

with pegs and CR 21.21 GMH gasket, top entry ¹⁾

MKH V25

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.



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),
 certified;
CQC, BV pending

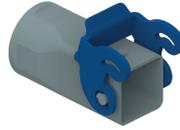


MKH production lines HYGIENIC SERIES

inserts	pages:
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

hood



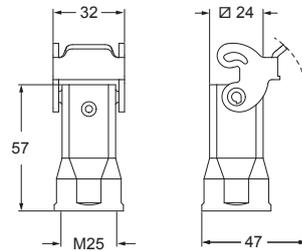
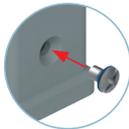
description	part No. (entry M25)
-------------	-------------------------

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



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

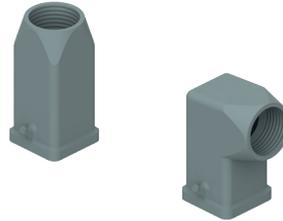


inserts	pages:
CJ KM	223
CJK 8MT	226
CJK 8IMT *	226, 228
CUK 2FT	236
CUK 3FT	236
CLK 04 SC *	239
CX 1/2 BD	243
CXL 2/4 PF	251
CXL 2/4 PFH	251
CXL 2/4 PM	251
CXL 2/4 PMH	251
CXL PF	251
CXL PM	251

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

refer to CN.19 pages

hood with glued gasket



description

part No. (entry M20)

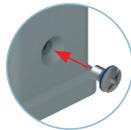
with pegs and glued gasket, top entry ¹⁾
with pegs and glued gasket, side entry ¹⁾

MKGH V20
MKGH VA20

▲ 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.

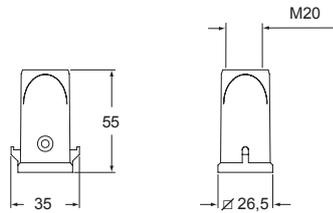
NOTE: The enclosure shown here is an example. The screw and sealing gasket kit can be used with all enclosures' part nos. in this page.



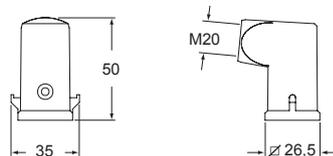
HOOD KIT EXAMPLE



MKGH V



MKGH VA



us (ECBT2.E115072, ECBT8.E115072)
Type 12, Type 4/4X, 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)
-------------	-------------------------

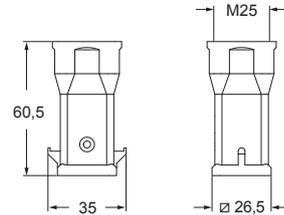
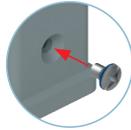
with pegs, top entry 1)

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



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



inserts

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

pages:

**HYGIENIC gasket
for "21.21" male inserts**



**gasket 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

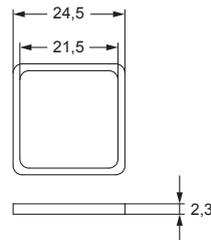
! CAUTION:

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

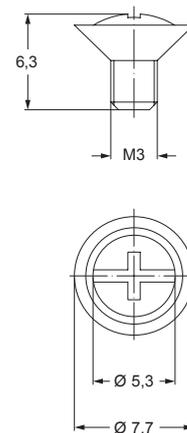
NOTE:

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.

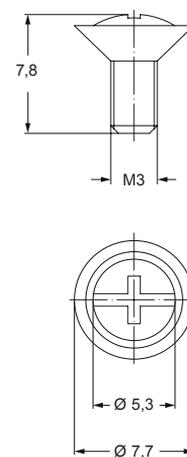
CR 21.21 GMH



CKRH 65



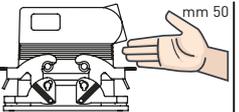
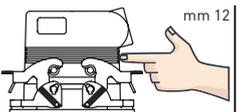
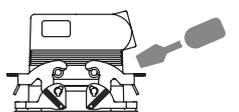
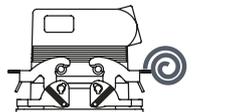
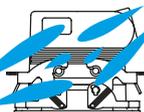
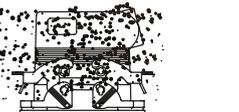
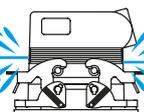
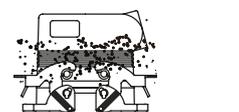
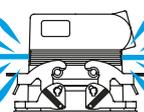
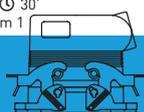
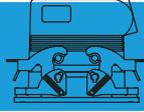
CKRH 65 D



GRADO DI PROTEZIONE

La custodia fissa, la guarnizione di tenuta e il meccanismo di chiusura del connettore proteggono il collegamento da influenze esterne come urti meccanici, corpi estranei, umidità, polvere, acqua o altri fluidi come detergenti e refrigeranti, oli, ecc. Il grado di protezione della custodia fissa è spiegato nelle norme IEC 60529, DIN EN 60529, che classificano le custodie in base alla protezione dai corpi estranei e dall'acqua.

La tabella che segue illustra la **Guida alla classificazione IP (Ingress Protection)**.

PRIMO numero del grado	Grado di protezione SOLIDI	SECONDO numero del grado	Grado di protezione ACQUA
0	Nessuna protezione	0	Nessuna protezione
1	 mm 50 Protetto dall'accesso alle parti pericolose con il dorso della mano ed dall'accesso di corpi estranei solidi di Ø 50 mm o superiore	1	 Protetto contro la caduta verticale di gocce d'acqua
2	 mm 12 Protetto dall'accesso alle parti pericolose con un dito e dall'accesso di corpi estranei solidi di Ø 12,5 mm o superiore	2	 15° Protetto contro la caduta verticale di gocce d'acqua quando la custodia è inclinata fino a 15° (su entrambi i lati della verticale)
3	 Protetto dall'accesso alle parti pericolose con un attrezzo e dall'accesso di corpi estranei solidi di Ø 2,5 mm o superiore	3	 Protetto contro acqua nebulizzata (quando la custodia è inclinata fino a 60° su entrambi i lati della verticale)
4	 Protetto dall'accesso alle parti pericolose con un filo e dall'accesso di corpi estranei solidi di Ø 1,0 mm o superiore	4	 Protetto contro gli spruzzi d'acqua da qualsiasi direzione
5	 Protetto dall'accesso alle parti pericolose con un filo, a tenuta di polvere (nessun deposito di polvere pericoloso)	5	 Protetto contro getti d'acqua da qualsiasi direzione
6	 Protetto dall'accesso alle parti pericolose con un filo, a tenuta stagna di polvere (protezione totale contro la polvere)	6	 Protetto contro getti d'acqua ad alta pressione da qualsiasi direzione (come onde di mare)
<p>ESEMPI DI CLASSIFICAZIONE</p> <p>IP 6 5</p>		7	 30° m 1 Protetto contro gli effetti dell'immersione temporanea in acqua a una profondità massima di 1 metro per 30 minuti
		8	 Protetto contro gli effetti dell'immersione continua in acqua a profondità e/o durata concordate; più rigoroso del numero 7
		9	 Protetto contro getti d'acqua ad alta pressione e temperatura da qualsiasi direzione

Descrizione secondo IEC 60529

PASSAGGIO DA FILETTATURE PG A FILETTATURE METRICHE

Dopo il 31 dicembre 1999 la norma tedesca di sicurezza DIN VDE 0619 (1987-09) e le norme ivi richiamate - DIN 46319 per le dimensioni con filettatura metrica e DIN 46320 (T1-T4), DIN 46255 e DIN 46259 per le dimensioni con filettatura Pg (Panzerrohr-Gewinde = letteralmente "filettatura per tubi corazzati") - sono state ritirate e dal 1° gennaio 2000 per le nuove costruzioni è in vigore la norma Europea EN 50262 "Pressacavi metrici per installazioni elettriche".

Tale norma definisce per i pressacavi le nuove grandezze con filettatura metrica secondo la norma EN 60423 e stabilisce le prescrizioni di sicurezza.

Non specifica le dimensioni, quali ad esempio la grandezza della chiave di serraggio, la diagonale di ingombro, né le dimensioni delle guarnizioni di tenuta, come facevano le norme DIN ritirate per i pressacavi Pg.

Essa è definitivamente entrata in vigore il 1° aprile 2001 con il ritiro delle norme nazionali contrastanti.

Valida in tutti i Paesi membri del CENELEC (Comitato Europeo per la Normazione Elettrica) e la sua pubblicazione ha imposto per i connettori multipolari per usi industriali l'ampliamento dell'offerta a nuove versioni di custodie con uscita cavo predisposta per pressacavi metrici.

NOTA - Nel 2016 la nuova norma EN 62444:2013 "Pressacavi per installazioni elettriche" ha sostituito la precedente coprendo solo pressacavi con filettatura metrica il cui range è ora da M6 a M110 (precedentemente fino a M75).

I costruttori di pressacavi hanno affiancato alle serie con grandezze Pg, per la loro graduale sostituzione, nuove serie metriche. Il periodo di transizione indicato nella norma avrebbe dovuto terminare il 1° marzo 2001, data dopo la quale l'impiego di dispositivi di ingresso cavi con filettatura Pg e conseguentemente di custodie predisposte con filettature Pg avrebbe dovuto aver termine nelle nuove installazioni. È tuttavia possibile continuare a utilizzare sia i dispositivi di uscita cavo che le relative custodie con filettatura Pg come parti di ricambio. Per la marcatura CE obbligatoria di tali articoli è sufficiente il rispetto delle condizioni di sicurezza richieste dalla Direttiva Bassa Tensione, tuttavia il rispetto dei requisiti di sicurezza della norma EN 62444 fornisce la presunzione di conformità.

✍ Per distinguere le custodie mobili e le custodie fisse da parete con uscite metriche dalle rispettive versioni Pg (identificate da un precodice C), i tipi metrici ILME sono identificati da un precodice M. La seguente tabella di trasposizione indica la regola di corrispondenza adottata nella maggior parte dei casi da ILME per la creazione delle nuove versioni metriche.

Tabella di trasposizione Pg → metrica

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

Diametro dei cavi utilizzabili con i pressacavi ILME

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

Per maggiori informazioni consultare il catalogo tecnico su www.ilme.com