



SECAM

Fixing Solutions

DESIGN AND INDUSTRIALIZATION OF INNOVATIVE FASTENING SOLUTIONS



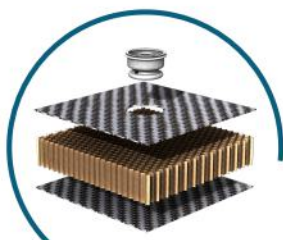
Inserts



Self-forming
Screws



Standard and
Custom Fasteners



Sandwich Panels
Fasteners



Composites
Fasteners

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Screws & Inserts

for plastics, light alloys
and composites

Over 3000 references in stock

We offer a complete catalog around
our know-how:

Screws and inserts for soft materials
Standardized or custom fasteners
and a new range focused
on composite materials



Engineering & Custom Parts



- 50 years of experience
- All shapes, all diameters
- Machining or cold stamping
- Injection
- Rotational molding
- Fitting and overmolding
in composites
(Vacuum infusion, RTM, SMC)

Supply Chain

Based in Haute-Savoie and backed by
our parent company specializing in
precision machining, we have a strong
culture of engineering, production and
supply chain management.



HBP Group

- Since 1975
- 80 Employees
- 5700 m² s plant
- 20 million € turnover

We help our customers around the world
to develop their business
by providing them new ideas,
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Inserts

Screw Insert
Expansion Insert
Press-in Insert
Ultrasonic Insert
Moulded-in Insert

POST MOULDING INSTALLATION

IVK

page 11



SCREW INSERT TYPE K

- Assembly and removal with an Hexagonal bit
- Optimisation of assembly/removal times
- External thread favouring plastic flow during installation



IVH

page 11



SCREW INSERT TYPE H

- Assembly and removal with an Hexagonal bit
- Optimisation of assembly/removal times
- External thread favouring plastic flow during installation
- Symmetrical for simplified automatic feed



IV2

page 13



SCREW INSERT TYPE 2

- Designed for screwing into hard plastics
- Self-tapping insert due to its cutting groove
- High pull-out resistance

IV7

page 14



SCREW INSERT TYPE 7

- For very hard thermosets and light alloys
 - 3 cutting bores to reduce the screwing torque
 - High holding force
- Recommended instead of type 2 screw insert in case of space constraint (shorter)

IV8

page 15



SCREW INSERT TYPE 8

- Advantages of the type 7 screw insert
- Thin wall designed for light, compact parts
- High holding force

IV9

page 15



SCREW INSERT TYPE 9

- External thread designed for all kinds of wood and fibreboard as well as for soft to very soft plastics
- Self-tapping insert due to its cutting groove

POST MOULDING INSTALLATION

IEC

page 21



SHORT EXPANSION INSERT

- Easy manual installation
- Very sharp crown design for improved penetration
- Cost effective

IEL

page 21



LONG EXPANSION INSERT

- Advantages of the short-expansion insert (IEC)
- Its two crown rows improve the torque resistance and pull-out force

IP

page 23



PRESSED-IN INSERT

- Headed or Unheaded
- 30° knurl reduces radial loads during installation
- Wall boss reduction
- Pilot point tip for efficient



IU

page 25



ULTRASONIC INSERT

- Headed or Unheaded
- Heat and ultrasonic installation yield, outstanding results
- 45° cross knurl improves torque resistance and holding force



OVERMOULDING INSTALLATION

ISB - ISD

page 27



Moulded-in Insert with Ribbed profile

- Blind or thru
- The knurled grooved shape guarantees pull-out resistance and torque

ISB-ISD

page 28



Moulded-in Insert with Hexagonal profile

- Blind or thru
- The hexagonal profile guarantees pull-out resistance and torque

CHOICE GUIDE

			Thermoplastics			Thermosets	Wood	Light Alloys
			Soft	Medium	Hard	Medium/Hard		
Hardness			<≈ 70 Shore D	70-85 Shore D	>≈ 85 Shore D Rockwell M	>≈ 90 Shore D >≈ 85 Rockwell M	Natural Chipboard MDF (medium)	Aluminium alloys Magnesium alloys
Modulus of elasticity in bending & tensile			<≈ 1,5 Gpa	1,5<3 Gpa	>≈ 3 Gpa	>≈ 3 Gpa		
Commodity Plastics			PE-BD PE-HD PP	PA 6.6 Rigid PVC ABS POM PET PTFE PSU	PC PC 30%fv PET 35%fv PPS PAI PEEK PI	EP PUR Loaded UP PF		
Technical Plastics								
High-performance Plastics								
	Pressed-in Expansion Insert	IEC	😊	😊	😊	😬	😬	😞
		IEL	😊	😊	😬	😬	😬	😞
	Pressed-in Insert	IP	😊	😊	😬	😬	😬	😞
	Ultrasonic Insert	IU	😊	😊	😊	😞	😞	😞
	Self-tapping Insert	IV2	😊	😊	😊	😊	😬	😬
		IV7	😬	😬	😊	😊	😬	😊
		IV8 thin wall	😬	😬	😊	😊	😞	😊
		IV9	😊	😞	😞	😞	😊	😞
		IVH	😊	😊	😬	😊	😞	😞
		IVK	😊	😊	😊	😊	😬	😬
	Moulded-in Insert	IST knurled	😊	😊	😊	😊	😞	😞
		ISH hexagonal	😊	😊	😊	😊	😞	😞

😊 Suitable 😬 May be suitable 😞 Unsuitable

Values are given for information only,
each material is specific and has its own properties

CHOICE GUIDE

Installation method	IEC	IEL	IP	IU	IV2	IV7	IV8	IV9	IVH	IVH split	IST knurled	ISH hexagonal
Manual	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊
Automatic	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊

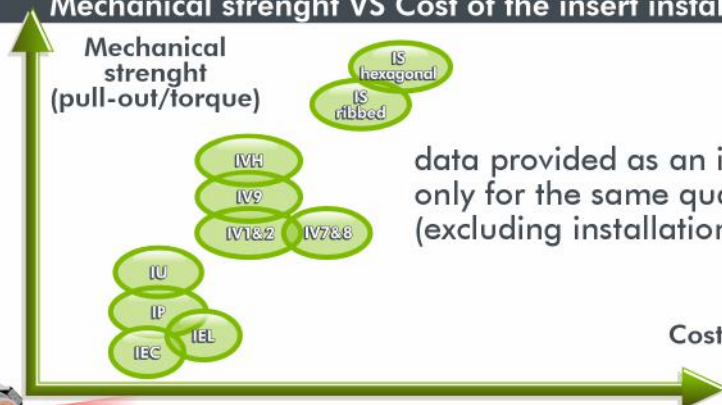
Installation tools

Manual tool	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊
Screwdriver	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊
Press	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊
Ultrasonic	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊
Thermal transfer	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊
Overmoulding	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊

Properties

Symmetrical	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊
Removable	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊
Version with head			😊	😊					😊			
⚠️ Chips	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊		
	IEC	IEL	IP	IU	IV2	IV7	IV8	IV9	IVH	IVH split	IST knurled	ISH hexagonal

Mechanical strenght VS Cost of the insert installed



Pay attention to galvanic corrosion between :

- The receiving material and the insert
- The insert and the screw

SELF FORMING INSERT TYPE K & H

- Assembled and removed using an Hexagonal bit with the same dimensions as the hexagonal hole
- Shorter assembly and removal times
- External thread favouring plastic flow during installation
- Available in split version with cutting slot



ECO-DESIGN
100 % RECYCLABLE

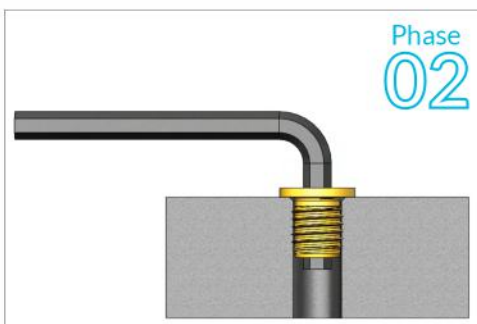
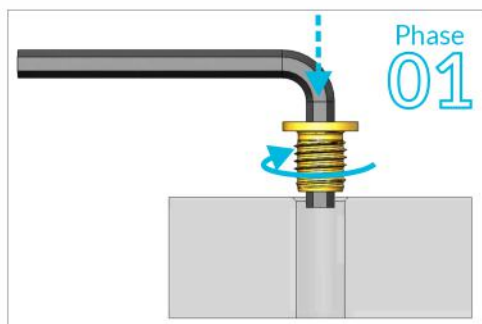


< HEADED TYPE K

UNHEADED TYPE H >



INSTALLATION METHOD



- 01** Position the hexagonal bit or tool with insert in line with the moulded or drilled hole and start screwing
- Self-forming: the material is forced back without making chips
 - Self-tapping: the cutting slot cuts the material

- 02** When the insert is correctly installed, remove the hexagonal bit or the tool. The material compresses the insert, holding it securely.

REFERENCE CODING TABLE

	Product	Sub-family	Type	Thread	L	Outer shape	Ø E	Materials	Specification
Example	I	V	K	0 3 0	0 6 0	M	0 5 0	L	0
	Insert	Screw	non-split 60° ext. thread, ISO metric pitch	Internal Thread M3 (1/10 of mm)	Total length 6 mm (1/10 de mm)	Metric pitch	External diameter 5 mm (1/10 de mm)	Brass CW 614N	None

Sub Families

V Screw

Screw Insert Type

K with head 45° thread with 160° bottom - reversible + internal hexagon
H headless 45° thread with 160° bottom - reversible + internal hexagon

Material

L Brass CW 614N

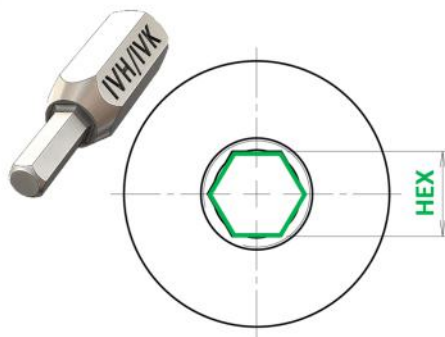
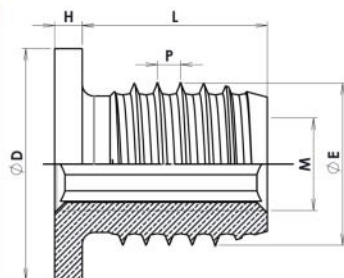
Specifications

0 None
N Nickel plating

Other materials or shapes on request

IVK TYPE K

Headed

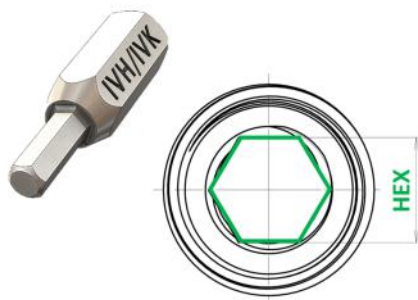
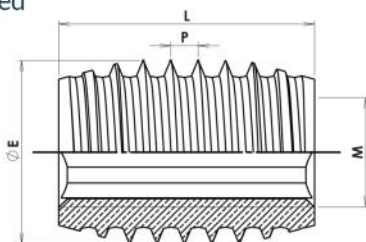


Reference	Thread M (6H)	ØE x P	L (mm)	D (mm)	H (mm)	HEX (mm)	Hole Ø soft & hard	Hole Ø very hard	Recommended min. wall thickness (mm)
IVK 030 071 R080 L 0	M3 x 0.50	5 x 0.80	6	8	1.1	2.5	4.4 - 4.6	4.6 - 4.8	2.5
IVK 040 092 R100 L 0	M4 x 0.70	7.0 x 1.00	8	10	1.2	3.2	6.0 - 6.6	6.6 - 6.9	3
IVK 050 114 R110 L 0	M5 x 0.80	8 x 1.25	10	11	1.4	4	6.9 - 7.4	7.4 - 7.7	3.5
IVK 060 154 R130 L 0	M6 x 1.00	10 x 1.50	14	13	1.4	5	8.5 - 9.1	9.1 - 9.4	4
IVK 080 164 R150 L 0	M8 x 1.25	12 x 1.80	15	15	1.4	7	10.5 - 11.2	11.1 - 11.4	5

Other dimensions on request

IVH TYPE H

Unheaded



Reference	Thread M (6H)	ØE x P	L (mm)	HEX (mm)	Hole Ø soft & hard	Hole Ø very hard	Recommended min. wall thickness (mm)
IVH 030 060 F050 L 0	M3 x 0.50	5 x 0.80	6	2.5	4.4 - 4.6	4.6 - 4.8	2.5
IV H 040 080 F065 L 0	M4 x 0.70	6.5 x 1.00	8	3.2	5.5 - 6.6	6.6 - 6.9	3
IV H 050 100 F080 L 0	M5 x 0.80	8 x 1.25	10	4	6.9 - 7.4	7.4 - 7.7	3.5
IV H 060 140 F100 L 0	M6 x 1.00	10 x 1.50	14	5	8.5 - 9.1	9.1 - 9.4	4
IV H 080 150 F120 L 0	M8 x 1.25	12 x 1.80	15	7	10.5 - 11.2	11.1 - 11.4	5

Other dimensions on request

IV : SCREW INSERT

- Post-moulding installation
- High pull-out resistance

SEVERAL RANGES SUITABLE FOR DIFFERENT MATERIALS



TYPE 2 :
Self-tapping with
Cutting slot



TYPE 7 :
Self-tapping with
3 cutting bores

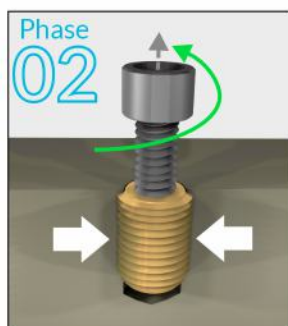
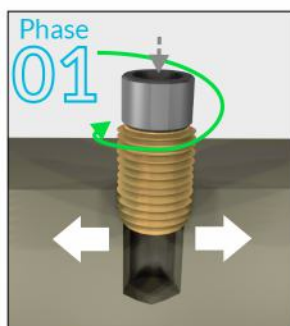


TYPE 8 :
Self-tapping with
3 cutting bores,
thin wall



TYPE 9 :
Self-tapping with
cutting bores,
for softs plastics,
wood and
chipboard panels

MOUNTING PRINCIPLE



01 Position the tool with insert in line with the moulded or drilled hole and start screwing
• Self-tapping: the cutting slot or bores cuts the material

02 The locknut or the mechanism of the installation tool allows to separate the tool from the insert
The material compresses the insert, holding it securely.

REFERENCE CODING TABLE

	Product	Sub-family	Type	Thread	L	Outer shape	Ø E	Materials	Specification
Example	I	V	2	0 3 0	0 6 0	M	0 5 0	L	0
	Insert	Screw	with cutting slot 60° ext. thread fine pitch	Internal Thread M3 (1/10 of mm)	Total length 6 mm (1/10 de mm)	Metric pitch	External diameter 5 mm (1/10 de mm)	Brass CW 614N	None

Sub Families

V Screw

Screw Insert Type

- 2 with cutting slot - 60° ext. thread, fine pitch
7 flat-bottom thread, 3 cutting holes
8 flat-bottom thread, 3 cutting holes, fine pitch
9 with cutting slot for soft plastics and wood

Material

- L Brass CW 614N
A Hardened steel
1 Inox 1.4305 (A1-303)
2 Inox 1.4567 (A2-304Cu)
4 Inox 1.4404 (A4-316L)
5 Inox 1.4571 (A5-316Ti)

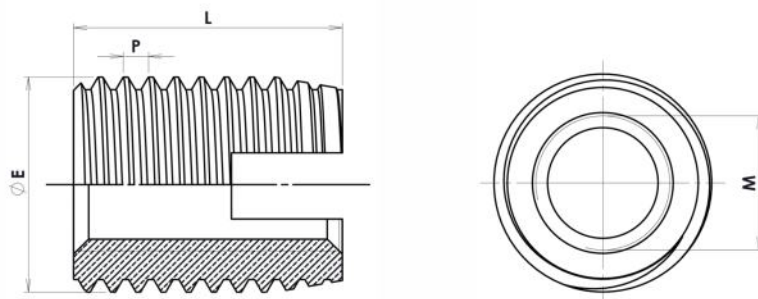
Specifications

- 0 None
N Nickel plating
ZnNi Zinc Nickel

Other materials or shapes on request

IV2 TYPE 2

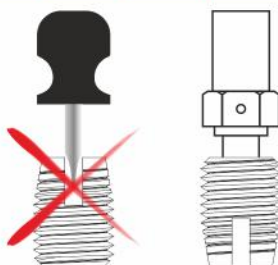
Cutting slot, 60° external thread, fine pitch



Reference	Thread M (6H)	L (mm)	Hole Ø	Ø E
IV 2 020 060 M045 L0	M2 X 0.40	6	4.5 X 0.50	4.1 - 4.2
IV 2 025 060 M045 L0	M2.5 x 0.45	6	4.5 x 0.50	4.1 - 4.2
IV 2 030 060 M050 L0	M3 X 0.50	6	5 X 0.50	4.6 - 4.7
IV 2 035 080 M060 L0	M3.5 x 0.60	8	6 x 0.75	5.5 - 5.6
IV 2 040 080 M065 L0	M4 X 0.70	8	6.5 X 0.75	6.0 - 6.1
IV 2 050 100 M080 L0	M5 x 0.80	10	8 x 1.00	7.3 - 7.5
IV 2 060 120 M090 L0	M6 X 1.00	12	9 X 1.00	8.3 à 8.5
IV 2 060 140 M100 L0	M6 x 1.00	14	10 x 1.50	8.9 à 9.2
IV 2 080 150 M120 L0	M8 X 1.25	15	12 X 1.50	10.9 à 11.2
IV 2 100 180 M140 L0	M10 x 1.50	18	14 x 1.50	12.9 à 13.2
IV 2 120 220 M160 L0	M12 X 1.75	22	16 X 1.50	10.8 à 11.4
IV 2 140 240 M180 L0	M14 x 2.00	24	18 x 1.50	16.9 à 17.2
IV 2 160 220 M200 L0	M16 X 2.00	22	20 X 1.50	18.9 à 19.2

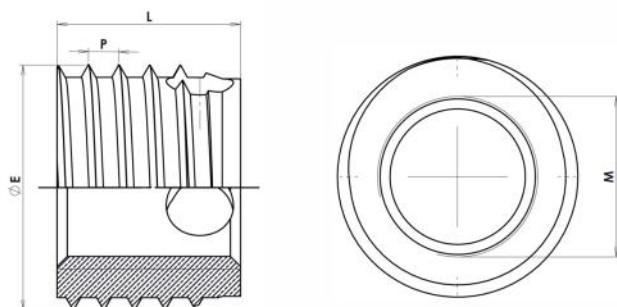
Other dimensions on request

**Do not use a flat
screwdriver to install this insert**
The slot is for
cutting the material only



IV7 TYPE 7

Flat thread, 3 cutting bores



SHORT

LONG

Reference	Thread M (δH)	L (mm)	Ø E	Hole Ø plastics	Hole Ø light alloys
IV 7 030 040 M050 A 0	M3 X 0.50	4	5 X 0.60	4.6 - 4.7	4.7 - 4.8
IV 7 035 050 M060 A 0	M3.5 x 0.60	5	6 x 0.80	5.5 - 5.6	5.6 - 5.7
IV 7 040 060 M065 A 0	M4 X 0.70	6	6.5 X 0.80	6.0 - 6.1	6.1 - 6.2
IV 7 050 070 M080 A 0	M5 x 0.80	7	8 x 1.00	7.4 - 7.6	7.6 - 7.7
IV 7 060 080 M100 A 0	M6 X 1.00	8	10 X 1.25	9.3 - 9.5	9.5 - 9.6
IV 7 080 090 M120 A 0	M8 x 1.25	9	12 x 1.50	11.1 - 11.3	11.3 - 11.5
IV 7 100 100 M140 A 0	M10 X 1.50	10	14 X 1.50	13.1 - 13.3	13.3 - 13.5
IV 7 120 120 M160 A 0	M12 1.75	12	16 x 1.75	15.0 - 15.2	15.2 - 15.4
IV 7 030 060 M50 A 0	M3 X 0.50	6	5 X 0.60	4.6 - 4.7	4.7 - 4.8
IV 7 035 080 M060 A 0	M3.5 x 0.60	8	6 x 0.80	5.5 - 5.6	5.6 - 5.7
IV 7 040 080 M065 A 0	M4 X 0.70	8	6.5 X 0.80	6.0 - 6.1	6.1 - 6.2
IV 7 050 100 M080 A 0	M5 x 0.80	10	8 x 1.00	7.4 - 7.6	7.6 - 7.7
IV 7 060 120 M100 A 0	M6 X 1.00	12	10 X 1.25	9.3 - 9.5	9.5 - 9.6
IV 7 080 140 M120 A 0	M8 x 1.25	14	12 x 1.50	11.1 - 11.3	11.3 - 11.5
IV 7 100 180 M140 A 0	M10 X 1.50	18	14 X 1.50	13.1 - 13.3	13.3 - 13.5
IV 7 120 220 M160 A 0	M12 1.75	22	16 x 1.75	15.0 - 15.2	15.2 - 15.4

Other dimensions on request

IV8 TYPE 8

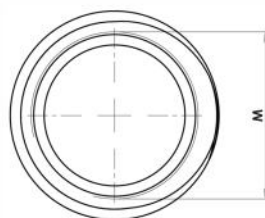
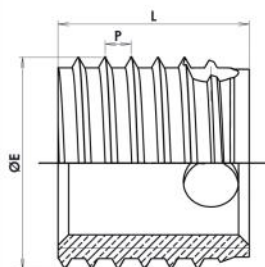
Flat-bottom thread, 3 cutting holes, thin wall

SHORT

LONG

Reference	Thread M (6H)	L	Ø E	Well Ø plastics	Well Ø light alloys
IV 8 035 050 M050 A 0	M3.5 X 0.60	5	5 X 0.60	4.6 à 4.7	4.7 à 4.8
IV 8 040 060 M060 A 0	M4 x 0.70	6	6 x 0.70	5.4 à 5.6	5.6 à 5.7
IV 8 050 070 M065 A 0	M5 X 0.80	7	6.5 X 0.80	6.0 à 6.1	6.1 à 6.2
IV 8 060 080 M080 A 0	M6 x 1.00	8	8 x 1.00	7.4 à 7.6	7.6 à 7.7
IV 8 080 090 M100 A 0	M8 X 1.25	9	10 X 1.25	9.3 à 9.5	9.5 à 9.6
IV 8 100 100 M120 A 0	M10 x 1.50	10	12 x 1.50	11.1 à 11.3	11.3 à 11.5
IV 8 120 120 M140 A 0	M12 X 0.75	12	14 X 1.75	13.1 à 13.3	13.3 à 13.5
IV 8 140 140 M160 A 0	M14 x 2.00	14	16 x 2.00	15.0 à 15.2	15.2 à 15.4
IV 8 160 140 M180 A 0	M16 X 2.00	14	18 X 2.00	17.0 à 17.2	-
IV 8 035 080 M050 A 0	M3.5 X 0.60	8	5 X 0.60	4.6 à 4.7	4.7 à 4.8
IV 8 040 080 M060 A 0	M4 x 0.70	8	6 x 0.70	5.4 à 5.6	5.6 à 5.7
IV 8 050 100 M065 A 0	M5 X 0.80	10	6.5 X 0.80	6.0 à 6.1	6.1 à 6.2
IV 8 060 120 M080 A 0	M6 x 1.00	12	8 x 1.00	7.4 à 7.6	7.6 à 7.7
IV 8 080 140 M100 A 0	M8 X 1.25	14	10 X 1.25	9.3 à 9.5	9.5 à 9.6
IV 8 100 180 M120 A 0	M10 x 1.50	18	12 x 1.50	11.1 à 11.3	11.3 à 11.5
IV 8 120 220 M140 A 0	M12 X 0.75	22	14 X 1.75	13.1 à 13.3	13.3 à 13.5
IV 8 140 240 M160 A 0	M14 x 2.00	24	16 x 2.00	15.0 à 15.2	15.2 à 15.4
IV 8 160 240 M180 A 0	M16 X 2.00	24	18 X 2.00	17.0 à 17.2	-

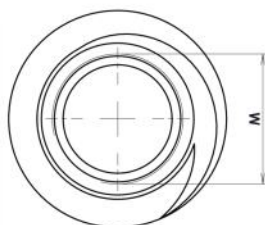
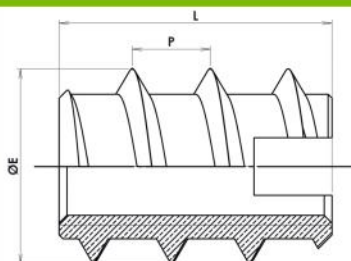
Other dimensions on request



IV9 TYPE 9

With cutting slot for soft plastics and wood

Reference	Thread M (6H)	L	Ø E	Well Ø
IV 9 030 060 B055 L 0	M3 X 0.50	6	5.5 X 1.60	4.1 à 4.3
IV 9 035 080 B065 L 0	M3.5 x 0.60	8	6.5 x 1.60	4.6 à 4.8
IV 9 040 100 B070 L 0	M4 X 0.70	10	7 X 2.50	5.1 à 5.3
IV 9 050 120 B090 L 0	M5 x 0.80	12	9 x 3.00	6.6 à 6.9
IV 9 060 140 B100 L 0	M6 X 1.00	14	10 X 4.00	7.6 à 7.9
IV 9 080 200 B130 L 0	M8 x 1.25	20	13 x 4.00	9.9 à 10.3
IV 9 100 230 B160 L 0	M10 X 1.50	23	16 X 5.00	12.4 à 12.8
IV 9 120 260 B190 L 0	M12 x 1.75	26	19 x 5.00	15.6 à 15.8



Other dimensions on request

RECOMMENDATION FOR THE DESIGNER



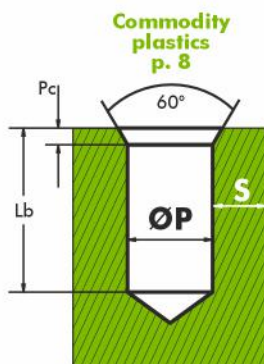
Chip tray

Lb Well depth :

To recover the chips
produced during installation
Insert length + 2 to 3 mm

Open Well

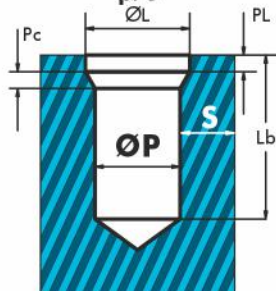
The insert must be
fully buried in the material :
Insert length + 1 mm



60° chamfer

Pc = 1 to 1.5 x ext. thread pitch

Technical plastics & High-performances plastics & Light alloys p. 8

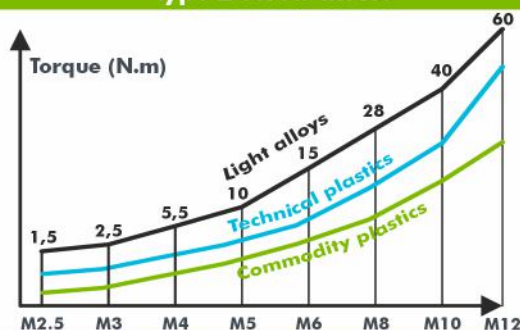


$\text{ØL} = \text{Øext} + 0.2 \text{ à } 0.4 \text{ mm}$

PL = 1 to 1.5 x pas filet ext

Pc = 1 to 1.5 x pas pas filet ext

Torque & speed for tempered steel type 2 screw insert



internal thread	M2.5 M3	M4 M5	M6 M8	M10 M12	M14 M16
Speed of rotation in r.p.m.	from 800 to 1300	from 600 to 900	from 400 to 700	from 300 to 450	from 240 to 350

ØP / Well diameter : p 17 to 19

A larger hole will make it easier to fit the insert but at the expense of the holding force and torque resistance.

Plan a **counterbore** and/or a **chamfer** to fit the insert more easily and ensure that it is flush with the surface of the material.

S / Wall sickness :

Depends on the material elasticity and the stress on the assembly.

Commodity plastics

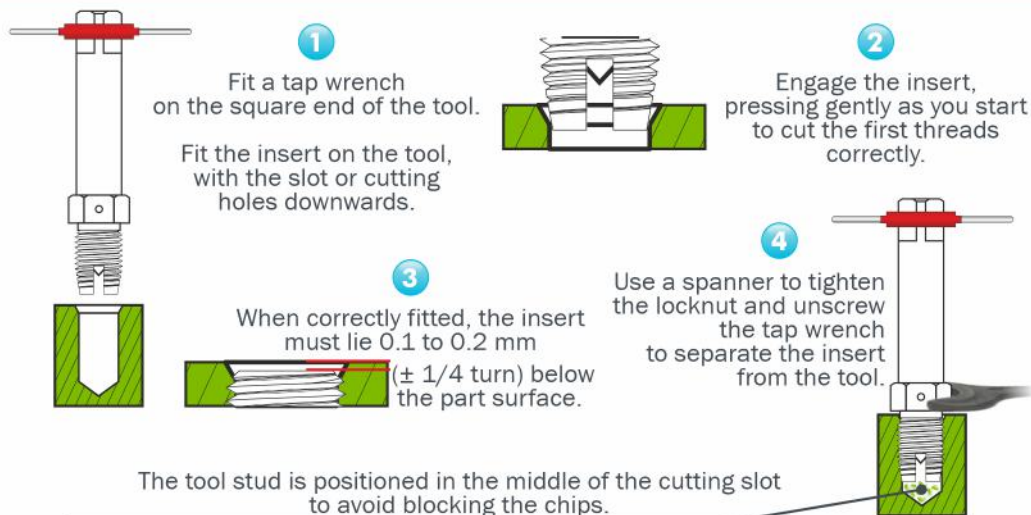
$S \geq 0.25$ to 0.9 insert outer Ø

Technical & High performance plastics & Light alloys :

$S \geq 0.2$ to 0.6 insert outer Ø

INSTALLATION TOOLS FOR SCREW-IN INSERTS

MANUAL TOOL - OVM



AUTOMATIC RELEASE TOOL - OVA

EQUIPMENT REQUIRED

Column drill with reverse and depth gauge.

Check that the drill has the characteristics required (r.p.m. and torque). see opposite page

Tighten on square with adapter supplied.

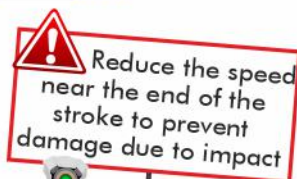
01

Set the depth gauge so that the tool bearing face penetrates 0.1 to 0.2 mm below the part surface.



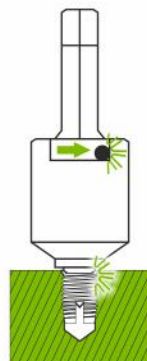
02

Fit the insert on the tool, with the slot or cutting holes downwards.
Engage the insert, pressing gently.
Screw in without applying pressure.



03

Reverse the drill at end of installation.
The pin separates from the insert tool by mechanical effect (impact).



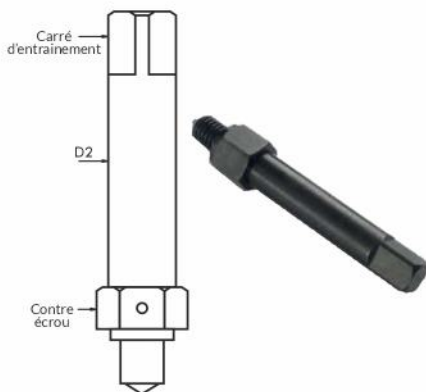
INSTALLATION TOOLS FOR SCREW-IN INSERTS

ADVICE & TOOLS

- Optimum assembly
- Fast installation
- Possibility of fitting the tool on an **electric screwdriver** or hand tool
- **Long version** available if hole difficult to access

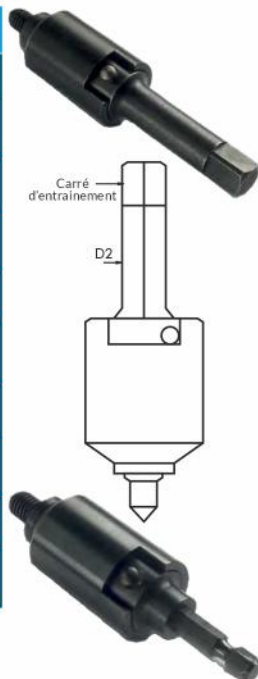
OVM Manual

Reference	Ø intérieur insert	Dim. du carré en mm	D2 Ø queue en mm
OVM 025 CM 0050 A 0	M2,5	5	6
OVM 030 CM 0050 A 0	M3	5	6
OVM 040 CM 0050 A 0	M4	5	6
OVM 050 CM 0080 A 0	M5	8	10
OVM 060 CM 0080 A 0	M6	8	10
OVM 080 CM 0080 A 0	M8	8	10
OVM 100 CM 0127 A 0	M10	12,5	16
OVM 120 CM 0127 A 0	M12	12,5	16



OVA Automatic Release

à Queue Cylindrique + carré d'Entrainement				à Queue Hexagonale 1/4" (6,35 mm)
Reference	Ø intérieur insert	Dim. du carré en mm	D2 Ø queue en mm	Référence
OVA 020 CM 0063 A 0	M2	6,35	8	OVA 020 HM 01/4 A 0
OVA 025 CM 0063 A 0	M2,5	6,35	8	OVA 025 HM 01/4 A 0
OVA 030 CM 0063 A 0	M3	6,35	8	OVA 030 HM 01/4 A 0
OVA 035 CM 0063 A 0	M3,5	6,35	8	OVA 035 HM 01/4 A 0
OVA 040 CM 0063 A 0	M4	6,35	8	OVA 040 HM 01/4 A 0
OVA 050 CM 0100 A 0	M5	9,53	12,5	OVA 050 HM 01/4 A 0
OVA 060 CM 0100 A 0	M6	9,53	12,5	OVA 060 HM 01/4 A 0
OVA 080 CM 0100 A 0	M8	9,53	12,5	OVA 080 HM 01/4 A 0
OVA 100 CM 0127 A 0	M10	12,70	16	OVA 100 HM 01/4 A 0
OVA 120 CM 0127 A 0	M12	12,70	16	



INSTALLATION TOOLS FOR SCREW-IN INSERTS

OVK - Queue hexagonale 1/4" (6,35 mm)

Outil Complet		Composants Outils pour achat au détail	
Référence	Ø intérieur insert	Référence porte Embout	Référence Embout
OVK 030 HM 01/4 A 0	M3	PORTE-OVCOM	EMBOUT-OVCOM3
OVK 040 HM 01/4 A 0	M4	PORTE-OVCOM	EMBOUT-OVCOM4
OVK 050 HM 01/4 A 0	M5	PORTE-OVCOM	EMBOUT-OVCOM5
OVK 060 HM 01/4 A 0	M6	PORTE-OVCOM	EMBOUT-OVCOM6
OVK 080 HM 01/4 A 0	M8	PORTE-OVCOM	EMBOUT-OVCOM8

Lame ressort commune : REF Lame-Ress-OVCOM



Pour pose d'inserts
IVK

OVH - Queue hexagonale 1/4" (6,35 mm) à débrayage automatique

Outil Complet		Composants Outils pour achat au détail	
Référence	Ø intérieur insert		Référence Embout
OVH 030 HM 01/4 A 0	M3		EMBOUT-OVCOM3
OVH 040 HM 01/4 A 0	M4		EMBOUT-OVCOM4
OVH 050 HM 01/4 A 0	M5		EMBOUT-OVCOM5
OVH 060 HM 01/4 A 0	M6		EMBOUT-OVCOM6
OVH 080 HM 01/4 A 0	M8		EMBOUT-OVCOM8

Lame ressort commune : REF Lame-Ress-OVCOM

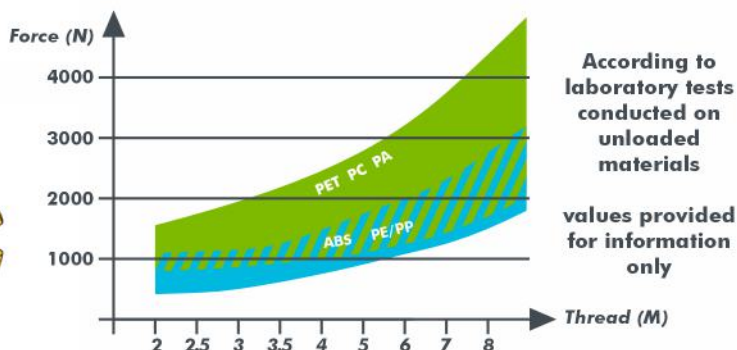


Pour pose d'inserts
IVH

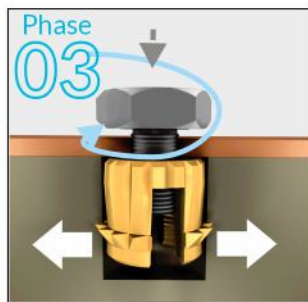
IEC & IEL : EXPANSION INSERT



- **Straightforward** and **quick** manual installation
- Very sharp teeth **for improved penetration** of material
- **Low cost**
- Locking improves **torque resistance** and **holding force**



MOUNTING PRINCIPLE



01 The insert is placed in a cavity which is either drilled or moulded in: the well.

02 The insert is forced into the well by axial pressure, deforming slightly in the process.
The insert will be flush with the material to avoid possible removal due to lever effect.

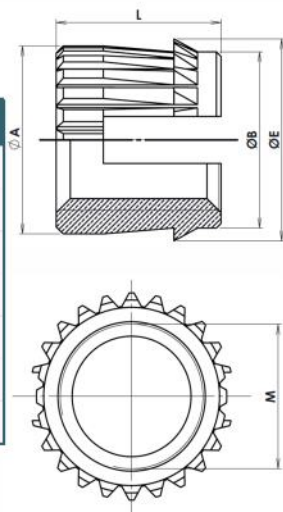
03 As the screw goes in, the insert returns to its original shape, the locking pyramids are forced into the material, providing holding force and torque resistance.
Select a screw long enough to effectively force the locking pyramids into the material.
The screw must never come into contact with the bottom of the well.

IEC TYPE C

Short
with one locking ring

Reference	Thread M (6H)	L(mm)	ØE(mm)	ØA(mm)	ØB(mm)	Well Ø
IE C 020 035 T039 L 0	M2 X 0.40	3.5	3.9	3.5	3.1	3.10
IE C 025 040 T044 L 0	M2.5 X 0.45	4	4.4	4	3.5	3.60 - 3.70
IE C 030 050 T056 L 0	M3 X 0.50	5	5.6	5	4.5	4.60 - 4.70
IE C 035 050 T059 L 0	M3.5 x 0.60	5	5.9	5.5	4.9	5.00 - 5.20
IE C 040 050 T066 L 0	M4 X 0.70	5	6.6	6	5.4	5.50 - 5.70
IE C 050 060 T076 L 0	M5 x 0.80	6	7.6	7	6.5	6.60 - 6.70
IE C 060 070 T086 L 0	M6 X 1.00	7	8.6	8	7.5	7.60 - 7.70

Other dimensions on request

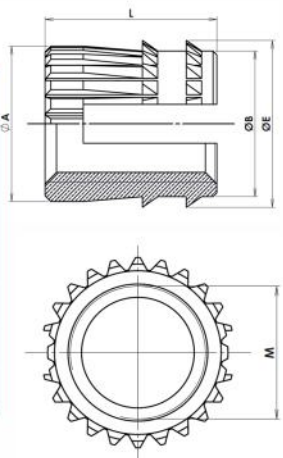


IEL TYPE L

Long
with two locking rings

Reference	Thread M (6H)	L(mm)	ØE(mm)	ØA(mm)	ØB(mm)	Well Ø
IE L 030 080 T056 L 0	M3 X 0.50	8	5.6	5	4.5	4.60 - 4.70
IE L 030 095 T056 L 0	M3 X 0.50	9.5	5.6	5	4.5	4.60 - 4.70
IE L 040 080 T066 L 0	M4 X 0.70	8	6.6	6	5.4	5.50 - 5.60
IE L 040 095 T066 L 0	M4 x 0.70	9.5	6.6	6	5.4	5.50 - 5.60
IE L 050 090 T076 L 0	M5 X 0.80	9	7.6	7	6.5	6.60 - 6.70
IE L 060 090 T086 L 0	M6 x 1.00	9	8.6	8	7.5	7.60 - 7.70
IE L 080 100 T106 L 0	M8 X 1.25	10	10.6	10	9.4	9.50 - 9.60

Other dimensions on request



REFERENCE CODING TABLE

Product	Sub-family	Type	Thread	L	Outer shape	Ø E	Materials	Specification
I	E	C	0 2 0	0 3 5	T	0 3 9	L	0
Insert	Expansion	Short with 1 locking ring	Internal thread M2 (1/10 of mm)	Total length 3.5 mm (1/10 of mm)	Ribbed	Largest Diameter 3.9 mm (1/10 of mm)	Brass CW 614N	None

Sub Families

E Expansion

Screw Insert Type

C Short with 1 locking ring
L Long with 2 locking rings

Material

L Brass CW 614N

Specifications

0 None
N Nickel plating

Other materials or shapes on request

IP : PRESSED-IN INSERT TYPE 1 & 2

- 30° knurl reduces radial loads during installation
- Thinner boss walls
- Pilot point to facilitate positioning



< HEADLESS TYPE 1

WITH HEAD TYPE 2 >

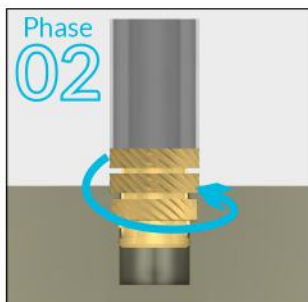
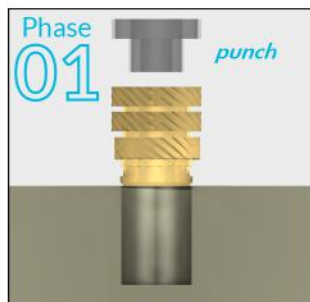


MOUNTING PRINCIPLE

HOLE PREPARATION

The hole will not be chamfered or counterbored and will preferably be moulded to avoid the stresses induced by drilling.

Avoid holes which are too large since they reduce or eliminate self-alignment effects, increasing radial loads and causing the boss to split.



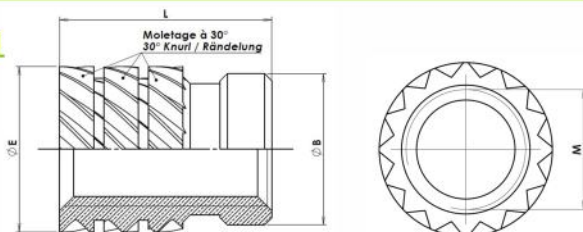
01 Push in the insert, preferably with a press, not a hammer. The insert is forced into a hole, without impact or bouncing, by axial pressure in a press with a punch.

02 The insert rotates slightly in the direction of the knurling. The punch must be smooth to allow the insert to rotate. The insert must be held axially, since any inclination will result in radial loads which may damage the material.

03 Under the effect of the insert, the plastic deforms and takes the specific shape of the insert, thereby guaranteeing good torque resistance and holding force.

IP1 TYPE 1

Headless

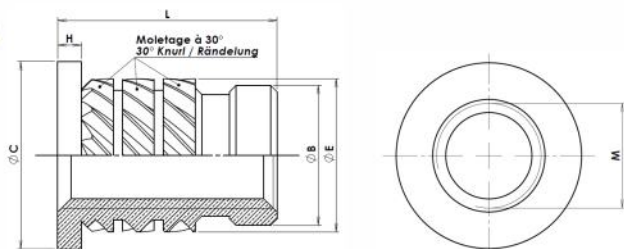


Reference	Thread M (6H)	L(mm)	ØE(mm)	ØB(mm)	Well Ø (mm)
IP 1 025 053 R042 L 0	M2.5 X 0.45	5.3	4.2	3.7	3.8
IP 1 030 053 R042 L 0	M3 x 0.50	5.3	4.2	3.7	3.8
IP 1 040 074 R058 L 0	M4 X 0.70	7.4	5.8	5.3	5.4
IP 1 050 083 R066 L 0	M5 x 0.80	8.3	6.6	6.1	6.2
IP 1 060 092 R082 L 0	M6 X 1.00	9.2	8.2	7.7	7.8
IP 1 080 092 R097 L 0	M8 x 1.25	9.2	9.7	9.3	9.4

Other dimensions on request

IP2 TYPE 2

With head



Reference	Thread M (6H)	L(mm)	ØE(mm)	ØB(mm)	ØC(mm)	H (mm)	Well Ø (mm)
IP 2 030 059 R055 L 0	M3 X 0.50	5.9	4.2	3.7	5.5	0.58	3.8
IP 2 040 083 R071 L 0	M4 x 0.70	8.3	5.8	5.3	7.1	0.89	5.4
IP 2 050 094 R079 L 0	M5 X 0.80	9.4	6.6	6.1	7.9	1.07	6.2
IP 2 060 105 R095 L 0	M6 x 1.00	10.5	8.2	7.7	9.5	1.32	7.8
IP 2 080 105 R111 L 0	M8 X 1.25	10.5	9.7	9.3	11.1	1.32	9.4

Other dimensions on request

REFERENCE CODING TABLE

	Product	Sub-family	Type	Thread	L	Outer shape	Ø E	Materials	Specification
Example	I	P	1	0 2 5	0 5 3	R	0 4 2	L	0
	Insert	Pressed-in	Headless	Internal Thread M2.5 (1/10 of mm)	Total length 5.3 mm (1/10 of mm)	Round	Largest diameter 4.2 mm (1/10 of mm)	Brass CW 614N	None

Sub Families

P Pressed-in

Pressed-in Insert Type

- 1 Headless
2 With Head

Specifications

- 0 None
N Nickel plating

Materials

L Brass CW 614N

Other materials or shapes on request

IU : ULTRASONIC INSERT TYPE 1 & 2

- Clean and fast ultrasonic or heat-transfer installation
- 45° cross knurl increases torque resistance and holding force



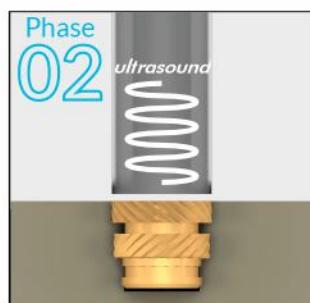
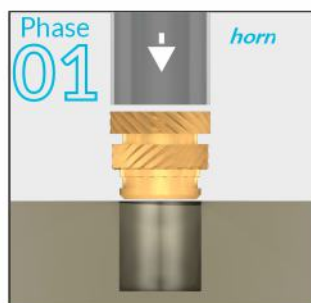
< HEADLESS TYPE 1

WITH HEAD TYPE 2 >



MOUNTING PRINCIPLE HOLE PREPARATION

The hole will have the same diameter as the insert.
Avoid holes which are too large since they reduce or eliminate self-alignment effects, increasing radial loads and causing the boss to split.



01 The insert is forced into a moulded hole under the action of ultrasound.

02 Ultrasonic insertion causes localised melting of the plastic which flows into the specific profile of the insert.

REFERENCE CODING TABLE

	Product	Sub-family	Type	Thread			L			Outer shape	Ø C			Materials	Specification
Example	I	U	1	0	2	0	0	4	0	M	0	3	6	L	0
	Insert	Ultrasonic	Cross knurl without Head	Internal Thread M2 (1/10 of mm)			Total length 4 mm (1/10 of mm)			Knurl	Largest diameter 3,6 mm (1/10 of mm)			Brass CW 614N	None

Sub-families

U Ultrasonic

Ultrasonic Insert Type

- 1 cross knurl, without head
2 cross knurl, with head

Materials

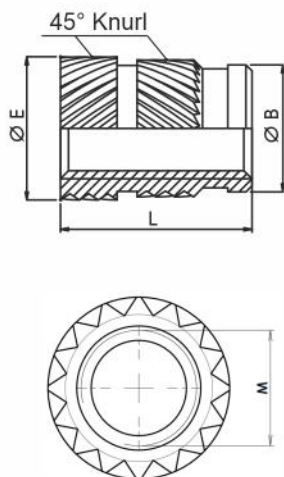
L Brass CW 614N

Specifications

- 0 None
N Nickel plating

IU1 TYPE 1

Headless

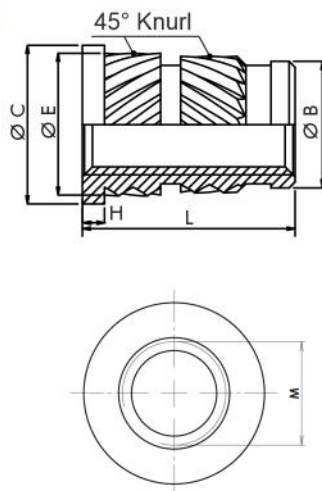


Other dimensions on request

Reference	Thread M (6H)	L (mm)	ØE (mm)	ØB (mm)	Well Ø (mm)
IU 1 020 040 M036 L 0	M2 X 0.40	4	3.6	3.1	3.2
IU 1 025 040 M046 L 0	M2.5 x 0.45	4	4.6	3.9	4.0
IU 1 025 057 M046 L 0	M2.5 X 0.45	5.7	4.6	3.9	4.0
IU 1 030 040 M046 L 0	M3 x 0.50	4	4.6	3.9	4.0
IU 1 030 057 M046 L 0	M3 X 0.50	5.7	4.6	3.9	4.0
IU 1 035 071 M054 L 0	M3.5 x 0.60	7.1	5.4	4.7	4.8
IU 1 040 040 M063 L 0	M4 X 0.70	4.0	6.3	5.5	5.6
IU 1 040 072 M063 L 0	M4 x 0.70	7.2	6.3	5.5	5.6
IU 1 040 081 M063 L 0	M4 X 0.70	8.1	6.3	5.5	5.6
IU 1 050 082 M071 L 0	M5 x 0.80	8.2	7.1	6.3	6.4
IU 1 050 095 M071 L 0	M5 X 0.80	9.5	7.1	6.3	6.4
IU 1 060 095 M087 L 0	M6 x 1.00	9.5	8.7	7.9	8.0
IU 1 060 127 M087 L 0	M6 X 1.00	12.7	8.7	7.9	8.0
IU 1 080 095 M102 L 0	M8 x 1.25	9.5	10.2	9.5	9.6
IU 1 080 127 M102 L 0	M8 X 1.25	12.7	10.2	9.5	9.6
IU 1 100 127 M125 L 0	M10 x 1.50	12.7	12.5	11.8	11.9

IU2 TYPE 2

With head



Reference	Thread M (6H)	L (mm)	ØE (mm)	ØB (mm)	Well Ø (mm)	ØC (mm)	H (mm)
IU 2 020 046 R048 L 0	M2 X 0.40	4.6	3.6	3.1	3.2	4.8	0.5
IU 2 025 064 R055 L 0	M2.5 x 0.45	6.4	4.6	3.9	4	5.5	0.6
IU 2 030 064 R055 L 0	M3 X 0.50	6.4	4.6	3.9	4	5.5	0.6
IU 2 035 079 R064 L 0	M3.5 x 0.60	7.9	5.4	4.7	4.8	6.4	0.75
IU 2 040 047 R075 L 0	M4 X 0.70	4.7	6.3	5.5	5.65	7.5	0.7
IU 2 040 090 R071 L 0	M4 X 0.70	9	6.3	5.5	5.6	7.1	0.9
IU 2 050 106 R079 L 0	M5 x 0.80	10.6	7.1	6.3	6.4	7.9	1.1
IU 2 060 140 R095 L 0	M6 X 1.00	14	8.7	7.9	8	9.5	1.35
IU 2 080 140 R111 L 0	M8 x 1.25	14	10.2	9.5	9.6	11.1	1.35
IU 2 100 143R140 L 0	M10 X 1.50	14.3	12.6	11.8	11.9	14	1.6

Other dimensions on request

MOULDED-IN INSERT



**ISB Ribbed :
Blind Type**

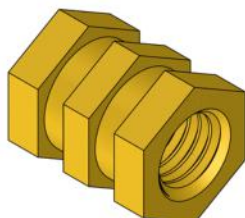


**ISD Ribbed :
Open Type**

- Very high torque resistance and holding force
- Assembly in hidden time possible
- Suitable for plastic rotational moulding and injection
- Various outer shapes



**ISB Hexagonal :
Blind Type**



**ISD Hexagonal :
Open Type**

CODE READING KEY

	Product	Sub-family	Type	Thread			L			Outer shape	Ø C	Materials	Specification
Exemple	I	S	B	0	4	0	0	6	0	T	0 6 5	L	0
	Insert	Moulded-in	Blind	Internal thread M4.0 (1/10 of mm)			Total length 6.0 mm (1/10 of mm)			Ribbed	Largest diameter 6.5 mm (1/10 of mm)	Brass CW 614N	None

Sub Families

S Moulded-in

Moulded-in Insert type

B Blind

D Open

Externe Form

T Ribbed

H Hexagonal

Materials

L Brass CW 614N

A Hardened steel

1 Inox 1.4305 (A1-303)

2 Inox 1.4567 (A2-304Cu)

4 Inox 1.4404 (A4-316L)

5 Inox 1.4571 (A5-316Ti)

Specifications

0 None

N Nickel plating

ZnNi Zinc Nickel

Other materials or shapes on request

Special inserts to customer specifications

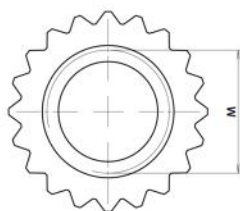
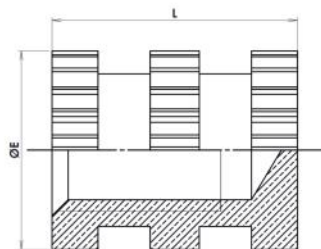
SECAM manufactures parts for all specific requests



MOULDED-IN INSERT WITH RIBBED PROFILE

ISB TYPE B BLIND

Insert with ribbed profile

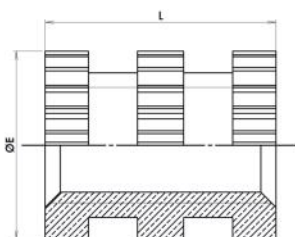


Other dimensions on request

Reference	Thread M (6H)	L (mm)	Number of grooves	ØE (mm)	Insert thickness (mm)
IS B 025 060 T045 L 0	M2,5 x 0,45	6	2	4,5	1,95
IS B 025 066 T045 L 0	M2,5 x 0,45	6,6	2	4,5	1,95
IS B 025 085 T045 L 0	M2,5 x 0,45	8,5	2	4,5	1,95
IS B 030 055 T056 L 0	M3 x 0,5	5,5	1	5,6	2,4
IS B 030 090 T056 L 0	M3 x 0,5	9	2	5,6	2,4
IS B 040 060 T065 L 0	M4 x 0,7	6	1	6,5	3,2
IS B 040 080 T065 L 0	M4 x 0,7	8	1	6,5	3,2
IS B 040 095 T065 L 0	M4 x 0,7	9,5	1	6,5	3,2
IS B 040 120 T065 L 0	M4 x 0,7	12	2	6,5	3,2
IS B 040 140 T065 L 0	M4 x 0,7	14	3	6,5	3,2
IS B 050 090 T075 L 0	M5 x 0,8	9	1	7,5	4,1
IS B 050 120 T085 L 0	M5 x 0,8	12	2	8,5	4,1
IS B 050 160 T085 L 0	M5 x 0,8	16	3	8,5	4,1
IS B 060 090 T085 L 0	M6 x 1	9	1	8,5	4,9
IS B 060 100 T085 L 0	M6 x 1	10	1	8,5	4,9
IS B 060 120 T085 L 0	M6 x 1	12	2	8,5	4,9
IS B 060 160 T085 L 0	M6 x 1	16	3	8,5	4,9
IS B 060 180 T085 L 0	M6 x 1	18	3	8,5	4,9
IS B 080 140 T105 L 0	M8 x 1,25	14	2	10,5	6,6
IS B 080 160 T105 L 0	M8 x 1,25	16	3	10,5	6,6
IS B 080 190 T105 L 0	M8 x 1,25	19	3	10,5	6,6
IS B 080 230 T105 L 0	M8 x 1,25	23	3	10,5	6,6

ISD TYPE D OPEN

Insert with ribbed profile



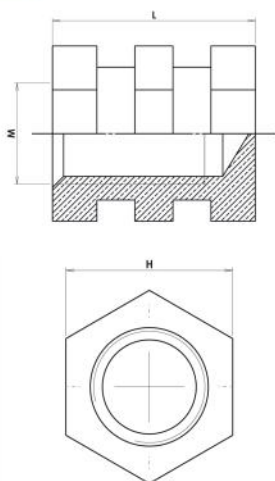
Other dimensions on request

Reference	Thread M (6H)	L (mm)	Number of grooves	ØE (mm)	Insert thickness (mm)
IS D 030 080 T056 L 0	M3 x 0,5	8	2	5,6	2,4
IS D 030 100 T056 L 0	M3 x 0,5	10	2	5,6	2,4
IS D 040 050 T065 L 0	M4 x 0,7	5	1	6,6	3,2
IS D 040 060 T065 L 0	M4 x 0,7	6	1	6,5	3,2
IS D 040 080 T065 L 0	M4 x 0,7	8	2	6,5	3,2
IS D 050 115 T075 L 0	M5 x 0,8	11,5	1	7,6	4,1
IS D 060 080 T085 L 0	M6 x 1	8	1	8,5	4,9
IS D 060 100 T085 L 0	M6 x 1	10	2	8,6	4,9
IS D 080 150 T105 L 0	M8 x 1,25	15	3	10,6	6,6

MOULDED-IN INSERT WITH HEXAGONAL PROFILE

ISB TYPE B BLIND

Insert with hexagonal profile

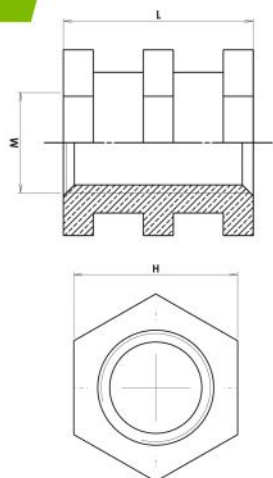


Reference	Thread M (6H)	L (mm)	Number of grooves	H (hexagone) (mm)	Min. hole diameter (mm)
IS B 050 090 H100 L 0	M5x0.80	9	2	10	4.1
IS B 050 150 H090 L 0	M5x0.80	15	2	9	4.1
IS B 060 120 H120 L 0	M6x1.00	12	1	12	4.9
IS B 060 150 H130 L 0	M6x1.00	15	1	13	4.9
IS B 060 200 H140 L 0	M6x1.00	20	1	14	4.9
IS B 080 160 H120 L 0	M8x1.25	16	2	12	6.6
IS B 080 190 H130 L 0	M8x1.25	19	3	13	6.6
IS B 080 250 H120 L 0	M8x1.25	25	3	12	6.6
IS B 100 160 H140 L 0	M10x1.50	16	1	14	8.33
IS B 100 200 H140 L 0	M10x1.50	20	1	14	8.33
IS B 100 350 H130 L 0	M10x1.50	35	3	13	8.33
IS B 120 280 H170 L 0	M12x1.75	28	3	17	10.06
IS B 140 280 H200 L 0	M14x2.00	28	3	20	11.8

Other dimensions on request

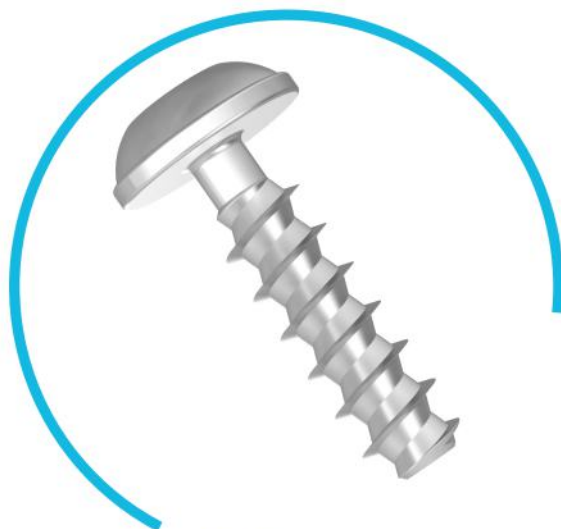
ISD TYPE D OPEN

Insert with hexagonal profile



Reference	Thread M (6H)	L (mm)	Number of grooves	H (hexagone) (mm)	Min. hole diameter (mm)
IS D 030 050 H050 L 0	M3x0.50	5	1	5	2.4
IS D 030 060 H050 L 0	M3x0.50	6	1	5	2.4
IS D 040 060 H130 L 0	M4x0.70	6	1	13	3.2
IS D 050 095 H080 L 0	M5x0.80	9.5	2	8	4.1
IS D 060 060 H090 L 0	M6x1.00	6	1	9	4.9
IS D 060 150 H100 L 0	M6x1.00	15	1	10	4.9
IS D 060 180 H140 L 0	M6x1.00	18	1	14	4.9
IS D 080 120 H130 L 0	M8x1.25	12	1	13	6.6
IS D 100 120 H140 L 0	M10x1.50	12	1	14	8.33

Other dimensions on request



Self-forming Screws

Hbplast
Hbpal

CHOICE GUIDE

	Thermoplastics			Thermosets	Steel sheets	Light Alloys	Metals
	Soft	Medium	Hard	Medium/Hard			
Hardness	<≈ 70 Shore D	70-85 Shore D	>≈ 85 Shore D Rockwell M	>≈ 90 Shore D >≈ 85 Rockwell M			
Modulus of elasticity in bending & tension	<≈ 1,5 Gpa	1,5<3 Gpa	>≈ 3 Gpa	>≈ 3 Gpa			
Commodity Plastics Technical Plastics High-performance Plastics	PE-BD PE-HD PP	PA 6.6 Rigid PVC ABS POM PET PTFE PSU	PC PC 30%fv PET 35%fv PPS PAI PEEK PI	EP PUR Loaded UP PF		Aluminium alloys Magnesium alloys	All plastically deformable metals, max. 135 HB (Rm = 450 N/mm²)
HBplast	😊	😊	😊	😊	😊	😊	😊
HBpal	😊	😊	😊	😊	😊	😊	😊
HBpal + slot	😊	😊	😊	😊	😊	😊	😊
HBpaltril	😊	😊	😊	😊	😊	😊	😊
HBtol	😊	😊	😊	😊	😊	😊	😊

Values are given for information only, each material is specific and has its own properties

😊 Suitable 😊 May be suitable 😊 Unsuitable

ASSEMBLY RECOMMENDATIONS

The thread is formed by heating the plastic. We recommend using an electric or pneumatic screwdriver.

A speed of between 500 and 600 r.p.m. is required in thermoplastics and between 300 and 1000 r.p.m. in light alloys

Excessive speed may damage the material and destroy the thread.

SCREW DRIVES



Hexagonal socket



Cruciform Z Pozidrive



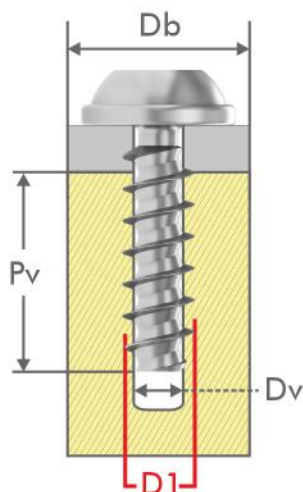
Cruciform H Phillips



Advantages of the torx drive

- Increases the torque transmission
- Limits the tool pressure on the screw
- No slipping of the tool in the screw drive
- Reduces wear on the screw drive and the screwdriver
- Suitable for all types of screw

BOSS DESIGN



Db = Boss outer $\varnothing$
 Pv = Screw inner $\varnothing$
 Pv = Screwing depth
 $D1$ = Screw nominal $\varnothing$

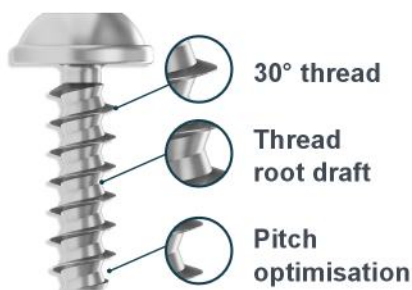
In **thermoplastics**,
refer to the complete diagram p 30
In **thermosets**,
refer to the complete diagram p 32
In **light alloys**,
refer to the complete diagram p 32

	Dv	Db	Pv
Thermoplastics			
PE-BD	0.70 x D1	2.00 x D1	2.00 x D1
PP	0.70 x D1	2.00 x D1	2.00 x D1
ASA	0.75 x D1	2.00 x D1	2.00 x D1
PP - 20% talc	0.72 x D1	2.00 x D1	2.00 x D1
PA4.6	0.73 x D1	1.85 x D1	1.80 x D1
SAN	0.77 x D1	2.00 x D1	1.90 x D1
PE-HD	0.75 x D1	1.80 x D1	1.80 x D1
PA6	0.75 x D1	1.85 x D1	1.70 x D1
PET	0.75 x D1	1.85 x D1	1.70 x D1
POM	0.75 x D1	1.95 x D1	2.00 x D1
PBT	0.75 x D1	1.85 x D1	1.70 x D1
PA6.6	0.75 x D1	1.85 x D1	1.70 x D1
ABS	0.80 x D1	2.00 x D1	2.00 x D1
Mélange ABS/PC	0.80 x D1	2.00 x D1	2.00 x D1
Rigid PVC	0.80 x D1	2.00 x D1	2.00 x D1
PA4.6 - 30% FV	0.80 x D1	1.85 x D1	1.80 x D1
PMMA	0.85 x D1	2.00 x D1	2.00 x D1
PPO *	0.85 x D1	2.50 x D1	2.20 x D1
PS	0.80 x D1	2.00 x D1	2.00 x D1
PC *	0.85 x D1	2.50 x D1	2.20 x D1
PA6 - 30% FV	0.80 x D1	2.00 x D1	1.90 x D1
PBT - 30% FV	0.80 x D1	1.80 x D1	1.70 x D1
PC - 30% FV *	0.85 x D1	2.20 x D1	2.00 x D1
PET - 30% FV	0.80 x D1	1.80 x D1	1.70 x D1
Thermosets			
PF Phenolic Resin	0.85 x D1	2.0 x D1 - 3.0 x D1	6.6 x D1 - 8.5 x D1
Melamine Resin	0.88 x D1	2.0 x D1 - 3.0 x D1	6.6 x D1 - 8.5 x D1
UP Polyester Resin	0.85 x D1	2.0 x D1 - 3.0 x D1	6.6 x D1 - 8.5 x D1
Light Alloys			
Soft	0.80 x D1	1.5 x D1 - 2.5 x D1	2.5 x D1
Medium	0.80 x D1	1.5 x D1 - 2.5 x D1	2.5 x D1
Hard	0.80 x D1	1.5 x D1 - 2.5 x D1	2.5 x D1

* A pilot hole is strongly recommended in materials sensitive to cracking

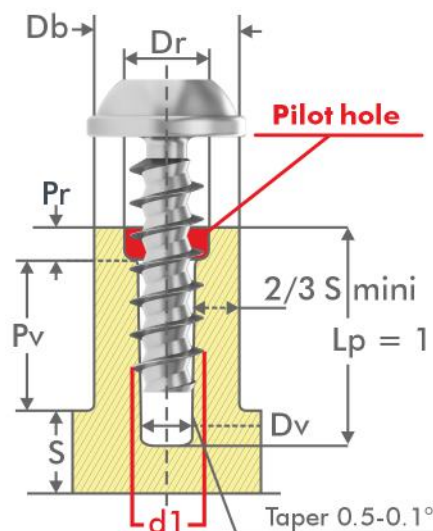
CODE READING KEY

Screw type	Diameter (d) (1/10 mm)	Total length (1/10 mm)	Head shape	Screw drive	Material+ Heat treatment	Finish (surface treatment)	Special requirement
VP	0 4 0	0 8 0	CB	X	J	0 1	0
HBplast VP	014	min	Fillister Head	Phillips H	Classe 10.9 equivalent Steel	Untreated 00	None
	016	2 x d	Large Washer	Pozidrive Z	J		0
HBpal VB	018	025	Countersunk	Torx X	Classe 8.8 equivalent Steel	White 01 à 39	Off-plan Part p
	020	050	Domed Countersunk	Slot F	G		
HBpal + cutting slot VG	022	060	Hexagonal	Hex socket G		Black 40 à 69	
	025		Hexagonal	Tamper Proof Torx T	Stainless Steel A2 2	Yellow 70 à 89	
HBpaltril VC	030		Hexagonal	Phillips + Slot A			
	035	080	Hexagonal	Pozidrive + Slot B			
HBtol VD	040	max.	Hex. Washer Head	6 lobes + Slot C	Stainless Steel A4 4	Other 90 à 99	
	050	10 x d	HE				

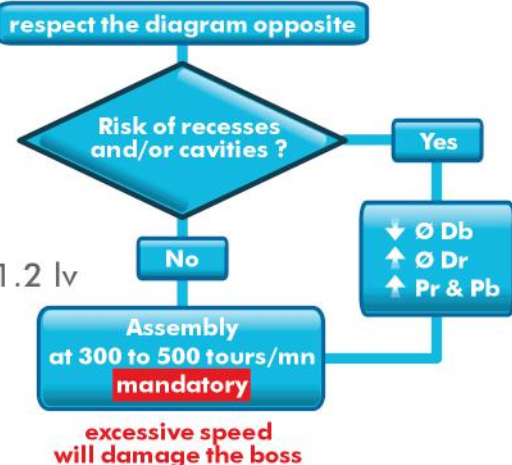


- High resistance to vibrations
- Reduced stresses on the boss
- Increased material flow
- Increased holding force
- Reduced risk of shearing
- Reduced installation cycle time

MOUNTING PRINCIPLE



Boss design



MANUFACTURING PROGRAM

Lv	D1	1.4	1.6	1.8	2.0	2.2	2.5	3.0	3.5	4.0	5.0
3	3.5										
4	4.5										
5	6										
7	8										
10	12										
14	16										
18	20										
22	25										
30	35										
40	50										

Values in mm

For countersunk heads, add 2 mm to the length

DIMENSIONS

			μ micro screws Classe 8.8 equivalent						screws Classe 10.9 equivalent			
			1.4	1.6	1.8	2.0	2.2	2.5	3.0	3.5	4.0	5.0
Thread $\varnothing$	$d1$		0.84	0.92	1.04	1.15	1.25	1.4	1.7	1.9	2.2	2.7
Core $\varnothing$	$d2$		0.62	0.67	0.8	0.9	1.00	1.15	1.35	1.57	1.8	2.25
Pitch	P		1.4	1.6	1.8	2.0	2.2	2.5	3.0	3.5	4.0	5.0
Max. clearance X	L > 3.d1		0.7	0.8	0.9	1.0	1.1	1.3	1.5	1.8	2.0	2.5
	L < 3.d1											

Fillister head - CB

Head $\varnothing$	D	2.8	3.2	3.6	3.8	4.0	4.2	5.6	6.9	7.5	8.2
Head height	K	1	1.1	1.3	1.4	1.5	1.6	2.2	2.4	2.7	3
Torx X											
Width/Size m/T		1.5/5	1.75/6	1.75/6	1.75/6	1.75/6	2.40/8	2.80/10	2.80/10	3.95/20	3.95/20
Depth t min.		0.5	0.5	0.5	0.65	0.65	0.70	1.00	1.10	1.25	1.40
max.		0.65	0.65	0.65	0.80	0.80	0.90	1.30	1.40	1.70	1.80

Head $\varnothing$	D	2.4	2.6	3.2	3.5	3.9	4.4	5.3	6.2	7.0	8.8
Head height	K	1	1.1	1.2	1.5	1.6	1.75	2.15	2.5	2.7	3.4
Cruciform Z											
Width/Size m/T		-	1.7/0	1.8/0	2.4/1	2.4/1	2.6/1	2.9/1	3.8/1	4.2/2	4.9/2
Depth t min.		-	0.55	0.7	0.85	0.95	1.05	1.30	1.40	1.65	2.25
max.		-	0.8	0.95	1.10	1.20	1.35	1.60	1.70	1.95	2.65
Cruciform H											
Width/Size m/T		1.6/0	1.6/0	1.8/0	2.3/1	2.3/1	2.6/1	2.9/1	3.8/2	4.2/2	4.9/2
Depth t min.		0.47	0.55	0.7	0.64	0.70	0.90	1.20	1.20	1.50	2.50
max.		0.77	0.85	1	1.10	1.10	1.30	1.60	1.70	2.10	3.10

Fillister head False Washer Large - RL

Head Ø	D		4.0	4.5	5.0	6.0	7.0	8.0	10.0	
Head height	K	ON REQUEST	1.7	1.7	2.0	2.4	2.8	3.2	3.6	
Base thickness	S		0.7	0.7	0.8	0.9	1.0	1.1	1.3	
Torx X										
		Width/Size m	1.75/6	1.75/6	2.4/8	2.8/10	2.8/10	3.9/20	3.9/20	
		Depth t min.	ON REQUEST	0.5	0.65	0.7	1.00	1.10	1.25	1.40
		max		0.65	0.80	0.90	1.30	1.40	1.65	1.80

Head Ø	D		4.0	4.4	5.0	6.0	7.0	8.0	10.0		
Head height	K	ON REQUEST	1.5	1.7	1.9	2.2	2.5	2.6	3.1		
Base thickness	S		0.6	0.6	0.7	0.8	0.9	1.1	1.3		
Cruciform Z		Width/Size	m	-	2.3/1	2.5/1	2.6/1	2.9/1	3.8/2	4.2/2	4.9/2
		Depth t	min.	-	0.75	0.80	1.0	1.05	1.10	1.40	2.00
		max.	-	0.95	1.00	1.00	1.25	1.45	1.50	1.80	2.40
Cruciform H		Width/Size	m		2.3/1	2.4/1	2.6/1	2.9/1	3.5/2	4.1/2	4.8/2
		Depth t	min.	ON REQUEST	0.51	0.68	0.82	1.15	1.07	1.33	1.98
		max.		0.97	1.14	1.28	1.61	1.70	1.96	2.61	

Countersunk head - FR

Head Ø	D	ON REQUEST	3.4	3.6	3.8	4.7	5.5	7.3	8.4	9.3
Head height	c		0.35	0.35	0.35	0.35	0.35	0.40	0.45	0.50
Torx X		Width/Size m/T	1.75/6	1.75/6	1.75/6	2.4/8	2.40/10	3.35/15	3.95/20	3.95/25
	Depth t min.	ON REQUEST	0.5	0.50	0.65	0.70	0.80	1.00	1.25	1.25
	max.		0.65	0.65	0.80	0.90	1.00	1.30	1.70	1.70

Head Ø	D	ON REQUEST	3	3.8	3.8	4.7	5.5	7.3	8.4	9.3	
Head height	c		0.3	0.35	0.35	0.35	0.35	0.40	0.45	0.50	
Cruciform Z		Width/Size m/T	-	1.6/1	2.2/1	2.2/1	2.6/1	2.7/1	4.0/2	4.2/2	4.6/2
		Depth t min.	-	0.56	0.92	0.92	1.09	1.20	1.47	1.70	2.06
		max.	-	0.81	1.17	1.17	1.34	1.45	1.93	2.16	2.52
Cruciform H		Width/Size m	1.6/1	2.35/1	2.35/1	2.6/1	2.7/1	3.9/2	4.2/2	4.6/2	
		Depth t min.	ON REQUEST	0.5	0.95	0.95	1	1.10	1.33	1.59	2.04
		max.		0.8	1.25	1.25	1.40	1.55	1.96	2.22	2.67

$d1$ = Screw nominal $\varnothing$

Db = Boss outer $\varnothing$

S = Wall thickness

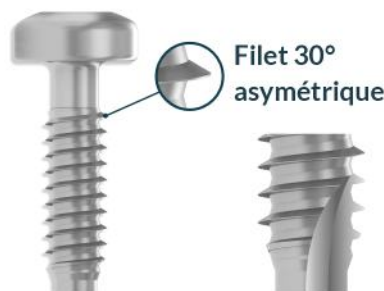
Dv = Screw inner $\varnothing$

Lp = well height - 1,1 to 1,2 L

Pv = Screwing depth

Pr = pilot hole height - 0.3 to 0.5 $d1$

Dr = pilot hole $\varnothing$ - 1.05 $d1$



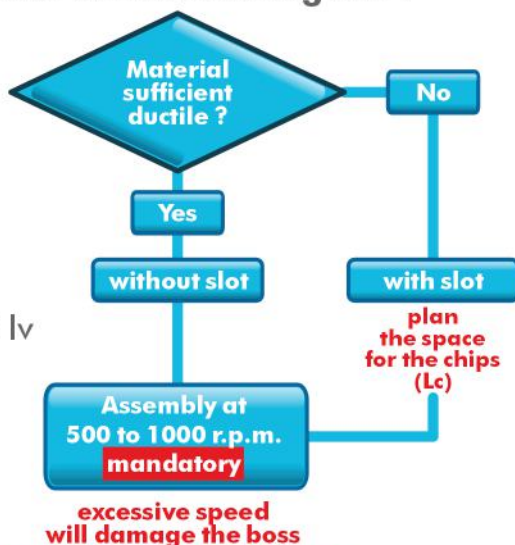
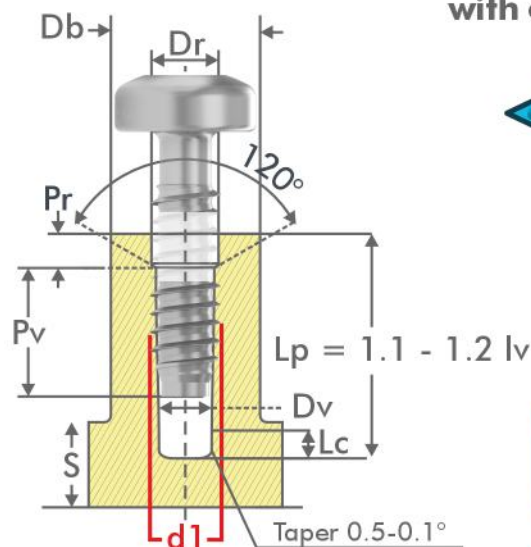
- High resistance to vibrations, high holding force
- Hard thermoplastics & Thermosets
- Light alloys (aluminium, magnesium, etc.)

Cutting slot option

- Reduces the screwing torque and the radial pressure
- Reduces the cut material by 80 %

MOUNTING PRINCIPLE

with or without cutting slot ?



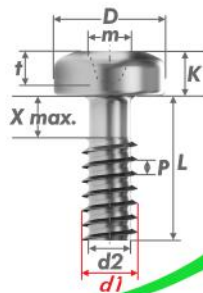
MANUFACTURING PROGRAM

Lv	D1	2.2	2.5	3.0	3.5	4.0	5.0	6.0	8.0
±0.60	6								
	7								
±0.75	8								
	10								
±0.90	12								
	14								
	16								
	18								
±1.05	20								
	25								
	30								
	35								
±1.25	40								
	50								
±1.50	60								
	70								
±1.75	80								

Values in mm

For countersunk heads, add 2 mm to the length

DIMENSIONS

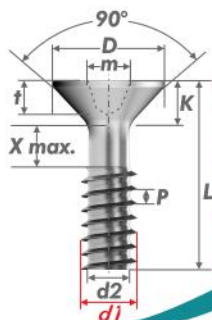


		µmicro screws Classe 8.8 equivalent		screws Classe 10.9 equivalent					
Thread Ø	d1	2.2	2.5	3.0	3.5	4.0	5.0	6.0	8.0
Core Ø	d2	1.59	1.81	2.18	2.56	2.93	3.68	4.42	5.91
Pitch	P	0.71	0.77	0.86	0.95	1.04	1.23	1.42	1.79
Max. clearance X	L > 3.d1	2.2	2.3	2.6	2.9	3.2	3.7	4.3	5.4
	L < 3.d1	1.1	1.3	1.5	1.8	2.0	2.5	3.0	-

Fillister head - CB

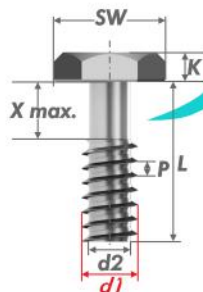
Head Ø	D	4.0	5.0	6	7	8	10	12	16
Head height	K	1.6	2.0	2.4	2.7	3.2	3.8	4.6	6
Torx X	Width/Size	m/T	1.75/6	2.4/8	2.8/10	3.35/15	3.95/20	4.5/25	5.6/30
			min.	0.50	0.90	1.00	1.20	1.40	1.60
			max.	0.70	1.10	1.30	1.50	1.80	2.00

Head Ø	D	4	5	6	7	8	10	12	16
Head height	K	1.6	2	2.4	2.7	3.1	3.8	4.6	6.0
Cruciform Z	Width/Size	m/T	2.4/1	2.6/1	3.0/1	4.0/2	4.3/2	5.0/2	6.7/3
			min.	1.1	1.27	1.68	1.65	1.90	2.64
			max.	1.35	1.52	1.93	2.11	2.36	3.1
Cruciform H	Width/Size	m/T	2.5/1	2.4/1	3.1/1	4.2/2	4.6/2	5.3/2	6.8/3
			min.	1.1	1.3	1.7	1.74	2.04	2.77
			max.	1.4	1.6	2	2.24	2.54	3.27



Countersunk head - FR

Head Ø	D	3.8	4.7	5.6	6.5	7.5	9.2	11	14.5
Head height	K	1.10	1.40	1.70	2.00	2.30	2.70	3.30	4.20
Torx X	Largeur/Taille	m	175/6	2.4/8	2.8/10	3.35/15	3.95/20	4.5/25	5.6/30
			Profondeur t	min.	0.60	0.90	1.00	1.20	1.40
			max.	0.80	1.10	1.30	1.50	1.80	2.00
Cruciform Z	Largeur/Taille	m	2.2/1	2.3/1	2.8/1	3.7/2	4.0/2	4.4/2	6.1/3
			Profondeur t	min.	0.92	1.22	1.48	1.34	1.60
			max.	1.17	1.47	1.73	1.80	2.06	2.51
Cruciform H	Largeur/Taille	m	2.35/1	1.7/1	2.9/1	3.9/2	4.4/2	4.6/2	6.6/3
			Profondeur t	min.	0.95	1.25	1.50	1.40	1.90
			max.	1.25	1.55	1.80	1.90	2.40	2.60



Hexagonal Head - HG

Distance across the flats	SW	4.0	5.0	5.5	6	7	8	10	13
Head height	K	1.40	1.70	2.00	2.40	2.80	3.50	4.00	5.30

d1 = Screw nominal Ø

Db = Boss outer Ø

S = Wall thickness

Dv = Screw inner Ø

Lc = Space for the chips

Lp = well height - 1,1 to 1,2 L

Pv = Screwing depth

Pr = pilot hole height - 0.3 to 0.5 d1

Dr = pilot hole Ø - 1.05 d1



Standard and
Custom Fasteners

Standard and Custom Fasteners

- Our experience and knowledge of the market allow us to offer standardized, semi-standardized or specially manufactured fasteners
- We frequently suggest re-engineering by combining different processes such as machining and cold stamping, which can significantly reduce costs.



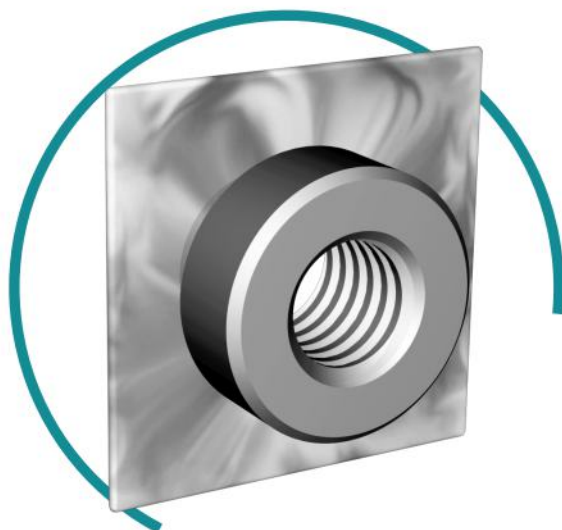
All standards on request



**lobed screw
for metals**
DIN 7500



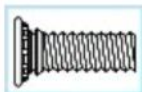
**screw
for sheet metal**
DIN 7975



Sheet Metal Fasteners

Rivet stud & nut
Deformable rivet nut

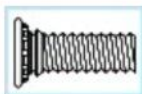
GS



RIVET STUD

- **Diameters** : M3 to M8
- **Lengths** : 6mm to 35mm
- **Materials** : White zinc-plated steel (Cr3), Stainless steel, Aluminium

GS



RIVET STUD FOR HARD STAINLESS STEEL

- **Diameters** : M3 to M6
- **Lengths** : 6mm to 35mm
- **Materials** : AISI 400 series

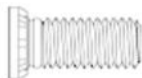
GS



SMOOTH RIVET STUD

- **Diameters** : 3mm to 6mm
- **Lengths** : 8mm to 20mm
- **Materials** : White zinc-plated steel (Cr3), Stainless steel

GS



LARGE THICK HEAD RIVET STUD

- **Diameters** : M5 to M10
- **Lengths** : 15mm to 50mm
- **Materials** : White zinc-plated steel (Cr3), Stainless steel

on request

GS

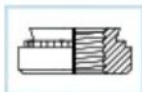


REDUCED THIN HEAD RIVET STUD

- **Diameters** : M2.5 to M5
- **Lengths** : 6mm to 35mm
- **Materials** : White zinc-plated steel (Cr3), Stainless steel

on request

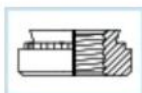
ES



RIVET NUT

- **Diameters** : M3 to M8, 4 UNC/F to 1/4" UNC/F
- **Materials** : White zinc-plated steel (Cr3),
Stainless steel

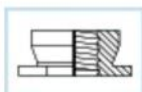
ES



RIVET NUT FOR HARD STAINLESS STEEL

- **Diameters** : M3 to M6
- **Materials** : AISI 400 series

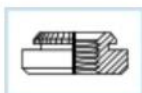
ES



FLUSH RIVET NUT

- **Diameters** : M2.5 to M6, 4 UNC/F to 1/4" UNC/F
- **Materials** : White zinc-plated steel (Cr3),
Stainless steel

ES

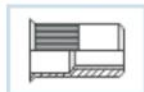


RIVET NUT

- **Diameters** : M2.5 to M5
- **Materials** : White zinc-plated steel (Cr3),
Stainless steel

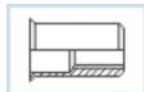
DEFORMABLE RIVET NUTS

RIBBED BODY – FLUSH HEAD



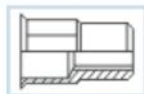
- Diameters : M3 to M8

SMOOTH BODY – FLUSH HEAD



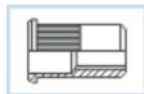
- Diameters : M3 to M8

HEXAGONAL BODY – FLUSH HEAD



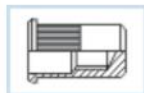
- Diameters : M4 to M8

RIBBED BODY CYLINDRICAL HEAD



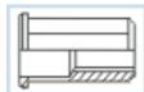
- Diameters : M3 to M8

RIBBED BODY – BLIND CYLINDRICAL HEAD

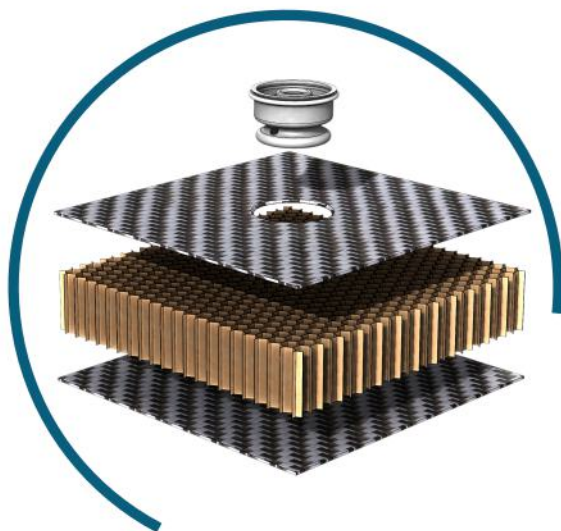


- Diameters : M4 to M8

HEXAGONAL BODY CYLINDRICAL HEAD



- Diameters : M4 to M10



Composites Fasteners

SECAMplate
SECAMnida®
SECAMautofix®

FOR COMPOSITE PANELS AND OVERMOULDING

GCP



STUDS

- **Thread** : from M4 to M10
- **Useable Length** : from 3.2 to 40mm
- **Platinum** : according to reference
- **Material** : Zinc-plated steel, A4 stainless steel

ICP



INSERT

- **Thread** : from M4 to M10 - selon référence
- **Useable Length** : from 3.2 to 40mm
- **Platinum** : according to reference
- **Material** : Zinc-plated steel, A4 stainless steel

ECP



FLANGE NUTS

- **Thread** : from M4 to M10
- **Useable Length** : from 3.2 to 40mm
- **Platinum** : according to reference
- **Material** : Zinc-plated steel, A4 stainless steel

HCP



HEXAGON NUTS

- **Thread** : from M4 to M10
- **Useable Length** : from 3.2 to 40mm
- **Platinum** : according to reference
- **Material** : Zinc-plated steel, A4 stainless steel

SPECIFY ONLINE REFERENCE



<https://secam-fixing.com/fasteners-for-composites-multi-materials/fasteners-for-splate-composites/>



SANDWICH & HONEYCOMB PANELS



- Insert held in place by crimping operation
- Easy and reliable glue injection
- A visual inspection of the filling via the second vent hole.
- No additional finishing operations



Simple

Immediate handling after crimping
No needs for finishing operations



Strong

Higher mechanical strength



Light

50 % weight reduction

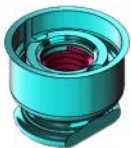


Fast

4 time quicker installation time
than conventional potted-in insert

Range of Applications

- Total Panel Thickness : 8 to 40 mm
- Insert Material : Aluminium or Stainless Steel
- Skin Thickness : 0,5 to 2 mm
- Thread : M3 to M8 or Imperial



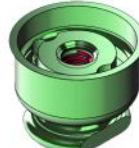
1/4-28 UNF



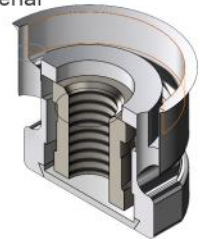
10-32 UNF



08-32 UNC



06-32 UNC



Floating SECAMnida
+/-1mm in x/y

**Installation process
can be fully automated**

in partnership with



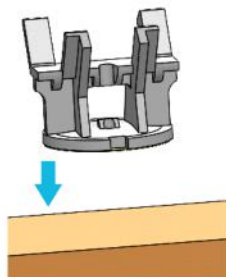
GEBE2

Europe Technologies group



Optimized Bonding Fasteners for composites

- Fastener held in place by pre-gluing
- Easy and reliable glue injection
- Guaranteed filling: patented foot shape & inspection indicator
- Quote and manufacturing on special requirement only

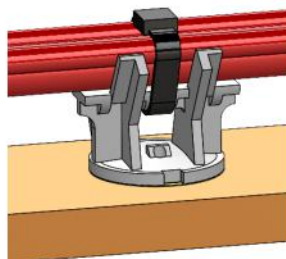
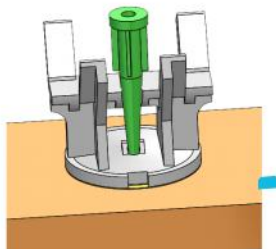


1

Peel off lid

2

Pre-gluing



3

Perfect glue filling
with fill indicator

4

Cable installation



HBP Group

Family owned company since 1975, HBP Group is your partner for R&D staff.
We support our customers from collaborative design to industrialization.

We bring real solutions to our customers, managing global
and multi-technology projects.



Bouverat Pernat

Innovative machining
Industrialization and production
of mechanical components and sub-assemblies

Nanoceram

Ceramic technologies
Solutions in technical ceramics

SECAM

Fixing Solutions
Engineering fasteners for plastics,
composites and lightweight materials

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