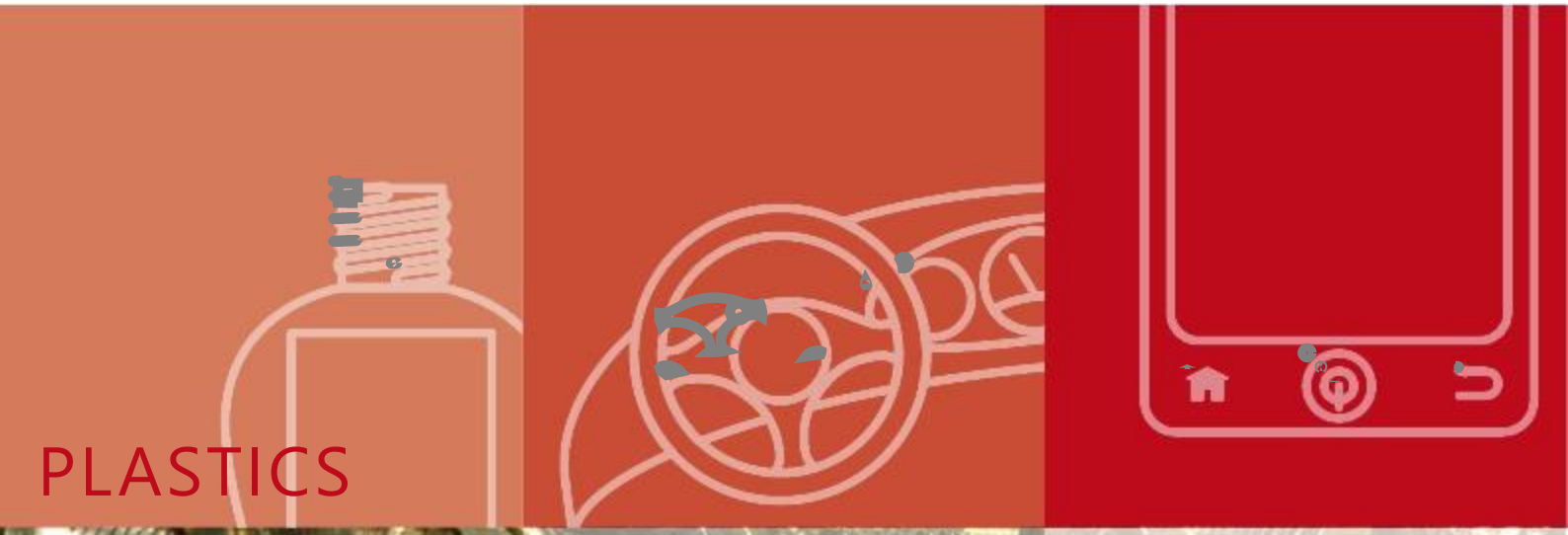
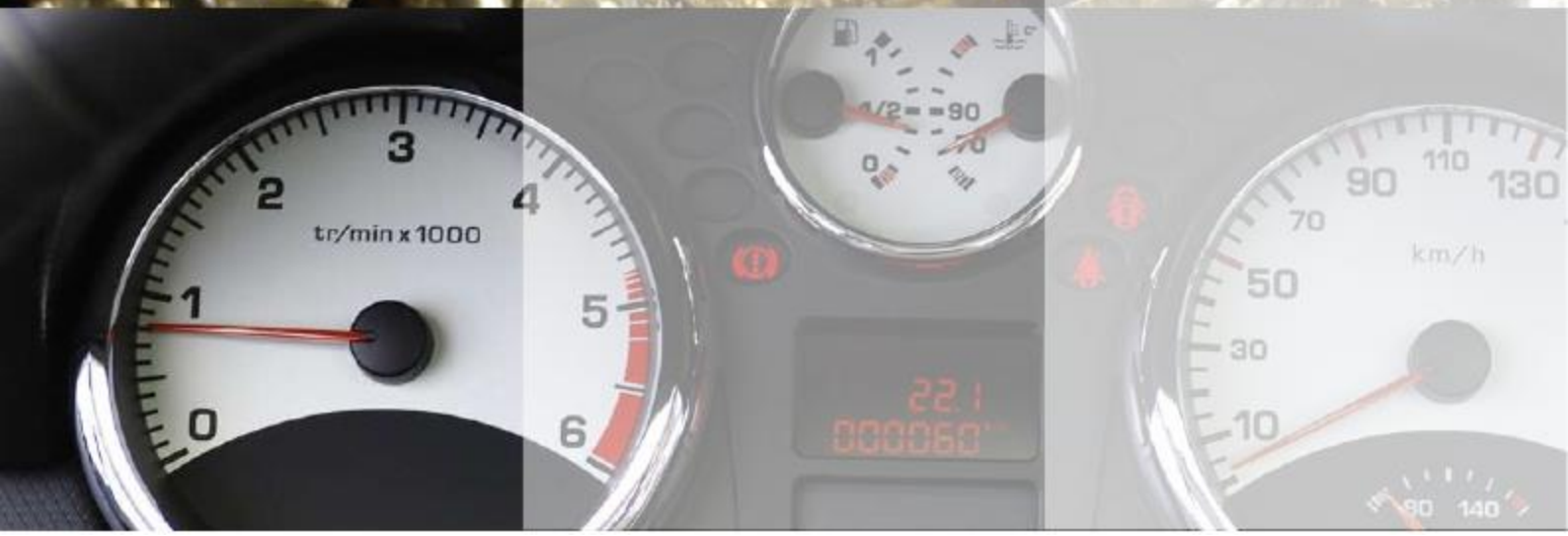
Our products for plastics





- Special parts on demand.

Summary

Generalities

PULL-OUT RESISTANCE

TYPE	page	thermo-plastics	Duro -plastics	overmoulding	thermic	ultrasonic	By expansion
TR		X					X
C		X	X				X
DM			X				X
CM		X	X				X
TH		X		X	X	X	
THC		X		X	X	X	
TS		X		X	X	X	
DC		X		X	X	X	
SCC		X		X	X	X	
DCC		X		X	X	X	
GTH		X		X	X	X	
CY/THS		X	X	X			
THH		X	X	X			

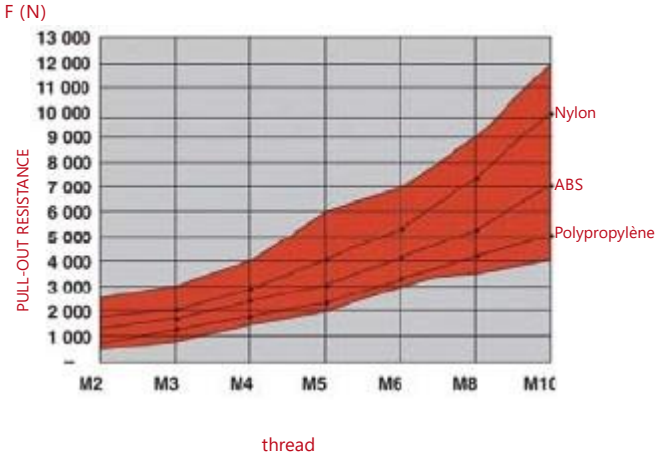
NOTE

The values of the above board are communicated for information only, because many parameters influence the hold of the inserts, especially the hole dimensions in the plastic and the mounting conditions.

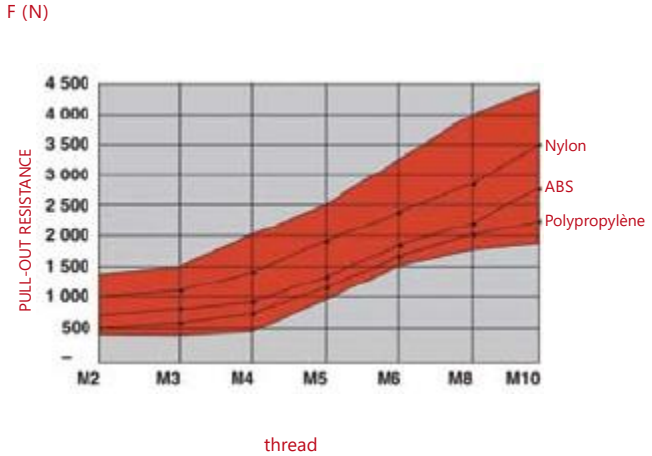
Each kind of plastic reacts differently compared to the others, we do suggest to proceed to the tests of pull-out and torque resistances of the insert mounted in the final plastic, to determinate as precisely as possible the requested hole diameter of the SERPLAST.

We can proceed to the tests in our laboratory with no charge for the customer.

SERPLAST
Types TH, THC, GTH et GTHC
Insertion by thermic and ultrasonic method



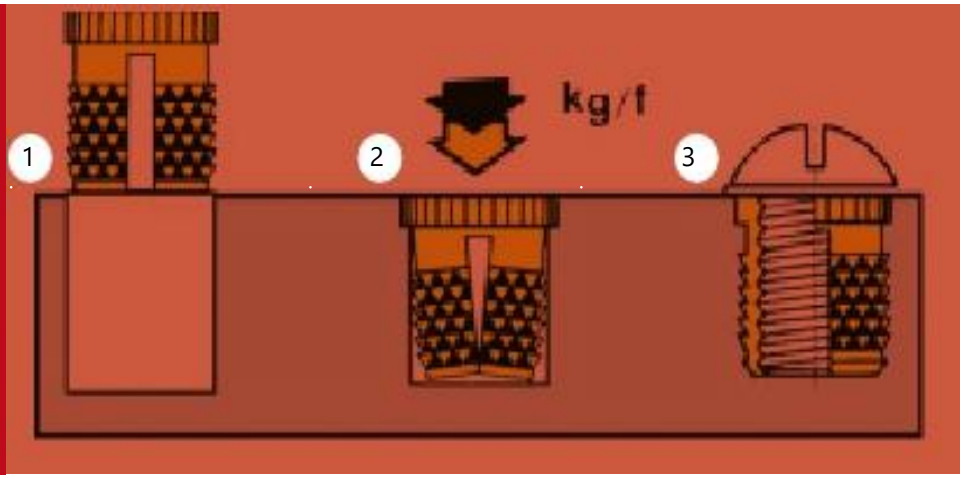
SERPLAST
Types TR, DM, C et CM
Insertiion by expansion ,through screwing



INSERTION BY EXPANSION

SERPLAST
Types TR, DM, C et CM

We do suggest to use our manual installation tool for a better guiding of the SERPLAST inserts : SER 1



ADVANTAGES

– Offer a resistant thread into plastic material.
– High resistance to PULL OUT and TORQUE tests.
– Installation after moulding by simple pressure.
– No tooling needed (manual installation).

APPLICATIONS

The SERPLAST inserts type TR are designed for thermoplastics, the SERPLAST Inserts DM for duroplastics .The SERPLAST inserts type C and CM can be used in both kind of plastics, thermoplastics and duroplastics..
All these inserts are installed into holes made by moulding or drilling.

MATERIAL AND FINISH

SERPLAST inserts types TR, DM, C and CM are manufactured in Brass CuZn40Pb3, CuZn39Pb3 or CuZn36Pb3.
For special application, they can be tin, nickel or zinc plated, etc. (consult us) .

MOUNTING

The SERPLAST inserts(1) are inserted in their holes by simple pressure (2), Then, the fixing is made by expansion during the screw tightening (3).
The SERPLAST inserts so mounted, do offer a break-effect to the screw.

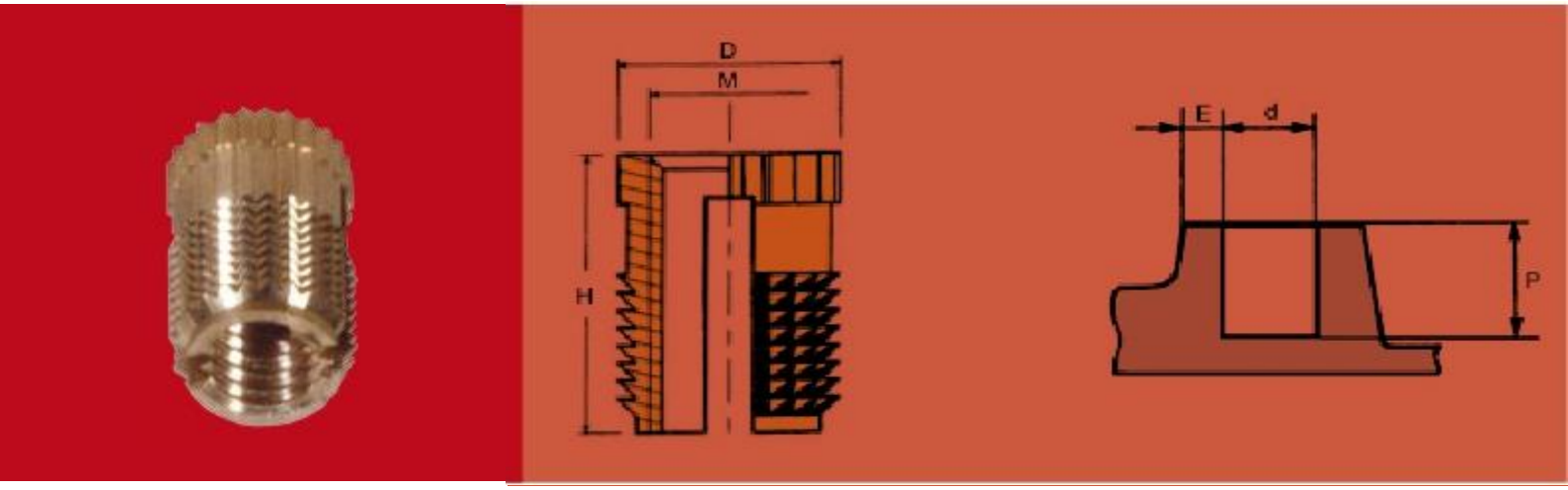
MANUAL MOUNTING TOOLS

They enable a better centering of the SERPLAST, but are usually used for the installation of small series:

– the SERPLAST has to be positionned on its hole;
– the centering nipple of the tool has to be inserted into the thread of the SERPLAST.
– A light hit of hammer on the top of the tool makes the insert penetrate the plastic.

INSERTS FOR THERMOPLASTICS

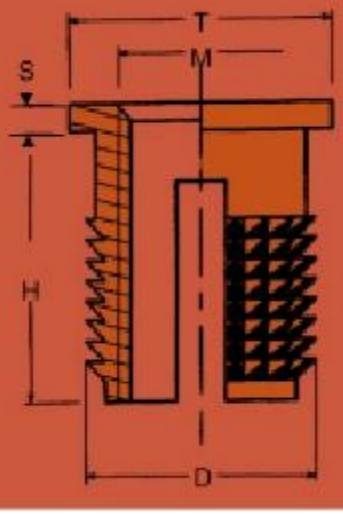
Insertion by expansion
Self break-effect : TR

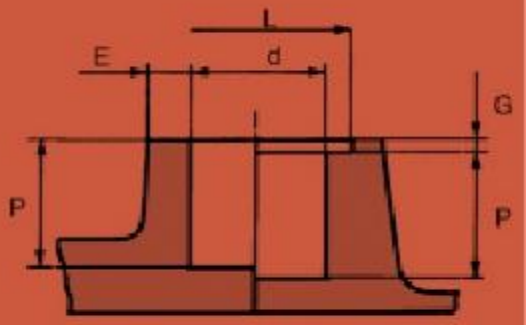


thread ISO M	part nr	length	external Ø D	Ø C	hole Ø d	hole depth P (0,1/0)	E
M2	40/TR020H040	4	4	3,4	3,5	5,5	1,8
M2,5	40/TR025H040	4	4,5	3,9	4	5,5	2
M2,5	40/TR025H065	6,5	4,5	3,9	4	8	2
M3	40/TR030H050	5	4,5	3,9	4	6,5	2
M3	40/TR030H065	6,5	4,5	3,9	4	8	2
M3,5	40/TR035H050	5	5,5	4,9	5	6,8	2,5
M3,5	40/TR035H080	8	5,5	4,9	5	9,8	2,5
M4	40/TR040H080	8	6	4,9	5,5	9,8	2,8
M4	40/TR040H095	9,5	6	4,9	5,5	11,3	2,8
M5	40/TR050H095	9,5	7	5,9	6,5	11,3	3,3
M5	40/TR050H110	11	7	5,9	6,5	13	3,3
M6	40/TR060H095	9,5	8,5	7	8	11,3	4
M6	40/TR060H125	12,5	8,5	7	8	14,5	4
M8	40/TR080H100	10	10	9	9,5	12	4,8
M10	40/TR100H130	13	12	11	11,5	15	5,8

INSERTS FOR THERMOPLASTICS

Insertion by expansion
Self-break effect
SERPLAST with collar – C

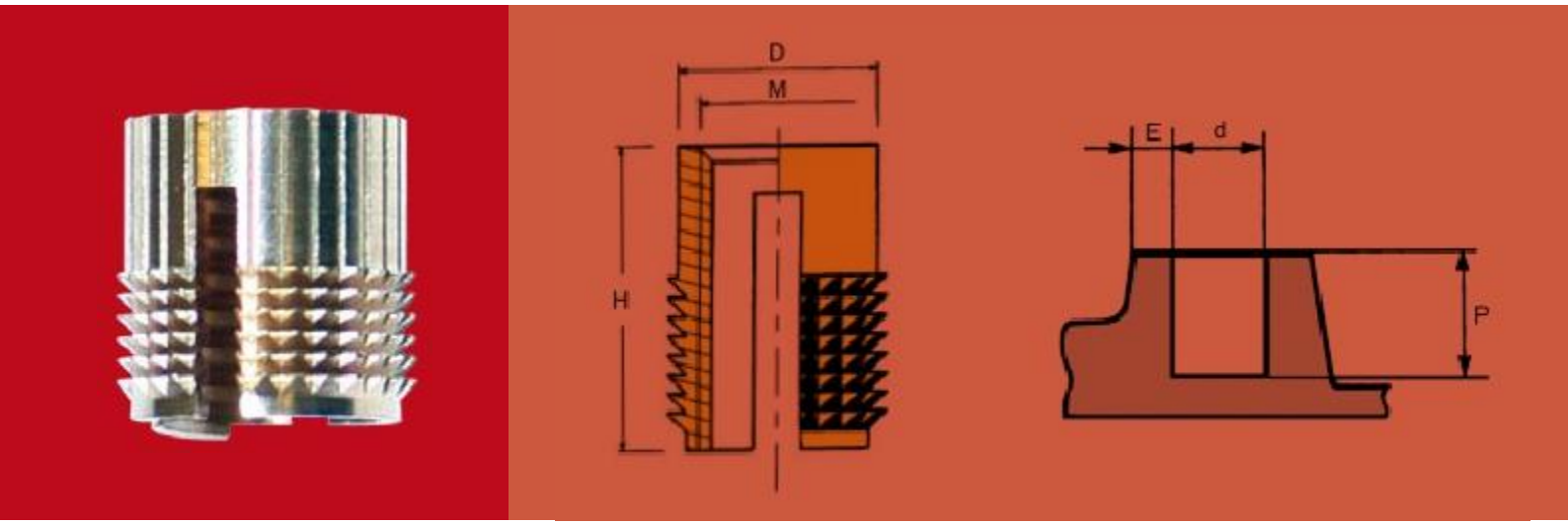




thread ISO M	part nr	length H	D	T	S	d	P mini	E mini	L mini	G
M2,5	40/C025H060	6,5	4,5	6	0,5	4	7	2	6,2	0,5
M3	40/C030H065	6,5	4,5	6	0,5	4	7	2	6,2	0,5
M3,5	40/C035H080	8	5,5	7	0,5	5	8,8	2,5	7,2	0,5
M4	40/C040H080	8	6	7	0,8	5,5	8,8	2,8	7,2	0,8
M5	40/C050H080	8	7	8	0,8	6,5	8,8	3,3	8,2	0,8
M6	40/C060H095	9,5	8,5	10	0,8	8	10	4	10,2	0,8
M8	40/C080H100	10	10	12	1	9,5	10,3	4,8	12,2	1
M10	40/C100H130	13	12	14	1	11,5	14	5,8	14,2	1

INSERTS FOR DUROPLASTICS

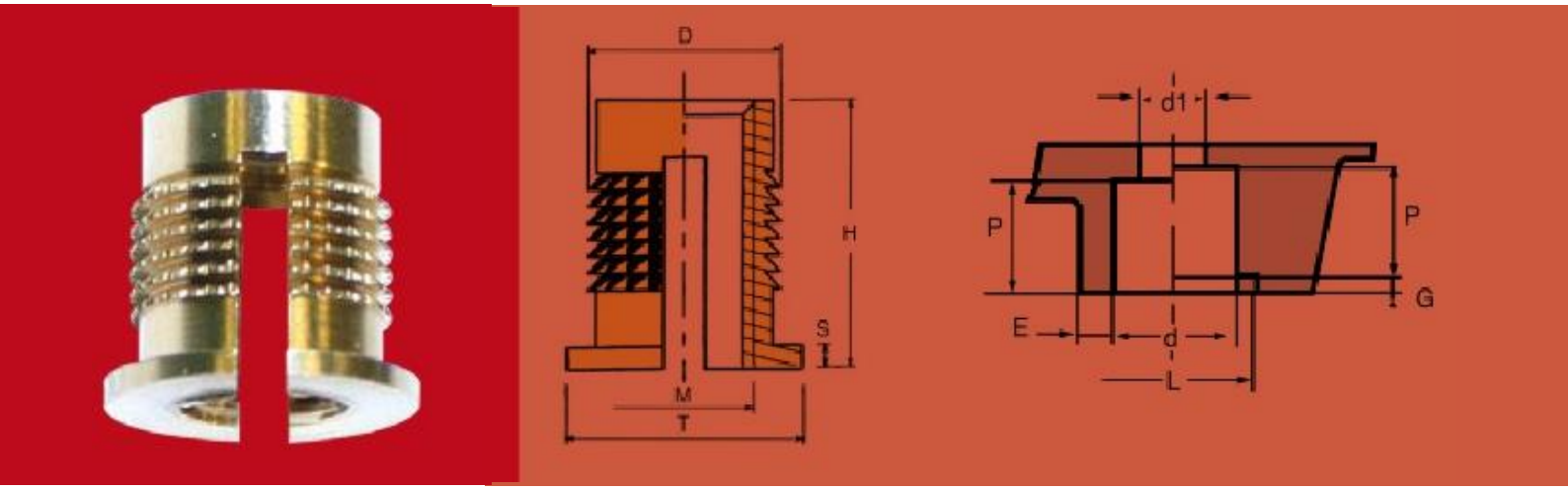
Insertion by expansion
Self-break effect – DM



thread ISO M	part nr	length H	Ø D	d	P mini	E mini
M2	40/DM020H040	4	3.4	3.5	4.5	1.8
M2,5	40/DM025H040	4	3.8	4	4.5	2
M2,5	40/DM025H065	6.5	3.8	4	7	2
M3	40/DM030H050	5	3.8	4	5.5	2
M3	40/DM030H065	6.5	3.8	4	7	2
M3,5	40/DM035H050	5	4.8	5	5.8	2.5
M3,5	40/DM035H080	8	4.8	5	8.8	2.5
M4	40/DM040H080	8	5.4	5.5	8.8	2.8
M4	40/DM040H095	9.5	5.4	5.5	10.3	2.8
M5	40/DM050H095	9.5	6.4	6.5	10.3	3.3
M5	40/DM050H110	11	6.4	6.5	12	3.3
M6	40/DM060H095	9.5	7.9	8	10.3	4
M6	40/DM060H125	12.5	7.9	8	13.5	4
M8	40/DM080H100	10	9.4	9.5	11	4.8
M10	40/DM100H130	13	10.9	11.5	14	5.8

INSERTS FOR DUROPLASTICS

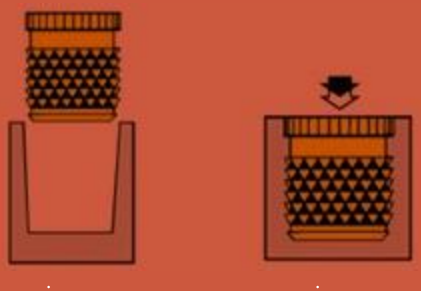
Insertion by expansion inverted mounting.
Self-break effect
SERPLAST with collar – CM



thread ISO M	part nr	length H	D	T	S	d	P mini	E mini	L mini	G	d1
M2,5	40/CM025H065	6.5	4.5	6	0.5	4	7	2	6.2	0.5	2.7
M3	40/CM030H065	6.5	4.5	6	0.5	4	7	2	6.2	0.5	3.2
M3,5	40/CM035H080	8	5.5	7	0.5	5	8.5	2.5	7.2	0.5	3.8
M4	40/CM040H080	8	6	6	0.8	5.5	8.5	2.8	7.7	0.8	4.3
M5	40/CM050H095	9.5	7	8.5	0.8	6.5	10	3.3	8.7	0.8	5.3
M6	40/CM060H095	9.5	8.5	10	0.8	8	10	4	10.7	0.8	6.3
M8	40/CM080H100	10	10	12	1	9.5	10	4.8	12.2	1	8.3
M10	40/CM100H130	13	12	14	1	11.5	13	5.8	14.2	1	10.3

Thermic or UltraSonic INSERTION

SERPLAST types
TH, THC, GTH, GTHC, SC, DC, DCC, SCC, TS



1 2

1 Installation of the INSERT on its hole by manual or automatic process.
2 Contact and pushing home of the INSERT With a heating rod or a sonotrode.

We can offer heating-head installation tools with manual or pheumatic pushing.s. For more information concerning the tools, please contact our sales department..

ADVANTAGES

– Offer a resistant thread into plastic material.
– Avoid the stress in the plastic surrounding the insert.
– High resistance to PULL OUT and TORQUE tests.
– Mounting after moulding, using thermic or ultrasonic process.
– Have all advantages of overmoulded inserts without the disadvantages.

APPLICATIONS

The inserts or threaded studs SERPLAST can be mounted in all thermoplastics, into holes made by moulding or drilling, by thermic or ultrasontic methods.
They can also be installed by overmoulding.
The headed inserts SERPLAST THC, DCC and SCC, ensure a larger contact surface and provide greater resistance
totensile strength when the traction force is applied in opposition to thr collar (application in an open end hole).

MATERIAL AND FINISH

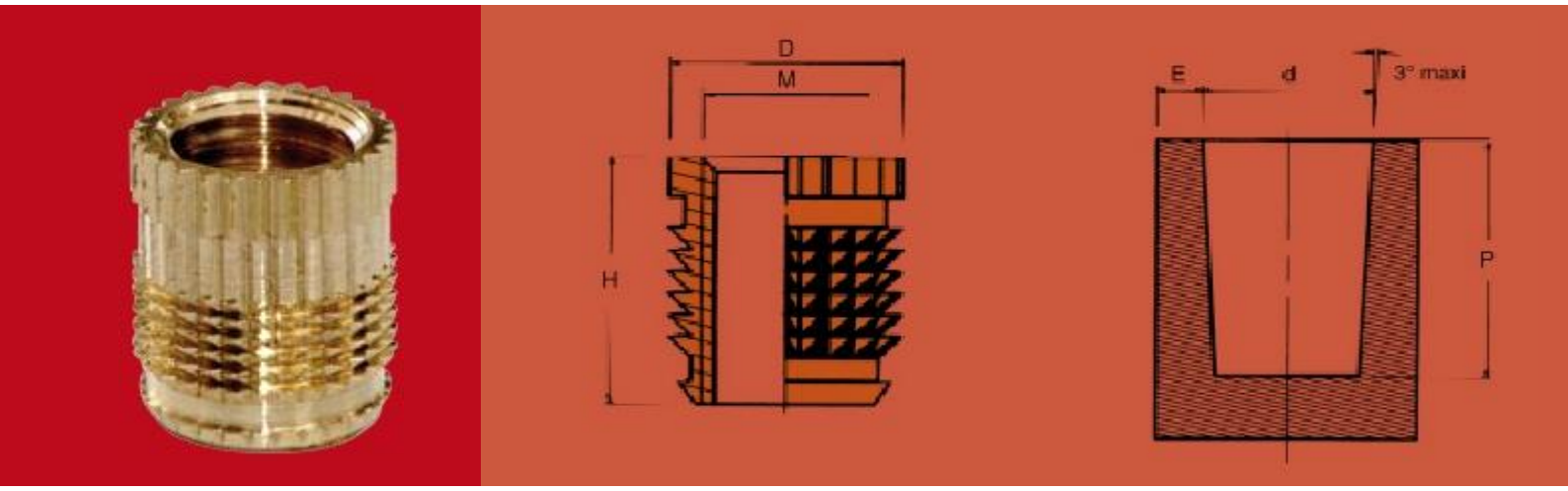
The SERPLAST inserts types TR, DM, C are made in Brass CuZn40Pb3, CuZn39Pb3 or CuZn36Pb3: For special applications, they can be Tin, Nickel or Zinc balck plated, etc. (please consult us).

MOUNTING

SERPLAST inserts and studs type TH, THC, GTH, GTHC, SC, DC, DCC and SCC can be overmoulded or installed by thermic or ultrasonic process .
In these last cases the mounting is a question of fusing the plastic around de insert or the stud .
Please, pay attention not to melt down the plastic while thermic or ultrasonic process is used: the plastic must just be soften. The pressure applied for insertion must be measured, to let the necessary time to the plastic to penetrate the groove and fuse around the teeth of the insert or the stud-SERPLAST.
Do not manipulate the insert after insertion ; a slow cooling period has to be programmed (12 to 20 hors are necessary to the majority of plastics).

INSERTS FOR THERMOPLASTICS

Insertion by
THERMIC or ULTRASONIC process
TH type

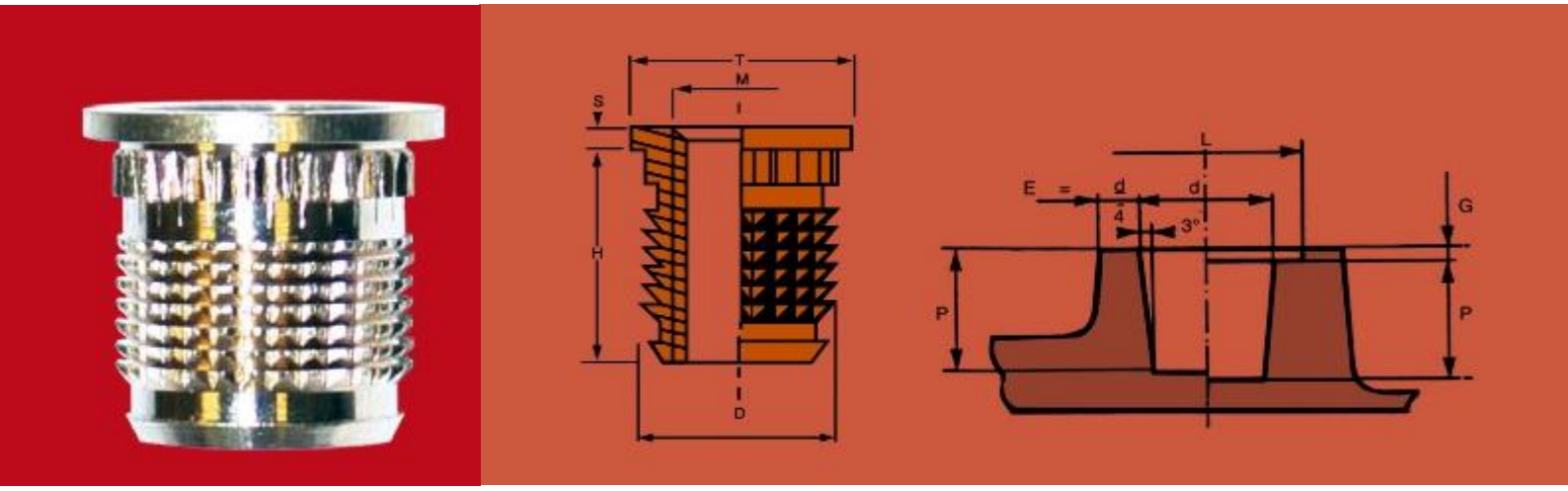


Thread ISO M	Part ref.	length H	Ø D	d	P mini	E mini
M2	40/TH020H040	4	4	3.5	5.5	1
M2,5	40/TH025H050	5	4	3.5	6.5	1
M3	40/TH030H055	5.5	4.5	4	7	1.1
M3,5	40/TH035H060	6	5.5	5	7.5	1.3
M4	40/TH040H075	7.5	6	5.4	9	1.4
M5	40/TH050H080	8	7	6.4	9.5	1.7
M6	40/TH060H090	9	8.5	7.9	11	2
M8	40/TH080H110	11	10	9.4	13	2.4
M10	40/TH100H130	13	12	11.3	15.5	2.9

Manual or semi-automatic installation tool by thermic process for SERPLAST inserts on demand.

INSERTS FOR THERMOPLASTICS

Insertion by THERMIC or ULTRASONIC process SERPLAST with collar – THC

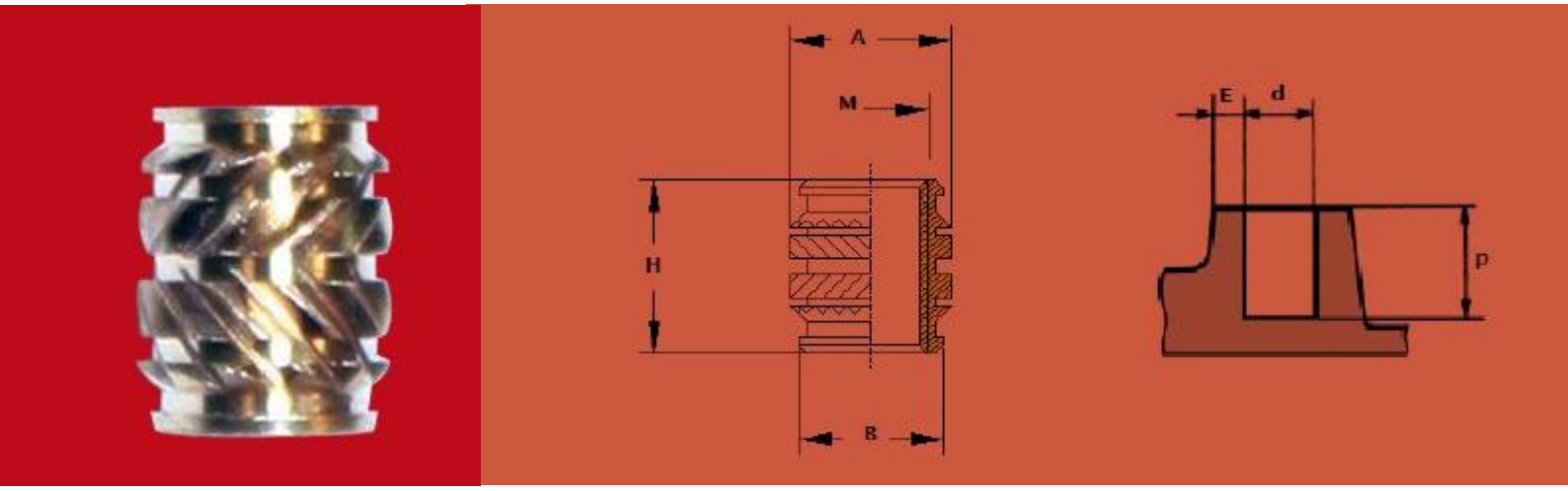


thread ISO M	Part ref.	Length H	D	T	S	d	P mini	E mini	L mini	G
M2	40/THC020H040	4	4	5	0.5	3.5	6.5	1	5.2	0.5
M2,5	40/THC025H050	5	4	5	0.5	3.5	6.5	1	5.2	0.5
M3	40/THC030H055	5.5	4.5	6	0.5	4	7	1.1	6.2	0.5
M3,5	40/THC035H060	6	5.5	7	0.5	5	7.5	1.3	7.2	0.5
M4	40/THC040H075	7.5	6	7.5	0.8	5.4	9	1.4	7.7	0.8
M5	40/THC050H080	8	7	8	0.8	6.4	9.5	1.7	8.2	0.8
M6	40/THC060H090	9	8.5	10	0.8	7.9	11	2	10.2	0.8
M8	40/THC080H100	10	10	12	1	9.4	13	2.4	12.2	1
M10	40/THC100H130	13	12	14	1	11.3	15.5	2.9	14.2	1

Manual or semi-automatic installation tool by thermic processfor SERPLAST inserts on demand.

INSERTS FOR THERMOPLASTICS

Insertion by
THERMIC or ULTRASONIC process
Symetrical SERPLAST – TS

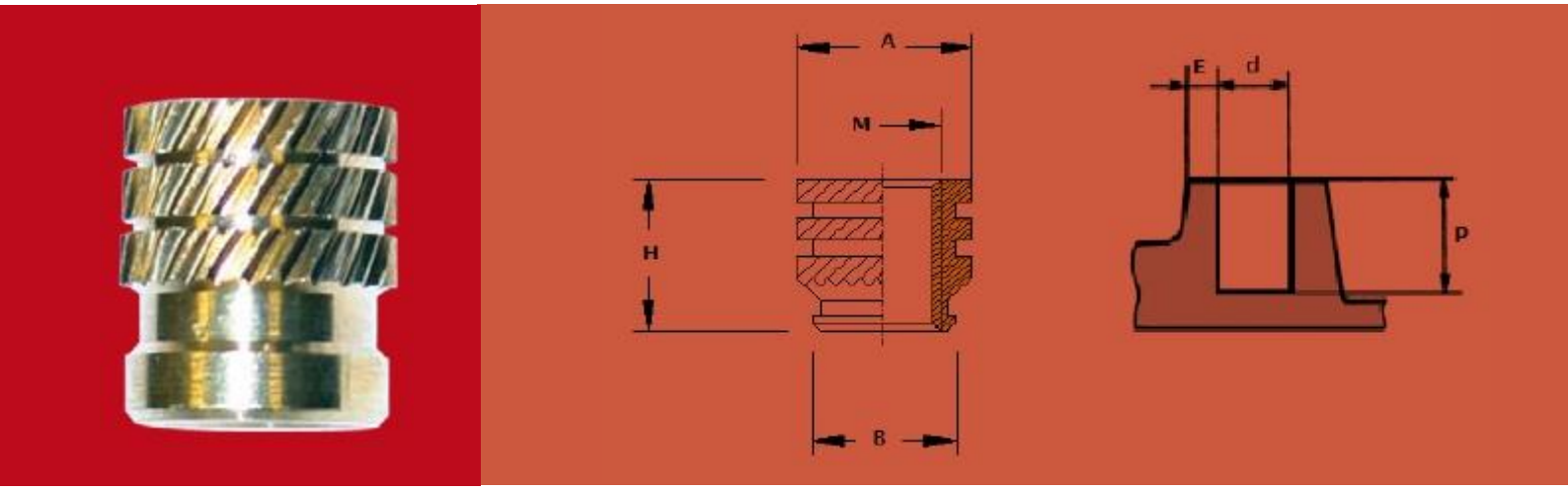


M	SIMAF ref.	H	A	B	d
2	40/TS020H030	3	3.5	3.1	3.2
2	40/TS020H039	3.9	3.5	3.1	3.2
2.5	40/TS025H040	4	4.4	3.9	4
2.5	40/TS025H057	5.7	4.4	3.9	4
3	40/TS030H040	4	4.4	3.9	4
3	40/TS030H048	4.8	4.4	3.9	4
3	40/TS030H057	5.7	4.4	3.9	4
3.5	40/TS035H050	5	5.2	4.7	4.8
3.5	40/TS035H071	7.1	5.2	4.7	4.8
4	40/TS040H040	4	6.1	5.5	5.6
4	40/TS040H048	4.8	6.1	5.5	5.6
4	40/TS040H058	5.8	6.1	5.5	5.6
4	40/TS040H081	8.1	6.1	5.5	5.6
5	40/TS050H058	5.8	6.8	6.3	6.4
5	40/TS050H095	9.5	6.8	6.3	6.4
6	40/TS060H068	6.8	8.5	7.9	8
6	40/TS060H095	9.5	8.5	7.9	8
6	40/TS060H127	12.7	8.5	7.9	8
8	40/TS080H127	12.7	10	9.5	9.6

Manual or semi-automatic installation tool by thermic process for SERPLAST inserts on demand.

INSERTS FOR THERMOPLASTICS

Insertion by THERMIC or ULTRASONIC process Single Stripe – SC

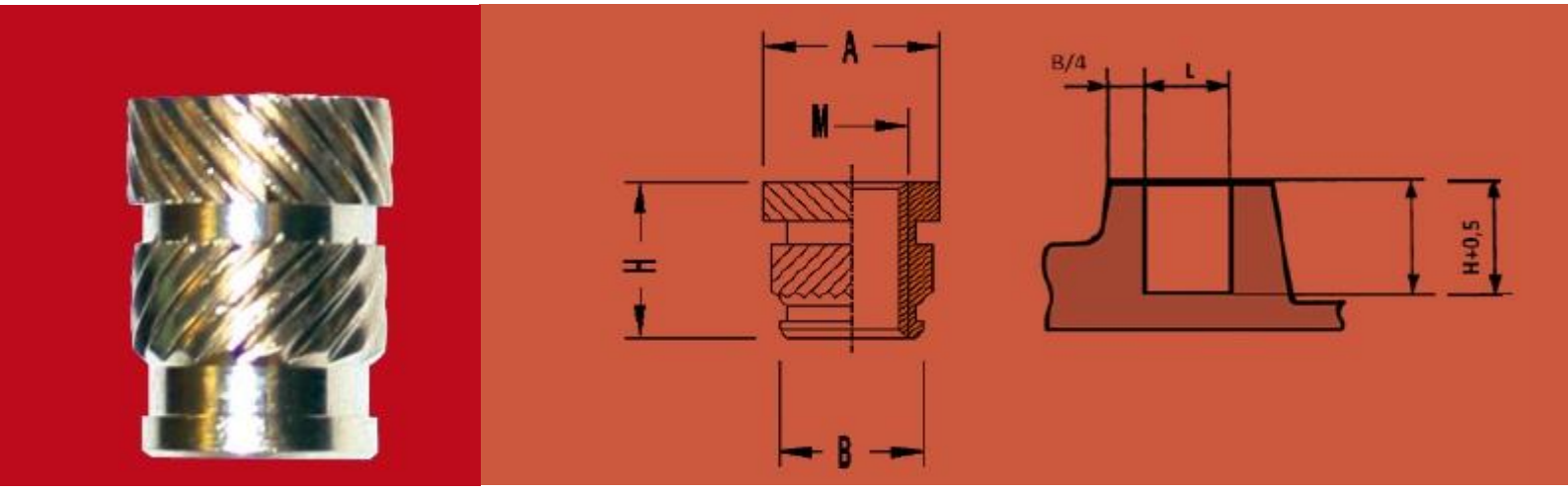


M	SIMAF ref.	H	A	B	d
2	40/SC020H041	4.1	3.3	3	3.1
2.5	40/SC025H053	5.3	4.2	3.7	3.8
3	40/SC030H053	5.3	4.2	3.7	3.8
3.5	40/SC035H063	6.3	5	4.5	4.6
4	40/SC040H074	7.4	5.8	5.3	5.4
5	40/SC050H083	8.3	6.6	6.1	6.2
6	40/SC060H092	9.2	8.2	7.7	7.8
8	40/SC080H092	9.2	9.7	9.3	9.4

Manual or semi-automatic installation tool by thermic process for SERPLAST inserts on demand.

INSERTS FOR THERMOPLASTICS

Insertion by:
THERMIC or ULTRASONIC process
Double Stripe – DC

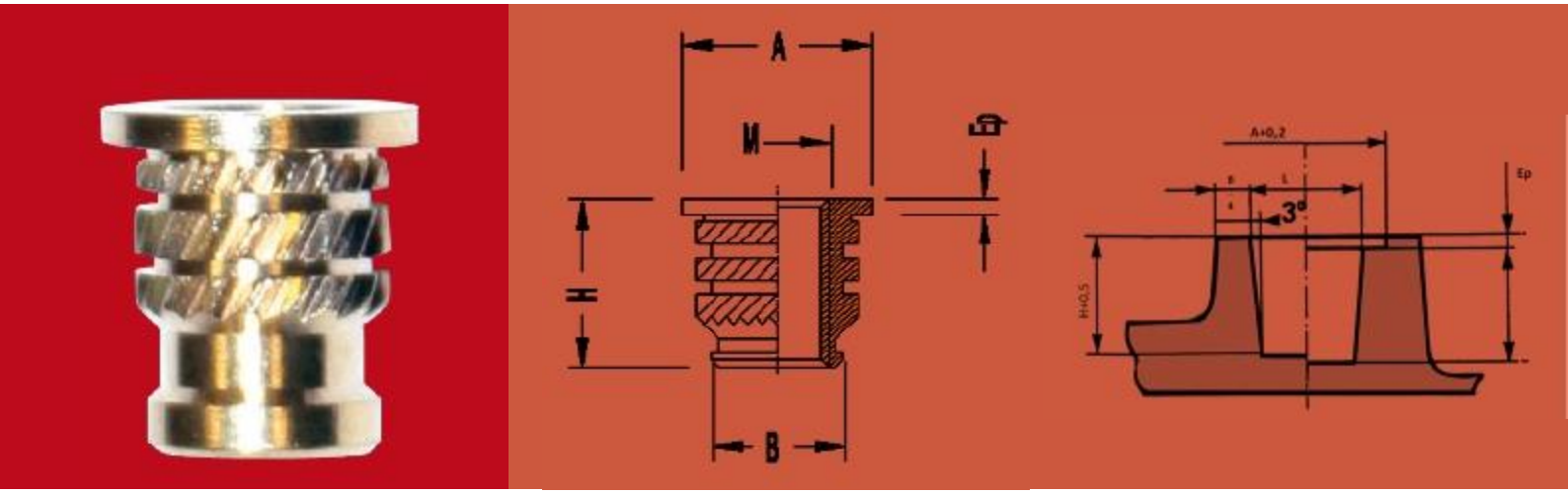


M	SIMAF ref.	H	A	B	L
2	40/DC020H034	3	3.6	3.1	3.2
2	40/DC020H040	4	3.6	3.1	3.2
2.5	40/DC025H040	4	4.6	3.9	4
2.5	40/DC025H057	5.7	4.6	3.9	4
3	40/DC030H040	4	4.6	3.9	4
3	40/DC030H048	4.8	4.6	3.9	4
3	40/DC030H057	5.7	4.6	3.9	4
3.5	40/DC035H050	5	5.4	4.7	4.8
3.5	40/DC035H071	7.1	5.4	4.7	4.8
4	40/DC040H040	4	6.3	5.5	5.6
4	40/DC040H048	4.8	6.3	5.5	5.6
4	40/DC040H058	5.8	6.3	5.5	5.6
4	40/DC040H082	8.2	6.3	5.5	5.6
5	40/DC050H058	5.8	7.1	6.3	6.4
5	40/DC050H095	9.5	7.1	6.3	6.4
6	40/DC060H068	6.8	8.7	7.9	8
6	40/DC060H095	9.5	8.7	7.9	8
6	40/DC060H127	12.7	8.7	7.9	8
8	40/DC080H127	12.7	10.2	9.5	9.6

Manual or semi-automatic installation tool by thermic process for SERPLAST inserts on demand.

INSERTS FOR THERMOPLASTICS

Insertion by THERMIC or ULTRASONIC process Single Stripe with collar – SCC

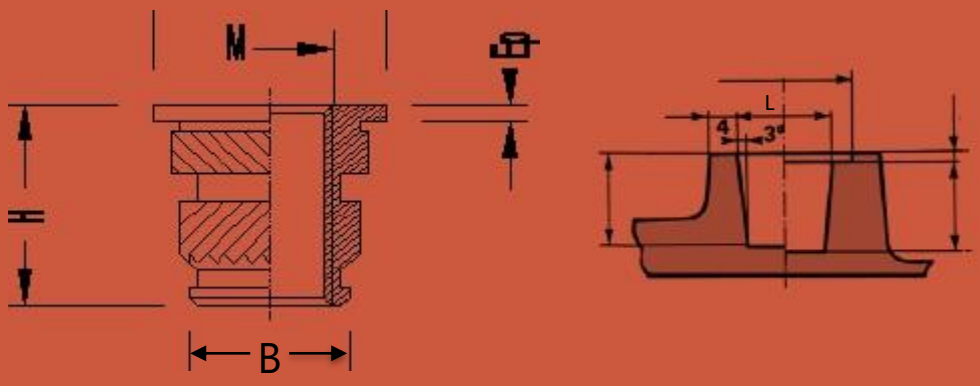


M	SIMAF ref.	H	A	B	L	Ep
2	40/SCC020H041	4.61	4.8	3	3.1	0.51
2.5	40/SCC025H053	5.88	5.5	3.7	3.8	0.58
3	40/SCC030H053	5.88	5.5	3.7	3.8	0.58
3.5	40/SCC035H063	7.04	6.4	4.5	4.6	0.74
4	40/SCC040H074	8.29	7.1	5.3	5.4	0.89
5	40/SCC050H083	9.37	7.9	6.1	6.2	1.07
6	40/SCC060H092	10.52	9.5	7.7	7.8	1.32
8	40/SCC080H092	10.52	11.1	9.3	9.4	1.32

Manual or semi-automatic installation tool by thermic process for SERPLAST inserts on demand.

INSERTS FOR THERMOPLASTICS

Insertion by
THERMIC or ULTRASONIC process
Double Stripe with Collar – DCC

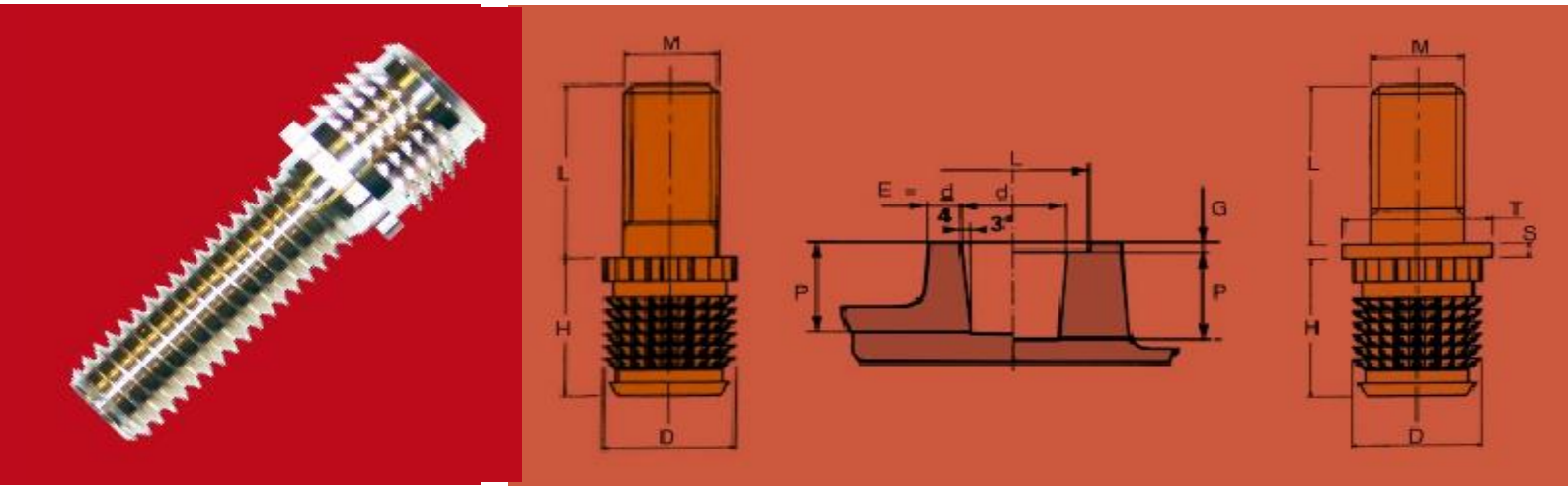


M	SIMAF ref.	H	A	B	L	Ep
2	40/DCC020H030	3.53	4.8	3.1	3.2	0.53
2	40/DCC020H040	4.53	4.8	3.1	3.2	0.53
2.5	40/DCC025H040	4.61	5.5	3.9	4	0.61
2.5	40/DCC025H057	6.31	5.5	3.9	4	0.61
3	40/DCC030H040	4.61	5.5	3.9	4	0.61
3	40/DCC030H048	5.41	5.5	3.9	4	0.61
3	40/DCC030H057	6.31	5.5	3.9	4	0.61
3.5	40/DCC035H050	5.76	6.4	4.7	4.8	0.76
3.5	40/DCC035H071	7.86	6.4	4.7	4.8	0.76
4	40/DCC040H040	4.91	7.1	5.5	5.6	0.91
4	40/DCC040H048	5.71	7.1	5.5	5.6	0.91
4	40/DCC040H058	6.71	7.1	5.5	5.6	0.91
4	40/DCC040H082	9.11	7.1	5.5	5.6	0.91
5	40/DCC050H058	6.89	7.9	6.3	6.4	1.09
5	40/DCC050H095	10.59	7.9	6.3	6.4	1.09
6	40/DCC060H068	8.15	9.5	7.9	8	1.35
6	40/DCC060H095	10.85	9.5	7.9	8	1.35
6	40/DCCO60H127	14.05	9.5	7.9	8	1.35
8	40/DCC080H127	14.05	11.1	9.5	9.6	1.35

Manual or semi-automatic installation tool by thermic processfor SERPLAST inserts on demand.

INSERTS FOR THERMOPLASTICS

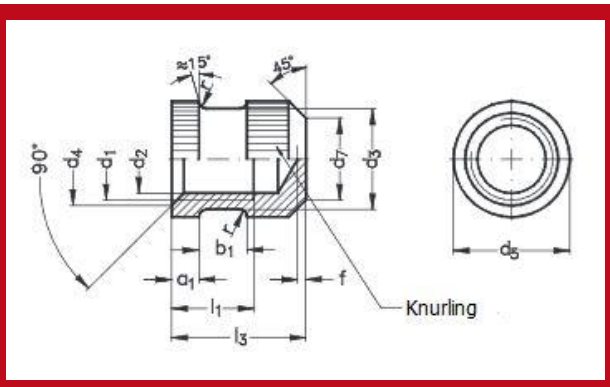
Insertion by THERMIc or ULTRASONIC process Stud-SERPLAST – GTH/GTHC

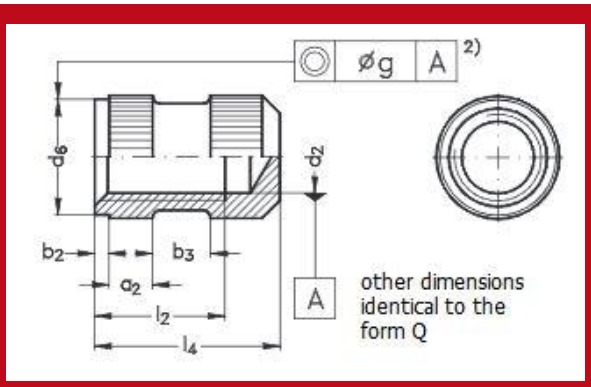


thread ISO M	Part ref. GTH	Part ref. GTHC	H	D	L	T	S	d	P mini	E mini	L mini	G
	40/GTHM03L05	40/GTHCM03L05			5							
	40/GTHM03L10	40/GTHCM03L10			10							
M3	40/GTHM03L15	40/GTHCM03L15	5.5	4.5	15	6	0.5	4	7	1.1	6.2	0.5
	40/GTHM04L05	40/GTHCM04L05			5							
	40/GTHM04L10	40/GTHCM04L10			10							
M4	40/GTHM04L15	40/GTHCM04L15	7.5	6	15	7.5	0.8	5.4	9	1.4	7.7	0.8
	40/GTHM05L10	40/GTHCM05L10			10							
	40/GTHM05L15	40/GTHCM05L15			15							
M5	40/GTHM05L20	40/GTHCM05L20	8	7	20	8	0.8	6.4	9.5	1.7	8.2	0.8
	40/GTHM06L10	40/GTHCM06L10			10							
	40/GTHM06L15	40/GTHCM06L15			15							
M6	40/GTHM06L20	40/GTHCM06L20	9	8.5	20	10	0.8	7.9	11	2	10.2	0.8
	40/GTHM08L15	40/GTHCM08L15			15							
	40/GTHM08L20	40/GTHCM08L20			20							
M8	40/GTHM08L25	40/GTHCM08L25	11	10	25	12	1	9.4	13	2.4	12.2	1

DIN INSERT-CYLINDRICAL CLOSED END

Type DIN 16903 Form S and Q
By Overmoulding





Form Q
cylindrical with no spigot

Form S
cylindrical with spigot.

REFERENCE

Construction of SIMAF Reference for a Form S & Q,, brass insert :

- Insert M2,5 form S = ref: 40/THS025H60B
- Insert M4 form Q = ref: 40/CY040H070B

MATERIAL

Brass : L

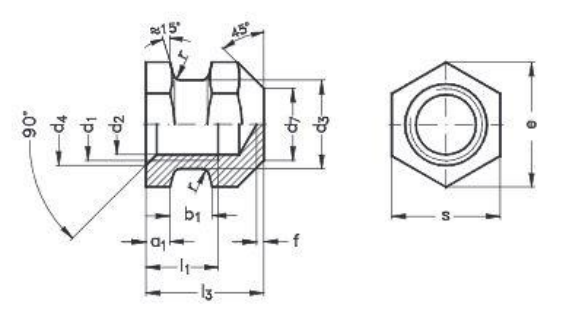
Steel/Zn : A

hread d1	M2	M2,5	M3	(M3,5)*	M4	M5	M6
a1	1	1.2	1.4	1.5	1.5	1.8	2
a2	1.2	1.5	1.6	2	2	2.5	3
b1	1.2	1.5	1.8	1.8	2.5	3	3.5
b2	0.8	0.8	1	1	1	1	1
b3	1.6	1.6	1.8	2	2.8	3.5	4
d2 H11	1.6	2.05	2.5	2.9	3.3	4.2	5
d3 h12	3.2	3.4	3.8	4.5	5	6.4	7.4
d4	2.7	3	3.4	4	4.5	5.5	6.8
d5	3.5	3.8	4.2	5	5.5	7	8
d6 h11	3.5	3.8	4.2	5	5.5	7	8
d7	2.5	2.5	2.8	3.5	4	5	6
f + 0,2	0.4	0.4	0.5	0.5	0.5	0.5	0.5
g	0.1	0.1	0.1	0.1	0.1	0.1	0.16
l1 h14	2.3	2.6	3	3.5	4	5	6
l2 14	3.5	4	4.5	5.5	6	7.5	9
l3 12	4	4.6	5.5	6	7	8.3	9.8
l4 12	5.2	6	7	8	9	10.8	12.8
r 12	0.3	0.3	0.3	0.3	0.4	0.6	0.6
t 12	0.5	0.5	0.5	0.5	0.5	0.5	0.6

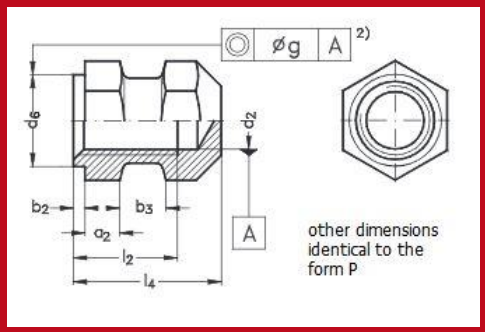
* Attention : M3.5 is not a standard item

DIN INSERT-HEX CLOSED END

Type DIN 16903 Form P and R
By Overmoulding



Form P
HEX with no spigot



Form R
HEX with spigot

REFERENCE

Construction of SIMAF Reference for a Form P & R, brass insert :

- Insert M4 form P = ref: 40/THH040H090BP
- Insert M4 form R = ref: 40/THH040H090BR

MATERIAL

Brass : L
Steel/Zn : A

Coaxiality tolerance according to norm DIN 7184

Thread d1	M2	M2,5	M3	(M3,5)*	M4	M5	M6	(M8)*
a	1	1	1	1	1	1	1	1
d4	2.7	3	3.4	4	4.5	5.5	6.8	8.8
d3	3.2	3.4	3.8	4.5	5	6.4	7.4	10.4
e	5.8	6.1	5.8	6.1	6.9	8.1	10.4	12.7
l1 h14	2.3	2.6	3	3.5	4	5	6	8
l2 h14	3.5	4	4.5	5.5	6	7.5	9	12
l3 h12	4	4.6	5.5	6	7	8.3	9.8	12.6
l4 h12	5.2	6	7	8	9	10.8	12.8	16.6
s	5	5.5	5	5.5	6	7	9	11

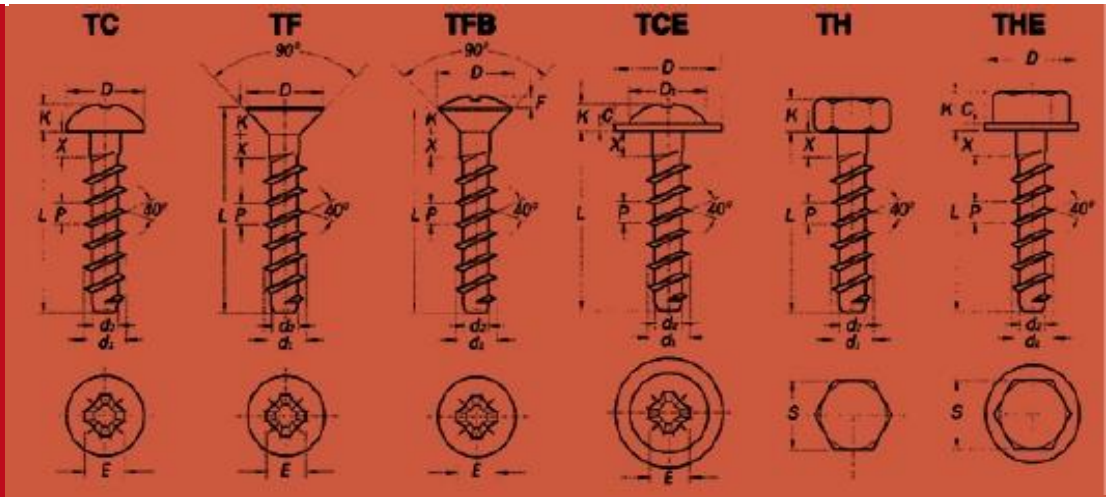
* Attention : M3.5,M8 is not a standard item

SCREWS FOR PLASTICS

POLYPLAST and POLYFORM

POLYPLAST
Symetrical 40° thread (instead of 60°)
Possibility of miltiple applications.

POLYFORM
Asymmetrical 12,5° thread



UTILISATION

– assembly in 1 operation (thread suppression)
– elimination of thread burrs
– closed end holes cleaning costs elimination
– pollution risks elimination

			TC			TF			TFB				E			H			HE	
N°	Ø	D	K	emp.	D	K	emp.	D	K	emp.	D	K	C	emp.	S	K	S	D	K	C
	2.2	4.0	1.4	1	3.8	1.2	1	3.8	1.2	1	–	–	–	–	–	–	–	–	–	–
2	2.5	4.2	1.8	1	5	1.7	1	5	1.7	1	6	1.4	0.5	1	–	–	–	–	–	–
4	3.0	5.6	2.2	1	5.5	1.7	1	5.5	1.7	1	7.5	1.5	0.5	1	5	1.5	5	6.4	2.5	0.5
6	3.5	6.9	2.6	2	6.5	2.2	2	6.5	2.2	2	8	1.6	0.5	2	5.	2.3	5.5	7	2.5	0.5
7	4.0	7.5	2.8	2	7	2.3	2	7	2.3	2	9	2.2	0.7	2		2.3	6	8	2.8	0.5
8	4.5	8.2	3.05	2	7.5	2.4	2	7.5	2.4	2	10	2.6	1	2	7	2,8	7	9	3.1	0.5
10	5.0	8.2	3.05	2	8.1	2.8	2	8.1	2.8	2	10	2.6	1	2	8	3	7	10	3.5	0.7
14	6.0	10.8	3.93	3	10.8	3.6	3	10.8	3.6	3	12	3.6	1.1	3	8	4	8	10	4.5	0.7

MATERIAL

Standard : – Steel/Zn clear
On demand : – Stainless Steel A2
– Steel/ Zn yellow
– DACROMET
– phosphatization
– js 500

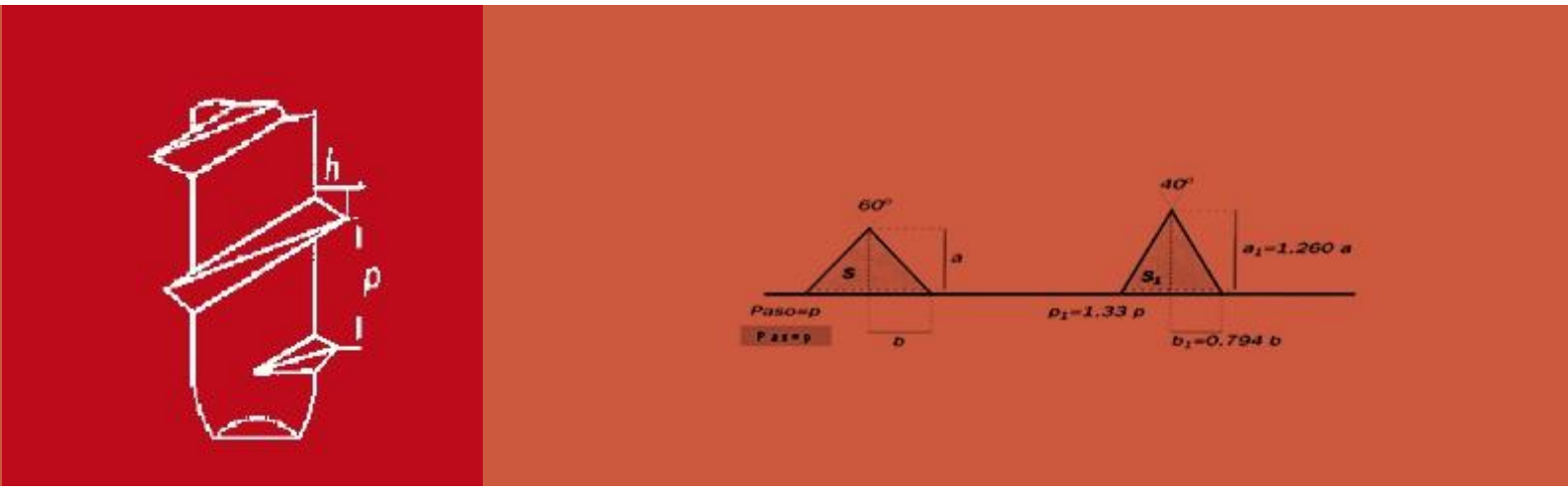
VERSIONS

– flat end
– pointed end

Recommended hole diameter depending on the plastic to be used (d1 = screw diameter)

PE polyéthylène	0.7	X	d1
PP Polypropylène	0.7	X	d1
POM Polyacetal	0.75	X	d1
SAN Copolymère Styrène Acrylonitrile	0.77	X	d1
ASA Acrylonitrile Styrène Acrylique	0.78	X	d1
PA Polyamide	0.8	X	d1
ABS Acrylonitrile Butadiène Styrène	0.8	X	d1
PS Polystyrène	0.8	X	d1
PC Polycarbonate	0.85	X	d1
PPO Polyphenyl Oxydè	0.85	X	d1

POLYPLAST SCREWS



Why the standard 60°, screw for metal thread, does not work on plastics assembly ?

– Formation of the virtual nut by deformation : High radial tension.
– Poor penetration of the thread in the plastic : Low pull-out resistance.
– Mauvaise qualité de l'écrou formé : haute probabilité de foirer l'assemblage.
– Petite surface de contact entre la vis et le matériau : basse tenue au dévissage par vibrations.

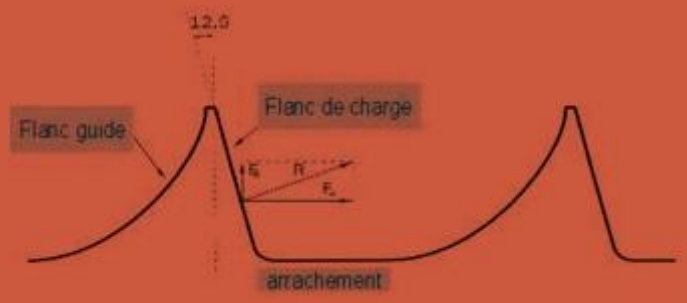
POLYPLAST THREAD SYMETRICAL 40°or 30°

– Better penetration in the material
– Better surface contact with the plastic
– Better formation of the virtual nut.
– Creates the thread by deformation in its hole.
– Lower friction and lateral stress, avoiding deformation and shaft splitting .
– The tapered profile of the thread, developped for its penetration properties in the plastic material, allows a fast mounting with a low tightening torque during the screwing operationbut very high to the rupture.
– The ratio between the important length of the pitch (P) and the thickness of the thread (h) allows a maximal contact with the plastic material and offers a very high pull-out resistance.

POLYFORM SCREWS

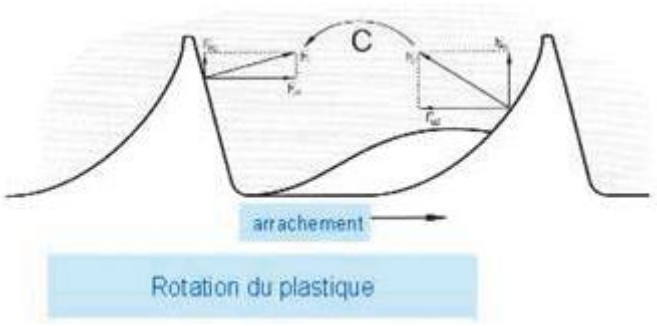
HIGH TENSION AND PULL-OUT RESISTANCE

– Assymetrical thread.
– Load flank with 12.5° angle.
– Guide flanc with progressive angle.



ASYMMETRICAL POLYFORM THREAD

Asymmetrical distribution of the plastic material.



ASSEMBLY MECANICAL PROPERTIES

The radial strength on the load flank (Fr1) is lower to the guide flank one, which makes the plastic material move on the load flank.

– Concentration of the plastic material on the load flank.
– Better pull-out resistance.
– Better resistance to unscrewing

THERMIC SETTING TOOL SER2004

For manual mounting of SERPLAST inserts

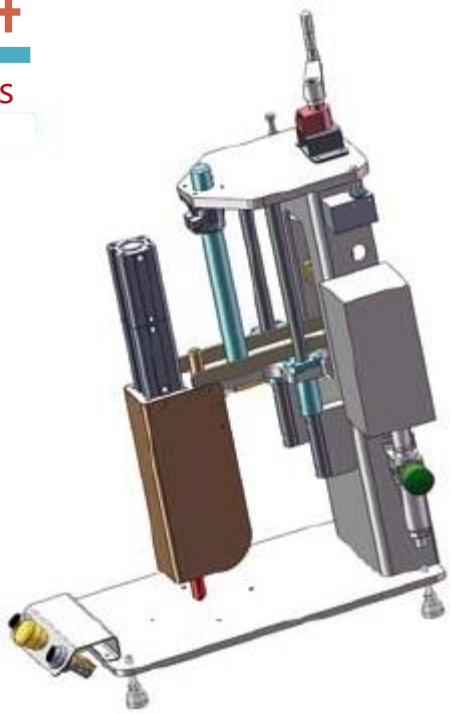
CHARACTERISTICS

Heating mounting tool for SIMAF SERPLAST inserts type :

- TH
- THC
- GTH
- GTHC

THERMIC SETTING TOOL SER2014

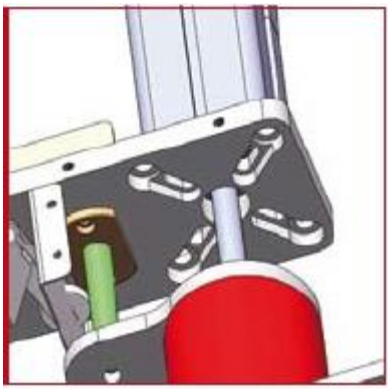
For semi-automatic mounting of SERPLAST inserts



CHARACTERISTICS

Heating mounting tool for SIMAF SERPLAST inserts type :

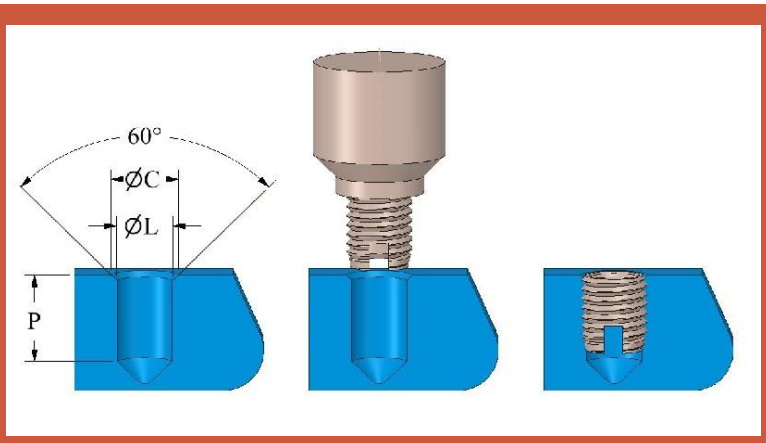
- TH
- THC
- GTH
- GTHC



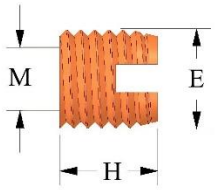

N°6

TARINSERT

Self tapping inserts for plastics and soft alloys
Easy, Fast, High screwing torque resistance



MOUNTING



Drill a hole as indicated in the table below.

Place the mounting tool on a tapping machine.

Put the Tarinsert with the split facing downwards.
Lower the tapping machine's spindle to place the Tarinsert in its support.
Once the Tarinsert is installed,, raise the spindle to action the uscrewing,
Which then separates the mounting tool from the Tarinsert.

MATERIAL

The TARINSERT can be in:
– Brass,
– Steel/Zn, Add= A.
– Cemented Steel/Zn, Add= AC
– Stainless Steel, Add= X.

ADVANTAGES

TARINSERT provides a resistant thread for high screwing torque in soft materials.

TARINSERT's mounting is easy and fast.

TARINSERT offers a high vibration and pull-out resistances, as there is no gap between the insert and the support.

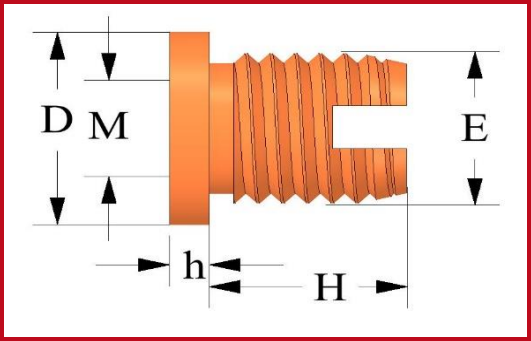
M Filetage ISO	E	H	LØ	CØ	p	EP* mini	Réf
2,5x0,45	4 4,5	4 6	3,7 4,1	4 4,5	5 8	2	36/T2,5 36/TL2,5
3x0,5	5	5 6	4,7	5	7 8	2	36/T3 36/TL3
3,5x0,6	6	6 8	5,5	6	8 10	2,5	36/T3,5 36/TL3,5
4x0,7	6,5	7 8	6	6,5	9 10	2,8	36/T4 36/TL4
5x0,8	8	8 10	7,4	8	10 13	3,3	36/T5 36/TL5
6x1,00	9 10	10 14	8,4 9	9 10	12 17	4	36/T6 36/TL6
8x1,25	12	13 15	11	12	16 18	4,8	36/T8 36/TL8
10x1,5	14	16 18	13	14	19 22	5,8	36/T10 36/TL10
12x1,75	16	22	15	16	26	7	36/T12

Ø L can be adjusted depending on the density of the support material.

Ep mini: minimum edge distance.

TARINSERT

Self tapping inserts for plastics and soft alloys
Easy, Fast, High screwing torque resistance



M Filetage ISO	E	H	LØ	CØ	p	d	h +/-0,05	EP* mini	Réf
2,5x0,45	4,5	6	4,1	4,5	8	6	0,6	2	36/TLC2,5
3x0,5	5	6	4,7	5	8	6,5	0,6	2	36/TLC3
3,5x0,6	6	8	5,5	6	10	7,5	0,75	2,5	36/TLC3,5
4x0,7	6,5	8	6	6,5	10	8	0,9	2,8	36/TLC4
5x0,8	8	10	7,4	8	13	9,5	1	3,3	36/TLC5
6x1,00	10	14	9	10	17	12	1,3	4,8	36/TLC6
8x1,25	12	15	11	12	18	14	1,3	4,8	36/TLC8
10x1,5	14	18	13	14	22	16	1,6	5,8	36/TLC10
12x1,75	16	22	15	16	26	18	1,6	7	36/TLC12

TARINSERT CHOICE

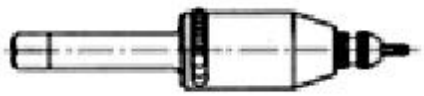
Light alloys :
- Steel/Zn Add= A ex: 36/TLC4A
- Cemented Steel/Zn Add= AC

Plastic Material :
- Brass
- Steel/Zn Add=A
- Stainless Steel Add= X

SETTING TOOLS

SER3**X**M is a manual setting tool. There is a separatte setting tool for each diameter of tarinsert.
Example : For mounting of M6 brass tarinsert T6= 48/SER3**6**M.

SER3**X**A is a setting tool to be mounted on a nut tapperor drill equipped with a tapping device. There is a separatte setting tool for each diameter of tarinsert.
Example: For mounting of M6 brass tarinsert T6= 48/SER3**6**A.



61, avenue de l'Europe –
78140 Vélizy-Villacoublay – France
Tel. : +33 1 78 74 32 00
www.simaf.com – email : infocom@simaf.com

S.A.S. au capital de 249 600 Euros – R.C.S. Versailles 2012 B 04291 – SIRET 606 620 524 00078 – APE 4669B

Since 1966, SIMAF has designed and marketed assembly systems that meet industry's increasingly sophisticated demands.
By adapting our production to new technologies and strict quality control of the millions of products shipped each month, we have managed to gain the confidence of both small enterprises and major international corporations, in leading economics sectors like the automotive industry, household applicances, telephony,, office automation, computer technology, structural steelwork, etc…
Customers high-tech domains are forever searching for the essential creativity needed to meet new requirements. Our technical services are constantly striving to find the most suitable solutions. : creation of one special part per week in order to meet our customer's demands.

DESIGN – TECHNICITY

Simaf has a golden rule of permanently controlling products, from manufacture to distribution. I t has guaranteed constant quallity of our production.

We can provide customers with precise information as to the mechanical properties of articles supplied, and thanks to simulation exercices in our test laboratory, we can give advice on the most suitable product for a customer's specific needs.

QUALITY CONTROLS – TEST LABORATORY

You can find all our products and services all over the world towards our subsidiaries or our distributors.

SIMAF TECHNIK GmbH – FREIBURGER STRASSE 19 – 79822-TITISEE NEUSTADT – GERMANY
Tél.:+49 76 51 939680
SIMAF CZ s.r.o.V – FIREMNI 747/17 – 620 00 BRNO – CZECH REPUBLIC
Tél. : +420 547 211 045
ASTEC Disseny S.LU. –C CARRETERA DE MOMTMELLO 88 – 08403 – GRANOLLERS (BARCELONA)-SPAIN
TéL :+34 935 722 168 – info@astecsimaf.com -
Rivetnut Technology Systems. LTD – UNIT 5 BRIGEGATE BUSINESS PARK – HP198XN – BUCKINGHAMSHIRE – ENGLAND
TéL: +44 1296 330 331 – Mail : info@rivetnut.co.uk -