



**BLUE-MASTER<sup>®</sup>**  
by *CE/ESA*



REPARACIÓN  
DE ROSCAS



Fabricados en acero inoxidable al cromo níquel de alta calidad (AISI 304), los insertos para reparación de roscas Power Coil proporcionan una alta resistencia a la temperatura y a la corrosión. Su diseño único asegura roscas de superior calidad cuyo comportamiento no puede ser igualado por ningún otro método de seguridad. Se encuentran disponibles en dos presentaciones básicas, standard y autoblocante o de seguridad, son mucho más ligeros y menos costosos que cualquier otro tipo de inserto equivalente y dado su tamaño compacto pueden generalmente incorporarse a diseños existentes en donde no sea necesaria ningún tipo de reparación.

#### Insertos Standard

Fabricados a partir de un alambre de acero inoxidable austenítico, y perfilados de forma precisa en forma de espiral helicoidal, los insertos standard Power Coil tienen forma de muelle. Cuando se instalan utilizando cualquiera de las herramientas, ya sean manuales o automáticas, proporcionan roscas internas resistentes y permanentes que soportan el calor y la corrosión. Una vez instalados su posición se mantiene por la acción de presión radial entre los filetes y las ranuras del agujero roscado. Esta presión existe porque su diámetro libre es ligeramente superior al instalado en una pequeña proporción previamente calculada.

#### Insertos Autoblocantes (Seguridad)

El inserto autoblocante está especialmente indicado en aplicaciones sujetas a vibración cíclica o impactos. Además de las ventajas proporcionadas por los insertos standard, los insertos autoblocantes (de seguridad) Power Coil ofrecen una seguridad adicional por su auto freno interno que lo hace más efectivo. Esto se consigue gracias a la acción de una espira poligonal de la rosca del inserto posicionada a lo largo del mismo, que ejerce presión radial sobre los hilos del tornillo. En la medida en que la rosca pasa a través de estos hilos de seguridad, los dispositivos se expanden aplicando gradualmente presión radial o freno efectivo en la rosca del tornillo. Al retirar el tornillo roscado, los hilos de seguridad relajan su expansión a su forma original permitiendo repetir el roscado del tornillo y manteniendo su nivel de presión radial de seguridad.

#### Características y Beneficios

Durante muchos años, los insertos helicoidales han sido subestimados. El concepto popular de ser diseñados para reparar roscas dañadas ha dado a este sistema único, esta falsa imagen.

Son mucho más ligeros y menos costosos que cualquier otro tipo equivalente de inserto de rosca, y por su tamaño compacto, pueden generalmente introducirse en diseños preexistentes en donde no se requiera una reparación adicional. Además de otros beneficios económicos, su utilización incrementa la calidad y rendimiento mientras reduce el costo total del producto. Su utilización es efectiva al utilizar materiales más delgados o más ligeros sin sacrificar la resistencia de la rosca.

Los insertos protegen las roscas originales contra posibles fallos de pérdida de hilos, pérdida de medida, corrosión o desgaste. Los insertos Power Coil están fabricados con cable de acero inoxidable austenítico, que le permite trabajar con una fuerza a la tensión de 200,000 psi y una dureza de RC 43-50. Los insertos tienen un acabado superficial tan fino que prácticamente elimina la fricción que induce al posible desgaste.

#### Resistencia

Debido a su flexibilidad, los insertos conforman roscas internas que cuentan con una mucho mejor distribución de carga residuales comparados con agujeros roscados convencionales, en donde un porcentaje superior al 70% de las fuerzas cortantes son llevadas a cabo por los tres primeros hilos en el agujero roscado. La flexibilidad de los insertos ayudan a compensar los errores del paso y del ángulo de flancos inherentes a los agujeros normales roscados, y mejora significativamente la capacidad de carga por deflexión de fuerzas residuales dentro de la rosca en donde la presión se dispersa hacia las paredes del agujero roscado. Esto hace que el diseño sea muy fiable y de gran resistencia utilizando roscas más pequeñas y más cortas aun cuando los insertos sean usados en materiales menos resistentes.

Los insertos Power Coil de alta flexibilidad reducen su diámetro durante la instalación. La fuerza del inserto al expandirse en el agujero asegura el inserto en su lugar correcto. Cada filete puede flexionarse independientemente para ponerse en contacto con la mayor cantidad de material de la superficie de la rosca.

#### Normas de referencia

##### SBAC AS 6734 & 8456

Norma de la Sociedad Británica de Compañías Aeroespaciales. Referida específicamente a los insertos libres Rosca UNC, requisito obligatorio exigido por la Sociedad. En realidad, muy similar al Standard Militar.

##### SBAC AS 6733 & 8455

Mismo requisito que el anterior extensivo a todos los insertos libres con carácter general.

##### BS

Standard Británico para Insertos de diámetro reducido. Es la norma generalizada para todos los fabricantes de insertos, equivalente a DIN8140.

##### NASM3279, 3280 & 3281

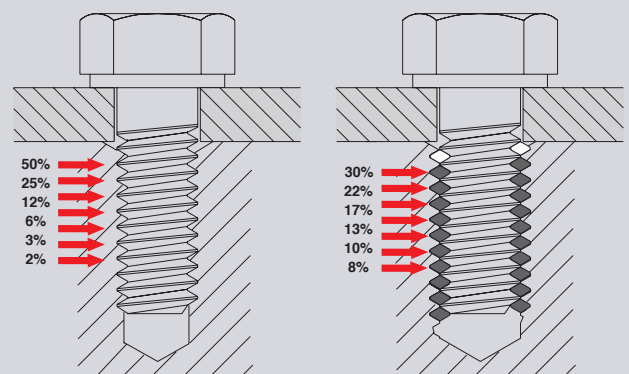
Standard militar para insertos libres. Los Insertos según Standard militar son mayores en diámetro en estado libre que los insertos comunes, por lo que son más difíciles de instalar, y de extraer. CELESA puede suministrar y certificar este tipo de insertos bajo demanda. La norma alemana DIN8140 para insertos de uso general tiene similares tolerancias que los Insertos de según Standard militar.

##### LN9499

Standard aeroespacial alemán. En desuso, aunque CELESA puede suministrar y certificar este tipo de insertos bajo demanda.

##### DIN8140

Los insertos Powercoil distribuidos por CELESA cumplen con los requisitos recogidos en la Norma DIN8140





**powercoil**  
 by *celesa*



# INSERTOS ROSCADOS

**Código** **35** **20** - **12.00** X **1.5D**

**35** PowerCoil en acero inoxidable  
**36** Loksert en acero al carbono  
**37** Loksert en acero inoxidable

**DIÁMETRO**  
**XX . XX** Métrica  
**XX / XX** Pulgadas

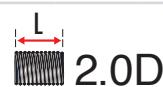
<b>20</b> Métrica	<b>32</b> UNC
<b>21</b> Métrica fina	<b>34</b> UNF
<b>22</b> Bujía	<b>44</b> BA
<b>23</b> Métrica fina	<b>46</b> BSP
<b>24</b> Métrica fina	<b>52</b> NPT
<b>28</b> BSW	<b>60</b> BSB
<b>30</b> BSF	<b>70</b> 8-UN
<b>00</b> Multifuncional	

<b>X.XD</b> Longitud del inserto	<b>INC</b> Inconel X-750
<b>IR</b> Carrete de alimentación de insertos	<b>NM</b> Nimonic 90
<b>SL</b> Insertos autoblocantes (de seguridad)	<b>NT</b> Nitronic 60
<b>K</b> Estuche de reparación de roscas	<b>Y</b> Acero Inoxidable 316
<b>P</b> Blister de insertos para colgar	<b>CD</b> Terminado en cadmio
<b>WK</b> Estuche completo para taller	<b>ZN</b> Terminado de zinc
<b>HIT</b> Herramienta de instalación manual Series Cortas	<b>AG</b> Terminado de plata
<b>HIP</b> Herramienta de instalación Series Medianas	<b>FL</b> Lubricado en seco
<b>MIT</b> Herramienta para insertar a máquina	<b>I</b> Macho 4-5 hilos
<b>HIM</b> Herramienta para insertar con mango hexagonal	<b>T</b> Macho 6-8 hilos
<b>MIP</b> Herramienta de instalación neumática	<b>B</b> Macho 2-3 hilos
<b>TB</b> Herramienta rompedora de cola Manual	<b>SF</b> Macho de máquina helicoidal
<b>STB</b> Herramienta rompedora de cola Automática	<b>SP</b> Macho de máquina con entrada corregida
<b>PTB</b> Herramienta rompedora de cola Neumática	<b>FT</b> Macho laminación
<b>RT</b> Herramienta extractora de insertos	<b>PD</b> Loksert de pared delgada
<b>LH</b> Giro izquierda	<b>PR</b> Loksert de pared reforzada
<b>GC</b> Comprobador de roscas en tolerancia 4H5H	<b>TT</b> Herramienta instalación de Loksert de pared delgada
<b>GM</b> Comprobador de roscas en tolerancia 6H	<b>HT</b> Herramienta instalación de Loksert de pared reforzada
<b>PB</b> Bronce con fósforo	<b>T</b> Herramienta de instalación universal para Loksert

## INSERTOS LIBRES

M  
MF

...D



	3520-2.00	2.10	L mm	€			L mm	€			L mm	€			Unit
				<500	500-999	1000-...		<500	500-999	1000-...		<500	500-999	1000-...	
M 2x0.40	3520-2.00	2.10	2.00	0,48	0,45	0,43	3.00	0,49	0,47	0,44	4.00	0,50	0,49	0,48	100
M 2.20x0.45	3520-2.20	2.30	2.20	0,48	0,45	0,43	3.30	0,49	0,47	0,44	4.40	0,50	0,49	0,48	100
M 2.50x0.45	3520-2.50	2.60	2.50	0,28	0,25	0,23	3.75	0,29	0,26	0,25	5.00	0,34	0,29	0,27	100
M 3x0.50	3520-3.00	3.20	3.00	0,28	0,25	0,24	4.50	0,29	0,26	0,25	6.00	0,34	0,27	0,26	100
M 3.50x0.60	3520-3.50	3.70	3.50	0,34	0,29	0,27	5.25	0,35	0,32	0,29	7.00	0,38	0,35	0,32	100
M 4x0.70	3520-4.00	4.20	4.00	0,27	0,23	0,22	6.00	0,28	0,25	0,24	8.00	0,34	0,27	0,26	100
M 5x0.80	3520-5.00	5.20	5.00	0,34	0,27	0,26	7.50	0,27	0,26	0,25	10.00	0,38	0,30	0,28	100
M 6x1.00	3520-6.00	6.30	6.00	0,35	0,28	0,26	9.00	0,28	0,26	0,25	12.00	0,42	0,38	0,36	100
M 7x1.00	3520-7.00	7.30	7.00	0,39	0,35	0,32	10.50	0,45	0,39	0,37	14.00	0,50	0,44	0,41	100
M 8x1.00	3521-8.00	8.30	8.00	0,40	0,38	0,36	12.00	0,42	0,40	0,36	16.00	0,53	0,45	0,42	100
M 8x1.25	3520-8.00	8.30	8.00	0,35	0,30	0,28	12.00	0,38	0,32	0,29	16.00	0,50	0,42	0,40	100
M 9x1.25	3520-9.00	9.40	9.00	0,50	0,45	0,43	13.50	0,64	0,60	0,54	18.00	0,67	0,61	0,56	100
M 10x1.00	3523-10.00	10.30	10.00	0,44	0,40	0,38	15.00	0,50	0,44	0,41	20.00	0,60	0,50	0,47	100
M 10x1.25	3521-10.00	10.30	10.00	0,44	0,39	0,37	15.00	0,50	0,44	0,41	20.00	0,60	0,54	0,49	100
M 10x1.50	3520-10.00	10.40	10.00	0,44	0,38	0,36	15.00	0,50	0,42	0,40	20.00	0,60	0,49	0,46	100
M 11x1.00	3523-11.00	11.30	11.00	0,60	0,51	0,48	16.50	0,88	0,80	0,74	22.00	1,22	1,09	1,02	100
M 11x1.25	3521-11.00	11.30	11.00	0,60	0,51	0,48	16.50	0,74	0,71	0,66	22.00	1,22	1,09	1,04	100
M 11x1.50	3520-11.00	11.40	11.00	0,76	0,62	0,58	16.50	0,86	0,72	0,67	22.00	0,89	0,80	0,74	100
M 12x1.00	3524-12.00	12.30	12.00	0,63	0,61	0,58	18.00	0,75	0,74	0,71	24.00	1,23	1,17	1,07	100
M 12x1.25	3523-12.00	12.30	12.00	0,63	0,53	0,49	18.00	0,75	0,61	0,56	24.00	0,87	0,80	0,74	100
M 12x1.50	3521-12.00	12.40	12.00	0,63	0,53	0,49	18.00	0,75	0,54	0,49	24.00	0,87	0,80	0,74	100
M 12x1.75	3520-12.00	12.50	12.00	0,63	0,51	0,48	18.00	0,75	0,65	0,61	24.00	0,87	0,75	0,69	100
M 13x1.25	3523-13.00	13.25	13.00	0,92	0,86	0,80	19.50	1,42	1,33	1,23	26.00	1,92	1,77	1,63	50
M 13x1.50	3521-13.00	13.25	13.00	0,92	0,86	0,80	19.50	1,42	1,33	1,23	26.00	1,92	1,77	1,63	50
M 13x1.75	3520-13.00	13.50	13.00	0,92	0,86	0,80	19.50	1,42	1,33	1,23	26.00	1,92	1,77	1,63	50
M 14x1.00	3524-14.00	14.25	14.00	1,16	1,12	1,09	21.00	1,20	1,16	1,10	28.00	1,38	1,33	1,25	50
M 14x1.25	3523-14.00	14.25	14.00	0,97	0,88	0,82	21.00	1,10	0,96	0,88	28.00	1,16	1,08	1,01	50
M 14x1.50	3521-14.00	14.50	14.00	0,97	0,84	0,79	21.00	1,10	0,90	0,84	28.00	1,16	1,12	1,05	50
M 14x2.00	3520-14.00	14.50	14.00	0,97	0,80	0,74	21.00	1,10	1,01	0,91	28.00	1,16	1,10	1,03	50

Nota Importante: La longitud total del inserto, se define para el inserto una vez montado en la pieza.

**INSERTOS LIBRES**



		L mm	 2.5D			 3.0D			Unit		
			€	€	€	€	€	€			
M 2x0.40	3520-2.00	2.10	5.00	0,58	0,53	0,50	6.00	0,63	0,61	0,58	100
M 2.20x0.45	3520-2.20	2.30	5.50	0,58	0,53	0,50	6.60	0,63	0,61	0,58	100
M 2.50x0.45	3520-2.50	2.60	6.25	0,39	0,35	0,32	7.50	0,45	0,40	0,38	100
M 3x0.50	3520-3.00	3.20	7.50	0,39	0,35	0,32	9.00	0,45	0,40	0,38	100
M 3.50x0.60	3520-3.50	3.70	8.75	0,42	0,39	0,37	10.50	0,50	0,47	0,44	100
M 4x0.70	3520-4.00	4.20	10.00	0,39	0,35	0,32	12.00	0,42	0,38	0,36	100
M 5x0.80	3520-5.00	5.20	12.50	0,44	0,38	0,36	15.00	0,51	0,44	0,41	100
M 6x1.00	3520-6.00	6.30	15.00	0,50	0,47	0,44	18.00	0,63	0,54	0,50	100
M 7x1.00	3520-7.00	7.30	17.50	0,62	0,54	0,50	21.00	0,72	0,70	0,66	100
M 8x1.00	3521-8.00	8.30	20.00	0,64	0,60	0,54	24.00	0,78	0,74	0,68	100
M 8x1.25	3520-8.00	8.30	20.00	0,62	0,54	0,50	24.00	0,72	0,65	0,61	100
M 9x1.25	3520-9.00	9.40	22.50	0,74	0,67	0,65	27.00	0,87	0,84	0,81	100
M 10x1.00	3523-10.00	10.30	25.00	0,70	0,64	0,60	30.00	0,85	0,78	0,71	100
M 10x1.25	3521-10.00	10.30	25.00	0,70	0,66	0,63	30.00	0,85	0,83	0,78	100
M 10x1.50	3520-10.00	10.40	25.00	0,70	0,63	0,59	30.00	0,85	0,75	0,69	100
M 11x1.00	3523-11.00	11.30	27.50	1,62	1,54	1,46	33.00	2,00	1,91	1,79	100
M 11x1.25	3521-11.00	11.30	27.50	1,62	1,54	1,46	33.00	2,00	1,91	1,79	100
M 11x1.50	3520-11.00	11.40	27.50	1,11	1,03	0,93	33.00	1,31	1,27	1,22	100
M 12x1.00	3524-12.00	12.30	30.00	1,54	1,50	1,44	36.00	1,89	1,81	1,67	100
M 12x1.25	3523-12.00	12.30	30.00	1,03	1,01	0,96	36.00	1,25	1,18	1,10	100
M 12x1.50	3521-12.00	12.40	30.00	1,03	1,01	0,96	36.00	1,44	1,18	1,10	100
M 12x1.75	3520-12.00	12.50	30.00	1,03	1,00	0,89	36.00	1,31	1,24	1,18	100
M 13x1.25	3523-13.00	13.25	32.50	2,59	2,38	2,21	39.00	2,98	2,74	2,54	50
M 13x1.50	3521-13.00	13.25	32.50	2,59	2,38	2,21	39.00	2,98	2,74	2,54	50
M 13x1.75	3520-13.00	13.50	32.50	2,59	2,38	2,21	39.00	2,98	2,74	2,54	50
M 14x1.00	3524-14.00	14.25	35.00	1,66	1,58	1,46	42.00	2,16	1,82	1,68	50
M 14x1.25	3523-14.00	14.25	35.00	1,37	1,29	1,19	42.00	1,67	1,47	1,35	50
M 14x1.50	3521-14.00	14.50	35.00	1,37	1,28	1,18	42.00	1,67	1,53	1,42	50
M 14x2.00	3520-14.00	14.50	35.00	1,37	1,31	1,28	42.00	1,67	1,59	1,47	50

Nota Importante: La longitud total del inserto, se define para el inserto una vez montado en la pieza.

## INSERTOS LIBRES

M  
MF

FREE

M/MF

AISI 304

BS7752  
DIN6140NASM3279  
NASM3280  
NASM3281 LNS039

...D



D	L	Ø	1.0D			1.5D			2.0D			Unit
			L mm	€		L mm	€		L mm	€		
				<100	100-500		<100	100-500		<100	100-500	
M 15 x 1.50	3521-15.00	15.25	15.00	1,54	1,28	22.50	1,98	1,63	30.00	2,50	2,10	50
M 15 x 2.00	3520-15.00	15.50	15.00	1,54	1,28	22.50	1,98	1,66	30.00	2,50	2,07	50
M 16 x 1.50	3521-16.00	16.50	16.00	1,29	0,87	24.00	1,35	0,98	32.00	1,67	1,28	50
M 16 x 2.00	3520-16.00	16.50	16.00	1,29	1,08	24.00	1,35	1,12	32.00	1,67	1,40	50
M 18 x 1.50	3523-18.00	18.50	18.00	1,89	1,61	27.00	2,21	1,88	36.00	2,98	2,54	50
M 18 x 2.00	3521-18.00	18.50	18.00	1,89	1,63	27.00	2,21	2,02	36.00	2,98	2,32	50
M 18 x 2.50	3520-18.00	19.00	18.00	1,89	1,56	27.00	2,21	1,84	36.00	2,98	2,48	50
M 20 x 1.50	3523-20.00	20.50	20.00	2,21	1,88	30.00	2,78	2,37	40.00	3,57	3,05	25
M 20 x 2.00	3521-20.00	20.50	20.00	2,21	1,56	30.00	2,78	2,22	40.00	3,57	3,05	25
M 20 x 2.50	3520-20.00	20.75	20.00	2,21	1,88	30.00	2,78	2,37	40.00	3,57	3,05	25
M 22 x 1.50	3523-22.00	22.50	22.00	2,38	2,03	33.00	2,98	2,54	44.00	3,77	3,21	25
M 22 x 2.00	3521-22.00	22.50	22.00	2,38	2,07	33.00	2,98	2,54	44.00	3,77	3,14	25
M 22 x 2.50	3520-22.00	22.75	22.00	2,38	2,02	33.00	2,98	2,54	44.00	3,77	3,21	25
M 24 x 1.50	3523-24.00	24.50	24.00	2,98	2,52	36.00	3,13	2,96	48.00	3,98	3,61	25
M 24 x 2.00	3521-24.00	24.50	24.00	2,98	2,66	36.00	3,13	2,96	48.00	3,98	3,70	25
M 24 x 3.00	3520-24.00	25.00	24.00	2,98	2,66	36.00	3,13	2,96	48.00	3,98	3,48	25
M 26 x 1.50	3523-26.00	26.50	26.00	4,53	3,84	39.00	5,15	4,39	52.00	6,69	5,69	10
M 27 x 1.50	3523-27.00	27.50	27.00	4,25	3,62	40.50	5,15	4,39	54.00	6,31	5,36	10
M 27 x 2.00	3521-27.00	27.50	27.00	4,38	3,73	40.50	5,15	4,42	54.00	6,31	5,30	10
M 27 x 3.00	3520-27.00	28.00	27.00	3,74	3,17	40.50	5,15	4,84	54.00	6,57	6,26	10
M 28 x 1.50	3523-28.00	28.50	28.00	4,34	3,70	42.00	5,15	4,39	56.00	6,69	5,69	10
M 30 x 1.50	3523-30.00	30.50	30.00	5,12	4,37	45.00	5,89	5,01	60.00	7,28	6,18	10
M 30 x 2.00	3521-30.00	30.50	30.00	4,83	4,12	45.00	5,89	5,01	60.00	7,56	6,44	10
M 30 x 3.50	3520-30.00	31.00	30.00	4,31	3,80	45.00	5,89	4,22	60.00	7,86	6,69	10
M 33 x 2.00	3521-33.00	33.50	33.00	7,26	6,17	49.50	7,54	6,56	66.00	8,82	7,54	10
M 33 x 3.50	3520-33.00	34.00	33.00	6,31	5,36	49.50	7,54	6,56	66.00	9,04	7,72	10
M 36 x 1.50	3524-36.00	36.50	36.00	6,21	5,28	54.00	7,54	6,56	72.00	9,08	8,58	10
M 36 x 2.00	3523-36.00	36.50	36.00	6,21	5,28	54.00	7,54	6,42	72.00	9,08	8,58	10
M 36 x 3.00	3521-36.00	37.00	36.00	6,21	5,28	54.00	7,54	7,23	72.00	9,21	8,58	10
M 36 x 4.00	3520-36.00	37.00	36.00	6,21	5,28	54.00	7,54	6,25	72.00	9,08	7,98	10
M 39 x 3,00	3521-39.00	40.00	39.00	-	-	58.50	30,30	-	78.00	-	-	1
M 39 x 4,00	3520-39.00	40.25	39.00	31,42	-	58.50	36,38	-	78.00	38,72	-	1
M 40 x 3,00	3523-40.00	41.00	40.00	-	-	60.00	42,79	-	80.00	-	-	1
M 42 x 3,00	3523-42.00	43.00	42.00	-	-	63.00	42,79	-	84.00	-	-	1
M 42 x 4,50	3520-42.00	43.50	42.00	-	-	63.00	43,15	-	84.00	-	-	1
M 45 x3 ,00	3523-45.00	46.00	45.00	-	-	67.50	51,48	-	90.00	-	-	1
M 45 x 4,50	3520-45.00	46.50	45.00	-	-	67.50	51,91	-	90.00	-	-	1
M 48 x 3,00	3523-48.00	49.00	48.00	-	-	72.00	51,48	-	96.00	-	-	1
M 48 x 5,00	3520-48.00	49.50	48.00	-	-	72.00	68,14	-	96.00	-	-	1
M 50 x 3,00	3523-50.00	51.00	50.00	-	-	75.00	67,57	-	100.00	-	-	1
M 52 x 3,00	3523-52.00	53.00	52.00	-	-	78.00	72,40	-	104.00	-	-	1
M 52 x 5,00	3520-52.00	53.50	52.00	-	-	78.00	73,01	-	104.00	-	-	1

Nota importante: La longitud total del inserto, se define para el inserto una vez montado en la pieza.

**INSERTOS LIBRES**

M MF FREE M/MF AISI 304 BS7752 DIN9140 NASM3279 NASM3280 NASM3261 LN9039 ...D



D	L	Ø	2.5D			3.0D			Unit
			L mm	€		L mm	€		
				<100	100-500		<100	100-500	
M 15 x 1.50	3521-15.00	15.25	37.50	3,08	2,57	45.00	3,57	2,95	50
<b>M 15 x 2.00</b>	<b>3520-15.00</b>	15.50	37.50	3,08	2,57	45.00	3,57	2,95	50
M 16 x 1.50	3521-16.00	16.50	40.00	1,83	1,56	48.00	2,16	1,75	50
<b>M 16 x 2.00</b>	<b>3520-16.00</b>	16.50	40.00	1,83	1,62	48.00	2,16	1,85	50
M 18 x 1.50	3523-18.00	18.50	45.00	3,38	2,89	54.00	3,98	3,38	50
M 18 x 2.00	3521-18.00	18.50	45.00	3,38	2,71	54.00	3,98	3,12	50
<b>M 18 x 2.50</b>	<b>3520-18.00</b>	19.00	45.00	3,38	2,81	54.00	3,98	3,31	50
M 20 x 1.50	3523-20.00	20.50	50.00	3,98	3,38	60.00	4,57	3,89	25
M 20 x 2.00	3521-20.00	20.50	50.00	3,98	3,38	60.00	4,57	3,89	25
<b>M 20 x 2.50</b>	<b>3520-20.00</b>	20.75	50.00	3,98	3,38	60.00	4,57	3,89	25
M 22 x 1.50	3523-22.00	22.50	55.00	4,32	3,68	66.00	5,21	4,43	25
M 22 x 2.00	3521-22.00	22.50	55.00	4,32	3,68	66.00	5,21	4,43	25
<b>M 22 x 2.50</b>	<b>3520-22.00</b>	22.75	55.00	4,32	3,68	66.00	5,21	4,43	25
M 24 x 1.50	3523-24.00	24.50	60.00	5,22	4,34	72.00	5,57	5,09	25
M 24 x 2.00	3521-24.00	24.50	60.00	5,22	4,44	72.00	5,57	5,21	25
<b>M 24 x 3.00</b>	<b>3520-24.00</b>	25.00	60.00	5,22	4,44	72.00	6,37	5,60	25
M 26 x 1.50	3523-26.00	26.50	65.00	8,95	7,59	78.00	11,18	9,50	10
M 27 x 1.50	3523-27.00	27.50	67.50	8,19	6,96	81.00	9,67	8,22	10
M 27 x 2.00	3521-27.00	27.50	67.50	7,44	6,33	81.00	8,78	7,48	10
<b>M 27 x 3.00</b>	<b>3520-27.00</b>	28.00	67.50	7,74	6,58	81.00	9,14	7,78	10
M 28 x 1.50	3523-28.00	28.50	70.00	9,61	8,18	84.00	11,53	9,82	10
M 30 x 1.50	3523-30.00	30.50	75.00	9,79	8,33	90.00	11,73	9,98	10
M 30 x 2.00	3521-30.00	30.50	75.00	8,69	7,41	90.00	10,01	8,53	10
<b>M 30 x 3.50</b>	<b>3520-30.00</b>	31.00	75.00	8,65	7,35	90.00	9,52	8,11	10
M 33 x 2.00	3521-33.00	33.50	82.50	9,71	8,25	99.00	10,68	9,08	10
<b>M 33 x 3.50</b>	<b>3520-33.00</b>	34.00	82.50	11,32	9,63	99.00	12,77	10,86	10
M 36 x 1.50	3524-36.00	36.50	90.00	11,88	10,11	108.00	13,08	11,12	10
M 36 x 2.00	3523-36.00	36.50	90.00	11,20	9,52	108.00	12,27	10,44	10
M 36 x 3.00	3521-36.00	37.00	90.00	11,04	9,40	108.00	12,16	10,34	10
<b>M 36 x 4.00</b>	<b>3520-36.00</b>	37.00	90.00	12,79	10,88	108.00	16,49	14,02	10



Ejemplo de codificación:

M 15x1.50	3520-15.00x1.0D	3520-15.00x1.5D
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## INSERTOS LIBRES

M

MF







...D-LH



## INSERTO A IZQUIERDAS



			 1.5D	€		€
		Ø	L mm			
M 3 x 0.50	3520-3.00x1.5D-LH	3.20	4.50	4,45	3520-3.00I-LH	26,58
M 4 x 0.70	3520-4.00x1.5D-LH	4.20	6.00	4,45	3520-4.00I-LH	26,58
M 5 x 0.80	3520-5.00x1.5D-LH	5.20	7.50	4,45	3520-5.00I-LH	26,58
M 6 x 1.00	3520-6.00x1.5D-LH	6.30	9.00	3,07	3520-6.00I-LH	26,58
M 8 x 1.25	3520-8.00x1.5D-LH	8.30	12.00	3,07	3520-8.00I-LH	33,10
M 10 x 1.50	3520-10.00x1.5D-LH	10.40	15.00	4,10	3520-10.00I-LH	40,56
M 12 x 1.75	3520-12.00x1.5D-LH	12.50	18.00	6,13	3520-12.00I-LH	45,91

M

MF



...DY



## AISI 316

			 1.5D	€
		Ø	L mm	
M 3 x 0.50	3520-3.00x1.5DY	3.20	4.50	2,29
M 4 x 0.70	3520-4.00x1.5DY	4.20	6.00	2,40
M 5 x 0.80	3520-5.00x1.5DY	5.20	7.50	2,49
M 6 x 1.00	3520-6.00x1.5DY	6.30	9.00	2,54
M 8 x 1.25	3520-8.00x1.5DY	8.30	12.00	3,06
M 10 x 1.50	3520-10.00x1.5DY	10.40	15.00	3,15
M 12 x 1.75	3520-12.00x1.5DY	12.50	18.00	3,43



Ejemplo de codificación:

M 6 x 1.00



1.0D

3520-6.00X1.5DY

**INSERTOS SIN COLA**



D	L	Ø	1.0D			1.5D			2.0D			Unit			
			L mm	<500	500-999	1000-...	L mm	<500	500-999	1000-...	L mm		<500	500-999	1000-...
M 3 x 0.50	3520-3.00DTL	3.20	3.00	0,44	0,39	0,38	4.50	0,46	0,41	0,39	6.00	0,50	0,42	0,41	100
M 4 x 0.70	3520-4.00DTL	4.20	4.00	0,42	0,36	0,34	6.00	0,44	0,39	0,38	8.00	0,50	0,42	0,41	100
M 5 x 0.80	3520-5.00DTL	5.20	5.00	0,50	0,42	0,41	7.50	0,42	0,41	0,39	10.00	0,59	0,47	0,44	100
M 6 x 1.00	3520-6.00DTL	6.30	6.00	0,53	0,44	0,41	9.00	0,44	0,41	0,39	12.00	0,65	0,59	0,54	100
M 8 x 1.25	3520-8.00DTL	8.30	8.00	0,53	0,47	0,44	12.00	0,59	0,49	0,46	16.00	0,80	0,65	0,62	100
M 10 x 1.50	3520-10.00DTL	10.40	10.00	0,68	0,59	0,54	15.00	0,80	0,65	0,62	20.00	0,91	0,78	0,71	100
M 12 x 1.75	3520-12.00DTL	12.50	12.00	0,97	0,81	0,76	18.00	1,16	1,01	0,93	24.00	1,35	1,16	1,07	100



Ejemplo de codificación: M 3 x 0.50    3520-3.00X1.0DTL    3520-3.00X1.5DTL    3520-3.00X2.0DTL

**HERRAMIENTAS DE INSTALACION PARA INSERTOS SIN COLA**

	€
3520-3MITTL	608,98
3520-4MITTL	608,98
3520-5MITTL	608,98
3520-6MITTL	608,98
3520-8MITTL	608,98
3520-10MITTL	608,98
3520-12MITTL	608,98



## INSERTO LIVRE

UNC



...D



D	UNC	Nº	3532-DG	D1 mm	L mm	1.0D			1.5D			2.0D			Unit			
						L mm	€	€	L mm	€	€	L mm	€	€				
		2-56	3532-2G	2.18	2.40	2.29	0,65	0,60	0,54	3.30	0,76	0,69	0,65	4.32	1,00	0,89	0,83	100
		3-48	3532-3G	2.51	2.70	2.54	0,66	0,62	0,58	3.81	0,71	0,65	0,61	5.08	0,75	0,70	0,66	100
		4-40	3532-4G	2.84	3.00	2.79	0,35	0,30	0,28	4.32	0,36	0,32	0,29	5.59	0,37	0,34	0,30	100
		5-40	3532-5G	3.17	3.40	3.30	0,38	0,34	0,30	4.83	0,39	0,35	0,32	6.35	0,41	0,38	0,36	100
		6-32	3532-6G	3.50	3.70	3.56	0,28	0,26	0,25	5.33	0,30	0,28	0,26	7.11	0,35	0,29	0,27	100
		8-32	3532-8G	4.17	4.40	4.06	0,29	0,27	0,26	6.35	0,34	0,29	0,27	8.38	0,37	0,30	0,28	100
		10-24	3532-10G	4.83	5.10	4.83	0,34	0,29	0,27	7.37	0,37	0,30	0,28	9.65	0,39	0,35	0,32	100
		12-24	3532-12G	5.49	5.70	5.59	0,38	0,34	0,30	8.13	0,41	0,38	0,36	10.92	0,44	0,40	0,38	100
		1/4-20	3532-1/4	6.35	6.70	6.35	0,38	0,34	0,30	9.65	0,41	0,38	0,36	12.70	0,44	0,40	0,38	100
		5/16-18	3532-5/16	7.94	8.30	7.87	0,49	0,42	0,40	11.94	0,61	0,51	0,48	15.75	0,63	0,54	0,50	100
		3/8-16	3532-3/8	9.52	9.90	9.65	0,69	0,63	0,59	14.48	0,75	0,66	0,62	19.30	1,00	0,86	0,80	100
		7/16-14	3532-7/16	11.11	11.60	11.18	0,84	0,74	0,68	16.76	1,01	0,88	0,82	22.35	1,13	1,01	0,91	100
		1/2-13	3532-1/2	12.70	13.00	12.70	0,89	0,79	0,72	19.05	1,01	0,88	0,82	25.40	1,13	1,01	0,91	100
		9/16-12	3532-9/16	14.28	15.00	14.22	1,74	1,53	1,42	21.34	2,03	1,80	1,66	28.45	2,59	2,28	2,11	50
		5/8-11	3532-5/8	15.87	16.50	16.00	1,75	1,54	1,44	24.13	2,04	1,81	1,67	32.00	2,61	2,30	2,13	50
		3/4-10	3532-3/4	19.05	20.00	19.05	1,93	1,71	1,56	28.70	2,40	2,13	1,96	38.10	2,88	2,54	2,34	50
		7/8-9	3532-7/8	22.22	23.00	22.35	2,51	2,22	2,04	33.53	3,13	2,76	2,55	44.70	3,74	3,30	3,03	25
		1-8	3532-1	25.40	26.25	25.40	3,66	3,57	3,30	38.10	5,47	5,34	4,92	50.80	6,95	6,80	6,27	25
		1.1/8-7	3532-1.1/8	28.57	29.50	28.70	5,82	5,13	4,71	42.93	7,70	6,78	6,25	57.15	7,98	7,04	6,47	25
		1.1/4-7	3532-1.1/4	31.75	32.50	31.75	6,35	5,59	5,15	47.75	8,06	7,10	6,53	63.50	9,09	8,00	7,36	10
		1.3/8-6	3532-1.3/8	34.92	36.00	35.05	6,96	6,13	5,65	52.58	8,59	7,56	6,96	69.85	10,19	8,98	8,25	10
		1.1/2-6	3532-1.1/2	38.10	39.50	38.10	8,06	7,10	6,53	57.15	11,08	9,75	8,99	76.20	12,81	11,28	10,37	10

Nota importante: O comprimento total do inserto é definido para o inserto, uma vez montado na peça.



Exemplo de codificação:

UNC 1/4-20



3532-1/4x1.0D



3532-1/4x1.5D



3532-1/4x2.0D

**INSERTO LIVRE**

UNC FREE UNC AISI 304 SBAC AS 6734 NASMI22076 - NASMI22275 NASM8846 ...D



D	D	D1	Ø	L	2.5D			L	3.0D			Unit	
					<500	500-999	1000-...		<500	500-999	1000-...		
UNC	Nº2-56	3532-2G	2.18	2.40	5.59	1,11	1,02	0,92	6.60	1,39	1,25	1,16	100
UNC	Nº3-48	3532-3G	2.51	2.70	6.35	0,79	0,72	0,67	7.62	0,87	0,80	0,74	100
UNC	Nº4-40	3532-4G	2.84	3.00	9.65	0,41	0,38	0,36	8.64	0,49	0,42	0,40	100
UNC	Nº5-40	3532-5G	3.17	3.40	7.87	0,49	0,42	0,40	9.65	0,61	0,51	0,48	100
UNC	Nº6-32	3532-6G	3.50	3.70	8.89	0,38	0,34	0,30	10.41	0,44	0,39	0,37	100
UNC	Nº8-32	3532-8G	4.17	4.40	10.41	0,39	0,36	0,34	12.45	0,46	0,41	0,39	100
UNC	Nº10-24	3532-10G	4.83	5.10	12.19	0,47	0,41	0,39	14.48	0,58	0,49	0,46	100
UNC	Nº12-24	3532-12G	5.49	5.70	13.72	0,53	0,48	0,45	16.51	0,66	0,60	0,54	100
UNC	1/4-20	3532-1/4	6.35	6.70	16.00	0,53	0,48	0,45	19.05	0,66	0,60	0,54	100
UNC	5/16-18	3532-5/16	7.94	8.30	19.81	0,75	0,65	0,61	23.62	0,89	0,79	0,72	100
UNC	3/8-16	3532-3/8	9.52	9.90	24.13	1,12	1,00	0,91	28.96	1,34	1,18	1,09	100
UNC	7/16-14	3532-7/16	11.11	11.60	27.94	1,37	1,20	1,11	33.53	1,67	1,47	1,35	100
UNC	1/2-13	3532-1/2	12.70	13.00	31.75	1,37	1,20	1,11	38.10	1,67	1,47	1,35	100
UNC	9/16-12	3532-9/16	14.28	15.00	35.56	3,24	2,86	2,63	42.67	3,50	3,09	2,86	50
UNC	5/8-11	3532-5/8	15.87	16.50	40.13	3,29	2,90	2,67	48.01	3,54	3,12	2,88	50
UNC	3/4-10	3532-3/4	19.05	20.00	47.75	3,75	3,31	3,05	57.15	4,13	3,64	3,35	50
UNC	7/8-9	3532-7/8	22.22	23.00	55.88	4,87	4,28	3,95	67.06	5,36	4,71	4,35	25
UNC	1-8	3532-1	25.40	26.25	63.50	8,21	8,03	7,41	76.20	9,96	9,73	8,97	25
UNC	1.1/8-7	3532-1.1/8	28.57	29.50	71.37	9,95	8,77	8,07	85.85	11,08	9,75	8,99	25
UNC	1.1/4-7	3532-1.1/4	31.75	32.50	79.50	11,40	10,05	9,24	95.25	12,82	11,29	10,38	10
UNC	1.3/8-6	3532-1.3/8	34.92	36.00	87.38	12,87	11,33	10,44	104.90	14,04	12,36	11,37	10
UNC	1.1/2-6	3532-1.1/2	38.10	39.50	95.25	16,75	14,74	13,58	114.30	19,05	16,77	15,44	10

Nota importante: O comprimento total do inserto é definido para o inserto, uma vez montado na peça.

## INSERTO LIBERO

UNF



...D



1.0D

1.5D

2.0D

D	UNF	D1 mm	Ø	€			€			€			Unit			
				L mm	<500	500-999	1000-...	L mm	<500	500-999	1000-...	L mm		<500	500-999	1000-...
	UNF N°3 - 56	2.51	2.70	2.54	0,50	0,45	0,42	3.81	0,63	0,56	0,51	5.08	0,76	0,67	0,63	100
	UNF N°4 - 48	2.84	3.00	2.79	0,50	0,45	0,42	4.32	0,63	0,56	0,51	5.59	0,76	0,67	0,63	100
	UNF N°6 - 40	3.50	3.70	3.56	0,50	0,45	0,42	5.33	0,63	0,56	0,51	7.11	0,76	0,67	0,63	100
	UNF N°8 - 36	4.17	4.40	4.06	0,50	0,45	0,42	6.35	0,63	0,56	0,51	8.38	0,76	0,67	0,63	100
	UNF N°10 - 32	4.83	5.10	4.83	0,37	0,30	0,28	7.37	0,38	0,34	0,30	9.65	0,44	0,39	0,37	100
	UNF N°12 - 28	5.49	5.70	5.59	0,60	0,51	0,48	8.13	0,62	0,58	0,51	10.92	0,64	0,61	0,56	100
	UNF 1/4 - 28	6.35	6.60	6.35	0,37	0,30	0,28	9.65	0,38	0,34	0,30	12.70	0,44	0,39	0,37	100
	UNF 5/16 - 24	7.94	8.20	7.87	0,48	0,42	0,40	11.94	0,51	0,45	0,42	15.75	0,63	0,53	0,49	100
	UNF 3/8 - 24	9.52	9.80	9.65	0,72	0,63	0,59	14.48	0,75	0,65	0,61	19.30	0,89	0,79	0,72	100
	UNF 7/16 - 20	11.11	11.50	11.18	0,88	0,78	0,71	16.76	1,01	0,87	0,81	22.35	1,12	1,00	0,91	100
	UNF 1/2 - 20	12.70	13.00	12.70	0,88	0,78	0,71	19.05	1,01	0,87	0,81	25.40	1,12	1,00	0,91	100
	UNF 9/16 - 18	14.29	14.70	14.22	1,98	1,75	1,61	21.34	2,10	1,85	1,71	28.45	2,50	2,22	2,04	50
	UNF 5/8 - 18	15.87	16.30	16.00	2,03	1,80	1,66	24.13	2,21	1,94	1,80	32.00	2,50	2,22	2,04	50
	UNF 3/4 - 16	19.05	19.50	19.05	2,24	1,97	1,83	28.70	2,40	2,13	1,96	38.10	2,74	2,42	2,23	50
	UNF 7/8 - 14	22.22	22.50	22.35	4,66	4,11	3,78	33.53	6,87	6,05	5,58	44.70	8,75	7,70	7,09	25
	UNF 1-12	25.40	26.00	25.40	4,66	4,11	3,78	38.10	6,87	6,05	5,58	50.80	8,75	7,70	7,09	25
	UNF 1-14	25.40	26.00	25.40	4,85	4,25	3,92	38.10	7,15	6,30	5,79	50.80	9,09	7,99	7,35	25
	UNF 1.1/8 - 12	28.57	29.50	28.70	6,68	5,89	5,42	43.18	8,82	7,77	7,15	57.15	9,16	8,06	7,43	10
	UNF 1.1/4 - 12	31.75	32.50	31.75	7,26	6,39	5,89	47.75	9,60	8,44	7,78	63.50	10,42	9,17	8,43	10
	UNF 1.3/8 - 12	34.92	35.50	35.05	7,96	7,01	6,45	52.58	9,85	8,66	7,97	69.85	11,67	10,27	9,45	10
	UNF 1.1/2 - 12	38.10	38.50	38.10	9,22	8,12	7,48	57.15	11,99	11,64	10,71	76.20	14,67	12,92	11,89	10

Nota importante: la lunghezza totale dell'inserto è definita per l'inserto una volta assemblato nella parte.



Esempio di codifica:

UNF N°3 - 56

3534-3Gx1.0D

3534-3Gx1.5D

3534-3Gx2.0D

**INSERTO LIBERO**

UNF FREE UNF AISI 304 SBAC AS 6734 NASM124651-124850 NASM8846 SBAC8455 ...D



UNF	Nº	Part Number	D1 mm	Ø	L mm	2.5D			3.0D			Unit	
						<500	500-999	1000-...	<500	500-999	1000-...		
UNF	Nº3	3534-3G	2.51	2.70	6.35	0,87	0,78	0,71	7.62	1,02	0,89	0,83	100
UNF	Nº4	3534-4G	2.84	3.00	7.11	0,87	0,78	0,71	8.64	1,02	0,89	0,83	100
UNF	Nº6	3534-6G	3.50	3.70	8.89	0,87	0,78	0,71	10.41	1,02	0,89	0,83	100
UNF	Nº8	3534-8G	4.17	4.40	10.41	0,87	0,78	0,71	12.45	1,02	0,89	0,83	100
UNF	Nº10	3534-10G	4.83	5.10	12.19	0,58	0,49	0,46	14.48	0,66	0,60	0,54	100
UNF	Nº12	3534-12G	5.49	5.70	13.72	0,67	0,63	0,59	16.51	0,75	0,70	0,66	100
UNF	1/4	3534-1/4	6.35	6.60	16.00	0,58	0,49	0,46	19.05	0,66	0,60	0,54	100
UNF	5/16	3534-5/16	7.94	8.20	19.81	0,76	0,67	0,63	23.62	0,89	0,79	0,72	100
UNF	3/8	3534-3/8	9.52	9.80	24.13	1,13	1,01	0,91	28.96	1,34	1,18	1,09	100
UNF	7/16	3534-7/16	11.11	11.50	27.94	1,40	1,23	1,13	33.53	1,67	1,47	1,35	100
UNF	1/2	3534-1/2	12.70	13.00	31.75	1,40	1,23	1,13	38.10	1,67	1,47	1,35	100
UNF	9/16	3534-9/16	14.29	14.70	35.56	3,17	2,79	2,58	42.67	3,56	3,13	2,89	50
UNF	5/8	3534-5/8	15.87	16.30	40.13	2,98	2,63	2,42	48.01	3,56	3,13	2,89	50
UNF	3/4	3534-3/4	19.05	19.50	47.75	3,75	3,31	3,05	57.15	4,13	3,64	3,35	50
UNF	7/8	3534-7/8	22.22	22.50	55.88	10,45	9,20	8,46	67.06	12,17	10,71	9,86	25
UNF	1	3534-1	25.40	26.00	63.50	10,45	9,20	8,46	76.20	12,17	10,71	9,86	25
UNF	1	3535-1	25.40	26.00	63.50	10,45	9,20	8,46	76.20	12,53	11,03	10,15	25
UNF	1.1/8	3534-1.1/8	28.57	29.50	71.37	11,40	10,05	9,24	85.85	12,71	11,18	10,29	10
UNF	1.1/4	3534-1.1/4	31.75	32.50	79.50	13,03	11,48	10,57	95.25	14,69	12,93	11,89	10
UNF	1.3/8	3534-1.3/8	34.92	35.50	87.38	14,74	12,98	11,95	104.90	16,07	14,14	13,02	10
UNF	1.1/2	3534-1.1/2	38.10	38.50	95.25	19,16	16,87	15,52	114.30	21,82	19,20	17,67	10



Consultare la nostra gamma di organizzatori.

## INSERTO LIVRE

BSW



...D



	D1 mm												Unit
			L mm	€	L mm	€	L mm	€	L mm	€	L mm	€	
BSW 1/8 - 40	3.17	3.40	3.30	0,44	5.08	0,48	6.60	0,58	8.38	0,74	9.91	0,96	100
BSW 3/16 - 24	4.76	5.00	4.83	0,44	7.37	0,48	9.65	0,58	12.19	0,74	14.48	0,96	100
BSW 1/4 - 20	6.35	6.70	6.35	0,40	9.65	0,44	12.70	0,50	16.00	0,66	19.05	0,71	100
BSW 5/16 - 18	7.94	8.30	7.87	0,46	11.94	0,53	15.75	0,59	19.81	0,69	23.62	0,85	100
BSW 3/8 - 16	9.52	10.00	9.65	0,83	14.48	0,88	19.30	1,05	24.13	1,23	28.96	1,47	100
BSW 7/16 - 14	11.11	11.60	11.18	1,01	16.76	1,10	22.35	1,27	27.94	1,50	33.53	1,84	100
BSW 1/2 - 12	12.70	13.00	12.70	1,01	19.05	1,10	25.40	1,27	31.75	1,50	38.10	1,84	100
BSW 9/16 - 12	14.29	14.75	14.22	2,50	21.34	3,50	28.45	4,11	35.56	4,88	42.67	5,97	50
BSW 5/8 - 11	15.87	16.50	16.00	2,50	24.13	3,50	32.00	4,11	40.13	4,88	48.01	5,97	50
BSW 3/4 - 10	19.05	20.00	19.05	3,24	28.70	4,16	38.10	5,06	47.75	6,08	57.15	7,28	50
BSW 7/8 - 9	22.22	23.25	22.35	4,16	33.53	5,80	44.70	7,26	55.88	8,74	67.06	10,48	25
BSW 1 - 8	25.40	26.50	25.40	4,48	38.10	6,65	50.80	7,26	63.50	8,74	76.20	10,48	25

BSF



...D

	D1 mm												Unit
			L mm	€	L mm	€	L mm	€	L mm	€	L mm	€	
BSF 3/16 - 32	4.76	5.00	4.83	0,44	7.37	0,48	9.65	0,59	12.19	0,68	14.48	0,81	100
BSF 1/4 - 26	6.35	6.60	6.35	0,42	9.65	0,44	12.70	0,51	16.00	0,63	19.05	0,72	100
BSF 5/16 - 22	7.94	8.30	7.87	0,44	11.94	0,54	15.75	0,60	19.81	0,72	23.62	0,87	100
BSF 3/8 - 20	9.52	9.80	9.65	0,84	14.48	0,90	19.30	1,07	24.13	1,25	28.96	1,50	100
BSF 7/16 - 18	11.11	11.60	11.18	1,03	16.76	1,12	22.35	1,29	27.94	1,53	33.53	1,88	100
BSF 1/2 - 16	12.70	13.25	12.70	1,03	19.05	1,12	25.40	1,29	31.75	1,53	38.10	1,88	100
BSF 9/16 - 16	14.29	14.75	14.22	2,56	21.34	3,39	28.45	4,19	35.56	4,99	42.67	6,78	50
BSF 5/8 - 14	15.88	16.50	16.00	2,56	24.13	3,39	32.00	4,19	40.13	4,99	48.01	6,11	50
BSF 3/4 - 12	19.05	19.50	19.05	3,31	28.70	4,24	38.10	5,19	47.75	6,21	57.15	7,46	50
BSF 7/8 - 11	22.23	22.75	22.35	4,24	33.53	5,94	44.70	7,42	55.88	8,94	67.06	10,70	25
BSF 1 - 10	25.40	26.25	25.40	4,24	38.10	5,94	50.80	7,42	63.50	8,94	76.20	10,70	25

**INSERTO LIVRE**

**BSP (GAS)** **FREE** **BSP** **AISI 304** **SBAC AS 4736 SBAC AS 4947** **...D**



		D1 mm		1.0D		1.5D		2.0D			
				L mm	€	L mm	€	L mm	€		
BSP	1/8 - 28	3546-1/8	9.73	10.00	3.30	0,62	4.83	0,87	6.35	0,97	100
BSP	1/4 - 19	3546-1/4	13.16	13.75	6.35	0,83	9.65	1,19	12.70	1,34	100
BSP	3/8 - 19	3546-3/8	16.66	17.00	9.65	0,74	14.22	1,35	19.05	1,53	100
BSP	1/2 - 14	3546-1/2	20.95	21.50	12.70	1,92	19.05	1,94	25.40	3,08	50
BSP	5/8 - 14	3546-5/8	22.91	23.50	16.00	2,94	23.88	4,34	31.75	4,53	50
BSP	3/4 - 14	3546-3/4	26.44	27.00	19.05	2,94	28.70	4,34	38.10	4,53	50
BSP	7/8 - 14	3546-7/8	30.20	30.50	22.35	7,55	33.53	13,27	44.45	16,55	25
BSP	1 - 11	3546-1	33.25	33.75	25.40	8,46	38.10	14,86	50.80	17,02	25

**NPT** **FREE** **NPT** **60°** **AISI 304** **SBAC AS 4737-48 SBAC AS 4948-59** **...D**

		L mm	€	Unit	
					1.5D
NPT	1/8 - 27	3552-1/8	4.78	1,24	100
NPT	1/4 - 18	3552-1/4	9.53	1,79	100
NPT	3/8 - 18	3552-3/8	14.30	2,25	100
NPT	1/2 - 14	3552-1/2	19.05	3,69	50
NPT	3/4 - 14	3552-3/4	28.58	5,29	50
NPT	1 - 11.1/2	3552-1	38.10	7,10	25



Exemplo de codificação:

BSP 1/8-28

1.0D  
**3546-1/8x1.0D**

1.5D  
**3546-1/8x1.5D**

## INSERTO LIBERO

UNx8



...D



		D1 mm		1.0D		1.5D		2.0D		Unit	
				L mm	€	L mm	€	L mm	€		
UN	1.1/8 - 8	3570-1.1/8	28.57	28.50	28.70	11,14	42.93	13,14	57.15	14,02	10
UN	1.1/4 - 8	3570-1.1/4	31.75	32.00	31.75	13,35	47.75	16,11	63.50	18,23	10
UN	1.3/8 - 8	3570-1.3/8	34.92	35.00	35.05	15,07	52.32	20,02	69.85	22,04	10
UN	1.1/2 - 8	3570-1.1/2	38.10	38.00	38.10	16,81	57.15	22,31	76.20	26,17	10
UN	1.5/8 - 8	3570-1.5/8	41.27	41.00	41.40	18,42	61.98	23,67	82.55	29,17	10
UN	1.3/4 - 8	3570-1.3/4	44.45	44.50	44.45	19,96	66.80	25,71	88.90	29,57	10
UN	1.7/8 - 8	3570-1.7/8	47.62	47.50	47.75	21,55	71.37	27,58	95.25	34,04	10
UN	2 - 8	3570-2	50.80	51.00	50.80	23,06	76.20	29,62	101.60	36,48	10

BA



...D

		D1 mm		1.0D		1.5D		2.0D		2.5D		3.0D		Unit	
				L mm	€	L mm	€	L mm	€	L mm	€	L mm	€		
BA 0		3544-0	6.00	6.20	6.10	2,76	8.89	3,65	11.94	4,38	14.99	5,03	18.03	5,79	100
BA 2		3544-2	4.70	4.90	4.83	1,44	7.11	1,60	9.40	1,76	11.68	2,07	14.22	2,24	100
BA 4		3544-4	3.60	3.80	3.56	1,44	5.33	1,60	7.11	1,76	8.89	2,07	10.92	2,24	100
BA 6		3544-6	2.80	2.90	2.79	1,44	4.32	1,60	5.59	1,76	7.11	2,07	8.38	2,24	100



Esempio di codifica:

UN 1.1/8 - 8



3570-1.1/8x1.0D

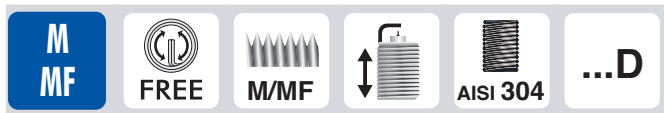


3570-1.1/8x1.5D

**INSERTO LIBERO**



D	D1 mm	Ø	1.0D		1.5D		2.0D		Unit	
			L mm	€	L mm	€	L mm	€		
BSB 1/4 - 26	3560-1/4	6,35	6.60	6,35	1,69	9.53	2,33	12.70	2,55	100
BSB 5/16 - 26	3560-5/16	7,94	8.20	7,95	0,76	11.91	0,91	15.88	1,23	100
BSB 3/8 - 26	3560-3/8	9,52	9.80	9,53	0,88	14.30	1,06	19.05	1,44	100
BSB 7/16 - 26	3560-7/16	11,11	11.30	11,13	0,93	16.66	1,44	22.23	1,95	100
BSB 1/2 - 26	3560-1/2	12,70	12.70	12,70	1,91	19.05	2,42	25.40	3,08	50



D	D1	Ø	8.40mm	12.40mm	16.40mm	Unit
			€	€	€	
14x1.25	3522-14.00	14.25	1,03	1,03	1,03	50

D	D1	Ø	1/2"	3/4"	Unit
			€	€	
10x1.00	3522-10.00	10.30	0,51	-	100
12x1.25	3522-12.00	12.30	0,62	0,75	100
14x1.25	3522-14.00	14.25	0,89	1,38	50
18x1.50	3522-18.00	18.50	1,20	-	50



D	D1	Ø	0.339"	3/8"	7/16"	Unit
			€	€	€	
10x1.00	3522-10.00	10.30	0,43	-	-	100
14x1.25	3522-14.00	14.25	-	0,97	1,06	50

M  
MF

FREE



M/MF










AISI 304

BS7752  
DIN6140

...DP



## INSERTO LIBERO

		€	D1 mm	L mm						Accessori			
M 3 x 0.50	3520-3.00X1.0DP	4,03	1.00	3.00	10	3.20	3520-3.00I	3500-HIT4	3500-TB4				
<b>M 3 x 0.50</b>	<b>3520-3.00X1.5DP</b>	<b>4,21</b>	1.50	4.50	10	3.20	3520-3.00I	3500-HIT4	3500-TB4				
M 3 x 0.50	3520-3.00X2.0DP	4,77	2.00	6.00	10	3.20	3520-3.00I	3500-HIT4	3500-TB4				
M 4 x 0.70	3520-4.00X1.0DP	3,83	1.00	4.00	10	4.20	3520-4.00I	3500-HIT6	3500-TB6				
<b>M 4 x 0.70</b>	<b>3520-4.00X1.5DP</b>	<b>4,03</b>	1.50	6.00	10	4.20	3520-4.00I	3500-HIT6	3500-TB6				
M 4 x 0.70	3520-4.00X2.0DP	4,77	2.00	8.00	10	4.20	3520-4.00I	3500-HIT6	3500-TB6				
M 5 x 0.80	3520-5.00X1.0DP	4,77	1.00	5.00	10	5.20	3520-5.00I	3500-HIT8	3500-TB8				
<b>M 5 x 0.80</b>	<b>3520-5.00X1.5DP</b>	<b>3,83</b>	1.50	7.50	10	5.20	3520-5.00I	3500-HIT8	3500-TB8				
M 5 x 0.80	3520-5.00X2.0DP	5,30	2.00	10.00	10	5.20	3520-5.00I	3500-HIT8	3500-TB8				
M 6 x 1.00	3520-6.00X1.0DP	4,94	1.00	6.00	10	6.30	3520-6.00I	3500-HIT9	3500-TB9				
<b>M 6 x 1.00</b>	<b>3520-6.00X1.5DP</b>	<b>4,03</b>	1.50	9.00	10	6.30	3520-6.00I	3500-HIT9	3500-TB9				
M 6 x 1.00	3520-6.00X2.0DP	6,04	2.00	12.00	10	6.30	3520-6.00I	3500-HIT9	3500-TB9				
M 6 x 1.00	3520-6.00X2.5DP	7,31	2.50	15.00	10	6.30	3520-6.00I	3500-HIT9	3500-TB9				
M 8 x 1.00	3521-8.00X1.0DP	5,67	1.00	8.00	10	8.30	3521-8.00I	3500-HIT11	3500-TB12				
M 8 x 1.00	3521-8.00X1.5DP	6,04	1.50	12.00	10	8.30	3521-8.00I	3500-HIT11	3500-TB12				
M 8 x 1.00	3521-8.00X2.0DP	7,68	2.00	16.00	10	8.30	3521-8.00I	3500-HIT11	3500-TB12				
M 8 x 1.25	3520-8.00X1.0DP	4,94	1.00	8.00	10	8.30	3520-8.00I	3500-HIT11	3500-TB12				
<b>M 8 x 1.25</b>	<b>3520-8.00X1.5DP</b>	<b>5,30</b>	1.50	12.00	10	8.30	3520-8.00I	3500-HIT11	3500-TB12				
M 8 x 1.25	3520-8.00X2.0DP	7,31	2.00	16.00	10	8.30	3520-8.00I	3500-HIT11	3500-TB12				
M 10 x 1.25	3521-10.00X1.5DP	7,07	1.50	15.00	10	10.30	3521-10.00I	3500-HIT13	3500-TB13				
M 10 x 1.50	3520-10.00X1.0DP	6,17	1.00	10.00	10	10.40	3520-10.00I	3500-HIT13	3500-TB13				
<b>M 10 x 1.50</b>	<b>3520-10.00X1.5DP</b>	<b>7,07</b>	1.50	15.00	10	10.40	3520-10.00I	3500-HIT13	3500-TB13				
M 10 x 1.50	3520-10.00X2.0DP	8,12	2.00	20.00	10	10.40	3520-10.00I	3500-HIT13	3500-TB13				
M 12 x 1.50	3521-12.00X1.5DP	10,42	1.50	18.00	10	12.40	3521-12.00I	3500-HIT15	3500-TB15				
M 12 x 1.75	3520-12.00X1.0DP	8,65	1.00	12.00	10	12.50	3520-12.00I	3500-HIT15	3500-TB15				
<b>M 12 x 1.75</b>	<b>3520-12.00X1.5DP</b>	<b>10,42</b>	1.50	18.00	10	12.50	3520-12.00I	3500-HIT15	3500-TB15				
M 12 x 1.75	3520-12.00X2.0DP	12,24	2.00	24.00	10	12.50	3520-12.00I	3500-HIT15	3500-TB15				
M 14 x 1.50	3521-14.00X1.5DP	7,68	1.50	21.00	5	14.40	3521-14.00I	3500-HIT16	-				
M 14 x 2.00	3520-14.00X1.0DP	6,71	1.00	14.00	5	14.50	3520-14.00I	3500-HIT16	-				
<b>M 14 x 2.00</b>	<b>3520-14.00X1.5DP</b>	<b>7,68</b>	1.50	21.00	5	14.50	3520-14.00I	3500-HIT16	-				
M 14 x 2.00	3520-14.00X2.0DP	8,03	2.00	28.00	5	14.50	3520-14.00I	3500-HIT16	-				
M 16 x 1.50	3521-16.00X1.5DP	9,45	1.50	24.00	5	16.50	3521-16.00I	3500-HIT18	-				
M 16 x 2.00	3520-16.00X1.0DP	9,01	1.00	16.00	5	16.50	3520-16.00I	3500-HIT18	-				
<b>M 16 x 2.00</b>	<b>3520-16.00X1.5DP</b>	<b>9,45</b>	1.50	24.00	5	16.50	3520-16.00I	3500-HIT18	-				
M 16 x 2.00	3520-16.00X2.0DP	11,66	2.00	32.00	5	16.50	3520-16.00I	3500-HIT18	-				
M 18 x 2.00	3521-18.00X1.5DP	15,36	1.50	27.00	5	18.50	3521-18.00I	3500-HIT20	-				
M 18 x 2.50	3520-18.00X1.0DP	12,21	1.00	18.00	5	19.00	3520-18.00I	3500-HIT20	-				
<b>M 18 x 2.50</b>	<b>3520-18.00X1.5DP</b>	<b>14,27</b>	1.50	27.00	5	19.00	3520-18.00I	3500-HIT20	-				
M 18 x 2.50	3520-18.00X2.0DP	19,34	2.00	36.00	5	19.00	3520-18.00I	3500-HIT20	-				
M 20 x 2.50	3520-20.00X1.0DP	14,27	1.00	20.00	5	20.75	3520-20.00I	3500-HIT21	-				
<b>M 20 x 2.50</b>	<b>3520-20.00X1.5DP</b>	<b>18,04</b>	1.50	30.00	5	20.75	3520-20.00I	3500-HIT21	-				
M 20 x 2.50	3520-20.00X2.0DP	23,18	2.00	40.00	5	20.75	3520-20.00I	3500-HIT21	-				
<b>M 22 x 2.50</b>	<b>3520-22.00X1.5DP</b>	<b>11,61</b>	1.50	33.00	3	22.75	3520-22.00I	3500-HIT22	-				
M 22 x 2.50	3520-22.00X2.0DP	14,71	2.00	44.00	3	22.75	3520-22.00I	3500-HIT22	-				
<b>M 24 x 3.00</b>	<b>3520-24.00X1.5DP</b>	<b>13,11</b>	1.50	36.00	3	24.50	3520-24.00I	3500-HIT23	-				

Accessori non inclusi nel prezzo.



M14x1,25

M12x1,25

		€	D1 mm	L						Accessori			
M 12 x 1.25	3522-12.00X1/2P	8,46	-	1/2"	10	12.30	3522-12.00PN	3500-HIT15	3500-TB15				
M 12 x 1.25	3522-12.00X3/4P	10,42	-	3/4"	10	12.30	3522-12.00PN	3500-HIT15	3500-TB15				
M 14 x 1.25	3522-14.00X3/8P	13,48	-	3/8"	10	14.30	3522-14.00PN	3500-HIT17	3500-HIT17				
M 14 x 1.25	3522-14.00X1/2P	12,54	-	1/2"	10	14.30	3522-14.00PN	3500-HIT17	3500-HIT17				
M 14 x 1.25	3522-14.00X3/4P	19,09	-	3/4"	10	14.30	3522-14.00PN	3500-HIT17	3500-HIT17				
M 14 x 1.25	3522-14.00X8.4P	7,15	-	8.4 mm	5	14.30	3522-14.00PN	3500-HIT17	3500-HIT17				
M 14 x 1.25	3522-14.00X12.4P	7,15	-	12.4"	5	14.30	3522-14.00PN	3500-HIT17	3500-HIT17				
M 14 x 1.25	3522-14.00X16.4P	7,15	-	16.4"	5	14.30	3522-14.00PN	3500-HIT17	3500-HIT17				

Accessori non inclusi nel prezzo.

**INSERTO LIBERO**

D	D	€	D1 mm	L mm	mm	Accessori				
						mm	<60° 4-5			
UNC	Nº6 - 32	<b>3532-6GX1.5DP</b>	<b>4,23</b>	1.50	5.33	10	3.80	3532-6GI	3500-HIT5	3500-TB5
UNC	Nº8 - 32	<b>3532-8GX1.5DP</b>	<b>4,46</b>	1.50	6.35	10	4.40	3532-8GI	3500-HIT6	3500-TB6
UNC	Nº10 - 24	<b>3532-10GX1.5DP</b>	<b>4,95</b>	1.50	7.11	10	5.20	3532-10GI	3500-HIT7	3500-TB8
UNC	1/4 - 20	<b>3532-1/4X1.5DP</b>	<b>5,66</b>	1.50	9.65	10	6.70	3532-1/4I	3500-HIT9	3500-TB9
UNC	5/16 - 18	<b>3532-5/16X1.0DP</b>	<b>6,89</b>	1.00	7.87	10	8.30	3532-5/16I	3500-HIT10	3500-TB12
UNC	5/16 - 18	<b>3532-5/16X1.5DP</b>	<b>8,31</b>	1.50	11.94	10	8.30	3532-5/16I	3500-HIT10	3500-TB12
UNC	3/8 - 16	<b>3532-3/8X1.5DP</b>	<b>10,42</b>	1.50	14.22	10	9.90	3532-3/8I	3500-HIT13	3500-TB12
UNC	3/8 - 16	<b>3532-3/8X2.0DP</b>	<b>13,77</b>	2.00	19.05	10	9.90	3532-3/8I	3500-HIT13	3500-TB12
UNC	7/16 - 14	<b>3532-7/16X1.5DP</b>	<b>13,94</b>	1.50	16.76	10	11.60	3532-7/16I	3500-HIT14	3500-TB14
UNC	1/2 - 13	<b>3532-1/2X1.5DP</b>	<b>13,94</b>	1.50	19.05	10	13.00	3532-1/2I	3500-HIT15	3500-TB15
UNC	5/8 - 11	<b>3532-5/8X1.5DP</b>	<b>14,31</b>	1.50	23.88	5	16.50	3532-5/8I	3500-HIT18	-
UNC	3/4 - 10	<b>3532-3/4X1.5DP</b>	<b>16,85</b>	1.50	28.70	5	20.00	3532-3/4I	3500-HIT20	-
UNC	7/8 - 9	<b>3532-7/8X1.5DP</b>	<b>13,16</b>	1.50	33.27	3	23.00	3532-7/8I	3500-HIT22	-
UNC	1 - 8	<b>3532-1X1.5DP</b>	<b>23,00</b>	1.50	38.10	3	26.25	3532-1I	3500-HIT23	-

**UNC  
UNF**



**...DP**

D	D	€	D1 mm	L mm	mm	Accessori				
						mm	<60° 4-5			
UNF	Nº10 - 32	<b>3534-10GX1.5DP</b>	<b>5,12</b>	1.50	7.11	10	5.10	3534-10GI	3500-HIT8	3500-TB8
UNF	1/4 - 28	<b>3534-1/4X1.5DP</b>	<b>5,12</b>	1.50	9.65	10	6.70	3534-1/4I	3500-HIT9	3500-TB9
UNF	5/16 - 24	<b>3534-5/16X1.5DP</b>	<b>7,25</b>	1.50	11.94	10	8.30	3534-5/16I	3500-HIT11	3500-TB12
UNF	3/8 - 24	<b>3534-3/8X1.5DP</b>	<b>10,42</b>	1.50	14.22	10	9.80	3534-3/8I	3500-HIT13	3500-TB13
UNF	7/16 - 20	<b>3534-7/16X1.5DP</b>	<b>13,94</b>	1.50	16.76	10	11.50	3534-7/16I	3500-HIT14	3500-TB14
UNF	1/2 - 20	<b>3534-1/2X1.5DP</b>	<b>13,94</b>	1.50	19.05	10	13.00	3534-1/2I	3500-HIT15	3500-TB15
UNF	5/8 - 18	<b>3534-5/8X1.5DP</b>	<b>15,42</b>	1.50	24.13	5	16.50	3534-5/8I	3500-HIT18	-
UNF	3/4 - 16	<b>3534-3/4X1.5DP</b>	<b>16,85</b>	1.50	28.70	5	19.50	3534-3/4I	3500-HIT21	-

Accessori non inclusi nel prezzo.

**BSP (GAS)** **FREE** **BSP** **AISI 304** **BS84** **...DP**



D	D	€	D1 mm	L mm	mm	Accessori				
						mm	<55° 4-5			
BSP	1/8 - 28	<b>3546-1/8X1.5DP</b>	<b>12,16</b>	1.50	4.83	10	10.00	3546-1/8I	3500-HIT14	
BSP	1/4 - 19	<b>3546-1/4X1.5DP</b>	<b>16,66</b>	1.50	9.65	10	13.75	3546-1/4I	3500-HIT16	
BSP	3/8 - 19	<b>3546-3/8X1.5DP</b>	<b>18,90</b>	1.50	14.22	10	17.00	3546-3/8I	3500-HIT20	
BSP	1/2 - 14	<b>3546-1/2X1.5DP</b>	<b>27,13</b>	1.50	19.05	10	21.50	3546-1/2I	3500-HIT23	
BSP	3/4 - 14	<b>3546-3/4X1.5DP</b>	<b>30,30</b>	1.50	28.70	5	27.00	3546-3/4I	3500-HIT24	
BSP	1 - 11	<b>3546-1X1.5DP</b>	<b>55,73</b>	1.50	38.10	3	33.75	3546-1I	3500-HIT27	

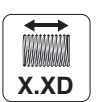
Accessori non inclusi nel prezzo.



INSERTI AUTOBLOCCANTE



D	L	L	1.0D			1.5D			2.0D			Unit			
			L mm	<500	500-999	1000-...	L mm	<500	500-999	1000-...	L mm		<500	500-999	1000-...
M 2 x 0.40	3520-2.00	2.10	2.00	0,66	0,60	0,54	3.00	0,86	0,76	0,70	4.00	1,01	0,88	0,82	100
M 2.20 x 0.45	3520-2.20	2.30	2.20	0,63	0,56	0,51	3.30	0,82	0,72	0,67	4.40	0,93	0,84	0,79	100
M 2.50 x 0.45	3520-2.50	2.60	2.50	0,42	0,37	0,35	3.75	0,43	0,40	0,38	5.00	0,44	0,41	0,39	100
M 3 x 0.50	3520-3.00	3.20	3.00	0,32	0,28	0,26	4.50	0,37	0,32	0,29	6.00	0,38	0,35	0,32	100
M 3.50 x 0.60	3520-3.50	3.70	3.50	0,38	0,35	0,32	5.25	0,40	0,38	0,36	7.00	0,42	0,40	0,38	100
M 4 x 0.70	3520-4.00	4.20	4.00	0,32	0,29	0,27	6.00	0,37	0,32	0,29	8.00	0,38	0,34	0,30	100
M 5 x 0.80	3520-5.00	5.20	5.00	0,38	0,34	0,30	7.50	0,39	0,35	0,32	10.00	0,42	0,38	0,36	100
M 6 x 1.00	3520-6.00	6.30	6.00	0,41	0,37	0,35	9.00	0,43	0,38	0,36	12.00	0,48	0,43	0,40	100
M 7 x 1.00	3520-7.00	7.30	7.00	0,48	0,43	0,40	10.50	0,58	0,50	0,47	14.00	0,64	0,58	0,51	100
M 8 x 1.00	3521-8.00	8.30	8.00	0,51	0,46	0,43	12.00	0,56	0,47	0,44	16.00	0,65	0,56	0,51	100
M 8 x 1.25	3520-8.00	8.30	8.00	0,42	0,38	0,36	12.00	0,48	0,43	0,40	16.00	0,58	0,48	0,45	100
M 9 x 1.25	3520-9.00	9.40	9.00	1,04	0,92	0,86	13.50	1,33	1,10	1,03	18.00	1,40	1,17	1,08	100
M 10 x 1.00	3523-10.00	10.30	10.00	0,56	0,48	0,45	15.00	0,68	0,59	0,53	20.00	0,70	0,63	0,58	100
M 10 x 1.25	3521-10.00	10.30	10.00	0,53	0,47	0,44	15.00	0,67	0,62	0,58	20.00	0,69	0,66	0,62	100
M 10 x 1.50	3520-10.00	10.40	10.00	0,56	0,47	0,44	15.00	0,67	0,58	0,51	20.00	0,70	0,63	0,59	100
M 11 x 1.50	3520-11.00	11.40	11.00	1,09	0,91	0,85	16.50	1,10	0,93	0,87	22.00	1,11	1,02	0,92	100
M 12 x 1.25	3523-12.00	12.30	12.00	0,89	0,74	0,68	18.00	0,97	0,81	0,75	24.00	1,05	0,93	0,86	100
M 12 x 1.50	3521-12.00	12.40	12.00	0,90	0,79	0,72	18.00	0,98	0,85	0,79	24.00	1,08	1,01	0,91	100
M 12 x 1.75	3520-12.00	12.50	12.00	0,81	0,68	0,64	18.00	0,97	0,82	0,76	24.00	1,05	0,91	0,85	100
M 14 x 1.50	3521-14.00	14.50	14.00	1,24	1,10	1,03	21.00	1,44	1,17	1,08	28.00	1,58	1,31	1,23	50
M 14 x 2.00	3520-14.00	14.50	14.00	1,13	1,01	0,91	21.00	1,30	1,22	1,12	28.00	1,60	1,52	1,41	50
M 16 x 1.50	3521-16.00	16.50	16.00	1,68	1,50	1,42	24.00	1,81	1,62	1,50	32.00	2,18	2,01	1,85	50
M 16 x 2.00	3520-16.00	16.50	16.00	1,56	1,40	1,29	24.00	1,63	1,51	1,40	32.00	2,02	1,88	1,73	50
M 18 x 1.50	3523-18.00	18.50	18.00	2,72	2,26	2,10	27.00	2,76	2,38	2,21	36.00	4,22	3,47	3,18	50
M 18 x 2.00	3521-18.00	18.50	18.00	2,32	2,07	1,92	27.00	2,59	2,42	2,30	36.00	3,53	3,09	2,86	50
M 18 x 2.50	3520-18.00	19.00	18.00	2,34	2,07	1,92	27.00	2,66	2,35	2,17	36.00	3,62	3,27	3,01	50
M 20 x 1.50	3523-20.00	20.50	20.00	3,08	2,68	2,48	30.00	3,64	3,29	3,02	40.00	4,25	3,70	3,39	25
M 20 x 2.00	3521-20.00	20.50	20.00	2,68	2,32	2,14	30.00	3,29	2,91	2,68	40.00	4,22	3,69	3,39	25
M 20 x 2.50	3520-20.00	20.75	20.00	2,81	2,48	2,28	30.00	3,39	3,02	2,78	40.00	4,38	3,87	3,56	25
M 22 x 1.50	3523-22.00	22.50	22.00	3,12	2,96	2,65	33.00	3,50	3,33	2,90	44.00	4,66	4,50	3,51	25
M 22 x 2.00	3521-22.00	22.50	22.00	2,82	2,57	2,36	33.00	3,53	3,18	2,90	44.00	4,47	4,14	3,90	25
M 22 x 2.50	3520-22.00	22.75	22.00	2,93	2,71	2,50	33.00	3,66	3,33	3,07	44.00	4,63	4,23	3,91	25
M 24 x 1.50	3523-24.00	24.50	24.00	3,58	3,39	2,86	36.00	4,10	3,58	3,43	48.00	4,87	4,23	3,99	25
M 24 x 2.00	3521-24.00	24.50	24.00	3,53	3,26	3,05	36.00	4,24	3,90	3,62	48.00	4,69	4,43	4,27	25
M 24 x 3.00	3520-24.00	25.00	24.00	3,70	3,45	3,17	36.00	4,43	4,14	3,80	48.00	4,90	4,60	4,23	25









Ejemplo de codificación:

M 14 x 2.00	3520-14.00x1.0DSL	3520-14.00x1.5DSL
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**INSERTI AUTOBLOCCANTE**



			 <b>2.5D</b>				 <b>3.0D</b>				
			L mm	€			L mm	€			
				<500	500-999	1000-...		<500	500-999	1000-...	Unit
M 2 x 0.40	3520-2.00	2.10	5.00	1,13	1,01	0,91	6.00	1,42	1,25	1,16	100
M 2.20 x 0.45	3520-2.20	2.30	5.50	1,07	0,93	0,87	6.60	1,34	1,18	1,09	100
M 2.50 x 0.45	3520-2.50	2.60	6.25	0,46	0,43	0,40	9.00	0,56	0,53	0,49	100
M 3 x 0.50	3520-3.00	3.20	7.50	0,43	0,41	0,39	9.00	0,51	0,47	0,44	100
M 3.50 x 0.60	3520-3.50	3.70	8.75	0,48	0,46	0,43	10.50	0,60	0,54	0,50	100
M 4 x 0.70	3520-4.00	4.20	10.00	0,43	0,41	0,39	12.00	0,48	0,44	0,41	100
M 5 x 0.80	3520-5.00	5.20	12.50	0,50	0,47	0,44	15.00	0,62	0,56	0,51	100
M 6 x 1.00	3520-6.00	6.30	15.00	0,60	0,54	0,50	18.00	0,70	0,64	0,60	100
M 7 x 1.00	3520-7.00	7.30	17.50	0,69	0,66	0,62	21.00	0,83	0,79	0,72	100
M 8 x 1.00	3521-8.00	8.30	20.00	0,75	0,67	0,63	24.00	0,91	0,86	0,82	100
M 8 x 1.25	3520-8.00	8.30	20.00	0,69	0,64	0,60	24.00	0,83	0,75	0,69	100
M 9 x 1.25	3520-9.00	9.40	22.50	1,55	1,38	1,27	27.00	2,02	1,85	1,71	100
M 10 x 1.00	3523-10.00	10.30	25.00	0,83	0,71	0,66	30.00	1,13	1,02	0,92	100
M 10 x 1.25	3521-10.00	10.30	25.00	0,84	0,80	0,74	30.00	1,16	1,11	1,04	100
M 10 x 1.50	3520-10.00	10.40	25.00	0,83	0,74	0,68	30.00	1,13	1,04	0,96	100
M 11 x 1.50	3520-11.00	11.40	27.50	1,38	1,26	1,17	33.00	1,69	1,62	1,50	100
M 12 x 1.25	3523-12.00	12.30	30.00	1,35	1,30	1,20	36.00	1,69	1,61	1,58	100
M 12 x 1.50	3521-12.00	12.40	30.00	1,35	1,14	1,06	36.00	1,74	1,72	1,58	100
M 12 x 1.75	3520-12.00	12.50	30.00	1,35	1,29	1,19	36.00	1,69	1,66	1,53	100
M 14 x 1.50	3521-14.00	14.50	35.00	1,93	1,53	1,42	42.00	3,21	3,16	2,92	50
M 14 x 2.00	3520-14.00	14.50	35.00	1,93	1,83	1,69	42.00	2,32	2,25	2,07	50
M 16 x 1.50	3521-16.00	16.50	40.00	2,39	2,24	2,06	48.00	3,09	3,00	2,76	50
M 16 x 2.00	3520-16.00	16.50	40.00	2,43	2,34	2,16	48.00	3,01	2,95	2,72	50
M 18 x 1.50	3523-18.00	18.50	45.00	4,50	3,81	3,52	54.00	5,04	4,43	4,08	50
M 18 x 2.00	3521-18.00	18.50	45.00	4,01	3,54	3,28	54.00	4,69	4,43	4,08	50
M 18 x 2.50	3520-18.00	19.00	45.00	4,12	3,74	3,44	54.00	4,83	4,66	4,18	50
M 20 x 1.50	3523-20.00	20.50	50.00	4,68	4,31	3,96	60.00	5,97	5,46	5,03	25
M 20 x 2.00	3521-20.00	20.50	50.00	4,69	4,33	4,04	60.00	5,97	5,66	5,51	25
M 20 x 2.50	3520-20.00	20.75	50.00	4,86	4,56	4,19	60.00	6,08	5,89	5,42	25
M 22 x 1.50	3523-22.00	22.50	55.00	5,45	4,79	4,41	66.00	6,92	6,64	6,03	25
M 22 x 2.00	3521-22.00	22.50	55.00	5,47	5,20	5,05	66.00	7,86	7,32	7,01	25
M 22 x 2.50	3520-22.00	22.75	55.00	5,67	5,30	4,88	66.00	7,67	7,11	6,54	25
M 24 x 1.50	3523-24.00	24.50	60.00	6,70	5,63	5,19	72.00	8,45	7,15	6,58	25
M 24 x 2.00	3521-24.00	24.50	60.00	6,81	6,16	5,60	72.00	8,13	7,77	7,67	25
M 24 x 3.00	3520-24.00	25.00	60.00	7,11	6,39	5,89	72.00	7,69	7,48	6,88	25



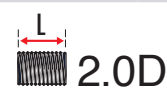
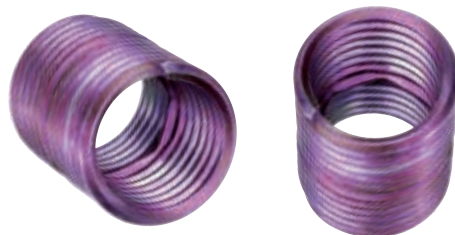
Nota importante: la lunghezza totale dell'inserto è definita per l'inserto una volta assemblato nella parte.

## INSERTI AUTOBLOCCANTE

UNC



...DSL



D	N°	Part Number	D1 mm	Ø	L mm	€			L mm	€			L mm	€			Unit
						<500	500-999	1000-...		<500	500-999	1000-...		<500	500-999	1000-...	
UNC	N°2 - 56	3532-2G	2.18	2.40	2.29	0,82	0,71	0,66	3.30	0,96	0,83	0,78	4.32	1,24	1,07	1,00	100
UNC	N°4 - 40	3532-4G	2.84	3.00	2.79	0,37	0,32	0,29	4.32	0,40	0,35	0,32	5.59	0,42	0,37	0,35	100
UNC	N°5 - 40	3532-5G	3.17	3.40	3.30	0,49	0,43	0,40	4.83	0,51	0,46	0,43	6.35	0,54	0,48	0,45	100
UNC	N°6 - 32	3532-6G	3.50	3.70	3.56	0,32	0,28	0,26	5.33	0,38	0,34	0,30	7.11	0,40	0,36	0,34	100
UNC	N°8 - 32	3532-8G	4.17	4.40	4.06	0,32	0,28	0,26	6.35	0,38	0,34	0,30	8.38	0,40	0,36	0,34	100
UNC	N°10 - 24	3532-10G	4.83	5.10	4.83	0,39	0,35	0,32	7.37	0,42	0,37	0,35	9.65	0,46	0,40	0,38	100
UNC	N°12 - 24	3532-12G	5.49	5.70	5.59	0,43	0,38	0,36	8.13	0,48	0,42	0,40	10.92	0,51	0,44	0,41	100
UNC	1/4 - 20	3532-1/4	6.35	6.70	6.35	0,43	0,38	0,36	9.65	0,48	0,42	0,40	12.70	0,51	0,44	0,41	100
UNC	5/16 - 18	3532-5/16	7.94	8.30	7.87	0,60	0,49	0,46	11.94	0,69	0,60	0,54	15.75	0,72	0,64	0,60	100
UNC	3/8 - 16	3532-3/8	9.52	9.90	9.65	0,84	0,72	0,67	14.48	0,88	0,78	0,71	19.05	1,16	1,02	0,92	100
UNC	7/16 - 14	3532-7/16	11.11	11.60	11.18	0,98	0,85	0,79	16.76	1,18	1,03	0,93	22.35	1,34	1,16	1,07	100
UNC	1/2 - 13	3532-1/2	12.70	13.00	12.70	1,06	0,91	0,85	19.05	1,18	1,03	0,93	25.40	1,34	1,16	1,07	100
UNC	9/16 - 12	3532-9/16	14.28	15.00	14.22	2,61	2,26	2,10	21.34	3,48	3,00	2,76	28.45	4,46	3,86	3,55	50
UNC	5/8 - 11	3532-5/8	15.87	16.50	16.00	2,37	2,04	1,89	23.88	3,16	2,73	2,52	31.75	3,93	3,40	3,13	50
UNC	3/4 - 10	3532-3/4	19.05	19.80	19.05	2,74	2,38	2,21	28.70	3,73	3,23	2,98	38.10	4,65	4,03	3,72	50
UNC	7/8 - 9	3532-7/8	22.22	23.00	22.35	3,81	3,31	3,05	33.53	5,71	4,92	4,55	44.45	7,25	6,27	5,76	25
UNC	1 - 8	3532-1	25.40	26.20	25.40	5,17	4,46	4,12	38.10	7,73	6,68	6,14	50.80	9,82	8,46	7,80	25

Nota importante: la lunghezza totale dell'inserto è definita per l'inserto una volta assemblato nella parte.



Ejemplo de codificación:

UNC 1/4 - 20









3532-1/4x1.0DSL



3532-1/4x1.5DSL

**INSERTI AUTOBLOCCANTE**



		<b>3532-2G</b>	<b>2.18</b>		<b>L</b>	 <b>2.5D</b>			 <b>3.0D</b>				<b>Unit</b>	
						<b>mm</b>	<b>mm</b>	<b>€</b>	<b>€</b>	<b>€</b>	<b>mm</b>			<b>€</b>
						<500	500-999	1000-...		<500	500-999	1000-...		
UNC	Nº2 - 56	<b>3532-2G</b>	<b>2.18</b>	2.40	5.59	1,40	1,20	1,11	6.60	1,50	1,29	1,19	100	
UNC	Nº4 - 40	<b>3532-4G</b>	<b>2.84</b>	3.00	7.11	0,48	0,42	0,40	8.64	0,60	0,49	0,46	100	
UNC	Nº5 - 40	<b>3532-5G</b>	<b>3.17</b>	3.40	7.87	0,60	0,49	0,46	9.65	0,82	0,70	0,66	100	
UNC	Nº6 - 32	<b>3532-6G</b>	<b>3.50</b>	3.70	8.89	0,43	0,38	0,36	10.41	0,50	0,44	0,41	100	
UNC	Nº8 - 32	<b>3532-8G</b>	<b>4.17</b>	4.40	10.41	0,43	0,38	0,36	12.45	0,50	0,44	0,41	100	
UNC	Nº10 - 24	<b>3532-10G</b>	<b>4.83</b>	5.10	12.19	0,54	0,47	0,44	14.48	0,66	0,59	0,53	100	
UNC	Nº12 - 24	<b>3532-12G</b>	<b>5.49</b>	5.70	13.72	0,64	0,56	0,51	16.51	0,78	0,67	0,63	100	
UNC	1/4 - 20	<b>3532-1/4</b>	<b>6.35</b>	6.70	16.00	0,64	0,56	0,51	19.05	0,78	0,67	0,63	100	
UNC	5/16 - 18	<b>3532-5/16</b>	<b>7.94</b>	8.30	19.81	0,87	0,75	0,69	23.62	1,06	0,91	0,85	100	
UNC	3/8 - 16	<b>3532-3/8</b>	<b>9.52</b>	9.90	23.88	1,33	1,14	1,06	28.70	1,56	1,35	1,25	100	
UNC	7/16 - 14	<b>3532-7/16</b>	<b>11.11</b>	11.60	27.94	1,60	1,39	1,28	33.53	1,95	1,69	1,56	100	
UNC	1/2 - 13	<b>3532-1/2</b>	<b>12.70</b>	13.00	31.75	1,60	1,39	1,28	38.10	1,95	1,69	1,56	100	
UNC	9/16 - 12	<b>3532-9/16</b>	<b>14.28</b>	15.00	35.56	5,11	4,42	4,06	42.93	6,16	5,32	4,90	50	
UNC	5/8 - 11	<b>3532-5/8</b>	<b>15.87</b>	16.50	39.62	4,69	4,06	3,75	47.75	5,61	4,85	4,46	50	
UNC	3/4 - 10	<b>3532-3/4</b>	<b>19.05</b>	19.80	47.75	5,53	4,78	4,40	57.15	6,62	5,72	5,27	50	
UNC	7/8 - 9	<b>3532-7/8</b>	<b>22.22</b>	23.00	55.63	8,59	7,41	6,81	66.80	10,42	9,00	8,28	25	
UNC	1 - 8	<b>3532-1</b>	<b>25.40</b>	26.20	63.50	11,62	10,02	9,23	76.20	14,09	12,17	11,21	25	

Nota importante: la lunghezza totale dell'inserto è definita per l'inserto una volta assemblato nella parte.



## INSERTI AUTOBLOCCANTE

UNF



LOCK



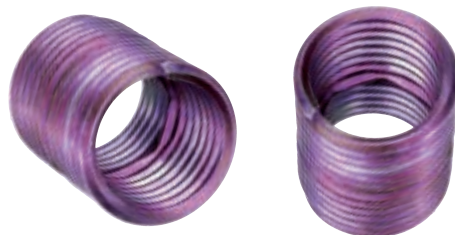
UNF



AISI 304

NASM21209  
NASM8846

...DSL



		D1 mm		Ø	1.0D			1.5D			2.0D			Unit		
					L mm	€		L mm	€		L mm	€				
					<500	500-999	1000-...	<500	500-999	1000-...	<500	500-999	1000-...			
UNF N°4 - 48	3534-4G	2.84	3.00	2.79	0,74	0,66	0,62	4.32	0,85	0,75	0,69	5.59	1,00	0,87	0,81	100
UNF N°6 - 40	3534-6G	3.50	3.70	3.56	0,74	0,66	0,62	5.33	0,85	0,75	0,69	7.11	1,00	0,87	0,81	100
UNF N°8 - 36	3534-8G	4.17	4.40	4.06	0,74	0,66	0,62	6.35	0,85	0,75	0,69	8.38	1,00	0,87	0,81	100
UNF N°10 - 32	3534-10G	4.83	5.10	4.83	0,42	0,37	0,35	7.37	0,43	0,38	0,36	9.65	0,51	0,44	0,41	100
UNF 1/4 - 28	3534-1/4	6.35	6.60	6.35	0,42	0,37	0,35	9.65	0,43	0,38	0,36	12.70	0,51	0,44	0,41	100
UNF 5/16 - 24	3534-5/16	7.94	8.20	7.87	0,60	0,49	0,46	11.94	0,63	0,51	0,48	16.00	0,72	0,64	0,60	100
UNF 3/8 - 24	3534-3/8	9.52	9.80	9.65	0,85	0,72	0,67	14.48	0,88	0,78	0,71	19.05	1,06	0,91	0,85	100
UNF 7/16 - 20	3534-7/16	11.11	11.50	11.18	1,06	0,91	0,85	16.76	1,18	1,03	0,93	22.35	1,34	1,16	1,07	100
UNF 1/2 - 20	3534-1/2	12.70	13.00	12.70	1,06	0,91	0,85	19.05	1,18	1,03	0,93	25.40	1,34	1,16	1,07	100
UNF 9/16 - 18	3534-9/16	14.29	14.75	14.22	2,33	2,00	1,84	21.34	2,48	2,06	1,91	28.70	2,98	2,56	2,35	50
UNF 5/8 - 18	3534-5/8	15.87	16.50	16.00	2,37	2,01	1,85	23.88	2,48	2,14	1,96	31.75	2,98	2,56	2,35	50
UNF 3/4 - 16	3534-3/4	19.05	19.50	19.05	3,12	2,69	2,49	28.70	4,35	3,75	3,45	38.10	5,26	4,53	4,17	50
UNF 7/8 - 14	3534-7/8	22.22	22.50	22.35	5,31	4,58	4,21	33.27	7,84	6,76	6,22	44.45	9,96	8,59	7,91	25
UNF 1 - 12	3534-1	25.40	26.00	25.40	5,31	4,58	4,21	38.10	7,84	6,76	6,22	50.80	9,96	8,59	7,91	25
UNS 1 - 14	3535-1	25.40	26.00	25.40	5,31	4,63	4,26	38.10	7,84	6,84	6,30	50.80	9,96	8,69	8,00	25

Nota importante: la lunghezza totale dell'inserto è definita per l'inserto una volta assemblato nella parte.



Ejemplo de codificación:

UNF N°4 - 48











3534-4Gx1.0DSL



3534-4Gx1.5DSL

**INSERTI AUTOBLOCCANTE**



					 2.5D				 3.0D				
					L mm	€			L mm	€			
		D1 mm	Ø		<500	500-999	1000-...	<500	500-999	1000-...	Unit		
UNF N°4 - 48	<b>3534-4G</b>	2.84	3.00		7.11	1,12	1,01	0,91	8.64	1,58	1,40	1,29	100
UNF N°6 - 40	<b>3534-6G</b>	3.50	3.70		8.89	1,12	1,01	0,91	10.41	1,58	1,40	1,29	100
UNF N°8 - 36	<b>3534-8G</b>	4.17	4.40		10.41	1,12	1,01	0,91	12.45	1,58	1,40	1,29	100
UNF N°10 - 32	<b>3534-10G</b>	4.83	5.10		12.19	0,64	0,56	0,51	14.48	0,78	0,67	0,63	100
UNF 1/4 - 28	<b>3534-1/4</b>	6.35	6.60		16.00	0,64	0,56	0,51	19.05	0,78	0,67	0,63	100
UNF 5/16 - 24	<b>3534-5/16</b>	7.94	8.20		19.81	0,87	0,78	0,71	23.88	1,06	0,91	0,85	100
UNF 3/8 - 24	<b>3534-3/8</b>	9.52	9.80		23.88	1,30	1,14	1,06	28.70	1,56	1,35	1,25	100
UNF 7/16 - 20	<b>3534-7/16</b>	11.11	11.50		27.69	1,60	1,40	1,29	33.27	1,95	1,69	1,56	100
UNF 1/2 - 20	<b>3534-1/2</b>	12.70	13.00		31.75	1,60	1,40	1,29	38.10	1,95	1,69	1,56	100
UNF 9/16 - 18	<b>3534-9/16</b>	14.29	14.75		35.81	3,62	3,16	2,92	42.93	4,18	3,61	3,33	50
UNF 5/8 - 18	<b>3534-5/8</b>	15.87	16.50		39.62	3,80	3,35	3,09	47.75	4,18	3,61	3,33	50
UNF 3/4 - 16	<b>3534-3/4</b>	19.05	19.50		47.75	6,36	5,55	5,11	57.15	7,62	6,58	6,07	50
UNF 7/8 - 14	<b>3534-7/8</b>	22.22	22.50		55.63	11,46	9,98	9,19	66.80	13,72	11,85	10,92	25
UNF 1 - 12	<b>3534-1</b>	25.40	26.00		63.50	13,66	11,91	10,97	76.20	16,44	14,21	13,07	25
UNS 1 - 14	<b>3535-1</b>	25.40	26.00		63.50	13,66	11,91	10,97	76.20	16,44	14,34	13,20	25




Nota importante: la lunghezza totale dell'inserto è definita per l'inserto una volta assemblato nella parte.








## KIT DI INSERTI LIBERI

M  
MF

...K

		€		
D	L		D	L mm
M 2 x 0.40	3520-2.00K	55,03	1.50	3.00
M 2.20 x 0.45	3520-2.20K	73,67	1.50	3.30
M 2.50 x 0.45	3520-2.50K	50,87	1.50	3.75
M 3 x 0.50	3520-3.00K	50,87	1.50	4.50
M 3.50 x 0.60	3520-3.50K	50,87	1.50	5.25
M 4 x 0.70	3520-4.00K	50,87	1.50	6.00
M 5 x 0.80	3520-5.00K	50,62	1.50	7.50
M 6 x 1.00	3520-6.00K	54,52	1.50	9.00
M 7 x 1.00	3520-7.00K	69,32	1.50	10.50
M 8 x 1.00	3521-8.00K	69,32	1.50	12.00
M 8 x 1.25	3520-8.00K	69,32	1.50	12.00
M 9 x 1.25	3520-9.00K	76,89	1.50	13.50
M 10 x 1.00	3523-10.00K	74,24	1.50	15.00
M 10 x 1.25	3521-10.00K	74,24	1.50	15.00
M 10 x 1.50	3520-10.00K	74,24	1.50	15.00
M 11 x 1.00	3523-11.00K	102,89	1.50	16.50
M 11 x 1.25	3521-11.00K	102,89	1.50	16.50
M 11 x 1.50	3520-11.00K	85,11	1.50	16.50
M 12 x 1.00	3524-12.00K	85,11	1.50	18.00
M 12 x 1.25	3523-12.00K	85,11	1.50	18.00
M 12 x 1.50	3521-12.00K	85,11	1.50	18.00
M 12 x 1.75	3520-12.00K	85,11	1.50	18.00
M 13 x 1.25	3523-13.00K	122,49	1.50	19.50
M 13 x 1.50	3521-13.00K	122,49	1.50	19.50
M 13 x 1.75	3520-13.00K	122,49	1.50	19.50
M 14 x 1.00	3524-14.00K	97,84	1.50	21.00
M 14 x 1.25	3523-14.00K	97,84	1.50	21.00
M 14 x 1.50	3521-14.00K	97,84	1.50	21.00
M 14 x 2.00	3520-14.00K	97,84	1.50	21.00
M 15 x 1.50	3521-15.00K	146,40	1.50	22.50
M 15 x 2.00	3520-15.00K	146,40	1.50	22.50
M 16 x 1.50	3521-16.00K	115,24	1.50	24.00
M 16 x 2.00	3520-16.00K	115,24	1.50	24.00
M 18 x 1.50	3523-18.00K	136,89	1.50	27.00

				
mm	mm	mm	mm	mm
Contenuto				
20	2.10	3520-2.00I	3500-HIT2	3500-TB2
20	2.30	3520-2.20I	3500-HIT2	3500-TB2
20	2.60	3520-2.50I	3500-HIT3	3500-TB3
20	3.20	3520-3.00I	3500-HIT4	3500-TB4
20	3.70	3520-3.50I	3500-HIT5	3500-TB5
20	4.20	3520-4.00I	3500-HIT6	3500-TB6
20	5.20	3520-5.00I	3500-HIT8	3500-TB8
20	6.30	3520-6.00I	3500-HIT9	3500-TB9
20	7.30	3520-7.00I	3500-HIT10	3500-TB11
20	8.30	3521-8.00I	3500-HIT11	3500-TB12
20	8.30	3520-8.00I	3500-HIT11	3500-TB12
15	9.40	3520-9.00I	3500-HIT13	3500-TB12
15	10.30	3523-10.00I	3500-HIT13	3500-TB13
15	10.30	3521-10.00I	3500-HIT13	3500-TB13
15	10.40	3520-10.00I	3500-HIT13	3500-TB13
10	11.30	3523-11.00I	3500-HIT14	3500-TB14
10	11.30	3521-11.00I	3500-HIT14	3500-TB14
10	11.40	3520-11.00I	3500-HIT14	3500-TB14
10	12.30	3524-12.00I	3500-HIT15	3500-TB15
10	12.30	3523-12.00I	3500-HIT15	3500-TB15
10	12.40	3521-12.00I	3500-HIT15	3500-TB15
10	12.50	3520-12.00I	3500-HIT15	3500-TB15
10	—	3523-13.00I	3500-HIT15	—
10	—	3521-13.00I	3500-HIT15	—
10	—	3520-13.00I	3500-HIT15	—
10	—	3524-14.00I	3500-HIT16	—
10	—	3523-14.00I	3500-HIT16	—
10	—	3521-14.00I	3500-HIT16	—
10	—	3520-14.00I	3500-HIT16	—
10	—	3521-15.00I	3500-HIT16	—
10	—	3520-15.00I	3500-HIT16	—
10	—	3521-16.00I	3500-HIT18	—
10	—	3520-16.00I	3500-HIT18	—
5	—	3523-18.00I	3500-HIT20	—

**KIT DI INSERTI LIBERI**



**M**  
**MF**

**FREE**

**M/MF**



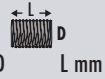
**1.5D**

**AINI 304**



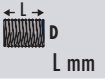
**HSS**




**HSS**

**...K**

		€	
M			D L mm
M 18 x 2.00	3521-18.00K	136,89	1.50 27.00
<b>M 18 x 2.50</b>	<b>3520-18.00K</b>	<b>139,55</b>	1.50 27.00
M 20 x 1.50	3523-20.00K	149,23	1.50 30.00
M 20 x 2.00	3521-20.00K	149,23	1.50 30.00
<b>M 20 x 2.50</b>	<b>3520-20.00K</b>	<b>149,23</b>	1.50 30.00
M 22 x 1.50	3523-22.00K	171,38	1.50 33.00
M 22 x 2.00	3521-22.00K	171,38	1.50 33.00
<b>M 22 x 2.50</b>	<b>3520-22.00K</b>	<b>171,38</b>	1.50 33.00
M 24 x 1.50	3523-24.00K	196,60	1.50 36.00
M 24 x 2.00	3521-24.00K	196,60	1.50 36.00
<b>M 24 x 3.00</b>	<b>3520-24.00K</b>	<b>196,60</b>	1.50 36.00

		
Contenuto		
5	3521-18.00I	3500-HIT20
5	3520-18.00I	3500-HIT20
5	3523-20.00I	3500-HIT21
5	3521-20.00I	3500-HIT21
5	3520-20.00I	3500-HIT21
5	3523-22.00I	3500-HIT22
5	3521-22.00I	3500-HIT22
5	3520-22.00I	3500-HIT22
5	3523-24.00I	3500-HIT23
5	3521-24.00I	3500-HIT23
5	3520-24.00I	3500-HIT23

		€	
M			D L mm
M 26 x 1.50	3523-26.00K	397,85	1.50 39.00
M 27 x 1.50	3523-27.00K	397,85	1.50 40.50
M 27 x 2.00	3521-27.00K	397,85	1.50 40.50
<b>M 27 x 3.00</b>	<b>3520-27.00K</b>	<b>397,85</b>	1.50 40.50
M 28 x 1.50	3523-28.00K	461,01	1.50 42.00
M 30 x 1.50	3523-30.00K	482,33	1.50 45.00
M 30 x 2.00	3521-30.00K	507,60	1.50 45.00
<b>M 30 x 3.50</b>	<b>3520-30.00K</b>	<b>482,33</b>	1.50 45.00
M 33 x 2.00	3521-33.00K	503,66	1.50 49.50
<b>M 33 x 3.50</b>	<b>3520-33.00K</b>	<b>503,66</b>	1.50 49.50
M 36 x 1.50	3524-36.00K	558,94	1.50 54.00
M 36 x 2.00	3523-36.00K	558,94	1.50 54.00
M 36 x 3.00	3521-36.00K	558,94	1.50 54.00
<b>M 36 x 4.00</b>	<b>3520-36.00K</b>	<b>558,94</b>	1.50 54.00
M 39 x 3.00	3521-39.00K	563,25	1.50 58.50
<b>M 39 x 4.00</b>	<b>3520-39.00K</b>	<b>572,24</b>	1.50 58.50
M 40 x 3.00	3523-40.00K	607,94	1.50 60.00
M 42 x 3.00	3523-42.00K	629,81	1.50 63.00
<b>M 42 x 4.50</b>	<b>3520-42.00K</b>	<b>629,81</b>	1.50 63.00
M 45 x 3.00	3523-45.00K	812,23	1.50 67.50
<b>M 45 x 4.50</b>	<b>3520-45.00K</b>	<b>702,39</b>	1.50 67.50
M 48 x 3.00	3523-48.00K	799,71	1.50 72.00
<b>M 48 x 5.00</b>	<b>3520-48.00K</b>	<b>842,29</b>	1.50 72.00
M 50 x 3.00	3523-50.00K	891,84	1.50 75.00
M 52 x 3.00	3523-52.00K	934,44	1.50 78.00
<b>M 52 x 5.00</b>	<b>3520-52.00K</b>	<b>934,44</b>	1.50 78.00

		
Contenuto		
5	3523-26.00I	3500-HIT24
5	3523-27.00I	3500-HIT24
5	3521-27.00I	3500-HIT24
5	3520-27.00I	3500-HIT24
5	3523-28.00I	3500-HIT24
5	3523-30.00I	3500-HIT26
5	3521-30.00I	3500-HIT26
5	3520-30.00I	3500-HIT25
5	3521-33.00I	3500-HIT26
5	3520-33.00I	3500-HIT26
3	3524-36.00I	3500-HIT28
3	3523-36.00I	3500-HIT28
3	3521-36.00I	3500-HIT28
5	3520-36.00I	3500-HIT28
3	3521-39.00I	3521-39.00HIM
3	3520-39.00I	3520-39.00HIM
3	3523-40.00I	3523-40.00HIM
3	3523-42.00I	3523-42.00HIM
3	3520-42.00I	3520-42.00HIM
3	3523-45.00I	3523-45.00HIM
3	3520-45.00I	3520-45.00HIM
3	3523-48.00I	3523-48.00HIM
3	3520-48.00I	3520-48.00HIM
3	3523-50.00I	3523-50.00HIM
3	3520-50.00I	3520-50.00HIM
3	3523-52.00I	3523-52.00HIM
3	3520-52.00I	3520-52.00HIM



## KIT DE REPARACIÓN DE INSERTOS LIBRES

UNC

FREE

UNC

1.5D




AISI 304



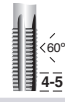

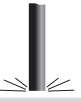
HSS




HSS



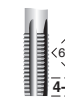


...K



			€		
				D	L mm
UNC	Nº2 - 56	3532-2GK	72,18	1.50	3.30
UNC	Nº3 - 48	3532-3GK	69,13	1.50	3.81
UNC	Nº4 - 40	3532-4GK	65,47	1.50	4.32
UNC	Nº5 - 40	3532-5GK	65,47	1.50	4.83
UNC	Nº6 - 32	3532-6GK	65,47	1.50	5.33
UNC	Nº8 - 32	3532-8GK	65,47	1.50	6.35
UNC	Nº10 - 24	3532-10GK	65,47	1.50	7.11
UNC	Nº12 - 24	3532-12GK	65,47	1.50	8.38
UNC	1/4 - 20	3532-1/4K	58,99	1.50	9.65
UNC	5/16 - 18	3532-5/16K	72,18	1.50	11.94
UNC	3/8 - 16	3532-3/8K	77,15	1.50	14.22
UNC	7/16 - 14	3532-7/16K	86,63	1.50	16.76
UNC	1/2 - 13	3532-1/2K	95,07	1.50	19.05
UNC	9/16 - 12	3532-9/16K	126,92	1.50	21.34
UNC	5/8 - 11	3532-5/8K	126,92	1.50	23.88
UNC	3/4 - 10	3532-3/4K	161,77	1.50	28.70
UNC	7/8 - 9	3532-7/8K	196,60	1.50	33.27
UNC	1 - 8	3532-1K	195,33	1.50	38.10

				
mm	mm	<math>\lt; 60^\circ</math> 4-5		
Contenido				
20	2.40	3532-2GI	3500-HIT2	3500-TB2
20	2.70	3532-3GI	3500-HIT3	3500-TB3
20	3.10	3532-4GI	3500-HIT4	3500-TB4
20	3.40	3532-5GI	3500-HIT4	3500-TB4
20	3.80	3532-6GI	3500-HIT5	3500-TB5
20	4.40	3532-8GI	3500-HIT6	3500-TB6
20	5.20	3532-10GI	3500-HIT7	3500-TB8
20	5.80	3532-12GI	3500-HIT8	3500-TB8
20	6.70	3532-1/4I	3500-HIT9	3500-TB9
20	8.30	3532-5/16I	3500-HIT10	3500-TB12
15	9.90	3532-3/8I	3500-HIT13	3500-TB12
10	11.60	3532-7/16I	3500-HIT14	3500-TB14
10	13.00	3532-1/2I	3500-HIT15	3500-TB15
10	–	3532-9/16I	3500-HIT16	–
10	–	3532-5/8I	3500-HIT18	–
5	–	3532-3/4I	3500-HIT20	–
5	–	3532-7/8I	3500-HIT22	–
5	–	3532-1I	3500-HIT23	–

			€		
				D	L mm
UNC	1.1/8 - 7	3532-1.1/8K	393,75	1.50	42.93
UNC	1.1/4 - 7	3532-1.1/4K	438,04	1.50	47.75
UNC	1.3/8 - 6	3532-1.3/8K	526,62	1.50	52.32
UNC	1.1/2 - 6	3532-1.1/2K	613,58	1.50	57.15

				
mm	mm	<math>\lt; 60^\circ</math> 4-5		
Contenido				
3	–	3532-1.1/8I	3500-HIT25	–
3	–	3532-1.1/4I	3500-HIT26	–
3	–	3532-1.3/8I	3500-HIT27	–
3	–	3532-1.1/2I	3500-HIT28	–

**KIT DE REPARACIÓN DE INSERTOS LIBRES**



**UNF**

**FREE**

**UNF**



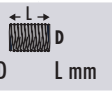

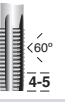

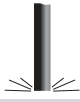
**1.5D**



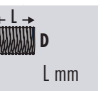

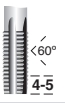

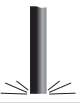
**AIISI 304**

**HSS**

**HSS**

**...K**

		€			mm	<b>Contenido</b>				
			D	L mm						
UNF N°3 - 56	<b>3534-3GK</b>	<b>72,05</b>	1.50	3.30	20	2.70	3534-3GI	3500-HIT3	3500-TB3	
UNF N°4 - 48	<b>3534-4GK</b>	<b>65,47</b>	1.50	3.81	20	3.00	3534-4GI	3500-HIT4	3500-TB4	
UNF N°6 - 40	<b>3534-6GK</b>	<b>65,47</b>	1.50	4.32	20	3.80	3534-6GI	3500-HIT5	3500-TB5	
UNF N°8 - 36	<b>3534-8GK</b>	<b>65,47</b>	1.50	4.83	20	4.40	3534-8GI	3500-HIT6	3500-TB6	
UNF N°10 - 32	<b>3534-10GK</b>	<b>65,47</b>	1.50	5.33	20	5.10	3534-10GI	3500-HIT8	3500-TB8	
UNF N°12 - 28	<b>3534-12GK</b>	<b>71,72</b>	1.50	6.35	20	5.60	3534-12GI	3500-HIT8	3500-TB8	
UNF 1/4 - 28	<b>3534-1/4K</b>	<b>58,99</b>	1.50	7.11	20	6.70	3534-1/4I	3500-HIT9	3500-TB9	
UNF 5/16 - 24	<b>3534-5/16K</b>	<b>72,18</b>	1.50	8.38	20	8.30	3534-5/16I	3500-HIT11	3500-TB12	
UNF 3/8 - 24	<b>3534-3/8K</b>	<b>77,15</b>	1.50	9.65	15	9.80	3534-3/8I	3500-HIT13	3500-TB13	
UNF 7/16 - 16	<b>3534-7/16-16K</b>	<b>104,96</b>	1.50	11.94	10	11.50	3534-7/16-16I	3500-HIT14	3500-TB14	
UNF 7/16 - 20	<b>3534-7/16K</b>	<b>86,63</b>	1.50	14.22	10	11.50	3534-7/16I	3500-HIT14	3500-TB14	
UNF 1/2 - 20	<b>3534-1/2K</b>	<b>95,07</b>	1.50	16.76	10	13.00	3534-1/2I	3500-HIT15	3500-TB15	
UNF 9/16 - 18	<b>3534-9/16K</b>	<b>126,92</b>	1.50	19.05	10	—	3534-9/16I	3500-HIT16	—	
UNF 5/8 - 18	<b>3534-5/8K</b>	<b>126,92</b>	1.50	21.34	10	—	3534-5/8I	3500-HIT18	—	
UNF 3/4 - 16	<b>3534-3/4K</b>	<b>161,77</b>	1.50	23.88	5	—	3534-3/4I	3500-HIT21	—	
UNF 7/8 - 14	<b>3534-7/8K</b>	<b>196,60</b>	1.50	28.70	5	—	3534-7/8I	3500-HIT22	—	
UNF 1 - 12	<b>3534-1K</b>	<b>192,65</b>	1.50	33.27	5	—	3534-1I	3500-HIT23	—	
UNF 1 - 14	<b>3535-1K</b>	<b>215,66</b>	1.50	38.10	5	—	3535-1I	3500-HIT23	—	

		€			mm	<b>Contenido</b>				
			D	L mm						
UNF 1.1/8 - 12	<b>3534-1.1/8K</b>	<b>393,75</b>	1.50	42.93	3	—	3534-1.1/8I	3500-HIT25	—	
UNF 1.1/4 - 12	<b>3534-1.1/4K</b>	<b>438,04</b>	1.50	47.75	3	—	3534-1.1/4I	3500-HIT26	—	
UNF 1.3/8 - 12	<b>3534-1.3/8K</b>	<b>526,62</b>	1.50	52.32	3	—	3534-1.3/8I	3500-HIT27	—	
UNF 1.1/2 - 12	<b>3534-1.1/2K</b>	<b>613,58</b>	1.50	57.15	3	—	3534-1.1/2I	3500-HIT28	—	

## KIT DE REPARACIÓN DE INSERTOS LIBRES

BSW

FREE

BSW

1.5D





AISI 304

HSS

HSS

...K



		€							
			D	L mm	Contenido				
BSW 1/8 - 40	3528-1/8K	67,22	1.50	4.83	20	3.40	3528-1/8I	3500-HIT4	3500-TB4
BSW 3/16 - 24	3528-3/16K	65,47	1.50	7.11	20	5.00	3528-3/16I	3500-HIT7	3500-TB8
BSW 1/4 - 20	3528-1/4K	60,56	1.50	9.65	20	6.70	3528-1/4I	3500-HIT9	3500-TB9
BSW 5/16 - 18	3528-5/16K	72,18	1.50	11.94	20	8.30	3528-5/16I	3500-HIT10	3500-TB11
BSW 3/8 - 16	3528-3/8K	77,15	1.50	14.22	15	9.90	3528-3/8I	3500-HIT11	3500-TB12
BSW 7/16 - 14	3528-7/16K	86,63	1.50	16.76	10	11.50	3528-7/16I	3500-HIT14	3500-TB14
BSW 1/2 - 12	3528-1/2K	95,07	1.50	19.05	10	13.00	3528-1/2I	3500-HIT15	3500-TB15
BSW 9/16 - 12	3528-9/16K	126,92	1.50	21.34	10	–	3528-9/16I	3500-HIT16	–
BSW 5/8 - 11	3528-5/8K	126,92	1.50	23.88	10	–	3528-5/8I	3500-HIT18	–
BSW 3/4 - 10	3528-3/4K	161,77	1.50	28.70	5	–	3528-3/4I	3500-HIT20	–
BSW 7/8 - 9	3528-7/8K	196,60	1.50	33.27	5	–	3528-7/8I	3500-HIT22	–
BSW 1 - 8	3528-1K	195,33	1.50	38.10	5	–	3528-1I	3500-HIT23	–

BSF

FREE

BSF




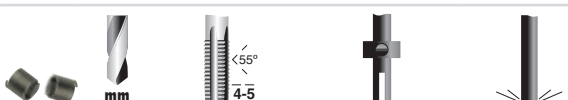
1.5D

AISI 304

HSS

HSS

...K

		€							
			D	L mm	Contenido				
BSF 3/16 - 32	3530-3/16K	65,47	1.50	7.11	20	5.0	3530-3/16I	3500-HIT8	3500-TB6
BSF 1/4 - 26	3530-1/4K	58,99	1.50	9.65	20	6.6	3530-1/4I	3500-HIT9	3500-TB9
BSF 5/16 - 22	3530-5/16K	72,18	1.50	11.94	20	8.3	3530-5/16I	3500-HIT11	3500-TB11
BSF 3/8 - 20	3530-3/8K	77,15	1.50	14.22	15	9.9	3530-3/8I	3500-HIT13	3500-TB12
BSF 7/16 - 18	3530-7/16K	86,63	1.50	16.76	10	11.5	3530-7/16I	3500-HIT14	3500-TB14
BSF 1/2 - 16	3530-1/2K	95,07	1.50	19.05	10	13.0	3530-1/2I	3500-HIT15	3500-TB15
BSF 9/16 - 16	3530-9/16K	126,92	1.50	21.34	10	–	3530-9/16I	3500-HIT16	–
BSF 5/8 - 14	3530-5/8K	126,92	1.50	23.88	10	–	3530-5/8I	3500-HIT18	–
BSF 3/4 - 12	3530-3/4K	161,77	1.50	28.70	5	–	3530-3/4I	3500-HIT20	–
BSF 7/8 - 11	3530-7/8K	196,60	1.50	33.27	5	–	3530-7/8I	3500-HIT22	–
BSF 1 - 10	3530-1K	198,40	1.50	38.10	5	–	3530-1I	3500-HIT23	–

**KIT DE REPARACIÓN DE INSERTOS LIBRES**






**BSP**  
**(GAS)**







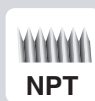

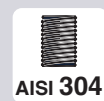



**...K**




**powercoil**  
by CELESA



Rosa

		€	
			D L mm
BSP 1/8 - 28	<b>3546-1/8K</b>	<b>105,01</b>	1.50 4.83
BSP 1/4 - 19	<b>3546-1/4K</b>	<b>110,89</b>	1.50 9.65
BSP 3/8 - 19	<b>3546-3/8K</b>	<b>127,45</b>	1.50 14.22
BSP 1/2 - 14	<b>3546-1/2K</b>	<b>167,53</b>	1.50 19.05
BSP 5/8 - 14	<b>3546-5/8K</b>	<b>343,92</b>	1.50 23.88
BSP 3/4 - 14	<b>3546-3/4K</b>	<b>360,35</b>	1.50 28.70
BSP 7/8 - 14	<b>3546-7/8K</b>	<b>482,33</b>	1.50 33.27
BSP 1 - 11	<b>3546-1K</b>	<b>482,33</b>	1.50 38.10

 <math><65^\circ</math> 4-5					
<b>Contenido</b>					
10	3546-1/8I	3500-HIT14	10	3546-1/4I	3500-HIT16
10	3546-3/8I	3500-HIT20	10	3546-1/2I	3500-HIT23
10	3546-5/8I	3500-HIT23	10	3546-3/4I	3500-HIT24
5	3546-7/8I	3500-HIT27	5	3546-11	3500-HIT27

		€	
			D L mm
NPT 1/8 - 27	<b>3552-1/8K</b>	<b>255,34</b>	1.50 4,78
NPT 1/4 - 18	<b>3552-1/4K</b>	<b>288,63</b>	1.50 9,53
NPT 3/8 - 18	<b>3552-3/8K</b>	<b>366,37</b>	1.50 14,30
NPT 1/2 - 14	<b>3552-1/2K</b>	<b>478,93</b>	1.50 19,05
NPT 3/4 - 14	<b>3552-3/4K</b>	<b>585,35</b>	1.50 28,58
NPT 1 - 11.1/2	<b>3552-1K</b>	<b>776,90</b>	1.50 38,10

 <math><60^\circ</math> 4-5					
<b>Contenido</b>					
10	3552-1/8I	3500-HIT13	10	3552-1/4I	3500-HIT16
10	3552-3/8I	3500-HIT18	10	3552-1/2I	3500-HIT22
10	3552-3/4I	3500-HIT24	10	3552-11	3500-HIT27

## KIT DE REPARACIÓN DE INSERTOS LIBRES

UNx8



FREE



8-UN



1.5D



AISI 304



HSS



HSS

...K



UN	1.1/8 - 8	3570-1.1/8K	€	D L mm	
				D	L mm
UN	1.1/4 - 8	3570-1.1/4K	713,07	1.50	42.88
UN	1.3/8 - 8	3570-1.3/8K	883,34	1.50	52.37
UN	1.1/2 - 8	3570-1.1/2K	776,90	1.50	57.15
UN	1.5/8 - 8	3570-1.5/8K	1.096,19	1.50	61.93
UN	1.3/4 - 8	3570-1.3/4K	1.138,76	1.50	66.68
UN	1.7/8 - 8	3570-1.7/8K	1.287,75	1.50	71.42
UN	2 - 8	3570-2K	1.436,77	1.50	76.20

Contenido		
3	3570-1.1/8I	3500-HIT25
3	3570-1.1/4I	3500-HIT26
3	3570-1.3/8I	3500-HIT27
3	3570-1.1/2I	3500-HIT28
3	3570-1.5/8I	3500-HIT28
3	3570-1.3/4I	3500-HIT28
3	3570-1.7/8I	3500-HIT30
3	3570-2I	3500-HIT30



BA



FREE



BA



1.5D



AISI 304



HSS



HSS

...K

BA	3544-0K	€	D L mm		Contenido				
			D	L mm	mm	mm			
BA 0	3544-0K	124,99	1.50	8.99	20	6.20	3544-0I	3500-HIT9	3500-TB11
BA 2	3544-2K	124,99	1.50	7.06	20	4.90	3544-2I	3500-HIT7	3500-TB8
BA 4	3544-4K	124,99	1.50	5.41	20	3.80	3544-4I	3500-HIT5	3500-TB5
BA 6	3544-6K	137,34	1.50	4.19	20	2.90	3544-6I	3500-HIT3	3500-TB3

**KIT DE REPARACIÓN DE INSERTOS LIBRES**

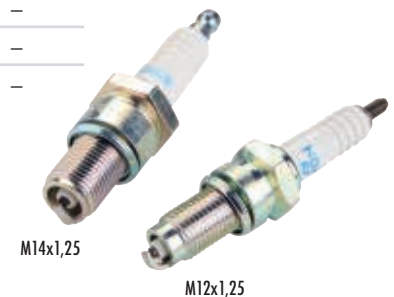


**BSB**



		€							
			D	L mm	Contenido				
BSB 1/4/26	<b>3560-1/4K</b>	<b>152,97</b>	1.50	9,53	20	6.6	3560-1/4I	3500-HIT10	3500-TB9
BSB 5/16 - 26	<b>3560-5/16K</b>	<b>121,56</b>	1.50	11,91	20	8.0	3560-5/16I	3500-HIT11	3500-TB12
BSB 3/8/26	<b>3560-3/8K</b>	<b>131,69</b>	1.50	14,30	15	9.8	3560-3/8I	3500-HIT13	3500-TB13
BSB 7/16 - 26	<b>3560-7/16K</b>	<b>141,83</b>	1.50	16,66	10	11.1	3560-7/16I	3500-HIT14	3500-TB14
BSB 1/2/26	<b>3560-1/2K</b>	<b>151,97</b>	1.50	19,05	10	12.7	3560-1/2I	3500-HIT15	3500-TB15

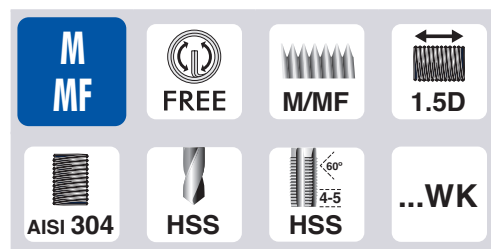
		€						
			D	L mm	Contenido			
M 10 x 1.00	<b>3522-10.00K</b>	<b>110,95</b>	-	1/2"	5	3520-10.00PN	3500-HIT13	3500-TB13
			-	0.339 mm	5	-	-	-
M 12 x 1.25	<b>3522-12.00K</b>	<b>135,23</b>	-	1/2"	5	3522-12.00PN	3500-HIT15	3500-TB15
			-	3/4"	5	-	-	-
M 14 x 1.25	<b>3522-14.00K</b>	<b>121,25</b>	-	3/8"	5	3522-14.00PN	3500-HIT17	-
			-	1/2"	5	-	-	-
			-	3/4"	5	-	-	-
M 18 x 1.50	<b>3522-18.00K</b>	<b>219,53</b>	-	1/2"	5	3522-18.00PN	3500-HIT20	-
M 14 x 1.25	<b>3522-14.00K1</b>	<b>116,98</b>	8.40	-	5	3522-14.00PN	3500-HIT17	-
			12.40	-	5	-	-	-
			16.40	-	5	-	-	-



M14x1,25

M12x1,25

## KIT DE REPARACIÓN DE INSERTOS LIBRES



	D	L mm	SET M5 - M12					
			mm	<math>\lt; 60^\circ</math> 4-5				
	M 5 x 0.80	1.50	7.50	25	5.20	3520-5.001	3500-HIT8	3500-TB8
	M 6 x 1.00	1.50	9.00	25	6.30	3520-6.001	3500-HIT9	3500-TB9
	M 8 x 1.25	1.50	12.00	25	8.30	3520-8.001	3500-HIT11	3500-TB12
3520-WK1	M 10 x 1.50	1.50	15.00	25	10.40	3520-10.001	3500-HIT13	3500-TB13
358,47 €	M 12 x 1.75	1.50	18.00	10	12.50	3520-12.001	3500-HIT15	3500-TB15



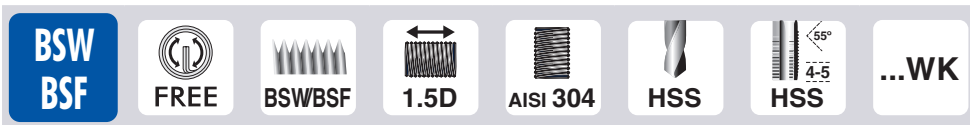
M14x1,25

	D	L mm	SET BUJÍAS						
			mm	<math>\lt; 55^\circ</math> 4-5	<math>\lt; 60^\circ</math>				
	M 6 x 1.00	1.50	9.00	25	6.30	3520-6.001	-	3500-HIT9	3500-TB9
	M 8 x 1.25	1.50	12.00	25	8.30	3520-8.001	-	3500-HIT11	3500-TB12
	M 10 x 1.50	1.50	15.00	25	10.40	3520-10.001	-	3500-HIT13	3500-TB13
	M 12 x 1.75	1.50	18.00	10	12.50	3520-12.001	-	3500-HIT15	3500-TB15
	M 14 x 1.25	-	8.40	5	14.25	-	3522-14.00PN	3500-HIT17	-
3522-WK4	-	-	12.40	5	-	-	-	-	-
413,08 €	-	-	16.40	5	-	-	-	-	-

**KIT DE REPARACIÓN DE INSERTOS LIBRES**



		D	L	D	L mm	SET UNC 1/4" - 1/2"					
	UNC	1/4	20	1.50	9.65	25	6.70	3532-1/4I	3500-HIT9	3500-TB9	
	UNC	5/16	18	1.50	11.94	25	8.30	3532-5/16I	3500-HIT10	3500-TB12	
	UNC	3/8	16	1.50	14.48	25	9.90	3532-3/8I	3500-HIT13	3500-TB12	
<b>3532-WK1</b>	UNC	7/16	14	1.50	16.76	10	11.60	3532-7/16I	3500-HIT14	3500-TB14	
<b>447,97 €</b>	UNC	1/2	13	1.50	19.05	10	13.00	3532-1/2I	3500-HIT15	3500-TB15	
		D	L	D	L mm	SET UNF 1/4" - 1/2"					
	UNF	1/4	28	1.50	9.65	25	6.70	3534-1/4I	3500-HIT9	3500-TB9	
	UNF	5/16	24	1.50	11.94	25	8.30	3534-5/16I	3500-HIT11	3500-TB12	
	UNF	3/8	24	1.50	14.48	25	9.80	3534-3/8I	3500-HIT13	3500-TB12	
<b>3534-WK1</b>	UNF	7/16	20	1.50	16.76	10	11.50	3534-7/16I	3500-HIT14	3500-TB14	
<b>447,97 €</b>	UNF	1/2	20	1.50	19.05	10	13.00	3534-1/2I	3500-HIT15	3500-TB15	



		D	L	D	L mm	SET BSW 1/4" - 1/2"					
	BSW	1/4	20	1.50	9.65	25	6.70	3528-1/4I	3500-HIT9	3500-TB9	
	BSW	5/16	18	1.50	11.94	25	8.30	3528-5/16I	3500-HIT10	3500-TB11	
	BSW	3/8	16	1.50	14.48	25	10.00	3528-3/8I	3500-HIT11	3500-TB12	
<b>3528-WK1</b>	BSW	7/16	14	1.50	16.76	10	11.60	3528-7/16I	3500-HIT14	3500-TB14	
<b>447,97 €</b>	BSW	1/2	12	1.50	19.05	10	13.00	3528-1/2I	3500-HIT15	3500-TB15	
		D	L	D	L mm	SET BSF 1/4" - 1/2"					
	BSF	1/4	26	1.50	9.65	25	6.60	3530-1/4I	3500-HIT9	3500-TB9	
	BSF	5/16	22	1.50	11.94	25	8.30	3530-5/16I	3500-HIT11	3500-TB11	
	BSF	3/8	20	1.50	14.48	25	9.80	3530-3/8I	3500-HIT13	3500-TB12	
<b>3530-WK1</b>	BSF	7/16	18	1.50	16.76	10	11.60	3530-7/16I	3500-HIT14	3500-TB14	
<b>447,97 €</b>	BSF	1/2	16	1.50	19.05	10	13.25	3530-1/2I	3500-HIT15	3500-TB15	

## EXPOSITORES DE INSERTOS LIBRES

M  
MF

FREE

AISI 304



330 x 360 x 515 mm

## CONTENIDO DEL EXPOSITOR

## ESTUCHES

		
4	M 3x0.5	3520-3.00K
4	M 4x0.7	3520-4.00K
4	M 5x0.8	3520-5.00K
3	M 6x1.0	3520-6.00K
3	M 8x1.25	3520-8.00K
3	M 10x1.5	3520-10.00K
2	M 12x1.75	3520-12.00K
2	M 14x2.0	3520-14.00K
BUJÍA		
2	M 14x1.25	3522-14.00K







1-87

1.859,70 €

## CONTENIDO DEL EXPOSITOR

## ESTUCHES

## BLISTERS

					
4	M 3x0.5	3520-3.00K	5	M 4x0.7-1.5D	3520-4.00x1.5DP
4	M 4x0.7	3520-4.00K	5	M 5x0.8-1.5D	3520-5.00x1.5DP
4	M 5x0.8	3520-5.00K	5	M 6x1.0-1.5D	3520-6.00x1.5DP
4	M 6x1.0	3520-6.00K	5	M 8x1.25-1.5D	3520-8.00x1.5DP
3	M 8x1.25	3520-8.00K	5	M 10x1.50-1.5D	3521-10.00x1.5DP
3	M 10x1.5	3520-10.00K	5	M 12x1.75-1.5D	3520-12.00x1.5DP

1-88

1.431,60 €



330 x 360 x 515 mm

**EXPOSITORES DE INSERTOS LIBRES**



330 x 360 x 515 mm

**CONTENIDO DEL EXPOSITOR**

ESTUCHES			BLISTERS		
			5	M 3x0.5-1.5D	3520-3.00x1.5DP
			5	M 4x0.7-1.5D	3520-4.00x1.5DP
4	M5x0.8	3520-5.00K	5	M 5x0.8-1.5D	3520-5.00x1.5DP
			5	M 6x1.0-1.0D	3520-6.00x1.0DP
4	M6x1.0	3520-6.00K	5	M 6x1.0-1.5D	3520-6.00x1.5DP
3	M8x1.25	3520-8.00K	3	M 8x1.25-1.0D	3520-8.00x1.0DP
			5	M 8x1.25-2.0D	3520-8.00x2.0DP
			5	M 10x1.5-1.5D	3520-10.00x1.5DP
			5	M 10x1.5-2.0D	3521-10.00x2.0DP
			5	M 12x1.75-1.5D	3520-12.00x1.5DP
			3	M 16x2.0-1.5D	3520-16.00x1.5DP
<b>BUJÍA</b>					
			5	M 14x1.25-1/2"	M14x1.25-1/2P

1-89  
1.014,07 €

## INSERTOS LIBRES EN CARRETE

M  
MF

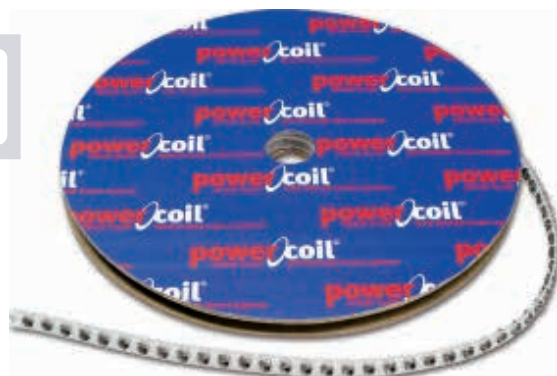
FREE

M/MF

AISI 304

BS7752  
DIN6140NASM3279  
NASM3280  
NASM3281 LNS039

...DIR



D	L	L	1.0D		1.5D		2.0D	
			L mm	€	L mm	€	L mm	€
M 2.20 x 0.45	3520-2.20	1000	2.20	433,63	3.30	439,91	4.40	474,47
M 2.50 x 0.45	3520-2.50	1000	2.50	207,70	3.75	223,10	5.00	251,38
M 3 x 0.50	3520-3.00	1000	3.00	194,83	4.50	223,10	6.00	241,94
M 4 x 0.70	3520-4.00	1000	4.00	191,68	6.00	204,24	8.00	226,23
M 5 x 0.80	3520-5.00	1000	5.00	191,68	7.50	226,55	10.00	245,57
M 6 x 1.00	3520-6.00	500	6.00	118,68	9.00	127,41	12.00	165,60
M 8 x 1.00	3521-8.00	250	8.00	89,17	12.00	95,17	16.00	120,89
M 8 x 1.25	3520-8.00	250	8.00	75,01	12.00	82,31	16.00	113,17
M 10 x 1.50	3520-10.00	250	10.00	99,78	15.00	113,17	20.00	131,19
M 12 x 1.75	3520-12.00	125	12.00	70,77	18.00	83,86	24.00	99,02



Ejemplo de codificación:

M 6 x 1.00

1.0D

3520-6.00x1.0DIR

1.5D

3520-6.00x1.5DIR

2.0D

3520-6.00x2.0DIR

**INSERTOS LIBRES EN CARRETE**

UNC FREE UNC AISI 304 SBAC AS 6733 NASM122076 - NASM122275 NASM8846 ...DIR



			1.0D	1.5D	2.0D			
			L mm	€	L mm	€	L mm	€
UNC	Nº2 - 56	<b>3532-2G</b>	1000	2.29 574,14	3.30 672,16	4.32 868,19		
UNC	Nº4 - 40	<b>3532-4G</b>	1000	2.79 210,09	4.32 219,26	5.59 224,05		
UNC	Nº5 - 40	<b>3532-5G</b>	1000	3.30 231,05	4.83 245,05	6.35 259,07		
UNC	Nº6 - 32	<b>3532-6G</b>	1000	3.56 208,18	5.33 233,15	7.11 249,82		
UNC	Nº8 - 32	<b>3532-8G</b>	1000	4.06 208,18	6.35 233,15	8.38 249,82		
UNC	Nº10 - 24	<b>3532-10G</b>	1000	4.83 224,05	7.37 235,20	9.65 245,05		
UNC	1/4 - 20	<b>3532-1/4</b>	500	6.35 145,25	9.65 162,84	12.70 176,04		
UNC	5/16 - 18	<b>3532-5/16</b>	250	7.87 110,03	11.94 132,53	15.75 140,03		
UNC	3/8 - 16	<b>3532-3/8</b>	250	9.65 170,04	14.48 194,65	19.30 222,56		

UNF FREE UNF AISI 304 SBAC AS 6733 NASM124551-124850 NASM9645 SBAC8455 ...DIR

			1.0D	1.5D	2.0D			
			L mm	€	L mm	€	L mm	€
UNF	Nº4 - 48	<b>3534-4G</b>	1000	2.79 512,69	4.32 581,97	5.59 775,97		
UNF	Nº6 - 40	<b>3534-6G</b>	1000	3.56 512,69	5.33 581,97	7.11 775,97		
UNF	Nº8 - 36	<b>3534-8G</b>	1000	4.06 512,69	6.35 581,97	8.38 775,97		
UNF	Nº10 - 32	<b>3534-10G</b>	1000	4.83 221,70	7.37 228,64	9.65 277,14		
UNF	1/4 - 28	<b>3534-1/4</b>	500	6.35 143,69	9.65 154,57	12.70 174,20		
UNF	5/16 - 24	<b>3534-5/16</b>	250	7.87 108,87	11.94 116,29	15.75 138,56		
UNF	3/8 - 24	<b>3534-3/8</b>	250	9.65 160,84	14.48 168,26	19.30 202,90		



Ejemplo de codificación:

UNC 1/4 - 20



3532-1/4x1.0DIR

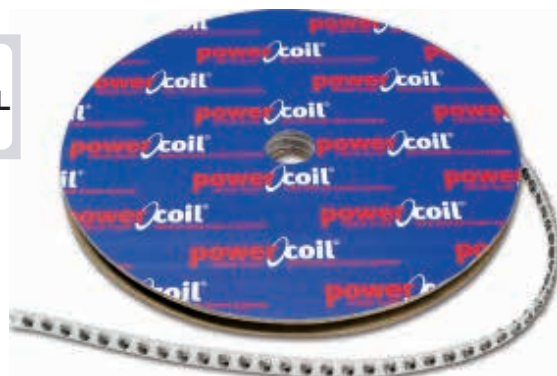


3532-1/4x1.5DIR



3532-1/4x2.0DIR

## INSERTOS AUTOBLOCANTES EN CARRETE



D	x	L	1.0D		1.5D		2.0D			
			L mm	€	L mm	€	L mm	€		
M	2.20	x 0.45	3520-2.20	1000	2.20	537,35	3.30	628,43	4.40	659,86
M	2.50	x 0.45	3520-2.50	1000	2.50	277,35	3.75	284,31	5.00	377,07
M	3	x 0.50	3520-3.00	1000	3.00	238,83	4.50	274,56	6.00	314,21
M	4	x 0.70	3520-4.00	1000	4.00	268,70	6.00	282,80	8.00	289,11
M	5	x 0.80	3520-5.00	1000	5.00	268,70	7.50	298,52	10.00	345,64
M	6	x 1.00	3520-6.00	500	6.00	159,38	9.00	166,34	12.00	202,31
M	8	x 1.00	3521-8.00	250	8.00	114,30	12.00	127,39	16.00	145,07
M	8	x 1.25	3520-8.00	250	8.00	95,30	12.00	113,17	16.00	132,33
M	10	x 1.50	3520-10.00	250	10.00	119,74	15.00	155,68	20.00	157,41
M	12	x 1.75	3520-12.00	125	12.00	87,98	18.00	109,68	24.00	119,60



Ejemplo de codificación:

M 3 x 0.50



3520-3.00x1.0DIRSL



3520-3.00x1.5DIRSL








3520-3.00x2.0DIRSL






**INSERTOS AUTOBLOCANTES EN CARRETE**

UNC LOCK UNC AISI 304 NASN2120B NASM8846 ...DIRSL



			 1.0D		 1.5D		 2.0D	
			L mm	€	L mm	€	L mm	€
UNC	Nº2 - 56	<b>3532-2G</b>	1000	2.29 688,97	3.30 806,59	4.32 1.041,85		
UNC	Nº4 - 40	<b>3532-4G</b>	1000	2.79 268,85	4.32 282,85	5.59 307,11		
UNC	Nº5 - 40	<b>3532-5G</b>	1000	3.30 310,88	4.83 328,05	6.35 339,94		
UNC	Nº6 - 32	<b>3532-6G</b>	1000	3.56 249,82	5.33 279,78	7.11 299,79		
UNC	Nº8 - 32	<b>3532-8G</b>	1000	4.06 249,82	6.35 279,78	8.38 299,79		
UNC	Nº10 - 24	<b>3532-10G</b>	1000	4.83 268,85	7.37 278,21	9.65 294,07		
UNC	1/4 - 20	<b>3532-1/4</b>	500	6.35 176,02	9.65 197,35	12.70 213,35		
UNC	5/16 - 18	<b>3532-5/16</b>	250	7.87 135,81	11.94 163,59	15.75 172,84		
UNC	3/8 - 16	<b>3532-3/8</b>	250	9.65 209,88	14.48 217,81	19.30 274,70		

UNF LOCK UNF AISI 304 NASN2120B NASM8846 ...DIRSL


			 1.0D		 1.5D		 2.0D	
			L mm	€	L mm	€	L mm	€
UNF	Nº4 - 48	<b>3534-4G</b>	1000	2.79 615,24	4.32 698,38	5.59 931,17		
UNF	Nº6 - 40	<b>3534-6G</b>	1000	3.56 615,24	5.33 698,38	7.11 931,17		
UNF	Nº8 - 36	<b>3534-8G</b>	1000	4.06 615,24	6.35 698,38	8.38 931,17		
UNF	Nº10 - 32	<b>3534-10G</b>	1000	4.83 266,05	7.37 274,37	9.65 332,56		
UNF	1/4 - 28	<b>3534-1/4</b>	500	6.35 176,15	9.65 188,91	12.70 212,60		
UNF	5/16 - 24	<b>3534-5/16</b>	250	7.87 135,81	11.94 145,07	15.75 172,84		
UNF	3/8 - 24	<b>3534-3/8</b>	250	9.65 200,62	14.48 209,88	19.30 253,09		



Ejemplo de codificación:

UNF 1/4 - 28

 1.0D  
3534-1/4x1.0DIRSL

 1.5D  
3534-1/4x1.5DIRSL

 2.0D  
3534-1/4x2.0DIRSL

## HERRAMIENTA DE INSERCIÓN NEUMÁTICA

M  
MF

FREE

LOCK




		€		€		€		€		€
M 2.20 x 0.45	3520-2.20MIP	453,58	3520-2.20MIPM	165,55	3520-2.20MIPN	289,15	3500-MIP1	1.778,53	-	
M 2.50 x 0.45	3520-2.50MIP	289,15	3520-2.50MIPM	104,33	3520-2.50MIPN	185,96	3500-MIP1	1.778,53	-	
M 3 x 0.50	3520-3.00MIP	289,15	3520-3.00MIPM	104,33	3520-3.00MIPN	185,96	3500-MIP1	1.778,53	-	
M 3.50 x 0.60	3520-3.50MIP	453,58	3520-3.50MIPM	165,55	3520-3.50MIPN	289,15	3500-MIP1	1.778,53	-	
M 4 x 0.70	3520-4.00MIP	289,15	3520-4.00MIPM	104,33	3520-4.00MIPN	185,96	3500-MIP1	1.778,53	-	
M 5 x 0.80	3520-5.00MIP	289,15	3520-5.00MIPM	104,33	3520-5.00MIPN	185,96	3500-MIP1	1.778,53	-	
M 6 x 1.00	3520-6.00MIP	289,15	3520-6.00MIPM	104,33	3520-6.00MIPN	185,96	3500-MIP1	1.778,53	-	
M 8 x 1.00	3521-8.00MIP	617,99	3521-8.00MIPM	226,79	3521-8.00MIPN	392,34	-		3500-MIP2	2.122,25
M 8 x 1.25	3520-8.00MIP	617,99	3520-8.00MIPM	226,79	3520-8.00MIPN	392,34	-		3500-MIP2	2.122,25
M 10 x 1.00	3523-10.00MIP	617,99	3523-10.00MIPM	226,79	3523-10.00MIPN	392,34	-		3500-MIP2	2.122,25
M 10 x 1.25	3521-10.00MIP	617,99	3521-10.00MIPM	226,79	3521-10.00MIPN	392,34	-		3500-MIP2	2.122,25
M 10 x 1.50	3520-10.00MIP	617,99	3520-10.00MIPM	226,79	3520-10.00MIPN	392,34	-		3500-MIP2	2.122,25
M 12 x 1.25	3523-12.00MIP	700,77	3523-12.00MIPM	268,75	3523-12.00MIPN	433,16	-		3500-MIP2	2.122,25
M 12 x 1.50	3521-12.00MIP	700,77	3521-12.00MIPM	268,75	3521-12.00MIPN	433,16	-		3500-MIP2	2.122,25
M 12 x 1.75	3520-12.00MIP	700,77	3520-12.00MIPM	268,75	3520-12.00MIPN	433,16	-		3500-MIP2	2.122,25

**FERRAMENTAS PNEUMÁTICAS**

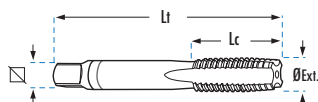
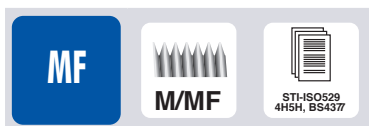


		€		€		€		€		€
UNC Nº2 - 56	3532-2GMIP	426,36	3532-2GMIPM	165,55	3532-2GMIPN	261,93	3500-MIP1	1.778,53	-	-
UNC Nº4 - 40	3532-4GMIP	289,15	3532-4GMIPM	104,33	3532-4GMIPN	185,96	3500-MIP1	1.778,53	-	-
UNC Nº5 - 40	3532-5GMIP	453,58	3532-5GMIPM	165,55	3532-5GMIPN	289,15	3500-MIP1	1.778,53	-	-
UNC Nº6 - 32	3532-6GMIP	289,15	3532-6GMIPM	104,33	3532-6GMIPN	185,96	3500-MIP1	1.778,53	-	-
UNC Nº8 - 32	3532-8GMIP	289,15	3532-8GMIPM	104,33	3532-8GMIPN	185,96	3500-MIP1	1.778,53	-	-
UNC Nº10 - 24	3532-10GMIP	289,15	3532-10GMIPM	104,33	3532-10GMIPN	185,96	3500-MIP1	1.778,53	-	-
UNC Nº12 - 24	3532-12GMIP	289,15	3532-12GMIPM	104,33	3532-12GMIPN	185,96	3500-MIP1	1.778,53	-	-
UNC 1/4 - 20	3532-1/4MIP	289,15	3532-1/4MIPM	104,33	3532-1/4MIPN	185,96	3500-MIP1	1.778,53	-	-
UNC 5/16 - 18	3532-5/16MIP	617,99	3532-5/16MIPM	226,79	3532-5/16MIPN	392,34	-	-	3500-MIP2	2.122,25
UNC 3/8 - 16	3532-3/8MIP	617,99	3532-3/8MIPM	226,79	3532-3/8MIPN	392,34	-	-	3500-MIP2	2.122,25
UNC 7/16 - 14	3532-7/16MIP	700,77	3532-7/16MIPM	268,75	3532-7/16MIPN	433,16	-	-	3500-MIP2	2.122,25
UNC 1/2 - 13	3532-1/2MIP	700,77	3532-1/2MIPM	268,75	3532-1/2MIPN	433,16	-	-	3500-MIP2	2.122,25



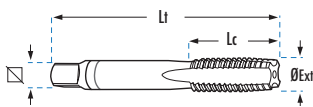
		€		€		€		€		€
UNF Nº6 - 40	3534-6GMIPM	453,58	3534-6GMIPM	165,55	3534-6GMIPN	289,15	3500-MIP1	1.778,53	-	-
UNF Nº8 - 36	3534-8GMIPM	453,58	3534-8GMIPM	165,55	3534-8GMIPN	289,15	3500-MIP1	1.778,53	-	-
UNF Nº10 - 32	3534-10GMIPM	289,15	3534-10GMIPM	104,33	3534-10GMIPN	185,96	3500-MIP1	1.778,53	-	-
UNF 1/4 - 28	3534-1/4MIPM	289,15	3534-1/4MIPM	104,33	3534-1/4MIPN	185,96	3500-MIP1	1.778,53	-	-
UNF 5/16 - 24	3534-5/16MIPM	617,99	3534-5/16MIPM	226,79	3534-5/16MIPN	392,34	-	-	3500-MIP2	2.122,25
UNF 3/8 - 24	3534-3/8MIPM	617,99	3534-3/8MIPM	226,79	3534-3/8MIPN	392,34	-	-	3500-MIP2	2.122,25
UNF 7/16 - 20	3534-7/16MIPM	700,77	3534-7/16MIPM	268,75	3534-7/16MIPN	433,16	-	-	3500-MIP2	2.122,25
UNF 1/2 - 20	3534-1/2MIPM	700,77	3534-1/2MIPM	268,75	3534-1/2MIPN	433,16	-	-	3500-MIP2	2.122,25

## MACHOS DE MÃO E CALIBRES STI



TOLERÂNCIA				TOL 5H-6H		TOL 5H-6H		TOL 5H-6H		TOL 5H-6H	
MATERIAL				HSS		HSS-V3		HSS-V3		Calibre	
FORMA				FORMA A		FORMA B		FORMA C		FORMA D	
				€		€		€		€	
Ø Ext.	Li x Lc x Ø										
M 2 x 0.40	2.10	2.52	44x9.5x2.2	3520-2.00I	15,23	3520-2.00SP	20,09	3520-2.00SF	20,09	3520-2.00GC	223,97
M 2.20 x 0.45	2.30	2.78	48x11x2.5	3520-2.20I	18,08	3520-2.20SP	20,09	3520-2.20SF	20,09	3520-2.20GC	250,40
M 2.50 x 0.45	2.60	3.08	48x11x2.5	3520-2.50I	15,23	3520-2.50SP	20,09	3520-2.50SF	20,09	3520-2.50GC	250,40
M 3 x 0.50	3.20	3.65	53x13x3.15	3520-3.00I	13,28	3520-3.00SP	15,23	3520-3.00SF	15,23	3520-3.00GC	181,30
M 3.50 x 0.60	3.70	4.27	53x13x3.55	3520-3.50I	13,28	3520-3.50SP	15,23	3520-3.50SF	15,23	3520-3.50GC	175,96
M 4 x 0.70	4.20	4.90	58x16x4	3520-4.00I	13,28	3520-4.00SP	15,23	3520-4.00SF	15,23	3520-4.00GC	170,65
M 5 x 0.80	5.20	6.03	66x19x5	3520-5.00I	13,28	3520-5.00SP	15,23	3520-5.00SF	15,23	3520-5.00GC	165,32
M 6 x 1.00	6.30	7.29	72x22x6.3	3520-6.00I	13,28	3520-6.00SP	15,23	3520-6.00SF	15,23	3520-6.00GC	159,98
M 7 x 1.00	7.30	8.29	72x22x7.1	3520-7.00I	16,56	3520-7.00SP	19,09	3520-7.00SF	19,09	3520-7.00GC	183,96
M 8 x 1.00	8.30	9.29	80x24x8	3521-8.00I	16,56	3521-8.00SP	19,09	3521-8.00SF	19,09	3521-8.00GC	196,90
M 8 x 1.25	8.30	9.62	80x24x8	3520-8.00I	16,56	3520-8.00SP	19,09	3520-8.00SF	19,09	3520-8.00GC	165,32
M 9 x 1.25	9.40	10.62	85x25x6.3	3520-9.00I	20,29	3520-9.00SP	29,42	3520-9.00SF	29,42	3520-9.00GC	170,65
M 10 x 1.00	10.30	11.29	85x25x6.3	3523-10.00I	20,29	3523-10.00SP	22,96	3523-10.00SF	22,96	3523-10.00GC	223,97
M 10 x 1.25	10.30	11.62	85x25x6.3	3521-10.00I	20,29	3521-10.00SP	28,36	3521-10.00SF	28,36	3521-10.00GC	229,30
M 10 x 1.50	10.40	11.94	89x29x7.1	3520-10.00I	20,29	3520-10.00SP	22,96	3520-10.00SF	22,96	3520-10.00GC	175,96
M 11 x 1.00	11.30	12.29	89x29x7.1	3523-11.00I	27,48	3523-11.00SP	30,59	3523-11.00SF	30,59	3523-11.00GC	234,62
M 11 x 1.25	11.30	12.62	89x29x7.1	3521-11.00I	27,58	3521-11.00SP	30,59	3521-11.00SF	30,59	3521-11.00GC	228,68
M 11 x 1.50	11.40	12.94	89x29x7.1	3520-11.00I	22,96	3520-11.00SP	30,59	3520-11.00SF	30,59	3520-11.00GC	181,30
M 12 x 1.00	12.30	13.29	95x30x9	3524-12.00I	28,04	3524-12.00SP	34,88	3524-12.00SF	34,88	3524-12.00GC	238,37
M 12 x 1.25	12.30	13.62	95x30x9	3523-12.00I	28,04	3523-12.00SP	30,44	3523-12.00SF	30,44	3523-12.00GC	238,37
M 12 x 1.50	12.40	14.13	95x30x9	3521-12.00I	28,04	3521-12.00SP	34,29	3521-12.00SF	34,29	3521-12.00GC	213,29
M 12 x 1.75	12.50	14.27	95x30x9	3520-12.00I	22,96	3520-12.00SP	30,06	3520-12.00SF	30,06	3520-12.00GC	186,64
M 13 x 1.25	13.25	14.62	95x30x9	3521-13.00I	32,16	3521-13.00SP	43,46	3521-13.00SF	43,46	3521-13.00GC	229,30
M 13 x 1.75	13.50	15.27	102x32x10	3520-13.00I	32,16	3520-13.00SP	43,46	3520-13.00SF	43,46	3520-13.00GC	213,53
M 14 x 1.00	14.25	15.29	102x32x10	3524-14.00I	31,89	3524-14.00SP	53,46	3524-14.00SF	53,46	3524-14.00GC	255,97
M 14 x 1.25	14.25	15.62	102x32x10	3523-14.00I	31,89	3523-14.00SP	42,05	3523-14.00SF	42,05	3523-14.00GC	255,97
M 14 x 1.50	14.50	15.94	102x32x10	3521-14.00I	31,89	3521-14.00SP	42,05	3521-14.00SF	42,05	3521-14.00GC	234,62
M 14 x 2.00	14.50	16.59	102x32x10	3520-14.00I	31,89	3520-14.00SP	42,05	3520-14.00SF	42,05	3520-14.00GC	197,32
M 15 x 1.50	15.25	16.94	102x32x10	3521-15.00I	38,08	3521-15.00SP	59,96	3521-15.00SF	59,96	3521-15.00GC	245,31
M 15 x 2.00	15.50	17.59	112x37x11.2	3520-15.00I	38,08	3520-15.00SP	59,96	3520-15.00SF	59,96	3520-15.00GC	230,39
M 16 x 1.50	16.50	17.94	112x37x11.2	3521-16.00I	38,18	3521-16.00SP	53,08	3521-16.00SF	53,08	3521-16.00GC	250,64
M 16 x 2.00	16.50	18.59	112x37x11.2	3520-16.00I	38,18	3520-16.00SP	44,46	3520-16.00SF	44,46	3520-16.00GC	218,64

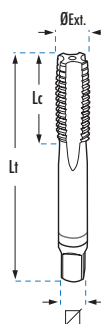
**MACHOS DE MÃO E CALIBRES STI**



TOLERÂNCIA					TOL 5H-6H		TOL 5H-6H		TOL 5H-6H		TOL 5H-6H	
MATERIAL					HSS		HSS-V3		HSS-V3		Calibre	
FORMA												
					Ø Ext.	Lt x Lc x $\varnothing$	€	€	€	€	€	€
M 18 x 1.50	18.50	19.94	112x37x11.2	3523-18.00I	48,33	3523-18.00SP	66,96	3523-18.00SF	66,96	3523-18.00GC	254,96	
M 18 x 2.00	18.50	20.59	112x37x11.2	3521-18.00I	48,33	3521-18.00SP	66,96	3521-18.00SF	66,96	3521-18.00GC	261,28	
<b>M 18 x 2.50</b>	19.00	21.24	118x38x12.5	3520-18.00I	48,33	3520-18.00SP	66,96	3520-18.00SF	66,96	3520-18.00GC	234,62	
M 20 x 1.50	20.50	21.94	118x38x12.5	3523-20.00I	53,15	3523-20.00SP	78,88	3523-20.00SF	78,88	3523-20.00GC	303,98	
M 20 x 2.00	20.50	22.59	118x38x12.5	3521-20.00I	53,15	3521-20.00SP	78,88	3521-20.00SF	78,88	3521-20.00GC	277,31	
<b>M 20 x 2.50</b>	20.75	23.24	118x38x12.5	3520-20.00I	53,15	3520-20.00SP	78,88	3520-20.00SF	78,88	3520-20.00GC	250,64	
M 22 x 1.50	22.50	23.94	130x45x14	3523-22.00I	61,14	3523-22.00SP	111,56	3523-22.00SF	111,56	3523-22.00GC	325,03	
M 22 x 2.00	22.50	24.59	130x45x14	3521-22.00I	61,14	3521-22.00SP	111,56	3521-22.00SF	111,56	3521-22.00GC	314,61	
<b>M 22 x 2.50</b>	22.75	25.24	130x45x14	3520-22.00I	61,14	3520-22.00SP	111,56	3520-22.00SF	111,56	3520-22.00GC	266,61	
M 24 x 1.50	24.50	25.94	130x45x14	3523-24.00I	77,31	3523-24.00SP	133,88	3523-24.00SF	133,88	3523-24.00GC	346,02	
M 24 x 2.00	24.50	26.59	127x37x16	3521-24.00I	77,31	3521-24.00SP	133,88	3521-24.00SF	133,88	3521-24.00GC	314,87	
<b>M 24 x 3.00</b>	25.00	27.89	135x45x16	3520-24.00I	77,31	3520-24.00SP	133,88	3520-24.00SF	133,88	3520-24.00GC	298,62	
M 26 x 1.50	26.50	27.94	127x37x16	3523-26.00I	145,26	-	-	-	-	-	-	
M 27 x 1.50	27.50	28.97	127x37x16	3523-27.00I	171,27	-	-	-	-	-	-	
M 27 x 2.00	27.50	29.59	127x37x16	3521-27.00I	171,27	-	-	-	-	-	-	
<b>M 27 x 3.00</b>	28.00	30.89	151x51x18	3520-27.00I	171,27	-	-	-	-	-	-	
M 28 x 1.50	28.50	29.99	137x37x18	3523-28.00I	190,92	-	-	-	-	-	-	
M 30 x 1.50	30.50	31.96	137x37x18	3523-30.00I	203,73	-	-	-	-	-	-	
M 30 x 2.00	30.50	32.59	137x37x18	3521-30.00I	203,73	-	-	-	-	-	-	
<b>M 30 x 3.50</b>	31.00	34.54	162x57x20	3520-30.00I	203,73	-	-	-	-	-	-	
M 33 x 2.00	33.50	35.59	144x39x20	3521-33.00I	247,38	-	-	-	-	-	-	
<b>M 33 x 3.50</b>	34.00	37.54	170x60x22.4	3520-33.00I	247,38	-	-	-	-	-	-	
M 36 x 1.50	36.50	37.92	149x39x22.4	3524-36.00I	284,42	-	-	-	-	-	-	
M 36 x 2.00	36.50	38.55	149x39x22.4	3523-36.00I	284,42	-	-	-	-	-	-	
M 36 x 3.00	37.00	39.89	170x60x22.4	3521-36.00I	284,42	-	-	-	-	-	-	
<b>M 36 x 4.00</b>	37.00	41.19	170x60x22.4	3520-36.00I	284,42	-	-	-	-	-	-	
M 39x3,00	40.00	42.90	149x39x26	3521-39.00I	392,06	-	-	-	-	-	-	
<b>M 39x4,00</b>	40.25	44.20	187x67x28	3520-39.00I	392,06	-	-	-	-	-	-	
M 40x3,00	41.00	43.90	149x39x26	3523-40.00I	414,77	-	-	-	-	-	-	
M 42x3,00	43.00	45.90	165x45x28	3523-42.00I	426,25	-	-	-	-	-	-	
<b>M 42x4,50</b>	43.50	47.90	187x67x28	3520-42.00I	426,25	-	-	-	-	-	-	
M 45x3,00	46.00	48.90	175x45x31	3523-45.00I	453,84	-	-	-	-	-	-	
<b>M 45x4,50</b>	46.50	50.90	200x70x31	3520-45.00I	453,84	-	-	-	-	-	-	
M 48x3,00	49.00	51.90	175x45x31	3523-48.00I	551,17	-	-	-	-	-	-	
<b>M 48x5,00</b>	49.50	54.50	200x70x31	3520-48.00I	551,17	-	-	-	-	-	-	
M 50x3,00	51.00	53.90	175x45x31	3523-50.00I	596,35	-	-	-	-	-	-	
M 52x3,00	53.00	55.90	193x48x34	3523-52.00I	630,54	-	-	-	-	-	-	
<b>M 52x5,00</b>	53.50	58.50	221x76x34	3520-52.00I	630,54	-	-	-	-	-	-	

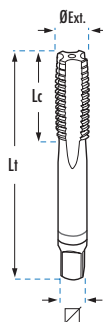
## MACHOS DE MÃO E CALIBRES STI

UNC

STI-ISO629  
4H5H, BS4377

TOLERÂNCIA				TOL 2B-3B		TOL 2B-3B		TOL 2B-3B		TOL 2B-3B		
MATERIAL				HSS		HSS-V3		HSS-V3		Calibre		
FORMA												
		Ø Ext.	Lt x Lc x $\varnothing$		€		€		€		€	
UNC Nº2 - 56		2.40	2.77	44x9.5x2.2	3532-2GI	20,29	3532-2GSP	27,70	3532-2GSF	27,70	3532-2GGC	318,54
UNC Nº3 - 48		2.70	3.02	44x9.5x2.2	3532-3GI	20,29	3532-3GSP	29,31	3532-3GSF	29,31	3532-3GGC	318,54
UNC Nº4 - 40		3.00	3.67	53x13x3.15	3532-4GI	20,29	3532-4GSP	27,70	3532-4GSF	27,70	3532-4GGC	319,95
UNC Nº5 - 40		3.40	4.00	53x13x3.15	3532-5GI	20,29	3532-5GSP	27,70	3532-5GSF	27,70	3532-5GGC	318,57
UNC Nº6 - 32		3.70	4.53	58x16x4	3532-6GI	20,29	3532-6GSP	27,70	3532-6GSF	27,70	3532-6GGC	193,90
UNC Nº8 - 32		4.40	5.19	62x17x4.5	3532-8GI	20,29	3532-8GSP	27,70	3532-8GSF	27,70	3532-8GGC	189,05
UNC Nº10 - 24		5.10	6.20	66x19x5	3532-10GI	20,29	3532-10GSP	25,39	3532-10GSF	25,39	3532-10GGC	184,20
UNC Nº12 - 24		5.70	6.86	66x19x5.6	3532-12GI	20,29	3532-12GSP	25,39	3532-12GSF	25,39	3532-12GGC	184,20
UNC 1/4 - 20		6.70	8.00	72x22x6.3	3532-1/4I	13,28	3532-1/4SP	18,48	3532-1/4SF	18,48	3532-1/4GC	174,53
UNC 5/16 - 18		8.30	9.77	80x24x8	3532-5/16I	16,47	3532-5/16SP	21,92	3532-5/16SF	21,92	3532-5/16GC	184,20
UNC 3/8 - 16		9.90	11.58	85x25x6.3	3532-3/8I	15,23	3532-3/8SP	27,70	3532-3/8SF	27,70	3532-3/8GC	184,20
UNC 7/16 - 14		11.60	13.47	95x30x9	3532-7/16I	20,29	3532-7/16SP	31,50	3532-7/16SF	31,50	3532-7/16GC	193,90
UNC 1/2 - 13		13.00	15.23	102x32x10	3532-1/2I	22,96	3532-1/2SP	34,62	3532-1/2SF	34,62	3532-1/2GC	208,45
UNC 9/16 - 12		15.00	17.03	112x37x11.2	3532-9/16I	38,18	3532-9/16SP	57,70	3532-9/16SF	57,70	3532-9/16GC	222,99
UNC 5/8 - 11		16.50	18.87	112x37x11.2	3532-5/8I	47,13	3532-5/8SP	80,42	3532-5/8SF	80,42	3532-5/8GC	232,70
UNC 3/4 - 10		20.00	22.34	118x38x12.5	3532-3/4I	57,27	3532-3/4SP	81,56	3532-3/4SF	81,56	3532-3/4GC	266,61
UNC 7/8 - 9		23.00	25.89	130x45x14	3532-7/8I	66,83	3532-7/8SP	118,27	3532-7/8SF	118,27	3532-7/8GC	300,56
UNC 1 - 8		26.25	29.52	138x48x16	3532-1I	66,83	3532-1SP	138,47	3532-1SF	138,47	3532-1GC	339,34
UNC 1.1/8 - 7		29.50	33.28	151x51x18	3532-1.1/8I	202,36	-	-	-	-	-	-
UNC 1.1/4 - 7		32.50	36.46	162x57x20	3532-1.1/4I	242,78	-	-	-	-	-	-
UNC 1.3/8 - 6		36.00	40.42	170x60x22.4	3532-1.3/8I	303,50	-	-	-	-	-	-
UNC 1.1/2 - 6		39.50	43.59	187x67x25	3532-1.1/2I	393,36	-	-	-	-	-	-

**MACHOS DE MÃO E CALIBRES STI**



TOLERÂNCIA				TOL 2B-3B		TOL 2B-3B		TOL 2B-3B		TOL 2B-3B		
MATERIAL				HSS		HSS-V3		HSS-V3		Calibre		
FORMA				FORMA B		FORMA B		FORMA B		FORMA B		
					€		€		€		€	
UNF	Nº	Ø Ext.	Lt x Lc x Ø		€		€		€		€	
UNF	Nº3 - 56	2.70	3.09	44x9.5x2.2	3534-3GI	21,23	3534-3GSP	29,31	3534-3GSF	29,31	3534-3GGC	319,95
UNF	Nº4 - 48	3.00	3.53	50x13x2.80	3534-4GI	20,29	3534-4GSP	27,70	3534-4GSF	27,70	3534-4GGC	319,95
UNF	Nº6 - 40	3.70	4.33	53x13x3.55	3534-6GI	20,29	3534-6GSP	27,70	3534-6GSF	27,70	3534-6GGC	193,90
UNF	Nº8 - 36	4.40	5.08	62x17x4.50	3534-8GI	20,29	3534-8GSP	27,70	3534-8GSF	27,70	3534-8GGC	189,05
UNF	Nº10 - 32	5.10	5.85	66x19x5.00	3534-10GI	20,29	3534-10GSP	25,39	3534-10GSF	25,39	3534-10GGC	184,20
UNF	Nº12 - 28	5.80	6.75	66x19x5.60	3534-12GI	23,25	3534-12GSP	25,42	3534-12GSF	25,42	3534-12GGC	310,24
UNF	1/4 - 28	6.60	7.52	72x22x6.30	3534-1/4I	13,28	3534-1/4SP	18,48	3534-1/4SF	18,48	3534-1/4GC	174,53
UNF	5/16 - 24	8.20	9.31	80x24x8.00	3534-5/16I	14,63	3534-5/16SP	21,92	3534-5/16SF	21,92	3534-5/16GC	184,20
UNF	3/8 - 24	9.80	10.89	85x25x6.30	3534-3/8I	15,23	3534-3/8SP	27,70	3534-3/8SF	27,70	3534-3/8GC	184,20
UNF	7/16 - 20	11.50	12.76	89x29x7.10	3534-7/16I	20,29	3534-7/16SP	31,50	3534-7/16SF	31,50	3534-7/16GC	193,90
UNF	1/2 - 20	13.00	14.35	95x30x9.00	3534-1/2I	20,87	3534-1/2SP	34,62	3534-1/2SF	34,62	3534-1/2GC	208,45
UNF	9/16 - 18	14.75	16.12	102x32x10	3534-9/16I	38,18	3534-9/16SP	57,70	3534-9/16SF	57,70	3534-9/16GC	222,99
UNF	5/8 - 18	16.50	17.00	112x37x11.2	3534-5/8I	47,13	3534-5/8SP	80,42	3534-5/8SF	80,42	3534-5/8GC	227,84
UNF	3/4 - 16	19.50	21.11	112x37x11.2	3534-3/4I	57,27	3534-3/4SP	81,56	3534-3/4SF	81,56	3534-3/4GC	184,20
UNF	7/8 - 14	22.50	24.58	130x45x14	3534-7/8I	74,83	3534-7/8SP	118,27	3534-7/8SF	118,27	3534-7/8GC	276,34
UNF	1 - 12	26.00	28.15	127x37x16	3534-1I	66,45	3534-1SP	138,47	3534-1SF	138,47	3534-1GC	252,08
UNS	1 - 14	26.00	27.76	127x37x16	3535-1I	66,45	3535-1SP	138,47	3535-1SF	138,47	3535-1GC	252,08
UNF	1.1/8 - 12	29.50	31.32	137x37x18	3534-1.1/8I	202,36	-	-	-	-	-	-
UNF	1.1/4 - 12	32.50	34.50	144x39x20	3534-1.1/4I	242,78	-	-	-	-	-	-
UNF	1.3/8 - 12	35.50	37.67	149x39x22.4	3534-1.3/8I	303,50	-	-	-	-	-	-
UNF	1.1/2 - 12	38.50	40.85	149x39x22.4	3534-1.1/2I	393,36	-	-	-	-	-	-

## MACHOS DE MÃO STI

BSW



BSW



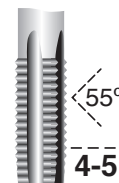
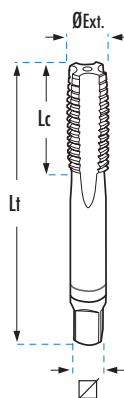
TOL (3B)



HSS



STI-ISO529



			Ø Ext.	Lt x Lc x $\varnothing$		€
BSW 1/8 - 40		3.40	3.93	53x13x3.15	3528-1/8I	13,28
BSW 3/16 - 24		5.00	6.00	66x19x5	3528-3/16I	13,28
BSW 1/4 - 20		6.70	7.84	72x22x6.3	3528-1/4I	13,28
BSW 5/16 - 18		8.30	9.59	80x24x8	3528-5/16I	14,63
BSW 3/8 - 16		10.00	11.38	85x25x6.3	3528-3/8I	15,23
BSW 7/16 - 14		11.60	13.23	95x30x9	3528-7/16I	20,29
BSW 1/2 - 12		13.00	15.17	102x32x10	3528-1/2I	23,53
BSW 9/16 - 12		14.75	16.76	102x32x10	3528-9/16I	38,18
BSW 5/8 - 11		16.50	18.57	112x37x11.2	3528-5/8I	47,13
BSW 11/16 - 11		17.50	19.60	112x37x11.2	3528-11/16I	57,27
BSW 3/4 - 10		20.00	22.01	118x38x12.5	3528-3/4I	57,27
BSW 7/8 - 9		23.25	25.52	130x45x14	3528-7/8I	66,45
BSW 1 - 8		26.50	29.10	138x48x16	3528-1I	66,45

BSF



BSF



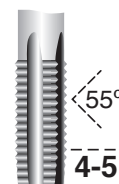
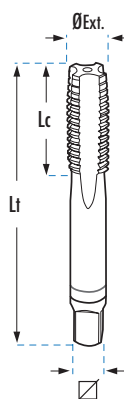
TOL (3B)



HSS



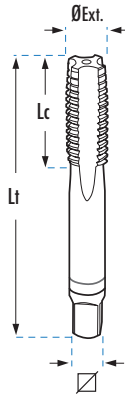
STI-ISO529



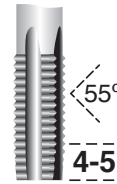
			Ø Ext.	Lt x Lc x $\varnothing$		€
BSF 3/16 - 32		5.00	5.70	66x19x5	3530-3/16I	13,28
BSF 1/4 - 26		6.60	7.51	72x22x6.3	3530-1/4I	13,28
BSF 5/16 - 22		8.30	9.30	80x24x8	3530-5/16I	14,63
BSF 3/8 - 20		9.80	11.02	85x25x6.3	3530-3/8I	15,23
BSF 7/16 - 18		11.60	12.77	89x29x7.1	3530-7/16I	20,29
BSF 1/2 - 16		13.25	14.56	95x30x9	3530-1/2I	23,53
BSF 9/16 - 16		14.75	16.15	102x32x10	3530-9/16I	38,18
BSF 5/8 - 14		16.50	18.01	112x37x11.2	3530-5/8I	47,13
BSF 11/16 - 14		17.50	19.60	112x37x11.2	3530-11/16I	57,27
BSF 3/4 - 12		19.50	21.53	118x38x12.5	3530-3/4I	57,27
BSF 7/8 - 11		22.75	24.93	130x45x14	3530-7/8I	66,45
BSF 1 - 10		26.25	28.37	138x48x16	3530-1I	66,45

**MACHOS DE MÃO STI**

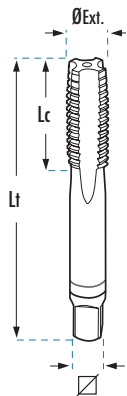
**BSP (GAS)**    **BSP**    **TOL (3B)**    **HSS**



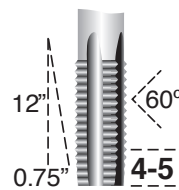
			Ø Ext.	Lt x Lc x ∅		€
BSP	1/8 - 28	10.00	10.81	85x25x6.3	3546-1/8I	20,13
BSP	1/4 - 19	13.75	14.73	95x30x9	3546-1/4I	22,85
BSP	3/8 - 19	17.00	18.24	112x37x11.2	3546-3/8I	30,06
BSP	1/2 - 14	21.50	23.09	118x38x12.5	3546-1/2I	48,71
BSP	5/8 - 14	23.50	25.05	130x45x14	3546-5/8I	71,58
BSP	3/4 - 14	27.00	28.58	127x37x16	3546-3/4I	71,58
BSP	1 - 11	33.75	35.96	162x57x20	3546-1I	111,84



**NPT**    **NPT**    **TOL (3B)**    **HSS**



		Ø Ext.	Lt x Lc x ∅		€
NPT	1/8 - 27	10.43	54x19x8.3	3552-1/8I	97,64
NPT	1/4 - 18	13.95	62x27x10.7	3552-1/4I	109,84
NPT	3/8 - 18	17.37	65x27x13.5	3552-3/8I	146,45
NPT	1/2 - 14	21.65	80x35x13.1	3552-1/2I	176,98
NPT	3/4 - 14	26.96	83x35x17.2	3552-3/4I	231,89
NPT	1 - 11.1/2	33.75	95x44x22.7	3552-1I	317,30



## MACHOS DE MÃO STI

UNx8



8-UN



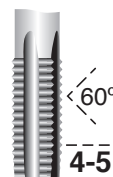
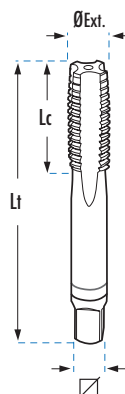
TOL (3B)






HSS



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			Ø Ext.	Lt x Lc x $\varnothing$		€
UN	1.1/8 - 8	28.50	1.26	5.9x2.0x0.7	3570-1.1/8I	347,93
UN	1.1/4 - 8	32.00	1.38	6.3x2.2x0.7	3570-1.1/4I	400,79
UN	1.3/8 - 8	35.00	1.51	6.6x2.3x0.8	3570-1.3/8I	454,85
UN	1.1/2 - 8	38.00	1.63	6.6x2.3x0.8	3570-1.1/2I	499,63
UN	1.5/8 - 8	41.00	1.76	7.3x2.6x0.9	3570-1.5/8I	584,46
UN	1.3/4 - 8	44.50	1.88	7.3x2.6x0.9	3570-1.3/4I	633,01
UN	1.7/8 - 8	47.50	2.01	7.8x2.7x1.1	3570-1.7/8I	735,90
UN	2 - 8	51.00	2.13	7.8x2.7x1.1	3570-2I	764,43

BA



BA



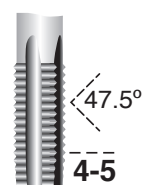
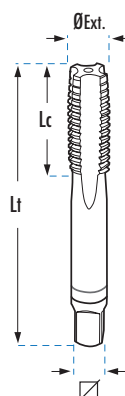
TOL (3B)





HSS

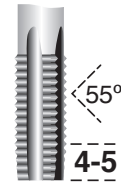
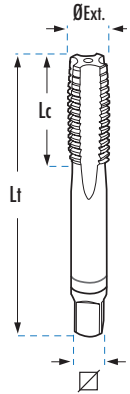


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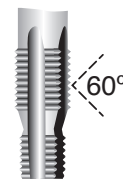
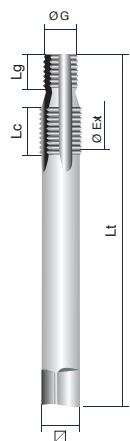


		Ø Ext.	Lt x Lc x $\varnothing$		€
BA 0	6.20	7.12	66x19x5.6	3544-0I	13,51
BA 2	4.90	5.60	62x17x4.5	3544-2I	13,51
BA 4	3.80	4.34	53x13x3.5	3544-4I	13,51
BA 6	2.90	3.40	50x13x2.8	3544-6I	13,51

**MACHOS DE MÃO STI**



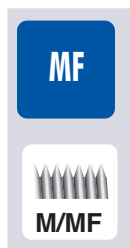
			Ø Ext.	Lt x Lc x Ø		€
BSB	1/4 - 26	6.60	7.72	72x22x6.3	3560-1/4I	14,97
BSB	5/16 - 26	8.00	9.30	72x22x7.1	3560-5/16I	16,47
BSB	3/8 - 26	9.80	10.89	85x25x6.3	3560-3/8I	17,15
BSB	7/16 - 26	11.10	12.48	89x29x7.1	3560-7/16I	22,85
BSB	1/2 - 26	12.70	14.07	95x30x9	3560-1/2I	25,85



			Ø Ext.	Lg	Ø G	Lt x Lc x Ø		€
M	6 x 1.00	6.30	7.29	7	6	70x28x6.3	3520-6.00PN	25,83
M	8 x 1.25	8.30	9.62	9	8	75x32x6.3	3520-8.00PN	25,83
M	10 x 1.00	10.30	11.29	8	10	74x30x6.3	3522-10.00PN	32,31
M	10 x 1.50	10.40	11.94	9	10	89x29x7.1	3520-10.00PN	32,31
M	12 x 1.25	12.30	13.62	9	12	75x32x7.1	3522-12.00PN	45,90
M	14 x 1.25	14.25	15.62	10	14	90x45x9.2	3522-14.00PN	53,41
M	18 x 1.50	18.50	19.94	10	18	116x47x12.5	3522-18.00PN	76,37

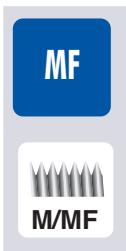


## FERRAMENTAS DE INSTALAÇÃO



		€		€		€		€
<b>M 2 x 0.40</b>	3500-HIT2	13,28	3520-2.00HIP	128,17	3520-2.00MIT	127,25	-	-
<b>M 2.20 x 0.45</b>	3500-HIT2	13,28	3520-2.20HIP	128,17	3520-2.20MIT	127,25	-	-
<b>M 2.50 x 0.45</b>	3500-HIT3	13,28	3520-2.50HIP	128,17	3520-2.50MIT	127,25	-	-
<b>M 3 x 0.50</b>	3500-HIT4	13,28	3520-3.00HIP	95,55	3520-3.00MIT	117,08	-	-
<b>M 3.50 x 0.60</b>	3500-HIT5	13,28	3520-3.50HIP	95,55	3520-3.50MIT	117,08	-	-
<b>M 4 x 0.70</b>	3500-HIT6	13,28	3520-4.00HIP	95,55	3520-4.00MIT	117,08	-	-
<b>M 5 x 0.80</b>	3500-HIT8	13,28	3520-5.00HIP	95,55	3520-5.00MIT	117,08	-	-
<b>M 6 x 1.00</b>	3500-HIT9	13,28	3520-6.00HIP	99,37	3520-6.00MIT	117,08	-	-
<b>M 7 x 1.00</b>	3500-HIT10	15,23	3520-7.00HIP	99,37	3520-7.00MIT	117,08	-	-
M 8 x 1.00	3500-HIT11	15,23	3521-8.00HIP	95,09	3521-8.00MIT	117,08	-	-
<b>M 8 x 1.25</b>	3500-HIT11	15,23	3520-8.00HIP	80,88	3520-8.00MIT	117,08	-	-
<b>M 9 x 1.25</b>	3500-HIT13	15,23	3520-9.00HIP	80,29	3520-9.00MIT	117,07	-	-
M 10 x 1.00	3500-HIT13	15,23	3523-10.00HIP	108,60	3523-10.00MIT	127,25	-	-
M 10 x 1.25	3500-HIT13	15,23	3521-10.00HIP	118,64	3521-10.00MIT	127,25	-	-
<b>M 10 x 1.50</b>	3500-HIT13	15,23	3520-10.00HIP	107,76	3520-10.00MIT	127,25	-	-
M 11 x 1.00	3500-HIT14	19,09	-	-	-	-	-	-
M 11 x 1.25	3500-HIT14	19,09	-	-	-	-	-	-
<b>M 11 x 1.50</b>	3500-HIT14	19,09	3520-11.00HIP	120,57	3520-11.00MIT	135,75	-	-
M 12 x 1.00	3500-HIT15	19,09	-	-	-	-	-	-
M 12 x 1.25	3500-HIT15	19,09	3523-12.00HIP	112,37	3523-12.00MIT	135,75	-	-
M 12 x 1.50	3500-HIT15	19,09	3521-12.00HIP	105,46	3521-12.00MIT	135,75	-	-
<b>M 12 x 1.75</b>	3500-HIT15	19,09	3520-12.00HIP	103,73	3520-12.00MIT	135,75	-	-
M 13 x 1.25	3500-HIT16	22,96	-	-	-	-	-	-
M 13 x 1.50	3500-HIT15	19,09	-	-	-	-	-	-
<b>M 13 x 1.75</b>	3500-HIT15	19,09	-	-	3520-13.00MIT	135,73	-	-
M 14 x 1.00	3500-HIT16	22,96	-	-	-	-	-	-
M 14 x 1.25	3500-HIT16	22,96	3523-14.00HIP	218,95	3523-14.00MIT	144,21	-	-
M 14 x 1.50	3500-HIT16	22,96	3521-14.00HIP	120,52	3521-14.00MIT	144,21	-	-
<b>M 14 x 2.00</b>	3500-HIT16	22,96	3520-14.00HIP	92,28	3520-14.00MIT	144,21	-	-
M 15 x 1.50	3500-HIT16	22,96	-	-	-	-	-	-
<b>M 15 x 2.00</b>	3500-HIT16	22,96	-	-	-	-	-	-
M 16 x 1.50	3500-HIT18	25,37	3521-16.00HIP	112,37	3521-16.00MIT	144,21	-	-
<b>M 16 x 2.00</b>	3500-HIT18	25,37	-	-	3520-16.00MIT	144,21	-	-
M 18 x 1.50	3500-HIT20	25,37	-	-	-	-	3523-18.00HIP	210,99
M 18 x 2.00	3500-HIT20	25,37	-	-	-	-	3521-18.00HIP	210,99
<b>M 18 x 2.50</b>	3500-HIT20	25,37	-	-	-	-	3520-18.00HIP	101,56

**FERRAMENTAS DE INSTALAÇÃO**



		€		€		€
M 20 x 1.50	3500-HIT21	25,37	-	-	3523-20.00HIP	262,91
M 20 x 2.00	3500-HIT21	25,37	-	-	3521-20.00HIP	262,91
<b>M 20 x 2.50</b>	3500-HIT21	25,37	-	-	3520-20.00HIP	119,01
M 22 x 1.50	3500-HIT22	31,89	-	-	3523-22.00HIP	321,57
M 22 x 2.00	3500-HIT22	31,89	-	-	3521-22.00HIP	321,57
<b>M 22 x 2.50</b>	3500-HIT22	31,89	-	-	3520-22.00HIP	125,05
M 24 x 1.50	3500-HIT23	31,89	-	-	3523-24.00HIP	375,15
M 24 x 2.00	3500-HIT23	31,89	-	-	3521-24.00HIP	375,15
<b>M 24 x 3.00</b>	3500-HIT23	31,89	-	-	3520-24.00HIP	132,65
M 26 x 1.50	3500-HIT24	57,26	3523-26.00HIM	31,94	-	-
M 27 x 1.50	3500-HIT24	57,26	3523-27.00HIM	31,94	-	-
M 27 x 2.00	3500-HIT24	57,26	3521-27.00HIM	31,94	-	-
<b>M 27 x 3.00</b>	3500-HIT24	57,26	3520-27.00HIM	31,94	-	-
M 28 x 1.50	3500-HIT24	57,26	3523-28.00HIM	31,94	-	-
M 30 x 1.50	3500-HIT26	90,15	3523-30.00HIM	38,34	-	-
M 30 x 2.00	3500-HIT26	90,15	3521-30.00HIM	38,34	-	-
<b>M 30 x 3.50</b>	3500-HIT25	57,26	3520-30.00HIM	38,34	-	-
M 33 x 2.00	3500-HIT26	90,15	3521-33.00HIM	44,73	-	-
<b>M 33 x 3.50</b>	3500-HIT26	90,15	3520-33.00HIM	44,73	-	-
M 36 x 1.50	3500-HIT28	90,30	3524-36.00HIM	44,73	-	-
M 36 x 2.00	3500-HIT28	90,30	3523-36.00HIM	44,73	-	-
M 36 x 3.00	3500-HIT28	90,30	3521-36.00HIM	44,73	-	-
<b>M 36 x 4.00</b>	3500-HIT28	90,30	3520-36.00HIM	44,73	-	-
M 39x3,00	3500-HIT28	90,30	3521-39.00HIM	83,48	-	-
<b>M 39x4,00</b>	3500-HIT28	90,30	3520-39.00HIM	83,48	-	-
M 40 x 3,00	3500-HIT28	90,30	3523-40.00HIM	83,48	-	-
M 42 x 3,00	3500-HIT28	90,30	3523-42.00HIM	97,50	-	-
<b>M 42 x 4,50</b>	3500-HIT28	90,30	3520-42.00HIM	97,50	-	-
M 45 x 3,00	3500-HIT30	112,28	3523-45.00HIM	97,50	-	-
<b>M 45 x 4,50</b>	3500-HIT30	112,28	3520-45.00HIM	97,50	-	-
M 48 x 3,00	3500-HIT30	112,28	3523-48.00HIM	103,34	-	-
<b>M 48 x 5,00</b>	3500-HIT30	112,28	3520-48.00HIM	103,34	-	-
M 50 x 3,00	3500-HIT30	112,28	3523-50.00HIM	117,92	-	-
M 52 x 3,00	3500-HIT30	112,28	3523-52.00HIM	117,92	-	-
<b>M 52 x 5,00</b>	3500-HIT30	112,28	3520-52.00HIM	117,92	-	-

## FERRAMENTAS DE INSTALAÇÃO

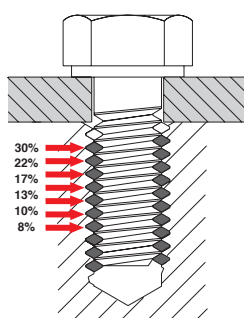
UNC

UNC



	FREE	FREE	LOCK	FREE	FREE	LOCK	FREE	LOCK

		€		€		€		€		€
UNC Nº2 - 56	3500-HIT2	13,28	3532-2GHIP	133,64	-	-	3532-2GMIT	127,25	-	-
UNC Nº3 - 48	3500-HIT3	13,28	-	-	-	-	3532-3GMIT	127,25	-	-
UNC Nº4 - 40	3500-HIT4	13,28	3532-4GHIP	133,64	-	-	3532-4GMIT	127,25	-	-
UNC Nº5 - 40	3500-HIT4	13,28	3532-5GHIP	133,64	-	-	3532-5GMIT	127,25	-	-
UNC Nº6 - 32	3500-HIT5	13,28	3532-6GHIP	130,00	-	-	3532-6GMIT	117,08	-	-
UNC Nº8 - 32	3500-HIT6	13,28	3532-8GHIP	130,00	-	-	3532-8GMIT	117,08	-	-
UNC Nº10 - 24	3500-HIT7	13,28	3532-10GHIP	130,00	-	-	3532-10GMIT	117,08	-	-
UNC Nº12 - 24	3500-HIT8	13,28	3532-12GHIP	130,00	-	-	3532-12GMIT	117,07	-	-
UNC 1/4 - 20	3500-HIT9	13,28	3532-1/4HIP	88,37	-	-	3532-1/4MIT	117,08	-	-
UNC 5/16 - 18	3500-HIT10	15,23	3532-5/16HIP	88,43	-	-	3532-5/16MIT	117,08	-	-
UNC 3/8 - 16	3500-HIT13	15,23	3532-3/8HIP	102,67	-	-	3532-3/8MIT	127,25	-	-
UNC 7/16 - 14	3500-HIT14	19,09	3532-7/16HIP	102,67	-	-	3532-7/16MIT	127,25	-	-
UNC 1/2 - 13	3500-HIT15	19,09	3532-1/2HIP	118,70	-	-	3532-1/2MIT	135,75	-	-
UNC 9/16 - 12	3500-HIT16	22,96	-	-	-	-	-	-	3532-9/16HIP	107,30
UNC 5/8 - 11	3500-HIT18	25,37	-	-	-	-	-	-	3532-5/8HIP	112,74
UNC 3/4 - 10	3500-HIT20	25,37	-	-	-	-	-	-	3532-3/4HIP	126,80
UNC 7/8 - 9	3500-HIT22	31,89	-	-	-	-	-	-	3532-7/8HIP	136,55
UNC 1 - 8	3500-HIT23	31,89	-	-	-	-	-	-	3532-1HIP	156,06
UNC 1.1/8 - 7	3500-HIT24	57,26	-	-	3532-1.1/8HIM	38,34	-	-	3532-1.1/8HIP	178,19
UNC 1.1/4 - 7	3500-HIT25	57,26	-	-	3532-1.1/4HIM	38,34	-	-	3532-1.1/4HIP	186,67
UNC 1.3/8 - 6	3500-HIT26	90,15	-	-	3532-1.3/8HIM	44,73	-	-	3532-1.3/8HIP	189,98
UNC 1.1/2 - 6	3500-HIT27	90,30	-	-	3532-1.1/2HIM	44,73	-	-	3532-1.1/2HIP	192,62

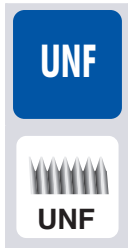



















## RECOMENDAÇÃO TÉCNICA:

Instale o inserto um fio e meio abaixo do nível da peça.



**FERRAMENTAS DE INSTALAÇÃO**



	 FREE		 FREE		 LOCK		 FREE		 FREE		 LOCK		 FREE		 LOCK	
									€	€	€	€	€	€	€	€
UNF Nº3 - 56	3500-HIT3	13,28	3534-3GHIP	118,98	-	-	-	-	-	-	-	-	-	-	-	-
UNF Nº4 - 48	3500-HIT4	13,28	3534-4GHIP	121,40	-	-	3534-4GMIT	127,25	-	-	-	-	-	-	-	-
UNF Nº6 - 40	3500-HIT5	13,28	3534-6GHIP	106,37	-	-	3534-6GMIT	117,08	-	-	-	-	-	-	-	-
UNF Nº8 - 36	3500-HIT6	13,28	3534-8GHIP	106,37	-	-	3534-8GMIT	117,08	-	-	-	-	-	-	-	-
UNF Nº10 - 32	3500-HIT8	13,28	3534-10GHIP	106,37	-	-	3534-10GMIT	117,08	-	-	-	-	-	-	-	-
UNF Nº12 - 28	3500-HIT8	13,28	3534-12GHIP	106,37	-	-	3534-12GMIT	117,07	-	-	-	-	-	-	-	-
UNF 1/4 - 28	3500-HIT9	13,28	3534-1/4HIP	72,30	-	-	3534-1/4MIT	117,08	-	-	-	-	-	-	-	-
UNF 5/16 - 24	3500-HIT11	15,23	3534-5/16HIP	72,36	-	-	3534-5/16MIT	117,08	-	-	-	-	-	-	-	-
UNF 3/8 - 24	3500-HIT13	15,23	3534-3/8HIP	84,01	-	-	3534-3/8MIT	127,25	-	-	-	-	-	-	-	-
UNF 7/16 - 20	3500-HIT14	19,09	3534-7/16HIP	84,01	-	-	3534-7/16MIT	127,25	-	-	-	-	-	-	-	-
UNF 1/2 - 20	3500-HIT15	19,09	3534-1/2HIP	97,14	-	-	3534-1/2MIT	135,75	-	-	-	-	-	-	-	-
UNF 9/16 - 18	3500-HIT16	22,96	-	-	-	-	-	-	-	-	-	3534-9/16HIP	87,79	-	-	
UNF 5/8 - 8	3500-HIT18	25,37	-	-	-	-	-	-	-	-	-	3534-5/8HIP	92,23	-	-	
UNF 3/4 - 16	3500-HIT21	25,37	-	-	-	-	-	-	-	-	-	3534-3/4HIP	103,76	-	-	
UNF 7/8 - 14	3500-HIT22	31,89	-	-	-	-	-	-	-	-	-	3534-7/8HIP	111,74	-	-	
UNF 1-12	3500-HIT23	31,89	-	-	-	-	-	-	-	-	-	3534-1HIP	127,68	-	-	
UNS 1-14	3500-HIT23	31,89	-	-	-	-	-	-	-	-	-	3535-1HIP	127,68	-	-	
UNF 1.1/8 - 12	3500-HIT25	57,26	-	-	3534-1.1/8HIM	38,34	-	-	3534-1.1/8HIP	478,82	-	-	-	-	-	
UNF 1.1/4 - 12	3500-HIT26	90,15	-	-	3534-1.1/4HIM	38,34	-	-	3534-1.1/4HIP	558,62	-	-	-	-	-	
UNF 1.3/8 - 12	3500-HIT27	90,30	-	-	3534-1.3/8HIM	44,73	-	-	3534-1.3/8HIP	638,43	-	-	-	-	-	
UNF 1.1/2 - 12	3500-HIT28	90,30	-	-	3534-1.1/2HIM	44,73	-	-	3534-1.1/2HIP	718,22	-	-	-	-	-	



## FERRAMENTAS DE INSTALAÇÃO

BSW



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BSW 1/8 - 40	3500-HIT4	13,28
BSW 3/16 - 24	3500-HIT7	13,28
BSW 1/4 - 20	3500-HIT9	13,28
BSW 5/16 - 18	3500-HIT10	15,23
BSW 3/8 - 16	3500-HIT11	15,23
BSW 7/16 - 14	3500-HIT14	19,09
BSW 1/2 - 12	3500-HIT15	19,09
BSW 9/16 - 12	3500-HIT16	22,96
BSW 5/8 - 11	3500-HIT18	25,37
BSW 3/4 - 10	3500-HIT20	25,37
BSW 7/8 - 9	3500-HIT22	31,89
BSW 1 - 8	3500-HIT23	31,89

BSP  
(GAS)

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BSP 1/8 - 28	3500-HIT14	19,09	3546-1/8HIM	19,17
BSP 1/4 - 19	3500-HIT16	22,96	3546-1/4HIM	19,17
BSP 3/8 - 19	3500-HIT20	25,37	3546-3/8HIM	22,37
BSP 1/2 - 14	3500-HIT23	31,89	3546-1/2HIM	25,58
BSP 5/8 - 14	3500-HIT23	31,89	3546-5/8HIM	31,94
BSP 3/4 - 14	3500-HIT24	57,26	3546-3/4HIM	31,94
BSP 7/8 - 14	3500-HIT27	90,30	3546-7/8HIM	44,73
BSP 1 - 11	3500-HIT27	90,30	3546-1HIM	44,73

BSF



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BSF 3/16 - 32	3500-HIT8	13,28
BSF 1/4 - 26	3500-HIT9	13,28
BSF 5/16 - 22	3500-HIT11	15,23
BSF 3/8 - 20	3500-HIT13	15,23
BSF 7/16 - 18	3500-HIT14	19,09
BSF 1/2 - 16	3500-HIT15	19,09
BSF 9/16 - 16	3500-HIT16	22,96
BSF 5/8 - 14	3500-HIT18	25,37
BSF 3/4 - 12	3500-HIT20	25,37
BSF 7/8 - 11	3500-HIT22	31,89
BSF 1 - 10	3500-HIT23	31,89

NPT





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NPT 1/8 - 27	3500-HIT13	15,23
NPT 1/4 - 18	3500-HIT16	22,96
NPT 3/8 - 18	3500-HIT18	25,37
NPT 1/2 - 14	3500-HIT22	31,89
NPT 3/4 - 14	3500-HIT24	57,26
NPT 1 - 11.1/2	3500-HIT27	90,30



**FERRAMENTAS DE INSTALAÇÃO**

UNx8








8-UN

BSB


FREE

FREE



		€		€
UN 1.1/8 - 8	<b>3500-HIT24</b>	<b>57,26</b>	<b>3570-1.1/8HIM</b>	<b>74,59</b>
UN 1.1/4 - 8	<b>3500-HIT25</b>	<b>57,26</b>	<b>3570-1.1/4HIM</b>	<b>74,59</b>
UN 1.3/8 - 8	<b>3500-HIT26</b>	<b>90,15</b>	<b>3570-1.3/8HIM</b>	<b>86,56</b>
UN 1.1/2 - 8	<b>3500-HIT27</b>	<b>90,30</b>	<b>3570-1.1/2HIM</b>	<b>86,56</b>
UN 1.5/8 - 8	<b>3500-HIT27</b>	<b>90,30</b>	<b>3570-1.5/8HIM</b>	<b>89,53</b>
UN 1.3/4 - 8	<b>3500-HIT28</b>	<b>90,30</b>	<b>3570-1.3/4HIM</b>	<b>95,50</b>
UN 1.7/8 - 8	<b>3500-HIT30</b>	<b>112,28</b>	<b>3570-1.7/8HIM</b>	<b>110,42</b>
UN 2 - 8	<b>3500-HIT30</b>	<b>112,28</b>	<b>3570-2HIM</b>	<b>110,42</b>


BSB



BSB

FREE

		€
BSB 1/4 - 26	<b>3500-HIT9</b>	<b>13,28</b>
BSB 5/16 - 26	<b>3500-HIT11</b>	<b>15,23</b>
BSB 3/8 - 26	<b>3500-HIT13</b>	<b>15,23</b>
BSB 7/16 - 26	<b>3500-HIT14</b>	<b>19,09</b>
BSB 1/2 - 26	<b>3500-HIT15</b>	<b>19,09</b>



BA



BA

FREE




		€
BA 0	<b>3500-HIT9</b>	<b>13,28</b>
BA 2	<b>3500-HIT7</b>	<b>13,28</b>
BA 4	<b>3500-HIT5</b>	<b>13,28</b>
BA 6	<b>3500-HIT3</b>	<b>13,28</b>

MF





FREE




		€
10x1.00	<b>3500-HIT13</b>	<b>15,23</b>
12x1.25	<b>3500-HIT15</b>	<b>19,09</b>
14x1.25	<b>3500-HIT17</b>	<b>22,96</b>
18x1.50	<b>3500-HIT20</b>	<b>25,37</b>



M14x1,25

M12x1,25

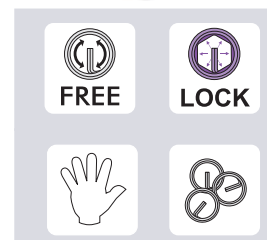
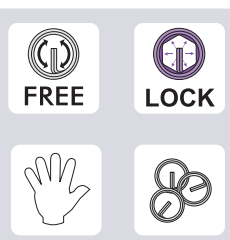





## COLOCADOR, QUEBRADOR, EXTRATOR

UNC

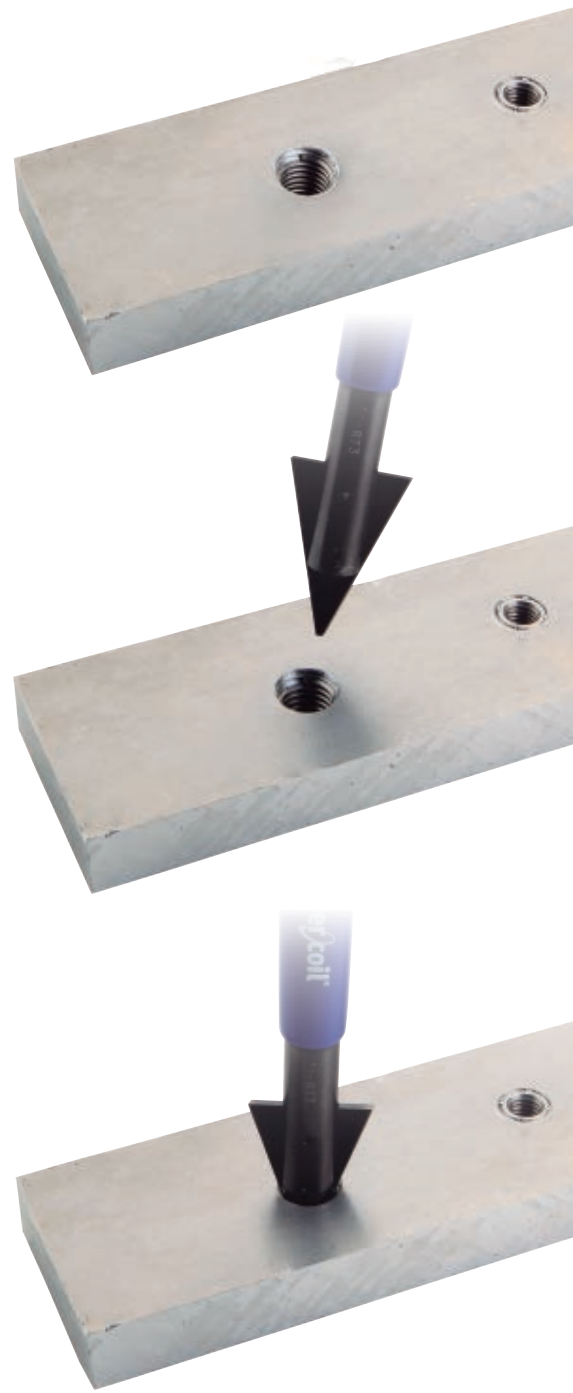
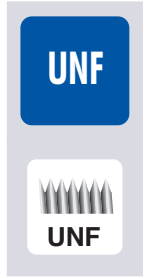
UNC



		€
UNC Nº2 - 56	3500-TB2	5,70
UNC Nº3 - 48	3500-TB3	5,70
UNC Nº4 - 40	3500-TB4	5,70
UNC Nº5 - 40	3500-TB4	5,70
UNC Nº6 - 32	3500-TB5	5,70
UNC Nº8 - 32	3500-TB6	5,70
UNC Nº10 - 24	3500-TB8	5,70
UNC Nº12 - 24	3500-TB8	5,70
UNC 1/4 - 20	3500-TB9	5,70
UNC 5/16 - 18	3500-TB12	6,31
UNC 3/8 - 16	3500-TB12	6,31
UNC 7/16 - 14	3500-TB14	7,64
UNC 1/2 - 13	3500-TB15	7,64
UNC 9/16 - 12	3500-HIT16	22,96
UNC 5/8 - 11	3500-HIT18	25,37
UNC 3/4 - 10	3500-HIT20	25,37
UNC 7/8 - 9	3500-HIT22	31,89
UNC 1 - 8	3500-HIT23	31,89
UNC 1.1/8 - 7	-	-
UNC 1.1/4 - 7	-	-
UNC 1.3/8 - 6	-	-
UNC 1.1/2 - 6	-	-

	€
3500-RT1	26,07
3500-RT1	26,07
3500-RT1	26,07
3500-RT1	26,07
3500-RT1	26,07
3500-RT1	26,07
3500-RT1	26,07
3500-RT2	28,15
3500-RT2	28,15
3500-RT2	28,15
3500-RT2	28,15
3500-RT3	34,45
3500-RT3	34,45
3500-RT3	34,45
3500-RT3	34,45
3500-RT3	34,45
3500-RT3	34,45
3500-RT3	34,45
3500-RT4	63,05
3500-RT4	63,05
3500-RT4	63,05
3500-RT4	63,05

**COLOCADOR, QUEBRADOR, EXTRATOR**



		€
UNF N°3 - 56	<b>3500-TB3</b>	<b>5,70</b>
UNF N°4 - 48	<b>3500-TB4</b>	<b>5,70</b>
UNF N°6 - 40	<b>3500-TB5</b>	<b>5,70</b>
UNF N°8 - 36	<b>3500-TB6</b>	<b>5,70</b>
UNF N°10 - 32	<b>3500-TB8</b>	<b>5,70</b>
UNF N°12 - 28	<b>3500-TB8</b>	<b>5,70</b>
UNF 1/4 - 28	<b>3500-TB9</b>	<b>5,70</b>
UNF 5/16 - 24	<b>3500-TB12</b>	<b>6,31</b>
UNF 3/8 - 24	<b>3500-TB13</b>	<b>6,31</b>
UNF 7/16 - 20	<b>3500-TB14</b>	<b>7,64</b>
UNF 1/2 - 20	<b>3500-TB15</b>	<b>7,64</b>
UNF 9/16 - 18	<b>3500-HIT16</b>	<b>22,96</b>
UNF 5/8 - 18	<b>3500-HIT18</b>	<b>25,37</b>
UNF 3/4 - 16	<b>3500-HIT21</b>	<b>25,37</b>
UNF 7/8 - 14	<b>3500-HIT22</b>	<b>31,89</b>
UNF 1 - 12	<b>3500-HIT23</b>	<b>31,89</b>
UNF 1 - 14	<b>3500-HIT23</b>	<b>31,89</b>
UNF 1.1/8 - 12	-	-
UNF 1.1/4 - 12	-	-
UNF 1.3/8 - 12	-	-
UNF 1.1/2 - 12	-	-

	€
<b>3500-RT1</b>	<b>26,07</b>
<b>3500-RT1</b>	<b>26,07</b>
<b>3500-RT1</b>	<b>26,07</b>
<b>3500-RT1</b>	<b>26,07</b>
<b>3500-RT2</b>	<b>28,15</b>
<b>3500-RT2</b>	<b>28,15</b>
<b>3500-RT2</b>	<b>28,15</b>
<b>3500-RT3</b>	<b>34,45</b>
<b>3500-RT3</b>	<b>34,45</b>
<b>3500-RT3</b>	<b>34,45</b>
<b>3500-RT3</b>	<b>34,45</b>
<b>3500-RT3</b>	<b>34,45</b>
<b>3500-RT3</b>	<b>34,45</b>
<b>3500-RT3</b>	<b>34,45</b>
<b>3500-RT3</b>	<b>34,45</b>
<b>3500-RT3</b>	<b>34,45</b>
<b>3500-RT3</b>	<b>34,45</b>
<b>3500-RT3</b>	<b>34,45</b>
<b>3500-RT3</b>	<b>34,45</b>
<b>3500-RT3</b>	<b>34,45</b>
<b>3500-RT4</b>	<b>63,05</b>
<b>3500-RT4</b>	<b>63,05</b>
<b>3500-RT4</b>	<b>63,05</b>
<b>3500-RT4</b>	<b>63,05</b>

## COLOCADOR, QUEBRADOR, EXTRATOR

BSW

BSW



BSF

BSF



€

€

BSW 1/8 - 40	3500-TB4	5,70	3500-RT1	26,07
BSW 3/16 - 24	3500-TB8	5,70	3500-RT2	28,15
BSW 1/4 - 20	3500-TB9	5,70	3500-RT2	28,15
BSW 5/16 - 18	3500-TB11	6,31	3500-RT2	28,15
BSW 3/8 - 16	3500-TB12	6,31	3500-RT3	34,45
BSW 7/16 - 14	3500-TB14	7,64	3500-RT3	34,45
BSW 1/2 - 12	3500-TB15	7,64	3500-RT3	34,45
BSW 9/16 - 12	3500-HIT16	22,96	3500-RT3	34,45
BSW 5/8 - 11	3500-HIT18	25,37	3500-RT3	34,45
BSW 3/4 - 10	3500-HIT20	25,37	3500-RT3	34,45
BSW 7/8 - 9	3500-HIT22	31,89	3500-RT3	34,45
BSW 1 - 8	3500-HIT23	31,89	3500-RT3	34,45



€

€

BSF 3/16 - 32	3500-TB6	5,70	3500-RT2	28,15
BSF 1/4 - 26	3500-TB9	5,70	3500-RT2	28,15
BSF 5/16 - 22	3500-TB11	6,31	3500-RT2	28,15
BSF 3/8 - 20	3500-TB12	6,31	3500-RT3	34,45
BSF 7/16 - 18	3500-TB14	7,64	3500-RT3	34,45
BSF 1/2 - 16	3500-TB15	7,64	3500-RT3	34,45
BSF 9/16 - 16	3500-HIT16	22,96	3500-RT3	34,45
BSF 5/8 - 14	3500-HIT18	25,37	3500-RT3	34,45
BSF 3/4 - 12	3500-HIT20	25,37	3500-RT3	34,45
BSF 7/8 - 11	3500-HIT22	31,89	3500-RT3	34,45
BSF 1 - 10	3500-HIT23	31,89	3500-RT3	34,45

BA

BA



BSB

BSB



€

€

BA 0	3500-TB11	6,31	3500-RT2	28,15
BA 2	3500-TB8	5,70	3500-RT2	28,15
BA 4	3500-TB5	5,70	3500-RT1	26,07
BA 6	3500-TB3	5,70	3500-RT1	26,07



€

€

BSB 1/4 - 26	3500-TB9	5,70	3500-RT2	28,15
BSB 5/16 - 26	3500-TB12	6,31	3500-RT2	28,15
BSB 3/8 - 26	3500-TB13	6,31	3500-RT3	34,45
BSB 7/16 - 26	3500-TB14	7,64	3500-RT3	34,45
BSB 1/2 - 26	3500-TB15	7,64	3500-RT3	34,45

**BROCA DE METAL DURO PARA PERFURAÇÃO DE MACHOS E PARAFUSOS QUEBRADOS**

Ref. BC85

**70 HRC**

MD

TOL D1  
h7

TOL D2  
h6

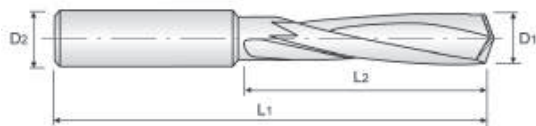


TiAIN

**HARDOX 600**

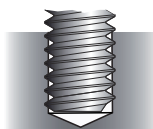
ALTA PRODUÇÃO

Broca especial para HARDOX 600

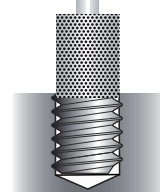


**FURAÇÃO DE PARAFUSOS E MACHOS QUEBRADOS**

Parafuso quebrado



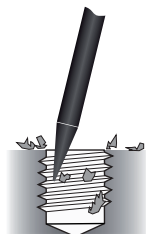
PASSO 1  
Limpar a superfície



PASSO 2  
Furar com a broca BC85

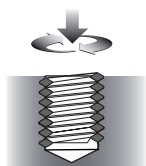



PASSO 3  
Remover os restos



PASSO 4 (Opcional)  
Reparar a rosca com insertos

**powercoil**  
by CELESA



BC85						
	D1 mm	D2 mm	L1 mm	L2 mm		
BC850300	3,0	3	46	16		49,79
BC850330	3,3	4	48	18	M4	57,14
BC850340	3,4	4	50	20		57,14
BC850350	3,5	4	50	20		57,14
BC850400	4,0	4	52	22		58,30
BC850420	4,2	6	65	25	M5	82,78
BC850430	4,3	6	68	28		82,78
BC850440	4,4	6	68	28		82,78
BC850450	4,5	6	68	28		82,78
BC850500	5,0	6	72	32	M6	82,78
BC850510	5,1	6	72	32		82,78
BC850520	5,2	6	72	32		82,78
BC850550	5,5	6	75	35		82,78
BC850600	6,0	6	75	35		82,78
BC850650	6,5	8	80	40		102,69
BC850680	6,8	8	85	45	M8	102,69
BC850690	6,9	8	85	45		102,69
BC850700	7,0	8	85	45		102,69
BC850750	7,5	8	85	45		102,69
BC850800	8,0	8	98	50		102,69
BC850850	8,5	10	98	50	M10	156,94
BC850860	8,6	10	105	57		156,94
BC850880	8,8	10	105	57		156,94
BC850900	9,0	10	105	57		156,94
BC850950	9,5	10	105	57		156,94
BC851000	10,0	10	111	63		156,94
BC851020	10,2	12	111	63	M12	203,26
BC851030	10,3	12	111	63		238,49
BC851050	10,5	12	111	63		238,49
BC851080	10,8	12	119	71		238,49
BC851100	11,0	12	119	71		238,49
BC851150	11,5	12	119	71		238,49
BC851200	12,0	12	119	71	M14	238,49
BC851400	14,0	14	125	77	M16	271,01

HRC	50-55		55-60		60-70	
	VC	14-22 m/min	VC	10-16 m/min	VC	8-13 m/min
Ø	(R.P.M.)	(mm/min)	(R.P.M.)	(mm/min)	(R.P.M.)	(mm/min)
3	1900	0.04	1330	0.04	1000	0.04
4	1430	0.04	1000	0.04	750	0.04
5	1150	0.04	800	0.04	600	0.04
6	960	0.04	670	0.04	500	0.04
8	720	0.04	500	0.04	370	0.04
10	570	0.04	400	0.04	300	0.04
12	480	0.04	330	0.04	250	0.04
14	438	0.04	282	0.04	210	0.04

## BROCAS HELICOIDAIS COM CABO CILINDRICO

HSSCo  
5%DIN  
338

135°

30°  
"N"

GOLD

120  
Kg/mm<sup>2</sup>

	Ø mm.	Ø "	L1 x L2 mm	€
3520-0210	2.10	-	49x24	2,80
3520-0230	2.30	3/32	53x27	2,80
3520-0240	2.40	-	57x30	2,80
3520-0260	2.60	-	57x30	2,69
3520-0270	2.70	-	61x33	2,69
3520-0290	2.90	-	61x33	2,69
3520-0300	3.00	-	61x33	2,14
3520-0320	3.20	1/8	65x36	2,58
3520-0340	3.40	-	70x39	2,69
3520-0370	3.70	-	70x39	3,24
3520-0380	3.80	-	75x43	3,24
3520-0420	4.20	-	75x43	3,06
3520-0430	4.30	-	80x47	3,24
3520-0440	4.40	11/64	80x47	3,24
3520-0480	4.80	-	86x52	3,60
3520-0490	4.90	-	86x52	3,60
3520-0500	5.00	-	86x52	3,28
3520-0510	5.10	-	86x52	3,94
3520-0520	5.20	13/64	86x52	3,94
3520-0550	5.50	7/32	93x57	4,16
3520-0570	5.70	15/64	93x57	4,92
3520-0620	6.20	-	101x63	5,48
3520-0630	6.30	1/4	101x63	5,48
3520-0660	6.60	-	101x63	6,58
3520-0670	6.70	17/64	101x63	6,58
3520-0690	6.90	-	109x69	6,58
3520-0730	7.30	9/32	109x69	8,38
3520-0760	7.60	-	117x75	10,08
3520-0800	8.00	5/16	117x75	7,25
3520-0820	8.20	-	117x75	9,67
3520-0830	8.30	21/64	117x75	9,67

	Ø mm.	Ø "	L1 x L2 mm	€
3520-0840	8.40	-	117x75	9,67
3520-0880	8.80	-	125x81	12,29
3520-0930	9.30	23/64	125x81	13,61
3520-0940	9.40	3/8	125x81	13,57
3520-0980	9.80	-	133x87	15,95
3520-0990	9.90	25/64	133x87	15,95
3520-1000	10.00	-	133x87	10,96
3520-1010	10.10	-	133x87	18,34
3520-1030	10.30	13/32	133x87	18,38
3520-1040	10.40	-	133x87	18,34
3520-1080	10.80	-	142x94	21,33
3520-1110	11.10	7/16	142x94	24,33
3520-1130	11.30	-	142x94	24,33
3520-1140	11.40	-	142x94	24,33
3520-1150	11.50	29/64	142x94	20,48
3520-1160	11.60	-	142x94	25,14
3520-1230	12.30	-	151x101	29,18
3520-1240	12.40	31/64	151x101	29,18
3520-1250	12.50	-	151x101	26,65
3520-1270	12.70	1/2	151x101	30,37
3520-1280	12.80	-	151x101	30,37
3520-1300	13.00	33/64	151x101	27,24
3520-1325	13.25	-	160x108	37,71
3520-1350	13.50	-	160x108	30,03
3520-1375	13.75	-	160x108	37,71
3520-1425	14.25	9/16	169x114	49,55
3520-1450	14.50	-	169x114	42,12
3520-1475	14.75	-	169x114	49,55
3520-1500	15.00	19/32	169x114	42,75
3520-1525	15.25	-	178x120	68,36



**BROCAS HELICOIDAIS COM CABO REDUZIDO**

**BROCAS HELICOIDAIS COM CABO CÔNICO**

HSSCo  
5%

DIN  
338



12,70



135°



**GOLD**



120  
Kg/mm²

	Ø mm.	Ø "	L1 x L2 mm	€
3520-1550	15.50	39/64	178x120	63,88
3520-1650	16.50	-	184x125	75,04
3520-1675	16.75	-	184x125	100,58
3520-1700	17.00	-	184x125	75,53
3520-1750	17.50	-	191x130	83,13
3520-1850	18.50	23/32	198x135	101,65
3520-1875	18.75	-	198x135	127,45
3520-1900	19.00	3/4	198x135	100,77
3520-1950	19.50	49/64	205x140	111,65
3520-2000	20.00	-	205x240	119,63
3520-2050	20.50	13/16	205x140	142,41

HSS

DIN  
345



118°



**OX**



70  
Kg/mm²

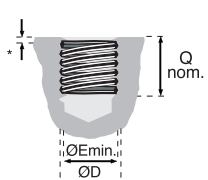
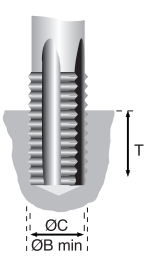
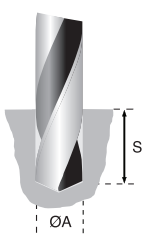
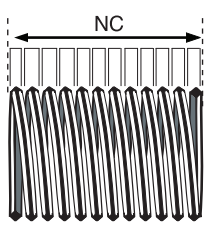
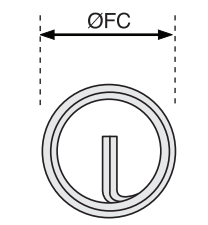
	Ø mm.	Ø "	L1 x L2 mm	€
3520-2075	20.75	-	243x145	77,14
3520-2100	21.00	-	243x145	73,72
3520-2150	21.50	27/32	248x150	73,72
3520-2250	22.50	57/64	253x155	80,82
3520-2275	22.75	-	253x155	93,17
3520-2300	23.00	29/32	253x155	80,64
3520-2325	23.25	-	276x155	102,72
3520-2350	23.50	-	276x155	89,49
3520-2450	24.50	31/32	281x160	97,46
3520-2500	25.00	-	281x160	97,06
3520-2575	25.75	1.1/64	286x165	121,91
3520-2600	26.00	-	286x165	105,62
3520-2625	26.25	-	286x165	132,02
3520-2650	26.50	-	286x165	114,33
3520-2700	27.00	1.1/16	291x170	114,44
3520-2750	27.50	1.5/64	291x170	122,42
3520-2800	28.00	1.3/32	291x170	122,79
3520-2850	28.50	1.1/8	296x175	131,24
3520-2950	29.50	1.5/32	296x175	144,50
3520-3000	30.00	1.11/64	296x175	144,62
3520-3050	30.50	1.3/16	301x180	161,34
3520-3100	31.00	1.7/32	301x180	161,48
3520-3200	32.00	1.1/4	334x185	170,12
3520-3250	32.50	1.9/32	334x185	195,41
3520-3300	33.00	1.19/64	334x185	194,23
3520-3325	33.25	-	334x185	239,58
3520-3350	33.50	1.5/16	334x185	211,90
3520-3375	33.75	-	339x190	240,86
3520-3400	34.00	1.21/64	339x190	211,24
3520-3500	35.00	1.3/8	339x190	231,86
3520-3550	35.50	1.13/32	339x190	247,52
3520-3600	36.00	-	344x195	248,14
3520-3650	36.50	-	344x195	262,44
3520-3700	37.00	1.29/64	344x195	262,07
3520-3800	38.00	1.1/2	349x200	275,26
3520-3850	38.50	-	349x200	292,90
3520-3900	39.00	1.17/32	349x200	293,16
3520-3950	39.50	1.35/64	349x200	310,46
3520-3975	39.75	-	349x200	344,90
3520-4000	40.00	1.9/16	349x200	310,07
3520-4100	41.00	1.5/8	354x205	325,43
3520-4250	42.50	1.43/64	354x205	362,76
3520-4300	43.00	1.11/16	359x210	362,80
3520-4450	44.50	1.3/8	359x210	397,50
3520-4600	46.00	-	364x215	411,61
3520-4750	47.50	1.7/8	364x215	444,64
3520-4850	48.50	1.29/32	369x220	462,28
3520-5100	51.00	2	412x225	562,76





**INFORMAÇÃO TÉCNICA PARA INSERTOS LIVRES**

M/MF	
<b>A</b>	Ø de perfuração ou interior da rosca prévia.
<b>B</b>	Ø maior da rosca prévia (Mínimo).
<b>C</b>	Ø dos flancos da rosca prévia.
<b>D</b>	Ø dos flancos do inserto instalado.
<b>E</b>	Ø interior do inserto instalado (Mínimo).
<b>FC</b>	Ø exterior do inserto em estado livre.
<b>S</b>	Profundidade de perfuração (Mínima).
<b>T</b>	Profundidade "útil" da roscagem (Mínima).
<b>Q</b>	Rosca "Útil" do inserto.
<b>NC</b>	Número de filetes ou fios.



DIMENSÃO M/MF	Broca		A max/min mm	FC min/max mm	NC max/min				
	mm	"			1.0D	1.5D	2.0D	2.5D	3.0D
M2 X 0.40	2.10	#45	2.177/2.087	2.49/2.70	3.30/3.00	5.70/5.20	8.10/7.40	10.50/9.60	13.00/11.80
M2.2 X 0.45	2.30	3/32	2.397/2.297	2.76/3.00	3.20/2.90	5.50/5.00	7.90/7.10	10.30/9.30	12.60/11.40
M2.5 X 0.45	2.60	#37	2.697/2.597	3.05/3.70	3.80/3.10	6.50/5.20	9.20/7.40	11.90/9.50	14.60/11.70
M3 X 0.50	3.20	1/8	3.220/3.108	3.61/4.35	4.30/3.40	7.20/5.80	10.10/8.20	13.10/10.50	16.00/12.90
M3.5 X 0.60	3.70	#27	3.755/3.630	4.24/4.95	4.10/3.40	7.00/5.80	9.80/8.20	12.60/10.50	15.50/12.90
M4 x 0.70	4.20	-	4.292/4.152	4.86/5.60	4.00/3.40	6.80/5.70	9.60/8.10	12.30/10.50	15.10/12.80
M5 X 0.80	5.20	13/64	5.333/5.173	5.98/6.80	4.50/3.90	7.60/6.50	10.60/9.20	13.70/11.80	16.70/14.40
M6 X 1.00	6.30	1/4	6.406/6.216	7.23/7.95	4.30/3.80	7.20/6.40	10.10/9.10	13.10/11.70	16.00/14.30
M7 X 1.00	7.30	9/32	7.406/7.216	8.22/9.20	5.30/4.60	8.70/7.70	12.10/10.70	15.60/13.70	19.00/16.70
M8 X 1.25	8.30	21/64	8.483/8.271	9.53/10.35	4.70/4.20	7.80/7.10	10.90/9.90	14.10/12.80	17.20/15.60
M8 X 1.00	8.30	21/64	8.406/8.216	9.39/10.25	6.10/5.60	10.00/9.10	13.80/12.50	17.70/16.00	21.50/19.50
M9 X 1.25	9.40	3/8	9.483/9.271	10.52/11.16	5.50/5.10	9.00/8.40	12.50/11.70	16.10/15.00	19.60/18.30
M9 x 1.00	9.30	23/64	9.406/9.216	10.40/11.23	7.10/6.50	11.50/10.50	15.80/14.50	20.20/18.50	24.50/22.50
M10 X 1.50	10.40	-	10.561/10.325	11.83/12.50	4.90/4.60	8.20/7.70	11.50/10.80	14.70/13.80	18.00/16.90
M10 X 1.25	10.30	13/32	10.483/10.271	11.74/12.65	6.10/5.60	10.00/9.20	13.80/12.70	17.70/16.30	21.50/19.80
M10 x 1.00	10.30	13/32	10.406/10.216	11.41/12.50	8.10/7.30	12.90/11.70	17.80/16.10	22.60/20.50	27.50/24.90
M11 X 1.50	11.40	-	11.561/11.325	12.82/13.59	5.60/5.20	9.20/8.60	12.80/12.00	16.40/15.40	20.00/18.70
M11 X 1.25	11.30	-	11.483/11.271	12.75/13.76	6.90/6.40	11.20/10.30	15.40/14.20	19.70/18.10	23.90/22.00
M11 X 1.00	11.30	-	11.406/11.216	12.42/13.41	9.10/8.40	14.40/13.30	19.80/18.20	25.10/23.10	30.40/28.00
M12 X 1.75	12.50	-	12.644/12.379	14.13/15.00	5.10/4.80	8.50/7.90	11.90/11.10	15.20/14.20	18.60/17.30
M12 X 1.50	12.40	31/64	12.561/12.325	14.09/15.20	6.10/5.60	10.00/9.20	13.80/12.70	17.70/16.20	21.50/19.80
M12 X 1.25	12.30	-	12.483/12.271	13.76/15.00	7.70/7.00	12.40/11.20	17.00/15.50	21.60/19.70	26.30/23.90
M12 X 1.00	12.30	-	12.406/12.216	13.43/14.49	10.10/9.30	15.90/14.70	21.70/20.00	27.60/25.40	33.40/30.80
M13 X 1.75	13.50	-	13.644/13.379	15.12/16.04	5.70/5.30	9.40/8.70	13.00/12.20	16.70/15.60	20.30/19.00
M13 X 1.50	13.25	-	13.561/13.325	15.10/16.29	6.80/6.20	11.00/10.10	15.20/13.90	19.30/17.80	23.50/21.60
M13 X 1.25	13.25	-	13.483/13.271	14.77/15.94	8.50/7.80	13.50/12.50	18.60/17.10	23.60/21.70	28.70/26.40
M14 X 2.00	14.50	-	14.733/14.433	16.43/17.35	5.30/5.00	8.70/8.20	12.10/11.40	15.60/14.60	19.00/17.90
M14 X 1.50	14.50	-	14.561/14.325	16.11/17.25	7.50/6.90	12.00/11.10	16.50/15.30	21.00/19.40	25.50/23.60
M14 X 1.25	14.25	9/16	14.483/14.271	15.78/17.03	9.30/8.60	14.70/13.60	20.20/18.60	25.60/23.60	31.00/28.60
M14 X 1.00	14.25	9/16	14.406/14.216	15.45/16.68	12.10/11.10	18.90/17.40	25.70/23.70	32.50/30.00	39.30/36.20
M15 X 2.00	15.50	39/64	15.733/15.433	17.42/18.48	5.80/5.40	9.50/8.80	13.10/12.30	16.80/15.70	20.50/19.20
M15 X 1.50	15.25	-	15.561/15.325	17.12/18.47	8.10/7.50	12.90/11.90	17.80/16.40	22.60/20.80	27.50/25.30
M16 X 2.00	16.50	-	16.733/16.433	18.41/19.60	6.30/5.90	10.20/9.50	14.20/13.20	18.10/16.90	22.00/20.50
M16 X 1.50	16.50	-	16.561/16.325	18.13/19.60	8.80/8.00	13.90/12.80	19.10/17.50	24.30/22.30	29.40/27.00
M18 X 2.50	19.00	3/4	18.896/18.541	21.04/22.00	5.50/5.20	9.00/8.60	12.50/11.90	16.10/15.30	19.60/18.60
M18 X 2.00	18.50	23/32	18.733/18.433	20.80/21.85	7.10/6.70	11.50/10.90	15.80/15.00	20.20/19.10	24.50/23.20
M18 X 1.50	18.50	23/32	18.561/18.325	20.15/21.75	10.10/9.30	15.90/14.60	21.70/20.00	27.60/25.40	33.40/30.70
M20 X 2.50	20.75	-	20.896/20.541	23.02/24.40	6.30/5.90	10.20/9.60	14.20/13.30	18.10/16.90	22.00/20.60
M20 X 2.00	20.50	13/16	20.733/20.433	22.82/24.05	8.10/7.70	12.90/12.20	17.80/16.80	22.60/21.40	27.50/25.90
M20 X 1.50	20.50	13/16	20.561/20.325	22.17/24.00	11.40/10.50	17.90/16.40	24.40/22.40	30.90/28.30	37.40/34.30
M22 X 2.50	22.75	-	22.896/22.541	25.00/26.90	7.10/6.50	11.40/10.50	15.80/14.50	20.10/18.50	24.50/22.50
M22 X 2.00	22.50	57/64	22.733/22.433	24.84/26.50	9.10/8.50	14.40/13.40	19.80/18.40	25.10/23.40	30.40/28.40
M22 X 1.50	22.50	57/64	22.561/22.325	24.19/26.45	12.70/11.60	19.90/18.10	27.00/24.60	34.20/31.10	41.30/37.60
M24 X 3.00	25.00	-	25.050/24.650	27.62/29.00	6.30/5.90	10.20/9.70	14.20/13.40	18.10/17.10	22.00/20.90
M24 X 2.00	24.50	31/32	24.733/24.433	26.86/29.10	10.10/9.20	15.90/14.60	21.70/19.90	27.60/25.30	33.40/30.60
M24 X 1.50	24.50	31/32	24.561/24.325	26.21/28.28	14.00/12.90	21.80/20.10	29.70/27.30	37.50/34.50	45.30/41.70
M26 X 1.50	26.50	-	26.561/26.325	28.23/30.46	15.40/14.20	23.80/22.00	32.30/29.80	40.80/37.60	49.20/45.40
M27 X 3.00	28.00	1.3/32	28.050/27.650	30.59/32.40	7.30/6.80	11.70/11.00	16.20/15.20	20.60/19.30	25.10/23.50
M27 X 2.00	27.50	1.5/64	27.733/27.433	29.89/32.30	11.60/10.60	18.10/16.70	24.70/22.70	31.30/28.80	37.90/34.80
M30 X 3.50	31.00	1.7/32	31.208/30.758	34.20/35.81	6.90/6.50	11.10/10.50	15.30/14.50	19.50/18.60	23.80/22.60
M30 X 3.00	31.00	1.7/32	31.050/30.650	34.24/36.10	8.10/7.60	12.90/12.20	17.80/16.80	22.60/21.30	27.50/25.90
M30 X 2.00	30.50	1.3/16	30.733/30.433	32.92/35.70	13.00/12.00	20.40/18.70	27.70/25.40	35.00/32.10	42.30/38.80
M33 X 3.50	34.00	1.21/64	34.208/33.758	37.17/38.80	7.70/7.40	12.40/11.80	17.00/16.20	21.70/20.70	26.40/25.10
M33 X 3.00	33.50	1.5/16	34.050/33.650	37.27/39.50	9.10/8.50	14.40/13.50	19.80/18.50	25.10/23.60	30.40/28.60
M33 X 2.00	33.50	1.5/16	33.733/33.433	35.95/39.20	14.50/13.30	22.60/20.60	30.60/28.00	38.70/35.30	46.80/42.70
M36 X 4.00	37.00	1.29/64	37.341/36.866	40.78/42.67	7.30/6.90	11.70/11.20	16.20/15.40	20.60/19.60	25.10/23.80
M36 X 3.00	37.00	1.29/64	37.050/36.650	40.30/42.70	10.10/9.50	15.90/14.90	21.70/20.40	27.60/25.90	33.40/31.40
M39 X 4.00	40.00	1.9/16	40.341/39.866	43.75/45.75	8.00/7.70	12.90/12.20	17.70/16.80	22.50/21.40	27.30/26.00
M42 X 4.50	43.00	1.11/16	43.505/42.975	47.37/49.00	7.60/7.30	12.20/11.80	16.80/16.20	21.50/20.70	26.10/25.10
M42 X 3.00	42.50	1.43/64	43.050/42.650	46.36/49.00	12.10/11.40	18.90/17.80	25.70/24.20	32.50/30.60	39.30/37.10

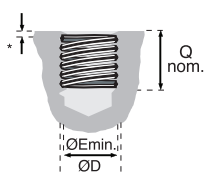
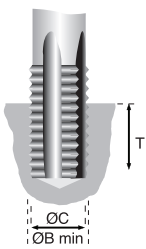
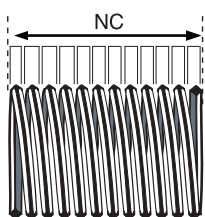
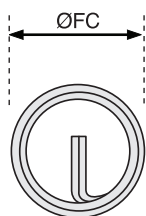


**INFORMAÇÃO TÉCNICA PARA INSERTOS LIVRES**

B mm	C (5H) mm	D (4H) mm	C (6H) mm	D (5H) mm	E mm	S					T					Q				
						1.0D	1.5D	2.0D	2.5D	3.0D	1.0D	1.5D	2.0D	2.5D	3.0D	1.0D	1.5D	2.0D	2.5D	3.0D
2.520	2.296/2.260	1.796/1.740	2.311/2.260	1.811/1.740	1.567	3.80	4.80	5.80	6.80	7.80	3.40	4.40	5.40	6.40	7.40	2.00	3.00	4.00	5.00	6.00
2.785	2.532/2.492	1.968/1.908	2.547/2.492	1.983/1.908	1.713	4.23	5.33	6.43	7.53	8.63	3.78	4.88	5.98	7.08	8.18	2.20	3.30	4.40	5.50	6.60
3.085	2.832/2.792	2.268/2.208	2.847/2.792	2.283/2.208	2.013	4.53	5.78	7.03	8.28	9.53	4.08	5.33	6.58	7.83	9.08	2.50	3.75	5.00	6.25	7.50
3.650	3.367/3.325	2.738/2.675	3.384/3.325	2.755/2.675	2.459	5.25	6.75	8.25	9.75	11.25	4.75	6.25	7.75	9.25	10.75	3.00	4.50	6.00	7.50	9.00
4.279	3.940/3.890	3.181/3.110	3.959/3.890	3.200/3.110	2.850	6.20	7.95	9.70	11.45	13.20	5.60	7.35	9.10	10.85	12.60	3.50	5.25	7.00	8.75	10.50
4.909	4.509/4.455	3.620/3.545	4.529/4.455	3.640/3.545	3.242	7.15	9.15	11.15	13.15	15.15	6.45	8.45	10.45	12.45	14.45	4.00	6.00	8.00	10.00	12.00
6.039	5.577/5.520	4.560/4.480	5.597/5.520	4.580/4.480	4.134	8.60	11.10	13.60	16.10	18.60	7.80	10.30	12.80	15.30	17.80	5.00	7.50	10.00	12.50	15.00
7.299	6.719/6.650	5.445/5.350	6.742/6.650	5.468/5.350	4.917	10.50	13.50	16.50	19.50	22.50	9.50	12.50	15.50	18.50	21.50	6.00	9.00	12.00	15.00	18.00
8.299	7.719/7.650	6.445/6.350	7.742/7.650	6.468/6.350	5.917	11.50	15.00	18.50	22.00	25.50	10.50	14.00	17.50	21.00	24.50	7.00	10.50	14.00	17.50	21.00
9.624	8.886/8.812	7.288/7.188	8.912/8.812	7.313/7.188	6.647	13.63	17.63	21.63	25.63	29.63	12.38	16.38	20.38	24.38	28.38	8.00	12.00	16.00	20.00	24.00
9.299	8.719/8.650	7.445/7.350	8.742/8.650	7.468/7.350	6.917	12.50	16.50	20.50	24.50	28.50	11.50	15.50	19.50	23.50	27.50	8.00	12.00	16.00	20.00	24.00
10.624	9.886/9.812	8.288/8.188	9.912/9.812	8.313/8.188	7.647	14.63	19.13	23.63	28.13	32.63	13.38	17.88	22.38	26.88	31.38	9.00	13.50	18.00	22.50	27.00
10.299	9.719/9.650	8.445/8.350	9.742/9.650	8.468/8.350	7.917	13.50	18.00	22.50	27.00	31.50	12.50	17.00	21.50	26.00	30.50	9.00	13.50	18.00	22.50	27.00
11.949	11.061/10.974	9.138/9.026	11.089/10.974	9.166/9.026	8.376	16.75	21.75	26.75	31.75	36.75	15.25	20.25	25.25	30.25	35.25	10.00	15.00	20.00	25.00	30.00
11.624	10.886/10.812	9.288/9.188	10.912/10.812	9.313/9.188	8.647	15.63	20.63	25.63	30.63	35.63	14.38	19.38	24.38	29.38	34.38	10.00	15.00	20.00	25.00	30.00
11.299	10.724/10.650	9.445/9.350	10.742/10.650	9.468/9.350	8.917	14.50	19.50	24.50	29.50	34.50	13.50	18.50	23.50	28.50	33.50	10.00	15.00	20.00	25.00	30.00
12.949	12.061/11.974	10.138/10.026	12.089/11.974	10.166/10.026	9.376	17.75	23.25	28.75	34.25	39.75	16.25	21.75	27.25	32.75	38.25	11.00	16.50	22.00	27.50	33.00
12.624	11.898/11.812	10.300/10.188	11.926/11.812	10.328/10.188	9.647	16.63	22.13	27.63	33.13	38.63	15.38	20.88	26.38	31.88	37.38	11.00	16.50	22.00	27.50	33.00
12.299	11.724/11.650	10.445/10.350	11.742/11.650	10.468/10.350	9.917	15.50	21.00	26.50	32.00	37.50	14.50	20.00	25.50	31.00	36.50	11.00	16.50	22.00	27.50	33.00
14.273	13.236/13.137	10.988/10.863	13.271/13.137	11.023/10.863	10.106	19.88	25.88	31.88	37.88	43.88	18.13	24.13	30.13	36.13	42.13	12.00	18.00	24.00	30.00	36.00
13.949	13.067/12.974	11.144/11.026	13.099/12.974	11.176/11.026	10.376	18.75	24.75	30.75	36.75	42.75	17.25	23.25	29.25	35.25	41.25	12.00	18.00	24.00	30.00	36.00
13.624	12.898/12.812	11.300/11.188	12.926/12.812	11.328/11.188	10.647	17.63	23.63	29.63	35.63	41.63	16.38	22.38	28.38	34.38	40.38	12.00	18.00	24.00	30.00	36.00
13.299	12.724/12.649	11.450/11.350	12.749 /12.649	11.475/11.350	10.917	16.50	22.50	28.50	34.50	40.50	15.50	21.50	27.50	33.50	39.50	12.00	18.00	24.00	30.00	36.00
15.273	14.236/14.137	11.988/11.863	14.271/14.137	12.023/11.863	11.106	20.88	27.38	33.88	40.38	46.88	19.13	25.63	32.13	38.63	45.13	13.00	19.50	26.00	32.50	39.00
14.949	14.067/13.974	12.144/12.026	14.099/13.974	12.176/12.026	11.376	19.75	26.25	32.75	39.25	45.75	18.25	24.75	31.25	37.75	44.25	13.00	19.50	26.00	32.50	39.00
14.624	13.898/13.812	12.300/12.188	13.926/13.812	12.328/12.188	11.647	18.63	25.13	31.63	38.13	44.63	17.38	23.88	30.38	36.88	43.38	13.00	19.50	26.00	32.50	39.00
16.598	15.406/15.299	12.833/12.701	15.444/15.299	12.871/12.701	11.835	23.00	30.00	37.00	44.00	51.00	21.00	28.00	35.00	42.00	49.00	14.00	21.00	28.00	35.00	42.00
15.949	15.067/14.974	13.144/13.026	15.099/14.974	13.176/13.026	11.376	20.75	27.75	34.75	41.75	48.75	19.25	26.25	33.25	40.25	47.25	14.00	21.00	28.00	35.00	42.00
15.624	14.898/14.812	13.300/13.188	14.926/14.812	13.328/13.188	12.674	19.63	26.63	33.63	40.63	47.63	18.38	25.38	32.38	39.38	46.38	14.00	21.00	28.00	35.00	42.00
15.299	14.724/14.649	13.450/13.350	14.749 /14.649	13.475/13.350	12.917	18.50	25.50	32.50	39.50	46.50	17.50	24.50	31.50	38.50	45.50	14.00	21.00	28.00	35.00	42.00
17.598	16.406/16.299	13.833/13.701	16.444/16.299	13.871/13.701	12.835	24.00	31.50	39.00	46.50	54.00	22.00	29.50	37.00	44.50	52.00	15.00	22.50	30.00	37.50	45.00
16.949	16.067/15.974	14.144/14.026	16.099/15.974	14.176/14.026	13.376	21.75	29.25	36.75	44.25	51.75	20.25	27.75	35.25	42.75	50.25	15.00	22.50	30.00	37.50	45.00
18.598	17.406/17.299	14.833/14.701	17.444/17.299	14.871/14.701	13.835	25.00	33.00	41.00	49.00	57.00	23.00	31.00	39.00	47.00	55.00	16.00	24.00	32.00	40.00	48.00
17.949	17.067/16.974	15.144/15.026	17.099/16.974	15.176/15.026	14.376	22.75	30.75	38.75	46.75	54.75	21.25	29.25	37.25	45.25	53.25	16.00	24.00	32.00	40.00	48.00
21.248	19.738/19.624	16.516/16.376	19.778/19.624	16.556/16.376	15.294	29.25	38.25	47.25	56.25	65.25	26.75	35.75	44.75	53.75	62.75	18.00	27.00	36.00	45.00	54.00
20.598	19.406/19.299	16.833/16.701	19.444/19.299	16.871/16.701	15.835	27.00	36.00	45.00	54.00	63.00	25.00	34.00	43.00	52.00	61.00	18.00	27.00	36.00	45.00	54.00
19.949	19.067/18.974	17.144/17.026	19.099/18.974	17.176/17.026	16.376	24.75	33.75	42.75	51.75	60.75	23.25	32.25	41.25	50.25	59.25	18.00	27.00	36.00	45.00	54.00
23.248	21.738/21.624	18.516/18.376	21.778/21.624	18.556/18.376	17.294	31.25	41.25	51.25	61.25	71.25	28.75	38.75	48.75	58.75	68.75	20.00	30.00	40.00	50.00	60.00
22.598	21.406/21.299	18.833/18.701	21.444/21.299	18.871/18.701	17.835	29.00	39.00	49.00	59.00	69.00	27.00	37.00	47.00	57.00	67.00	20.00	30.00	40.00	50.00	60.00
21.949	21.067/20.974	19.144/19.026	21.099/20.974	19.176/19.026	18.376	26.75	36.75	46.75	56.75	66.75	25.25	35.25	45.25	55.25	65.25	20.00	30.00	40.00	50.00	60.00
25.248	23.738/23.624	20.516/20.376	23.778/23.624	20.556/20.376	19.294	33.25	44.25	55.25	66.25	77.25	30.75	41.75	52.75	63.75	74.75	22.00	33.00	44.00	55.00	66.00
24.598	23.406/23.299	20.833/20.701	23.444/23.299	20.871/20.701	19.835	31.00	42.00	53.00	64.00	75.00	29.00	40.00	51.00	62.00	73.00	22.00	33.00	44.00	55.00	66.00
23.949	23.067/22.974	21.144/21.026	23.099/22.974	21.176/21.026	20.376	28.75	39.75	50.75	61.75	72.75	27.25	38.25	49.25	60.25	71.25	22.00	33.00	44.00	55.00	66.00
27.897	26.093/25.948	22.221/22.051	26.135/25.948	22.263/22.051	20.752	37.50	49.50	61.50	73.50	85.50	34.50	46.50	58.50	70.50	82.50	24.00	36.00	48.00	60.00	72.00
26.598	25.414/25.299	22.841/22.701	25.454/25.299	22.881/22.701	21.835	33.00	45.00	57.00	69.00	81.00	31.00	43.00	55.00	67.00	79.00	24.00	36.00	48.00	60.00	72.00
25.949	25.044/24.975	23.121/23.026	25.135/24.975	23.186/23.026	22.376	30.75	42.75	54.75	66.75	78.75	29.25	41.25	53.25	65.25	77.25	24.00	36.00	48.00	60.00	72.00
27.949	27.044/26.975	25.121/25.026	27.135/26.975	25.186/25.026	24.376	32.75	45.75	58.75	71.75	84.75	31.25	44.25	57.25	70.25	83.25	26.00	39.00	52.00	65.00	78.00
30.897	29.093/28.948	25.221/25.051	29.135/28.948	25.263/25.051	23.752	40.50	54.00	67.50	81.00	94.50	37.50	51.00	64.50	78.00	91.50	27.00	40.50	54.00	67.50	81.00
29.598	28.414/28.299	25.841/25.																		


**INFORMAÇÃO TÉCNICA PARA INSERTOS LIVRES**

UNF/UNC	BSF
<b>A</b>	Ø de perfuração ou interior da rosca prévia.
<b>B</b>	Ø maior da rosca prévia (Mínimo).
<b>C</b>	Ø dos flancos da rosca prévia.
<b>D</b>	Ø dos flancos do inserto instalado.
<b>E</b>	Ø interior do inserto instalado (Mínimo).
<b>FC</b>	Ø exterior do inserto em estado livre.
<b>S</b>	Profundidade de perfuração (Mínima).
<b>T</b>	Profundidade "útil" da roscagem (Mínima).
<b>Q</b>	Rosca "Útil" do inserto.
<b>NC</b>	Número de filetes ou fios.



DIMENSÃO UNF	Broca		A max/min mm	FC min/max mm	NC max/min					
	mm	"			1.0D	1.5D	2.0D	2.5D	3.0D	
No 2 - 64	2.30	3/32	2.36/2.27	2.79/3.05	3.70/3.40	6.30/5.80	8.90/8.20	11.60/10.50	14.20/12.90	
No 3 - 56	2.70	#37	2.71/2.61	3.05/3.81	3.70/3.10	6.40/5.20	9.00/7.40	11.60/9.60	14.30/11.80	
No 4 - 48	3.00	#31	3.07/2.96	3.56/4.06	3.70/3.20	6.40/5.40	9.00/7.60	11.60/9.80	14.20/12.10	
No 5 - 44	3.40	#30	3.41/3.3	4.06/4.32	3.70/3.40	6.30/5.80	8.90/8.20	11.50/10.60	14.20/13.00	
No 6 - 40	3.70	#27	3.75/3.64	4.32/4.83	3.70/3.20	6.30/5.50	9.00/7.80	11.60/10.10	14.20/12.40	
No 8 - 36	4.40	11/64	4.43/4.32	5.08/5.59	4.10/3.60	6.90/6.10	9.70/8.60	12.50/11.10	15.30/13.60	
No 10 - 32	5.10	-	5.12/5	5.84/6.6	4.30/3.80	7.20/6.40	10.10/9.00	13.00/11.60	15.90/14.20	
1/4 X 28	6.60	-	6.72/6.55	7.62/8.38	5.20/4.70	8.50/7.70	11.90/10.80	15.20/13.80	18.60/16.90	
5/16 X 24	8.20	-	8.35/8.17	9.4/10.16	5.60/5.10	9.20/8.50	12.80/11.70	16.40/15.00	20.00/18.30	
3/8 X 24	9.80	-	9.93/9.75	10.92/11.94	7.10/6.50	11.40/10.50	15.80/14.50	20.10/18.50	24.50/22.50	
7/16 X 20	11.50	29/64	11.58/11.39	12.95/13.97	6.90/6.30	11.10/10.20	15.30/14.00	19.50/17.90	23.70/21.70	
1/2 X 20	13.00	33/64	13.16/12.97	14.48/15.75	8.10/7.40	12.90/11.90	17.80/16.30	22.60/20.80	27.50/25.20	
9/16 X 18	14.75	-	14.79/14.59	16.26/17.53	8.30/7.60	13.30/12.20	18.20/16.80	23.10/21.30	28.10/25.90	
5/8 X 18	16.50	-	16.38/16.18	17.78/19.3	9.40/8.70	14.90/13.80	20.50/18.90	26.00/24.00	31.50/29.10	
3/4 X 16	19.50	49/64	19.6/19.39	21.34/22.86	10.10/9.30	15.90/14.70	21.70/20.10	27.60/25.50	33.40/30.90	
7/8 X 14	22.50	57/64	22.84/22.62	24.89/26.67	10.30/9.60	16.30/15.10	22.20/20.60	28.20/26.10	34.20/31.60	
1 X 12	26.00	-	26.11/25.86	28.45/30.48	10.10/9.40	16.00/14.80	21.80/20.30	27.70/25.70	33.50/31.10	
1 X 14	26.00	-	26.02/25.79	27.94/30.23	12.10/11.20	18.90/17.50	25.70/23.80	32.50/30.10	39.40/36.40	
1-1/8 X 12	29.50	1.5/32	29.32/29.03	31.75/33.78	11.60/10.80	18.20/16.90	24.80/23.00	31.40/29.20	38.00/35.30	
1-1/4 X 12	32.50	1.9/32	32.49/32.21	34.8/37.34	13.10/12.20	20.40/19.00	27.80/25.80	35.10/32.70	42.50/39.50	
1-3/8 X 12	35.50	1.13/32	35.67/35.38	38.1/40.89	14.60/13.50	22.70/21.00	30.80/28.50	38.80/36.00	46.90/43.50	
1-1/2 X 12	38.50	-	38.84/38.56	41.15/44.45	16.10/14.90	24.90/23.10	33.70/31.30	42.60/39.50	51.40/47.70	
<b>UNC</b>										
No 2 - 56	2.40	#41	2.39/2.28	2.79/3.05	3.10/2.80	5.40/4.80	7.80/6.90	10.10/9.00	12.50/11.10	
No 3 - 48	2.70	#37	2.74/2.63	3.05/3.56	3.20/2.80	5.50/4.90	7.90/7.00	10.30/9.00	12.70/11.20	
No 4 - 40	3.00	#31	3.11/2.98	3.56/4.06	2.80/2.40	4.90/4.30	7.10/6.20	9.20/8.10	11.40/10.00	
No 5 - 40	3.40	#30	3.44/3.31	4.06/4.32	3.30/2.90	5.70/5.00	8.10/7.20	10.50/9.30	13.00/11.50	
No 6 - 32	3.70	#27	3.82/3.68	4.57/4.83	2.70/2.40	4.80/4.30	7.00/6.20	9.10/8.20	11.20/10.10	
No 8 - 32	4.40	11/64	4.47/4.34	5.08/5.59	3.50/3.20	6.10/5.50	8.60/7.80	11.20/10.10	13.70/12.40	
No 10 - 24	5.10	-	5.21/5.05	6.1/6.6	2.80/2.60	5.00/4.60	7.20/6.70	9.40/8.70	11.60/10.70	
No 12 - 24	5.70	15/64	5.86/5.72	6.86/7.11	3.50/3.20	6.00/5.60	8.50/7.90	11.00/10.30	13.50/12.60	
1/4 X 20	6.70	17/64	6.87/6.62	7.87/8.38	3.30/3.10	5.70/5.30	8.10/7.60	10.50/9.90	13.00/12.10	
5/16 X 18	8.30	21/64	8.49/8.24	9.65/10.16	3.90/3.70	6.70/6.30	9.50/8.90	12.20/11.50	15.00/14.10	
3/8 X 16	9.90	25/64	10.12/9.87	11.43/11.94	4.30/4.10	7.20/6.80	10.10/9.60	13.10/12.40	16.00/15.20	
7/16 X 14	11.60	-	11.78/11.51	13.21/13.97	4.40/4.10	7.40/7.00	10.40/9.80	13.40/12.60	16.30/15.50	
1/2 X 13	13.00	33/64	13.4/13.12	14.99/15.75	4.80/4.50	8.00/7.50	11.10/10.60	14.30/13.60	17.50/16.60	
9/16 X 12	15.00	19/32	15.03/14.74	16.76/17.53	5.00/4.80	8.40/7.90	11.70/11.10	15.00/14.20	18.30/17.40	
5/8 X 11	16.50	-	16.68/16.38	18.8/19.56	5.10/4.90	8.50/8.10	11.90/11.30	15.20/14.50	18.60/17.70	
3/4 X 10	20.00	-	19.91/19.6	22.1/23.11	5.80/5.50	9.50/9.00	13.10/12.60	16.80/16.10	20.50/19.60	
7/8 X 9	23.00	29/32	23.17/22.84	25.65/26.67	6.20/5.90	10.00/9.60	13.90/13.30	17.80/17.00	21.70/20.70	
1 X 8	26.25	-	26.47/26.09	29.21/30.48	6.30/6.00	10.20/9.80	14.20/13.60	18.10/17.30	22.00/21.10	
1-1/8 X 7	29.50	1.5/32	29.74/29.36	33.02/34.54	6.20/5.90	10.10/9.60	14.00/13.30	17.90/17.00	21.80/20.70	
1-1/4 X 7	32.50	1.9/32	32.92/32.53	36.07/37.59	7.10/6.70	11.40/10.90	15.80/15.00	20.10/19.20	24.40/23.30	
1-3/8 X 6	36.00	-	36.35/35.84	40.13/41.66	6.50/6.20	10.60/10.10	14.60/14.00	18.70/17.80	22.70/21.70	
1-1/2 X 6	39.50	1.35/64	39.52/39.02	43.18/44.96	7.30/6.90	11.70/11.20	16.10/15.40	20.60/19.60	25.00/23.90	
<b>BSF</b>										
3/16 X 32	5.00	-	5.03/4.88	5.84/6.35	4.30/3.90	7.20/6.50	10.20/9.20	13.10/11.90	16.00/14.50	
1/4 X 26	6.60	-	6.71/6.53	7.62/8.38	4.80/4.30	7.90/7.10	11.20/9.90	14.40/12.70	17.50/15.60	
5/16 X 22	8.30	21/64	8.38/8.2	9.4/10.16	5.20/4.70	8.50/7.70	11.90/10.70	15.30/13.80	18.70/16.80	
3/8 X 20	9.80	-	9.96/9.78	11.18/12.19	5.80/5.30	9.40/8.60	13.20/12.00	16.90/15.30	20.50/18.70	
7/16 X 18	11.60	-	11.63/11.43	12.95/14.22	6.20/5.60	10.00/9.10	13.90/12.60	17.80/16.10	21.60/19.60	
1/2 X 16	13.25	-	13.26/13.03	14.73/16	6.30/5.70	10.20/9.30	14.20/12.90	18.10/16.50	22.00/20.00	
9/16 X 16	14.75	-	14.88/14.66	16.26/17.78	7.30/6.60	11.70/10.60	16.10/14.70	20.60/18.70	25.00/22.70	
5/8 X 14	16.30	41/64	16.48/16.26	18.29/19.56	7.10/6.50	11.30/10.40	15.70/14.30	20.00/18.30	24.30/22.20	
3/4 X 12	19.50	49/64	19.69/19.43	21.84/23.37	7.30/6.70	11.70/10.80	16.20/14.90	20.70/19.00	25.10/23.00	
7/8 X 11	22.75	-	22.86/22.61	25.15/27.18	7.90/7.20	12.60/11.60	17.40/15.90	22.10/20.30	26.90/24.60	
1 X 10	26.25	-	26.52/26.19	28.7/30.99	8.30/7.60	13.20/12.10	18.10/16.60	23.10/21.20	28.00/25.70	
1-1/8 X 9	29.50	1.5/32	29.72/29.36	32.26/34.8	8.40/7.80	13.30/12.30	18.40/17.00	23.40/21.50	28.40/26.10	
1-1/4 X 9	32.50	1.9/32	32.89/32.54	35.31/38.1	9.50/8.80	15.00/13.90	20.60/19.00	26.20/24.20	31.70/29.30	
1-3/8 X 8	36.00	-	36.07/35.71	39.12/42.16	9.30/8.50	14.60/13.50	20.10/18.50	25.50/23.50	31.00/28.50	
1-1/2 X 8	39.00	1.17/32	39.24/38.89	42.16/45.97	10.30/9.40	16.10/14.80	22.10/20.10	28.00/25.50	33.90/30.90	

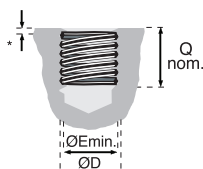
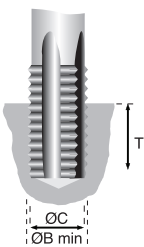
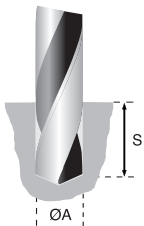
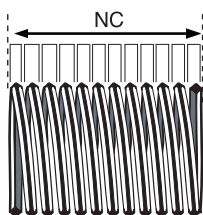


INFORMAÇÃO TÉCNICA PARA INSERTOS LIVRES

B mm	C (5H) mm	D (4H) mm	C (6H) mm	D (5H) mm	E mm	S					T					Q				
						1.0D	1.5D	2.0D	2.5D	3.0D	1.0D	1.5D	2.0D	2.5D	3.0D	1.0D	1.5D	2.0D	2.5D	3.0D
0.106	0.0974/0.0962	0.0779/0.0759	0.0980/0.0962	0.0786/0.0759	0.0691	0.156	0.199	0.242	0.285	0.328	0.141	0.184	0.227	0.270	0.313	0.086	0.129	0.172	0.215	0.258
0.122	0.1119/0.1106	0.0895/0.0874	0.1126/0.1106	0.0902/0.0874	0.0797	0.179	0.229	0.278	0.328	0.377	0.161	0.210	0.260	0.310	0.359	0.099	0.148	0.198	0.247	0.297
0.139	0.1270/0.1255	0.1008/0.0985	0.1278/0.1255	0.1016/0.0985	0.0894	0.206	0.262	0.318	0.374	0.430	0.185	0.241	0.297	0.353	0.409	0.112	0.168	0.224	0.280	0.336
0.155	0.1414/0.1398	0.1126/0.1102	0.1422/0.1398	0.1134/0.1102	0.1004	0.227	0.290	0.352	0.414	0.477	0.204	0.267	0.329	0.391	0.454	0.125	0.187	0.250	0.312	0.375
0.171	0.1559/0.1542	0.1243/0.1218	0.1568/0.1542	0.1252/0.1218	0.111	0.250	0.319	0.388	0.457	0.526	0.225	0.294	0.363	0.432	0.501	0.138	0.207	0.276	0.345	0.414
0.200	0.1839/0.1820	0.1487/0.1460	0.1848/0.1820	0.1496/0.1460	0.134	0.289	0.371	0.453	0.535	0.617	0.261	0.343	0.425	0.507	0.589	0.164	0.246	0.328	0.410	0.492
0.231	0.2123/0.2103	0.1726/0.1697	0.2133/0.2103	0.1736/0.1697	0.156	0.331	0.426	0.521	0.616	0.711	0.299	0.394	0.489	0.584	0.679	0.190	0.285	0.380	0.475	0.570
0.296	0.2754/0.2732	0.2300/0.2268	0.2765/0.2732	0.2311/0.2268	0.2113	0.411	0.536	0.661	0.786	0.911	0.375	0.500	0.625	0.750	0.875	0.250	0.375	0.500	0.625	0.750
0.367	0.3421/0.3395	0.2890/0.2854	0.3433/0.3395	0.2902/0.2854	0.2674	0.500	0.656	0.812	0.969	1.125	0.458	0.614	0.771	0.927	1.083	0.312	0.469	0.625	0.781	0.937
0.429	0.4047/0.4020	0.3516/0.3479	0.4059/0.4020	0.3528/0.3479	0.3299	0.562	0.750	0.937	1.124	1.312	0.521	0.708	0.896	1.083	1.271	0.375	0.562	0.750	0.937	1.125
0.503	0.4731/0.4700	0.4091/0.4050	0.4744/0.4700	0.4104/0.4050	0.3834	0.662	0.881	1.100	1.319	1.537	0.612	0.831	1.050	1.269	1.487	0.437	0.656	0.875	1.094	1.312
0.565	0.5357/0.5325	0.4717/0.4675	0.5371/0.5325	0.4731/0.4675	0.4459	0.725	0.975	1.225	1.475	1.725	0.675	0.925	1.175	1.425	1.675	0.500	0.750	1.000	1.250	1.500
0.635	0.6020/0.5986	0.5308/0.5264	0.6035/0.5986	0.5323/0.5264	0.5024	0.811	1.093	1.374	1.655	1.936	0.756	1.038	1.319	1.600	1.881	0.562	0.844	1.125	1.406	1.687
0.697	0.6646/0.6611	0.5934/0.5889	0.6661/0.6611	0.5949/0.5889	0.5649	0.874	1.187	1.500	1.812	2.124	0.819	1.132	1.444	1.757	2.069	0.625	0.937	1.250	1.562	1.875
0.831	0.7945/0.7906	0.7143/0.7094	0.7961/0.7906	0.7159/0.7094	0.6823	1.031	1.406	1.781	2.156	2.531	0.969	1.344	1.719	2.094	2.469	0.750	1.125	1.500	1.875	2.250
0.968	0.9257/0.9214	0.8339/0.8286	0.9274/0.9214	0.8356/0.8286	0.7977	1.196	1.634	2.071	2.509	2.946	1.125	1.562	2.000	2.437	2.875	0.875	1.312	1.750	2.187	2.625
1.108	1.0589/1.0542	0.9516/0.9459	1.0608/1.0542	0.9535/0.9459	0.9098	1.375	1.875	2.375	2.875	3.375	1.292	1.792	2.292	2.792	3.292	1.000	1.500	2.000	2.500	3.000
1.093	1.0508/1.0464	0.9590/0.9536	1.0527/1.0464	0.9609/0.9536	0.9277	1.32	1.82	2.32	2.82	3.32	1.25	1.75	2.25	2.75	3.25	1.000	1.500	2.000	2.500	3.000
1.233	1.1841/1.1792	1.0768/1.0709	1.1860/1.1792	1.0787/1.0709	1.0348	1.500	2.062	2.625	3.187	3.750	1.417	1.979	2.542	3.104	3.667	1.125	1.687	2.250	2.812	3.375
1.358	1.3092/1.3042	1.2019/1.1959	1.3112/1.3042	1.2039/1.1959	1.1598	1.625	2.250	2.875	3.500	4.125	1.542	2.167	2.792	3.417	4.042	1.250	1.875	2.500	3.125	3.750
1.483	1.4343/1.4292	1.3270/1.3209	1.4364/1.4292	1.3291/1.3209	1.2848	1.750	2.438	3.125	3.813	4.500	1.667	2.354	3.042	3.729	4.417	1.375	2.062	2.750	3.437	4.125
1.608	1.5595/1.5542	1.4522/1.4459	1.5615/1.5542	1.4542/1.4459	1.4098	1.875	2.625	3.375	4.125	4.875	1.792	2.542	3.292	4.042	4.792	1.500	2.250	3.000	3.750	4.500
0.109	0.0989/0.0976	0.0765/0.0744	0.0996/0.0976	0.0772/0.0744	0.0667	0.166	0.209	0.252	0.295	0.338	0.148	0.191	0.234	0.277	0.320	0.086	0.129	0.172	0.215	0.258
0.126	0.1139/0.1125	0.0877/0.0855	0.1147/0.1125	0.0885/0.0855	0.0764	0.193	0.242	0.292	0.341	0.391	0.172	0.221	0.271	0.320	0.370	0.099	0.148	0.198	0.247	0.297
0.145	0.1298/0.1282	0.0982/0.0958	0.1307/0.1282	0.0991/0.0958	0.0849	0.224	0.280	0.336	0.392	0.448	0.199	0.255	0.311	0.367	0.423	0.112	0.168	0.224	0.280	0.336
0.158	0.1429/0.1412	0.1113/0.1088	0.1437/0.1412	0.1121/0.1088	0.0979	0.237	0.300	0.362	0.425	0.487	0.212	0.275	0.337	0.400	0.462	0.125	0.187	0.250	0.312	0.375
0.179	0.1601/0.1583	0.1204/0.1177	0.1611/0.1583	0.1214/0.1177	0.1040	0.279	0.348	0.417	0.486	0.555	0.247	0.316	0.385	0.454	0.523	0.138	0.207	0.276	0.345	0.414
0.205	0.1862/0.1843	0.1465/0.1437	0.1872/0.1843	0.1475/0.1437	0.1300	0.305	0.387	0.469	0.551	0.633	0.273	0.355	0.437	0.519	0.601	0.164	0.246	0.328	0.410	0.492
0.244	0.2193/0.2171	0.1661/0.1629	0.2204/0.2171	0.1672/0.1629	0.1450	0.377	0.472	0.567	0.662	0.757	0.336	0.431	0.526	0.621	0.716	0.190	0.285	0.380	0.475	0.570
0.270	0.2454/0.2431	0.1922/0.1889	0.2465/0.2431	0.1933/0.1889	0.1710	0.403	0.511	0.619	0.727	0.835	0.362	0.470	0.578	0.686	0.794	0.216	0.324	0.432	0.540	0.648
0.315	0.2851/0.2825	0.2211/0.2175	0.2863/0.2825	0.2223/0.2175	0.1959	0.475	0.600	0.725	0.850	0.975	0.425	0.550	0.675	0.800	0.925	0.250	0.375	0.500	0.625	0.750
0.385	0.3515/0.3486	0.2803/0.2764	0.3529/0.3486	0.2817/0.2764	0.2524	0.562	0.718	0.875	1.031	1.187	0.507	0.663	0.819	0.975	1.132	0.312	0.469	0.625	0.781	0.937
0.456	0.4189/0.4156	0.3387/0.3344	0.4203/0.4156	0.3401/0.3344	0.3073	0.656	0.844	1.031	1.219	1.406	0.594	0.781	0.969	1.156	1.344	0.375	0.562	0.750	0.937	1.125
0.530	0.4875/0.4839	0.3957/0.3911	0.4890/0.4839	0.3972/0.3911	0.3602	0.758	0.977	1.196	1.415	1.633	0.687	0.906	1.125	1.344	1.562	0.437	0.656	0.875	1.094	1.312
0.600	0.5537/0.5499	0.4548/0.4500	0.5554/0.5499	0.4565/0.4500	0.4167	0.846	1.096	1.346	1.596	1.846	0.769	1.019	1.269	1.519	1.769	0.500	0.750	1.000	1.250	1.500
0.671	0.6208/0.6167	0.5135/0.5084	0.6225/0.6167	0.5152/0.5084	0.4723	0.937	1.219	1.500	1.781	2.062	0.854	1.135	1.417	1.698	1.979	0.562	0.844	1.125	1.406	1.687
0.743	0.6885/0.6841	0.5714/0.5660	0.6903/0.6841	0.5732/0.5660	0.5266	1.034	1.347	1.659	1.972	2.284	0.943	1.256	1.568	1.881	2.193	0.625	0.937	1.250	1.562	1.875
0.880	0.8196/0.8149	0.6907/0.6850	0.8216/0.8149	0.6927/0.6850	0.6417	1.200	1.575	1.950	2.325	2.700	1.100	1.475	1.850	2.225	2.600	0.750	1.125	1.500	1.875	2.250
1.019	0.9522/0.9471	0.8089/0.8028	0.9543/0.9471	0.8110/0.8028	0.7547	1.375	1.812	2.250	2.687	3.125	1.264	1.701	2.139	2.576	3.014	0.875	1.312	1.750	2.187	2.625
1.162	1.0868/1.0812	0.9254/0.9188	1.0890/1.0812	0.9276/0.9188	0.8647	1.562	2.062	2.562	3.062	3.562	1.437	1.937	2.437	2.937	3.437	1.000	1.500	2.000	2.500	3.000
1.311	1.2239/1.2178	1.0393/1.0322	1.2262/1.2178	1.0416/1.0322	0.9704	1.768	2.330	2.893	3.455	4.018	1.625	2.187	2.750	3.312	3.875	1.125	1.687	2.250	2.812	3.375
1.436	1.3490/1.3428	1.1644/1.1572	1.3514/1.3428	1.1668/1.1572	1.0954	1.893	2.518	3.143	3.768	4.393	1.750	2.375	3.000	3.625	4.250	1.250	1.875	2.500	3.125	3.750
1.591	1.4900/1.4832	1.2745/1.2667	1.4926/1.4832	1.2771/1.2667	1.1946	2.125	2.812	3.500	4.187	4.875	1.958	2.646	3.333	4.021	4.708	1.375	2.062	2.750	3.437	4.125
1.716	1.6151/1.6082	1.3996/1.3917	1.6177/1.6082	1.4022/1.3917	1.3196	2.250	3.000	3.750	4.500	5.250	2.083	2.833	3.583	4.333	5.083	1.500	2.250	3.000	3.750	4.500
0.225	0.2087/0.2075	0.1697/0.1675	0.2098/0.2075	0.1708/0.1675	0.1475	0.328	0.422	0.515	0.609	0.703	0.297	0.390	0.484	0.578	0.672	0.187	0.281	0.375	0.469	0.562
0.296	0.2762/0.2747	0.2279/0.2254	0.2774/0.2747	0.2291/0.2254	0.2008	0.423	0.548	0.673	0.798	0.923	0.385	0.510	0.635	0.760	0.885	0.250	0.375	0.500	0.625	0.750
0.366	0.3433/0.3416	0.2861/0.2834	0.3447/0.3416	0.2875/0.2834	0.2543	0.517	0.673	0.829	0.986	1.142	0.472	0.628	0.784	0.940	1.096	0.312	0.469	0.625	0.781	0.937
0.434	0.4089/0.4070	0.3459/0.3430	0.4104/0.4070	0.3474/0.3430	0.3110	0.600	0.787	0												


**INFORMAÇÃO TÉCNICA PARA INSERTOS LIVRES**
**BSW/BSP BA/BSB/UN-8 PITCH**

<b>A</b>	Ø de perfuração ou interior da rosca prévia.
<b>B</b>	Ø maior da rosca prévia (Mínimo).
<b>C</b>	Ø dos flancos da rosca prévia.
<b>D</b>	Ø dos flancos do inserto instalado.
<b>E</b>	Ø interior do inserto instalado (Mínimo).
<b>FC</b>	Ø exterior do inserto em estado livre.
<b>S</b>	Profundidade de perfuração (Mínima).
<b>T</b>	Profundidade "útil" da roscagem (Mínimo).
<b>Q</b>	Rosca "Útil" do inserto.
<b>NC</b>	Número de filetes ou fios.



	BSW	mm	"	A max/min mm	FC min/max mm	1.0D	1.5D	NC max/min 2.0D	2.5D	3.0D	
	1/8 X 40	3.40	#30	3.43/3.28	3.81/4.32	3.40/3.00	5.80/5.10	8.40/7.30	10.90/9.40	13.40/11.60	
	3/16 X 24	2.70	#37	2.71/2.61	3.05/3.81	3.70/3.10	6.40/5.20	9.00/7.40	11.60/9.60	14.30/11.80	
	1/4 X 20	6.70	17/64	6.78/6.63	7.87/8.38	3.40/3.10	5.90/5.40	8.50/7.70	11.00/9.90	13.50/12.20	
	5/16 X 18	8.30	21/64	8.48/8.33	9.4/10.16	4.10/3.80	6.90/6.40	9.80/9.00	12.60/11.60	15.50/14.20	
	3/8 X 16	10.00	-	10.11/9.91	11.18/11.94	4.40/4.10	7.40/6.90	10.50/9.70	13.50/12.50	16.50/15.30	
	7/16 X 14	11.60	-	11.76/11.51	13.21/13.97	4.60/4.20	7.60/7.10	10.70/9.90	13.80/12.80	16.90/15.60	
	1/2 X 12	13.00	33/64	13.34/13.08	14.99/16	4.50/4.10	7.40/7.00	10.50/9.80	13.60/12.60	16.60/15.40	
	9/16 X 12	14.75	-	14.94/14.68	16.51/17.53	5.20/4.90	8.60/8.00	12.00/11.20	15.40/14.40	18.80/17.60	
	5/8 X 11	16.50	-	16.84/16.59	18.29/19.56	5.30/5.00	8.70/8.20	12.20/11.50	15.70/14.70	19.20/17.90	
	3/4 X 10	20.00	-	20.09/19.84	21.84/22.86	6.00/5.60	9.70/9.20	13.50/12.70	17.30/16.30	21.10/19.80	
	7/8 X 9	23.25	-	23.27/23.01	25.15/26.67	6.30/6.00	10.20/9.70	14.30/13.40	18.20/17.10	22.20/20.90	
	1 X 8	26.50	-	26.52/26.187.4	28.7/30.48	6.50/6.10	10.40/9.90	14.50/13.70	18.60/17.50	22.60/21.20	
	1-1/8 X 7	30.00	1.11/64	30.12/29.743.4	32.51/34.29	6.30/5.90	10.20/9.60	14.30/13.40	18.20/17.10	22.20/20.80	
	1-1/4 X 7	33.00	1.19/64	33.3/32.918.4	35.56/37.59	7.20/6.80	11.60/10.90	16.00/15.00	20.40/19.20	24.90/23.30	
	1-1/2 X 6	39.50	1.35/64	39.9/39.268.4	42.67/45.21	7.50/7.00	11.90/11.30	16.50/15.50	21.10/19.80	25.60/24.00	
	<b>BSP</b>										
	1/8 X 28	10.00	-	10.16/9.91	10.92/11.94	1.90/1.70	3.60/3.20	5.30/4.80	7.00/6.40	8.80/7.90	
	1/4 X 19	13.75	-	13.72/13.46	14.99/16.26	3.10/2.80	5.40/5.00	7.80/7.10	10.10/9.20	12.50/11.40	
	3/8 X 19	17.00	-	17.27/17.02	18.54/20.07	5.50/5.00	8.90/8.20	12.50/11.40	16.00/14.60	19.50/17.90	
	1/2 X 14	21.50	27/32	21.59/21.34	23.37/25.15	5.30/4.90	8.80/8.10	12.20/11.20	15.70/14.40	19.10/17.60	
	5/8 X 14	23.50	-	23.55/23.24	25.4/27.43	7.10/6.50	11.30/10.40	15.70/14.40	20.00/18.40	24.30/22.30	
	3/4 X 14	27.00	1.1/16	27.08/26.75	28.96/31.24	8.80/8.10	13.90/12.90	19.20/17.60	24.30/22.40	29.50/27.20	
	7/8 X 14	30.50	1.13/16	30.81/30.48	32.77/35.31	10.50/9.70	16.50/15.30	22.60/20.80	28.70/26.40	34.70/32.00	
	1 X 11	33.75	-	33.91/33.53	36.32/39.12	9.30/8.60	14.70/13.60	20.10/18.60	25.60/23.60	31.00/28.60	
	1-1/4 X 11	42.50	1.43/64	42.67/42.29	44.96/48.51	12.00/11.10	18.70/17.40	25.60/23.70	32.40/30.00	39.20/36.20	
	1-1/2 X 11	48.50	1.29/32	48.79/48.41	51.05/54.86	14.70/13.60	22.80/21.20	31.00/28.70	39.20/36.30	47.30/43.80	
	<b>BA</b>										
	BA 6	2.90	#33	2.95/2.87	3.56/3.81	3.60/3.30	6.20/5.60	8.70/7.90	11.20/10.20	13.80/12.50	
	BA 5	3.40	#30	3.43/3.28	3.81/4.32	3.80/3.40	6.40/5.80	9.00/8.10	11.60/10.50	14.20/12.90	
	BA 4	3.80	#25	3.86/3.73	4.32/4.83	3.80/3.50	6.40/5.80	9.10/8.20	11.70/10.60	14.40/13.00	
	BA 3	4.30	-	4.34/4.22	5.08/5.33	3.90/3.60	6.70/6.00	9.40/8.50	12.10/10.90	14.80/13.40	
	BA 2	4.90	#10	4.98/4.85	5.59/6.1	4.20/3.80	6.90/6.30	9.80/8.80	12.60/11.40	15.40/13.90	
	BA 1	5.50	7/32	5.59/5.41	6.35/6.86	4.20/3.80	7.10/6.40	9.90/9.00	12.80/11.60	15.60/14.10	
	BA 0	6.20	C	6.25/6.12	7.11/7.87	4.30/3.90	7.20/6.60	10.10/9.20	13.00/11.80	16.00/14.50	
	<b>BSB</b>										
	3/16 X 32	5.10	-	5.21/4.95	5.84/6.6	4.10/3.70	6.90/6.20	9.70/8.70	12.50/11.20	15.30/13.70	
	1/4 X 26	6.60	-	6.86/6.55	7.87/8.64	4.60/4.10	7.60/6.90	10.70/9.60	13.80/12.30	16.80/15.10	
	5/16 X 26	8.00	5/16	8.43/8.13	9.4/10.41	6.20/5.50	10.00/9.00	13.90/12.50	17.80/16.00	21.60/19.40	
	3/8 X 26	9.80	-	10.03/9.73	10.92/12.19	7.80/7.00	12.40/11.20	17.10/15.40	21.70/19.60	26.40/23.80	
	7/16 X 26	11.10	7/16	11.61/11.33	12.7/13.97	9.40/8.40	14.80/13.40	20.30/18.30	25.80/23.30	31.20/28.20	
	1/2 X 26	12.70	1/2	13.21/12.9	14.22/15.49	11.00/9.90	17.20/15.60	23.50/21.20	29.80/26.90	36.00/32.60	
	9/16 X 26	14.75	-	14.78/14.5	15.75/17.27	12.60/11.40	19.70/17.80	26.70/24.20	33.80/30.50	40.90/36.90	
	5/8 X 26	16.50	-	16.38/16.08	17.53/19.05	14.20/12.80	22.00/19.90	29.90/27.10	37.80/34.20	45.70/41.30	
	3/4 X 26	19.50	49/64	19.53/19.25	20.57/22.61	17.40/15.70	26.90/24.30	36.30/32.90	45.80/41.50	55.30/50.10	
	1 X 24	25.75	1.1/64	25.91/25.63	27.18/29.72	21.80/19.80	33.50/30.40	45.30/41.00	57.00/51.60	68.70/62.20	
	<b>UN-8 PITCH</b>										
	1.1/8 X 8	28.50	1.1/8	29.34/28.7	31.75/33.02	7.50/7.10	12.00/11.50	16.60/15.80	21.10/20.10	25.60/24.50	
	1.1/4 X 8	32.00	1.1/4	32.51/31.88	35.31/36.32	8.30/8.10	13.30/12.90	18.30/17.70	23.30/22.60	28.20/27.40	
	1.3/8 X 8	35.00	1.3/8	35.69/35.05	38.61/39.88	9.30/9.00	14.80/14.30	20.20/19.60	25.70/24.90	31.20/30.20	
	1.1/2 X 8	38.00	1.1/2	38.86/38.23	41.91/42.93	10.30/10.00	16.20/15.80	22.20/21.50	28.10/27.30	34.10/33.10	
	1.5/8 X 8	41.00	1.5/8	42.04/41.4	45.21/48.26	11.20/10.50	17.70/16.40	24.10/22.40	30.50/28.40	37.00/34.30	
	1.3/4 X 8	44.50	1.3/4	45.21/44.58	48.26/51.82	12.20/11.40	19.20/17.80	26.10/24.20	33.00/30.70	39.90/37.10	
	1.7/8 X 8	47.50	1.7/8	48.39/47.75	51.56/54.86	13.20/12.40	20.60/19.30	28.10/26.20	35.50/33.20	42.90/40.10	
	2 X 8	51.00	2	51.56/50.93	54.86/57.91	14.20/13.40	22.10/20.90	30.00/28.40	38.00/35.90	45.90/43.30	



INFORMAÇÃO TÉCNICA PARA INSERTOS LIVRES

B mm	C (5H) mm	D (4H) mm	C (6H) mm	D (5H) mm	E mm	S					T					Q				
						1.0D	1.5D	2.0D	2.5D	3.0D	1.0D	1.5D	2.0D	2.5D	3.0D	1.0D	1.5D	2.0D	2.5D	3.0D
0.155	0.1420/0.1410	0.1109/0.1090	0.1430/0.1410	0.1119/0.1090	0.0930	0.237	0.300	0.362	0.425	0.487	0.212	0.275	0.337	0.400	0.462	0.125	0.187	0.250	0.312	0.375
0.237	0.2154/0.2142	0.1631/0.1608	0.2166/0.2142	0.1643/0.1608	0.1341	0.375	0.469	0.562	0.656	0.750	0.333	0.427	0.521	0.614	0.708	0.187	0.281	0.375	0.469	0.562
0.309	0.2836/0.2820	0.2206/0.2180	0.2849/0.2820	0.2219/0.2180	0.1860	0.475	0.600	0.725	0.850	0.975	0.425	0.550	0.675	0.800	0.925	0.250	0.375	0.500	0.625	0.750
0.378	0.3498/0.3480	0.2797/0.2769	0.3512/0.3480	0.2811/0.2769	0.2413	0.562	0.718	0.875	1.031	1.187	0.507	0.663	0.819	0.975	1.132	0.312	0.469	0.625	0.781	0.937
0.448	0.4170/0.4150	0.3380/0.3350	0.4185/0.4150	0.3395/0.3350	0.2950	0.656	0.844	1.031	1.219	1.406	0.594	0.781	0.969	1.156	1.344	0.375	0.562	0.750	0.937	1.125
0.521	0.4855/0.4833	0.3950/0.3918	0.4871/0.4833	0.3966/0.3918	0.3461	0.758	0.977	1.196	1.415	1.633	0.687	0.906	1.125	1.344	1.562	0.437	0.656	0.875	1.094	1.312
0.597	0.5557/0.5533	0.4500/0.4466	0.5575/0.5533	0.4518/0.4466	0.3932	0.875	1.125	1.375	1.625	1.875	0.792	1.042	1.292	1.542	1.792	0.500	0.750	1.000	1.250	1.500
0.660	0.6184/0.6158	0.5127/0.5091	0.6201/0.6158	0.5144/0.5091	0.4557	0.937	1.219	1.500	1.781	2.062	0.854	1.135	1.417	1.698	1.979	0.562	0.844	1.125	1.406	1.687
0.731	0.6859/0.6832	0.5705/0.5668	0.6878/0.6832	0.5724/0.5668	0.5086	1.034	1.347	1.659	1.972	2.284	0.943	1.256	1.568	1.881	2.193	0.625	0.937	1.250	1.562	1.875
0.867	0.8171/0.8141	0.6900/0.6860	0.8191/0.8141	0.6920/0.6860	0.6220	1.200	1.575	1.950	2.325	2.700	1.100	1.475	1.850	2.225	2.600	0.750	1.125	1.500	1.875	2.250
1.005	0.9495/0.9462	0.8082/0.8039	0.9516/0.9462	0.8103/0.8039	0.7328	1.375	1.812	2.250	2.687	3.125	1.264	1.701	2.139	2.576	3.014	0.875	1.312	1.750	2.187	2.625
1.146	1.0836/1.0801	0.9245/0.9200	1.0859/1.0801	0.9268/0.9200	0.8400	1.562	2.062	2.562	3.062	3.562	1.437	1.937	2.437	2.937	3.437	1.000	1.500	2.000	2.500	3.000
1.291	1.2203/1.2165	1.0383/1.0335	1.2227/1.2165	1.0407/1.0335	0.9420	1.768	2.330	2.893	3.455	4.018	1.625	2.187	2.750	3.312	3.875	1.125	1.687	2.250	2.812	3.375
1.416	1.3454/1.3415	1.1634/1.1585	1.3479/1.3415	1.1659/1.1585	1.0670	1.893	2.518	3.143	3.768	4.393	1.750	2.375	3.000	3.625	4.250	1.250	1.875	2.500	3.125	3.750
1.694	1.6110/1.6067	1.3986/1.3933	1.6137/1.6067	1.4013/1.3933	1.2866	2.250	3.000	3.750	4.500	5.250	2.083	2.833	3.583	4.333	5.083	1.500	2.250	3.000	3.750	4.500
0.426	0.4076/0.4058	0.3629/0.3601	0.4090/0.4058	0.3643/0.3601	0.3372	0.286	0.348	0.411	0.437	0.536	0.250	0.312	0.375	0.437	0.500	0.125	0.187	0.250	0.312	0.375
0.580	0.5539/0.5517	0.4875/0.4843	0.5556/0.5517	0.4892/0.4843	0.4506	0.487	0.612	0.737	0.862	0.987	0.434	0.559	0.684	0.809	0.934	0.250	0.375	0.500	0.625	0.750
0.718	0.6920/0.6897	0.6256/0.6223	0.6937/0.6897	0.6273/0.6223	0.5886	0.612	0.799	0.987	1.174	1.362	0.559	0.747	0.934	1.122	1.309	0.375	0.562	0.750	0.937	1.125
0.909	0.8735/0.8708	0.7830/0.7793	0.8754/0.8708	0.7849/0.7793	0.7336	0.821	1.071	1.321	1.571	1.821	0.750	1.000	1.250	1.500	1.750	0.500	0.750	1.000	1.250	1.500
0.986	0.9506/0.9478	0.8601/0.8563	0.9524/0.9478	0.8619/0.8563	0.8106	0.946	1.258	1.571	1.883	2.196	0.875	1.187	1.500	1.812	2.125	0.625	0.937	1.250	1.562	1.875
1.126	1.0898/1.0868	0.9993/0.9953	1.0918/1.0868	1.0013/0.9953	0.9496	1.071	1.446	1.821	2.196	2.571	1.000	1.375	1.750	2.125	2.500	0.750	1.125	1.500	1.875	2.250
1.274	1.2378/1.2348	1.1473/1.1433	1.2399/1.2348	1.1494/1.1433	1.0976	1.196	1.634	2.071	2.509	2.946	1.125	1.562	2.000	2.437	2.875	0.875	1.312	1.750	2.187	2.625
1.416	1.3705/1.3673	1.2551/1.2508	1.3727/1.3673	1.2573/1.2508	1.1926	1.409	1.909	2.409	2.909	3.409	1.318	1.818	2.318	2.818	3.318	1.000	1.500	2.000	2.500	3.000
1.757	1.7118/1.7083	1.5964/1.5918	1.7141/1.7083	1.5987/1.5918	1.5336	1.660	2.284	2.909	3.534	4.159	1.568	2.193	2.818	3.443	4.068	1.250	1.875	2.500	3.125	3.750
1.989	1.9440/1.9403	1.8286/1.8238	1.9464/1.9403	1.8310/1.8238	1.7656	1.909	2.659	3.409	4.159	4.909	1.818	2.568	3.318	4.068	4.818	1.500	2.250	3.000	3.750	4.500
0.134	0.1252/0.1226	0.1014/0.0976			0.0850	0.204	0.259	0.314	0.369	0.424	0.183	0.238	0.293	0.348	0.404	0.110	0.165	0.220	0.275	0.331
0.152	0.1426/0.1399	0.1159/0.1120			0.0980	0.230	0.293	0.356	0.419	0.482	0.207	0.270	0.333	0.396	0.459	0.126	0.189	0.252	0.315	0.378
0.171	0.1605/0.1574	0.1305/0.1262			0.1106	0.259	0.329	0.400	0.471	0.542	0.233	0.303	0.374	0.445	0.516	0.142	0.212	0.283	0.354	0.425
0.194	0.1821/0.1786	0.1488/0.1441			0.1268	0.291	0.371	0.452	0.533	0.613	0.262	0.343	0.423	0.504	0.585	0.161	0.242	0.323	0.403	0.484
0.221	0.2079/0.2042	0.1709/0.1659			0.1468	0.328	0.421	0.513	0.606	0.698	0.297	0.389	0.482	0.574	0.667	0.185	0.277	0.370	0.462	0.555
0.249	0.2342/0.2299	0.1929/0.1874			0.1661	0.368	0.472	0.576	0.681	0.785	0.333	0.437	0.541	0.646	0.750	0.209	0.313	0.417	0.522	0.626
0.281	0.2645/0.2598	0.2185/0.2126			0.1890	0.413	0.531	0.649	0.768	0.886	0.374	0.492	0.610	0.728	0.846	0.236	0.354	0.472	0.590	0.709
0.232	0.2112/0.2136	0.1738/0.1709			0.1543	0.33	0.42	0.52	0.61	0.70	0.30	0.39	0.48	0.58	0.67	0.187	0.281	0.375	0.469	0.562
0.304	0.2790/0.2817	0.2328/0.2295			0.2090	0.42	0.55	0.67	0.80	0.92	0.38	0.51	0.63	0.76	0.88	0.250	0.375	0.500	0.625	0.750
0.367	0.3415/0.3444	0.2965/0.2920			0.2715	0.49	0.64	0.80	0.95	1.11	0.45	0.60	0.76	0.92	1.07	0.312	0.469	0.625	0.781	0.937
0.429	0.4040/0.4070	0.3583/0.3545			0.3340	0.55	0.74	0.92	1.11	1.30	0.51	0.70	0.88	1.07	1.26	0.375	0.562	0.750	0.937	1.125
0.492	0.4665/0.4697	0.4210/0.4170			0.3965	0.61	0.83	1.05	1.27	1.49	0.57	0.79	1.01	1.23	1.45	0.437	0.656	0.875	1.094	1.312
0.554	0.5290/0.5323	0.4837/0.4795			0.4590	0.67	0.92	1.17	1.42	1.67	0.63	0.88	1.13	1.38	1.63	0.500	0.750	1.000	1.250	1.500
0.617	0.5915/0.5945	0.5464/0.5420			0.5215	0.74	1.02	1.30	1.58	1.86	0.70	0.98	1.26	1.54	1.82	0.562	0.844	1.125	1.406	1.687
0.679	0.6540/0.6575	0.6090/0.6045			0.5840	0.80	1.11	1.42	1.74	2.05	0.76	1.07	1.38	1.70	2.01	0.625	0.937	1.250	1.562	1.875
0.804	0.7790/0.7827	0.7343/0.7295			0.7090	0.92	1.30	1.67	2.05	2.42	0.88	1.26	1.63	2.01	2.38	0.750	1.125	1.500	1.875	2.250
1.059	1.0314/1.0355	0.9828/0.9778			0.9556	1.19	1.69	2.19	2.69	3.19	1.15	1.65	2.15	2.65	3.15	1.000	1.500	2.000	2.500	3.000
1.261	1.1757/1.1688	1.1/4	1.0528/1.0438			1.69	2.25	2.81	3.38	3.94	1.56	2.13	2.69	3.25	3.81	1.125	1.688	2.250	2.81	3.38
1.386	1.3008/1.2938	1.3/8	1.1780/1.1688			1.81	2.44	3.06	3.69	4.31	1.69	2.31	2.94	3.56	4.19	1.250	1.875	2.500	3.13	3.75
1.511	1.4259/1.4188	1.1/2	1.3031/1.2938			1.94	2.62	3.31	4.00	4.69	1.81	2.50	3.19	3.88	4.56	1.375	2.062	2.750	3.44	4.13
1.636	1.5510/1.5438	1.5/8	1.4283/1.4188			2.06	2.81	3.56	4.31	5.06	1.94	2.69	3.44	4.19	4.94	1.500	2.250	3.000	3.75	4.50
1.761	1.6762/1.6688	1.3/4	1.5535/1.5438			2.19	3.00	3.81	4.63	5.44	2.06	2.88	3.69	4.50	5.31	1.625	2.438	3.250	4.06	4.88
1.886	1.8013/1.7938	1.7/8	1.6786/1.6688			2.31	3.19	4.06	4.94	5.81	2.19	3.06	3.94	4.81	5.69	1.750	2.625	3.500	4.38	5.25
2.011	1.9264/1.9188	2	1.8038/1.7938			2.44	3.37	4.31	5.25	6.19	2.31	3.25	4.19	5.13	6.06	1.875	2.812	3.750	4.69	5.63
2.136	2.0515/2.0438	2.1/8	1.9289/1.9188			2.56	3.56	4.56	5.56	6.56	2.44	3.44	4.44	5.44	6.44	2.000	3.000	4.000	5.00	6.00

**TABELA PARA A CONSULTA DE FERRAMENTAS DE INSTALAÇÃO DE INSERTOS**


MC	MF	SPARK	UNC	UNF	BSW	BSF	BA	BSC	NPT	BSP	UN-8	Ref.	Ref.	Ref.
2X0.40	-	-	-	-	-	-	-	-	-	-	-	3500-HIT2	3500-TB1	3500-RT1
2.20X0.45	-	-	2GX56	-	-	-	-	-	-	-	-	3500-HIT2	3500-TB2	3500-RT1
2.50X0.45	-	-	3GX48	3GX56	-	-	#6	-	-	-	-	3500-HIT3	3500-TB3	3500-RT1
-	-	-	4GX40	4GX48	1/8X40	-	-	-	-	-	-	3500-HIT4	3500-TB4	3500-RT1
3X0.50	-	-	4GX40	4GX48	1/8X40	-	-	-	-	-	-	3500-HIT4	3500-TB4	3500-RT2
-	-	-	5GX40	-	-	-	-	-	-	-	-	3500-HIT4	3500-TB4	3500-RT1
3.50X0.60	-	-	-	-	-	-	-	-	-	-	-	3500-HIT5	3500-TB5	3500-RT2
-	-	-	6GX32	6GX40	-	-	#4	-	-	-	-	3500-HIT5	3500-TB5	3500-RT1
4X0.70	-	-	8GX32	8GX36	-	3/16X32	-	-	-	-	-	3500-HIT6	3500-TB6	3500-RT2
-	-	-	8GX32	8GX36	-	-	-	-	-	-	-	3500-HIT6	3500-TB6	3500-RT1
5X0.80	-	-	12GX24	10GX32	3/16X24	3/16X32	#1	-	-	-	-	3500-HIT8	3500-TB8	3500-RT2
-	-	-	12GX24	12GX28	-	-	-	-	-	-	-	3500-HIT8	3500-TB8	3500-RT2
6X1.00	-	-	1/4X20	1/4X28	1/4X20	1/4X26	#0	1/4X26	-	-	-	3500-HIT9	3500-TB9	3500-RT2
7X1.00	-	-	5/16X18	-	5/16X18	5/16X22	#0	-	1/16X27	-	-	3500-HIT10	3500-TB11	3500-RT2
8X1.25	8X1.00	-	5/16X18	5/16X24	3/8X16	5/16X22	-	5/16X26	-	-	-	3500-HIT11	3500-TB12	3500-RT2
9X1.25	9X1.00	10X1.00	3/8X16	3/8X24	-	3/8X20	-	3/8X26	-	-	-	3500-HIT13	3500-TB12	3500-RT2
-	10X1.00	-	3/8X16	-	3/8X16	3/8X20	-	-	-	-	-	3500-HIT13	3500-TB12	3500-RT3
10X1.50	10X1.25	-	-	-	-	-	-	-	1/8X27	-	-	3500-HIT13	3500-TB13	3500-RT2
-	-	-	-	3/8X24	-	-	-	3/8X26	-	-	-	3500-HIT13	3500-TB13	3500-RT3
-	10X1.00	-	-	-	-	-	-	-	-	-	-	3500-HIT13	3500-TB13	3500-RT2
11X1.50	11X1.25	-	7/16X14	7/16X20	7/16X14	7/16X18	-	7/16X26	-	1/8X28	-	3500-HIT14	3500-TB14	3500-RT3
-	11X1.00	-	-	-	-	-	-	-	-	-	-	3500-HIT14	3500-TB14	3500-RT3
12X1.75	12X1.50	10X1.25	1/2X13	1/2X20	1/2X12	1/2X16	-	1/2X26	-	-	-	3500-HIT15	3500-TB15	3500-RT3
-	12X1.25	-	-	-	-	-	-	-	-	-	-	3500-HIT15	-	-
-	12X1.00	12X1.25	-	-	-	-	-	-	-	-	-	3500-HIT15	3500-TB15	3500-RT3
13X1.75	13X1.50	-	-	-	-	-	-	-	-	-	-	3500-HIT15	3500-TB15	3500-RT3
-	13X1.25	-	-	-	-	-	-	-	-	-	-	3500-HIT16	-	3500-RT3
14X2.00	14X1.50	14X1.25	9/16X12	9/16X18	9/16X12	9/16X16	-	-	-	1/4X18	-	3500-HIT16	-	3500-RT3
-	14X1.00	-	-	-	-	-	-	-	-	-	-	3500-HIT16	-	3500-RT3
15X2.00	15X1.50	-	-	-	-	-	-	-	1/4X18	-	-	3500-HIT16	-	3500-RT3
-	-	14X1.25	-	-	-	-	-	-	-	-	-	3500-HIT17	-	-
16X2.00	16X1.50	-	5/8X11	5/8X18	5/8X11	5/8X14	-	-	3/8X18	-	-	3500-HIT18	-	3500-RT3
18X2.50	18X2.00	18X1.50	3/4X10	-	3/4X10	3/4X12	-	-	-	3/8X19	-	3500-HIT20	-	3500-RT3
-	18X1.50	-	-	-	-	-	-	-	-	-	-	3500-HIT20	-	-
20X2.50	20X2.00	-	-	3/4X16	-	-	-	-	-	-	-	3500-HIT21	-	3500-RT3
-	20X1.50	-	-	-	-	-	-	-	-	-	-	3500-HIT21	-	3500-RT3
22X2.50	22X2.00	-	7/8X9	7/8X14	7/8X9	7/8X11	-	-	1/2X14	-	-	3500-HIT22	-	3500-RT3
-	22X1.50	-	-	-	-	-	-	-	-	-	-	3500-HIT22	-	3500-RT3
24X3.00	24X2.00	-	1X8	1X12	1X8	1X10	-	-	-	1/2X14	-	3500-HIT23	-	3500-RT3
-	24X1.50	-	-	1X14	-	-	-	-	-	5/8X14	-	3500-HIT23	-	3500-RT3
-	26X1.50	-	-	-	-	-	-	-	-	-	-	3500-HIT24	-	3500-RT4
27X3.00	27X2.00	-	-	-	-	-	-	-	-	-	-	3500-HIT24	-	3500-RT4
-	27X1.50	-	-	-	-	-	-	-	-	-	-	3500-HIT24	-	3500-RT4
-	28X1.50	-	-	-	-	-	-	-	-	-	-	3500-HIT24	-	3500-RT4
30X3.50	30X2.00	-	1.1/8X7	1.1/8X12	-	-	-	-	-	-	-	3500-HIT25	-	3500-RT4
-	30X3.00	-	1.1/8-7	1.1/8-12	-	-	-	-	-	-	1.1/8X8	3500-HIT25	-	-
-	30X1.50	-	1.1/4X7	1.1/4X12	-	-	-	-	-	-	-	3500-HIT26	-	3500-RT4
33X3.50	33X2.00	-	1.3/8X6	1.3/8X12	-	-	-	-	-	3/4X14	1.1/4X8	3500-HIT26	-	3500-RT4
-	-	-	1.3/8-6	1.3/8-12	-	-	-	-	1X11.5	7/8X14	1.3/8X8	3500-HIT27	-	-
-	-	-	-	-	-	-	-	-	-	1X11	-	3500-HIT27	-	-
36X4.00	36X3.00	-	1.1/2X6	1.1/2X12	-	-	-	-	-	-	1.1/2X8	3500-HIT28	-	3500-RT4
39X4.00	36X2.00	-	-	-	-	-	-	-	-	-	-	3500-HIT28	-	3500-RT4
-	36X1.50	-	-	-	-	-	-	-	-	-	-	3500-HIT28	-	3500-RT4
42X4.50	-	-	-	-	-	-	-	-	-	-	1.5/8X8	3500-HIT28	-	-
-	44X3.00	-	-	-	-	-	-	-	-	-	1.3/4X8	3500-HIT28	-	-
48X5.00	-	-	-	-	-	-	-	-	-	-	1.7/8X8	3500-HIT30	-	-
-	50X2.00	-	-	-	-	-	-	-	-	-	2X8	3500-HIT30	-	-



# INSERTOS DE BLOQUEIO COM CHAVE

## MS51831F, MILITARY SPECIFICATION

Os insertos de segurança Loksert são fáceis de instalar e a sua montagem é ideal para substituir as roscas danificadas ou gastas em, essencialmente, qualquer material - ferroso, não ferroso e não metálico. Eles são fabricados com a mais alta qualidade de aço carbono ou de aço inoxidável.

O inserto Loksert fornece-se com os arrastos pré-montados. Os filetes de aperto posicionados estrategicamente colocam o inserto na profundidade correta da superfície do material de alojamento. Os Lokserts são recomendados para a reparação e criação de roscas numa ampla gama de aplicações incluindo ferrarias e fundições e são especialmente recomendados para os casos de alto desgaste pelo uso e a vibração, tais como a mineração, a construção e os equipamentos de grande movimento.

### Características e Vantagens

- Eles são instalados usando machos e brocas standard.
- Sólidos, constam de guias de aperto que proporcionam alta segurança mecânica contra a rotação.
- Instalação simples. Não requer conhecimentos especiais.
- Recomendado para o seu uso numa ampla gama de materiais de alojamento.
- Impossível confundir as roscas durante a instalação.
- Se for necessário, processo de extração simples.
- Sem arrastos que cortar e remover.
- Disponível em tamanhos métricos, de polegadas e de velas de ignição.
- Disponível em parede fina e parede reforçada.



Métrica e métrica fina



UNC

Rosca americana UNC



UNF

Rosca americana fina UNF



Inserto de segurança



PD

Inserto de parede fina



PR

Inserto de parede reforçada



AC

Inserto de aço ao carbono



INOX

Inserto de aço inoxidável



...X

Código de família



Rosca **Interna** do inserto



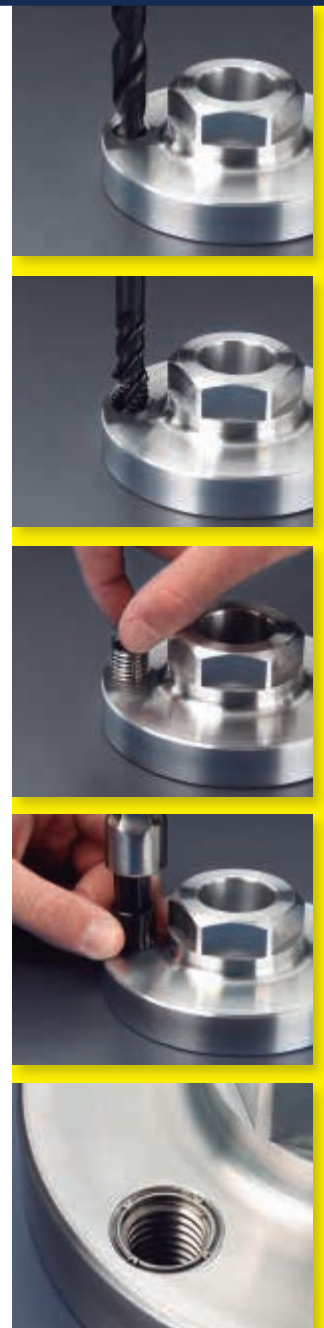
Rosca **externa** do inserto



Passo em mm.



Longitude do inserto



## INSERTOS DE BLOQUEIO

M  
MF

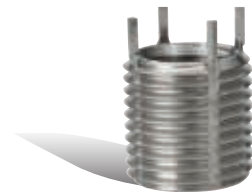
M/MF

UNC/UNF

PD

PD

...TW



				AC			INOX		
				€			€		
M 5 x 0.80	8 x 1.25	8.00	6.90	3620-5.00TW	6,17		3720-5.00TW	13,46	
M 6 x 1.00	10 x 1.25	10.00	8.80	3620-6.00TW	6,57		3720-6.00TW	13,73	
M 8 x 1.00	12 x 1.25	12.00	10.80	3621-8.00TW	8,79		3721-8.00TW	14,63	
M 8 x 1.25	12 x 1.25	12.00	10.80	3620-8.00TW	7,40		3720-8.00TW	14,26	
M 10 x 1.25	14 x 1.50	14.00	12.80	3621-10.00TW	10,97		3721-10.00TW	16,79	
M 10 x 1.50	14 x 1.50	14.00	12.80	3620-10.00TW	10,87		3720-10.00TW	16,63	
M 12 x 1.25	16 x 1.50	16.00	14.75	3621-12.00TW	13,58		3721-12.00TW	21,44	
M 12 x 1.75	16 x 1.50	16.00	14.75	3620-12.00TW	13,35		3720-12.00TW	20,93	

UNC

UNC

				€			€		
UNC (J) N°10 - 24	5/16 x 18	7.87	6.90	3632-10GTW	4,63		3732-10GTW	11,64	
UNC (J) 1/4 - 20	3/8 x 16	9.40	8.40	3632-1/4TW	4,95		3732-1/4TW	12,78	
UNC (J) 5/16 - 18	7/16 x 14	10.92	10.10	3632-5/16TW	5,28		3732-5/16TW	14,23	
UNC (J) 3/8 - 16	1/2 x 13	12.70	11.50	3632-3/8TW	5,92		3732-3/8TW	14,63	
UNC (J) 7/16 - 14	9/16 x 12	14.22	13.00	3632-7/16TW	7,68		3732-7/16TW	17,79	
UNC (J) 1/2 - 13	5/8 x 11	15.75	14.75	3632-1/2TW	8,96		3732-1/2TW	20,52	

UNF

UNF

				€			€		
UNF (J) N°10 - 32	5/16 x 18	7.87	6.90	3634-10GTW	4,63		3734-10GTW	11,64	
UNF (J) 1/4 - 28	3/8 x 16	9.40	8.40	3634-1/4TW	4,95		3734-1/4TW	12,78	
UNF (J) 5/16 - 24	7/16 x 14	10.92	10.10	3634-5/16TW	5,28		3734-5/16TW	14,23	
UNF (J) 3/8 - 24	1/2 x 13	12.70	11.50	3634-3/8TW	5,92		3734-3/8TW	14,63	
UNF (J) 7/16 - 20	9/16 x 12	14.22	13.00	3634-7/16TW	7,68		3734-7/16TW	17,79	
UNF (J) 1/2 - 20	5/8 x 11	15.75	14.75	3634-1/2TW	8,96		3734-1/2TW	20,52	

1

Furar



2

Roscar



3

Instalar

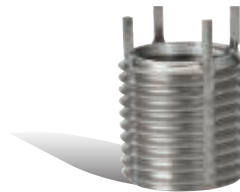


4

Ocultar as guias



**INSERTOS DE BLOQUEIO**



				AC	INOX			
				€	€	€		
M	4 x 0.70	8 x 1.25	8.00	6.90	3620-4.00HD	11,68	3720-4.00HD	15,29
M	5 x 0.80	10 x 1.25	10.00	8.80	3620-5.00HD	6,80	3720-5.00HD	16,47
M	6 x 1.00	12 x 1.25	12.00	10.80	3620-6.00HD	7,10	3720-6.00HD	16,61
M	8 x 1.00	14 x 1.50	14.00	12.80	3621-8.00HD	8,97	3721-8.00HD	17,41
M	8 x 1.25	14 x 1.50	14.00	12.80	3620-8.00HD	7,54	3720-8.00HD	17,41
M	10 x 1.25	16 x 1.50	16.00	14.75	3621-10.00HD	11,07	3721-10.00HD	20,15
M	10 x 1.50	16 x 1.50	16.00	14.75	3620-10.00HD	11,07	3720-10.00HD	19,80
M	12 x 1.25	18 x 1.50	18.00	16.75	3621-12.00HD	13,85	3721-12.00HD	21,86
M	12 x 1.75	18 x 1.50	18.00	16.75	3620-12.00HD	13,80	3720-12.00HD	21,86
M	14 x 1.50	20 x 1.50	20.00	18.75	3621-14.00HD	16,61	3721-14.00HD	25,00
M	14 x 2.00	20 x 1.50	20.00	18.75	3620-14.00HD	21,36	3720-14.00HD	30,71
M	16 x 1.50	22 x 1.50	22.00	20.50	3621-16.00HD	19,81	3721-16.00HD	28,23
M	16 x 2.00	22 x 1.50	22.00	20.50	3620-16.00HD	22,45	3720-16.00HD	33,86
M	18 x 1.50	24 x 1.50	24.00	22.50	3621-18.00HD	29,07	3721-18.00HD	43,61
M	20 x 1.50	30 x 2.00	30.00	28.00	3621-20.00HD	35,08	3721-20.00HD	51,73
M	20 x 2.50	30 x 2.00	30.00	28.00	3620-20.00HD	41,93	3720-20.00HD	62,40
M	22 x 1.50	32 x 2.00	32.00	30.00	3621-22.00HD	41,20	3721-22.00HD	61,79
M	24 x 2.00	33 x 2.00	33.00	31.00	3621-24.00HD	62,75	3721-24.00HD	94,12
M	24 x 3.00	33 x 2.00	33.00	31.00	3620-24.00HD	76,32	3720-24.00HD	113,58



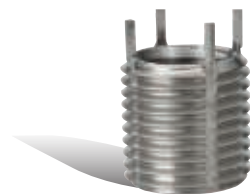
## INSERTOS DE BLOQUEIO

UNC

UNF



...HD








				AC		INOX	
					€		€
UNC (J) N°8 - 32	5/16x18	7.87	6.90	3632-8GHD	6,39	3732-8GHD	12,78
UNC (J) N°10 - 24	3/8x16	7.87	8.40	3632-10GHD	4,63	3732-10GHD	11,64
UNC (J) 1/4 - 20	7/16x14	9.40	10.10	3632-1/4HD	4,95	3732-1/4HD	12,78
UNC (J) 5/16 - 18	1/2x13	10.92	11.50	3632-5/16HD	5,27	3732-5/16HD	14,31
UNC (J) 3/8 - 16	9/16x12	12.70	13.00	3632-3/8HD	5,91	3732-3/8HD	15,17
UNC (J) 7/16 - 14	5/8x11	15.75	14.75	3632-7/16HD	7,67	3732-7/16HD	22,04
UNC (J) 1/2 - 13	3/4x16	15.75	17.75	3632-1/2HD	8,96	3732-1/2HD	22,68
UNC (J) 9/16 - 12	3/4x16	20.57	17.75	3632-9/16HD	12,30	3732-9/16HD	24,02
UNC (J) 5/8 - 11	7/8x14	22.10	21.00	3632-5/8HD	14,23	3732-5/8HD	27,31
UNC (J) 3/4 - 10	1-1/8x12	28.45	27.00	3632-3/4HD	20,29	3732-3/4HD	35,55
UNC (J) 7/8 - 9	1-1/4x12	31.75	30.00	3632-7/8HD	26,36	3732-7/8HD	55,57
UNC (J) 1 - 8	1-3/8x12	34.80	33.25	3632-1HD	53,34	3732-1HD	112,01
UNC (J) 1.1/8 - 7	1-1/2x12	41.15	36.50	3632-1.1/8HD	255,80	3732-1.1/8HD	-
UNC (J) 1.1/4 - 7	1-5/8x12	45.97	39.50	3632-1.1/4HD	318,24	3732-1.1/4HD	-
UNC (J) 1.1/2 - 6	1-7/8x12	50.80	46.00	3632-1.1/2HD	552,27	3732-1.1/2HD	-


				€		€	
UNF (J) N°10 - 32	3/8x16	7.87	8.40	3634-10GHD	4,63	3734-10GHD	11,64
UNF (J) 1/4 - 28	7/16x14	7.87	10.10	3634-1/4HD	4,95	3734-1/4HD	12,78
UNF (J) 5/16 - 24	1/2x13	9.40	11.50	3634-5/16HD	5,27	3734-5/16HD	14,31
UNF (J) 3/8 - 24	9/16x12	10.92	13.00	3634-3/8HD	5,91	3734-3/8HD	15,17
UNF (J) 7/16 - 20	5/8x11	12.70	14.75	3634-7/16HD	7,67	3734-7/16HD	22,04
UNF (J) 1/2 - 20	3/4x16	15.75	17.75	3634-1/2HD	8,96	3734-1/2HD	22,68
UNF (J) 9/16 - 18	3/4x16	15.75	17.75	3634-9/16HD	12,30	3734-9/16HD	24,02
UNF (J) 5/8 - 18	7/8x14	20.57	21.00	3634-5/8HD	14,23	3734-5/8HD	27,31
UNF (J) 3/4 - 16	1-1/8x12	22.10	27.00	3634-3/4HD	20,29	3734-3/4HD	35,55
UNF (J) 7/8 - 14	1-1/4x12	28.45	30.00	3634-7/8HD	26,36	3734-7/8HD	55,57
UNF (J) 1 - 12	1-3/8x12	31.75	33.25	3634-1HD	53,34	3734-1HD	112,01
UNF (J) 1 - 14	1-3/8x12	34.80	33.25	3635-1HD	96,81	3735-1HD	-
UNF (J) 1.1/8 - 12	1-1/2x12	41.15	36.50	3634-1.1/8HD	255,80	3734-1.1/8HD	-
UNF (J) 1.1/4 - 12	1-5/8x12	45.97	39.50	3634-1.1/4HD	318,24	3734-1.1/4HD	-
UNF (J) 1.1/2 - 12	1-7/8x12	45.97	46.00	3634-1.1/2HD	552,27	3734-1.1/2HD	-

**FERRAMENTAS DE INSTALAÇÃO**



	 PD	...TT	 PR	...HT	 PD	 PR	...T
		€		€			€
M 4	-	-	3600-4.00HT	98,32	-	-	-
M 5	3600-5.00TT	99,89	3600-5.00HT	99,89	3600-190T	-	55,81
M 6	3600-6.00TT	102,75	3600-6.00HT	102,75	3600-250T	-	51,12
M 8	3600-8.00TT	106,68	3600-8.00HT	106,68	3600-312T	-	61,30
M 10	3600-10.00TT	115,29	3600-10.00HT	115,29	3600-375T	-	61,30
M 12	3600-12.00TT	123,63	3600-12.00HT	123,63	3600-500T	-	67,02
M 14	-	-	3600-14.00HT	134,58	-	-	-
M 16	-	-	3600-16.00HT	139,27	3600-625T	-	67,02
M 18	-	-	3600-18.00HT	142,92	-	-	-
M 20	-	-	3600-20.00HT	148,40	3600-875T	-	79,02
M 22	-	-	3600-22.00HT	153,08	3600-875T	-	79,02
M 24	-	-	3600-24.00HT	169,27	3600-875T	-	79,02



		€		€		€
8G	-	-	3600-8GHT	117,39	-	-
10G	3600-10GTT	106,63	3600-10GHT	117,39	3600-190T	55,81
1/4	3600-1/4TT	110,41	3600-1/4HT	122,33	3600-250T	51,12
5/16	3600-5/16TT	122,33	3600-5/16HT	122,33	3600-312T	61,30
3/8	3600-3/8TT	139,35	3600-3/8HT	129,87	3600-375T	61,30
7/16	3600-7/16TT	128,72	3600-7/16HT	133,00	3600-375T	61,30
1/2	3600-1/2TT	133,00	3600-1/2HT	145,27	3600-500T	67,02
9/16	-	-	3600-9/16HT	145,27	3600-500T	67,02
5/8	-	-	3600-5/8HT	167,71	3600-625T	67,02
3/4	-	-	3600-3/4HT	194,04	3600-875T	79,02
7/8	-	-	3600-7/8HT	205,51	3600-875T	79,02
1	-	-	3600-1HT	203,96	3600-100T	79,02
1-1/8	-	-	3600-1.1/8HT	571,68	-	-
1-1/4	-	-	3600-1.1/4HT	618,10	-	-
1-1/2	-	-	3600-1.1/2HT	727,13	-	-



## JOGOS DE INSERTOS DE BLOQUEIO



M 5 x 0.80	8.00 x 1.25	8.00	3620-5.00TWK	AC	INOX	5	6.9	M03M08X1,25	3600-190T	
				€	€					
M 6 x 1.00	10.00 x 1.25	10.00	3620-6.00TWK	194,76	3720-6.00TWK	226,30	5	8.8	M03M10X1,25	3600-250T
M 8 x 1.25	12.00 x 1.25	12.00	3620-8.00TWK	246,73	3720-8.00TWK	276,09	5	10.8	M03M12X1,25	3600-312T
M 10 x 1.50	14.00 x 1.50	14.00	3620-10.00TWK	306,75	3720-10.00TWK	327,25	5	12.8	M03M14X1,50	3600-375T
M 12 x 1.75	16.00 x 1.50	16.00	3620-12.00TWK	326,61	3720-12.00TWK	351,17	5	14.75	M03M16X1,50	3600-500T

MF 8 x 1.00	12.00 x 1.25	12.00	3621-8.00TWK <th>AC</th> <th>INOX</th> <th rowspan="2">5</th> <th rowspan="2">10.8</th> <th rowspan="2">M03M12X1,25</th> <th rowspan="2">3600-312T</th>	AC	INOX	5	10.8	M03M12X1,25	3600-312T	
				€	€					
MF 10 x 1.25	14.00 x 1.50	14.00	3621-10.00TWK	306,75	3721-10.00TWK	327,25	5	12.8	M03M14X1,50	3600-375T
MF 12 x 1.25	16.00 x 1.50	16.00	3621-12.00TWK	333,40	3721-12.00TWK	357,95	5	14.75	M03M16X1,50	3600-500T

UNC Nº10 x 24	UNC 5/16 x 18	7,87	3632-10GTWK <th>AC</th> <th>INOX</th> <th rowspan="2">5</th> <th rowspan="2">6.90</th> <th rowspan="2">M03NC5/16X18</th> <th rowspan="2">3600-190T</th>	AC	INOX	5	6.90	M03NC5/16X18	3600-190T	
				€	€					
UNC 1/4 x 20	UNC 3/8 x 16	9,40	3632-1/4TWK	182,36	3732-1/4TWK	230,60	5	8.40	M03NC3/8X16	3600-250T
UNC 5/16 x 18	UNC 7/16 x 14	10,92	3632-5/16TWK	240,74	3732-5/16TWK	290,15	5	10.10	M03NC7/16X14	3600-312T
UNC 3/8 x 16	UNC 1/2 x 13	12,70	3632-3/8TWK	209,37	3732-3/8TWK	258,28	5	11.50	M03NC1/2X13	3600-375T
UNC 7/16 x 14	UNC 9/16 x 12	14,22	3632-7/16TWK	271,85	3732-7/16TWK	318,71	5	13.00	M03NC9/16X12	3600-375T
UNC 1/2 x 13	UNC 5/8 x 11	15,75	3632-1/2TWK	301,94	3732-1/2TWK	353,21	5	14.75	M03NC5/8X11	3600-500T

UNF Nº10 x 32	UNC 5/16 x 18	7,87	3634-10GTWK <th>AC</th> <th>INOX</th> <th rowspan="2">5</th> <th rowspan="2">6.90</th> <th rowspan="2">M03NC5/16X18</th> <th rowspan="2">3600-190T</th>	AC	INOX	5	6.90	M03NC5/16X18	3600-190T	
				€	€					
UNF 1/4 x 28	UNC 3/8 x 16	9,40	3634-1/4TWK	182,36	3734-1/4TWK	230,60	5	8.40	M03NC3/8X16	3600-250T
UNF 5/16 x 24	UNC 7/16 x 14	10,92	3634-5/16TWK	244,27	3734-5/16TWK	293,67	5	10.10	M03NC7/16X14	3600-312T
UNF 3/8 x 24	UNC 1/2 x 13	12,70	3634-3/8TWK	209,37	3734-3/8TWK	258,28	5	11.50	M03NC1/2X13	3600-375T
UNF 7/16 x 20	UNC 9/16 x 12	14,22	3634-7/16TWK	271,85	3734-7/16TWK	318,71	5	13.00	M03NC9/16X12	3600-375T
UNF 1/2 x 20	UNC 5/8 x 11	15,75	3634-1/2TWK	301,94	3734-1/2TWK	353,21	5	14.75	M03NC5/8X11	3600-500T

**JOGOS DE INSERTOS DE BLOQUEIO**

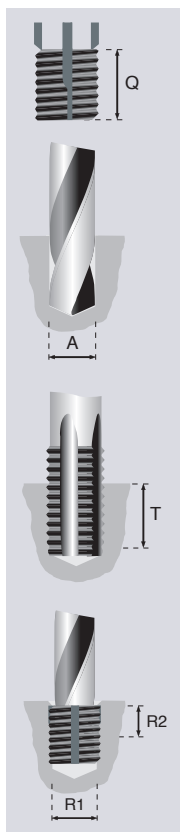


M 5 x 0.80	10.00 x 1.25	10.00	3620-5.00HDK	AC	INOX	5	8.80	M03M10X1,25	3600-190T	
				€	€					
M 6 x 1.00	12.00 x 1.25	12.00	3620-6.00HDK	239,51	3720-6.00HDK	289,17	5	10.80	M03M12X1,25	3600-250T
M 8 x 1.25	14.00 x 1.50	14.00	3620-8.00HDK	301,70	3720-8.00HDK	352,50	5	12.80	M03M14X1,25	3600-312T
M 10 x 1.50	16.00 x 1.50	16.00	3620-10.00HDK	329,94	3720-10.00HDK	375,12	5	14.75	M03M16X1,50	3600-375T
M 12 x 1.75	18.00 x 1.50	18.00	3620-12.00HDK	487,18	3720-12.00HDK	522,74	5	16.75	M03M18X1,50	3600-500T
M 16 x 2.00	22.00 x 1.50	22.00	3620-16.00HDK	654,47	3720-16.00HDK	684,03	5	20.50	M03M22X1,50	3600-625T

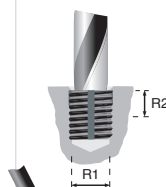
M 8 x 1.00	14.00 x 1.50	14.00	3621-8.00HDK	AC	INOX	5	12.80	M03M14X1,50	3600-312T	
				€	€					
M 10 x 1.25	16.00 x 1.50	16.00	3621-10.00HDK	329,94	3721-10.00HDK	375,12	5	14.75	M03M16X1,50	3600-375T
M 12 x 1.25	18.00 x 1.50	18.00	3621-12.00HDK	487,18	3721-12.00HDK	522,74	5	16.75	M03M18X1,50	3600-500T
M 16 x 1.50	22.00 x 1.50	22.00	3621-16.00HDK	654,47	3721-16.00HDK	684,03	5	20.50	M03M22X1,50	3600-625T

UNC Nº10 x 24	UNC 3/8 x 16	7.87	3632-10GHDK	AC	INOX	5	8.40	M03NC3/8X16	3600-190T	
				€	€					
UNC 1/4 x 20	UNC 7/16 x 14	9.40	3632-1/4HDK	236,82	3732-1/4HDK	303,18	5	10.10	M03NC7/16X14	3600-250T
UNC 5/16 x 18	UNC 1/2 x 13	10.92	3632-5/16HDK	212,71	3732-5/16HDK	283,52	5	11.50	M03NC1/2X13	3600-312T
UNC 3/8 x 16	UNC 9/16 x 12	12.70	3632-3/8HDK	275,05	3732-3/8HDK	348,64	5	13.00	M03NC9/16X12	3600-375T
UNC 7/16x14	UNC 5/8 x 11	14.22	3632-7/16HDK	263,42	3732-7/16HDK	283,29	5	14.75	M03NC5/8X11	3600-375T
UNC 1/2x13	UNF 3/4 x 16	15.75	3632-1/2HDK	400,76	3732-1/2HDK	431,01	5	17.75	M03NF3/4X16	3600-500T
UNC 9/16x12	UNF 3/4 x 16	20.57	3632-9/16HDK	400,76	3732-9/16HDK	431,01	5	17.75	M03NF3/4X16	3600-500T
UNC 5/8x11	UNF 7/8 x 14	22.10	3632-5/8HDK	541,96	3732-5/8HDK	601,61	5	21.00	M03NF7/8X14	3600-625T

UNF Nº10 x 32	UNC 3/8 x 16	7.87	3634-10GHDK	AC	INOX	5	8.40	M03NC3/8X16	3600-190T	
				€	€					
UNF 1/4 x 28	UNC 7/16 x 14	9.40	3634-1/4HDK	236,82	3734-1/4HDK	303,18	5	10.10	M03NC7/16X14	3600-250T
UNF 5/16 x 24	UNC 1/2 x 13	10.92	3634-5/16HDK	212,71	3734-5/16HDK	283,52	5	11.50	M03NC1/2X13	3600-312T
UNF 3/8 x 24	UNC 9/16 x 12	12.70	3634-3/8HDK	275,05	3734-3/8HDK	348,64	5	13.00	M03NC9/16X12	3600-375T
UNF 7/16 x 20	UNC 5/8 x 11	14.22	3634-7/16HDK	306,84	3734-7/16HDK	374,44	5	14.75	M03NC5/8X11	3600-375T
UNF 1/2 x 20	UNF 3/4 x 16	15.75	3634-1/2HDK	452,51	3734-1/2HDK	514,84	5	17.75	M03NF3/4X16	3600-500T
UNF 9/16 x 18	UNF 3/4 x 16	20.57	3634-9/16HDK	470,90	3734-9/16HDK	529,07	5	17.75	M03NF3/4X16	3600-500T
UNF 5/8 x 18	UNF 7/8 x 14	22.10	3634-5/8HDK	541,96	3734-5/8HDK	601,61	5	21.00	M03NF7/8X14	3600-625T

Loksert  
by CELESA

## EXTRAÇÃO



1

## Furar

Fure o material entre as guias e a rosca interior na profundidade especificada. Consulte pela informação técnica.

2

## Dobrar

Dobre as guias para dentro e quebre-las.

3

## Extrair

Tire o inserto com um extrator de parafusos.

4

## Instalar

Pelo procedimento habitual, coloque um novo inserto Loksert.



	Rosca Interna		Rosca Externa		Macho				
	Tol 6H mm	Tol 6G mm	Q mm	Ferramenta de instalação	A mm	Tol 6H mm	T Min. mm	R1 mm	R2 mm
PAREDE FINA	M 5 X 0.8	M8 X 1.25	8.0	3600-190T	6.9	M8 X 1.25	9.5	5.50	4.00
	M 6 X 1.0	M10 X 1.25	10.0	3600-250T	8.8	M10 x 1.25	11.5	7.50	4.75
	M 8 X 1.25	M12 x 1.25	12.0	3600-312T	10.8	M12 x 1.25	13.5	9.50	4.75
	M 8 X 1.0	M12 x 1.25	12.0	3600-312T	10.8	M12 x 1.25	13.5	9.50	4.75
	M 10 X 1.5	M14 x 1.5	14.0	3600-375T	12.8	M14 x 1.5	15.5	11.50	4.75
	M 10 X 1.25	M14 x 1.5	14.0	3600-375T	12.8	M14 x 1.5	15.5	11.50	4.75
	M 12 X 1.75	M16 x 1.5	16.0	3600-500T	14.75	M16 x 1.5	17.5	13.50	4.75
M 12 X 1.25	M16 x 1.5	16.0	3600-500T	14.75	M16 x 1.5	17.5	13.50	4.75	

	Rosca Interna		Rosca Externa		Macho				
	Tol 6H mm	Tol 6G mm	Q mm	Ferramenta de instalação	A mm	Tol 2B "	T Min. mm	R1 mm	R2 mm
PAREDE REFORÇADA	M 4 X 0.7	M8 X 1.25	8.0	3600-4.00HT	6.9	M8 X 1.25	9.5	5.50	4.00
	M 5 X 0.8	M10 X 1.25	10.0	3600-190T	8.8	M10 x 1.25	12.5	7.50	4.75
	M 6 X 1.0	M12 x 1.25	12.0	3600-250T	10.8	M12 x 1.25	14.5	9.50	4.75
	M 8 X 1.25	M14 x 1.5	14.0	3600-312T	12.8	M14 x 1.5	16.5	11.50	4.75
	M 8 X 1.0	M14 x 1.5	14.0	3600-312T	12.8	M14 x 1.5	16.5	11.50	4.75
	M 10 X 1.5	M16 x 1.5	16.0	3600-375T	14.75	M16 x 1.5	18.5	13.50	4.75
	M 10 X 1.25	M16 x 1.5	16.0	3600-375T	14.75	M16 x 1.5	18.5	13.50	4.75
	M 12 X 1.75	M18 X 1.5	18.0	3600-500T	16.75	M18 X 1.5	20.5	15.50	4.75
	M 12 X 1.25	M18 X 1.5	18.0	3600-500T	16.75	M18 X 1.5	20.5	15.50	4.75
	M 14 X 2.0	M20 X 1.5	20.0	3600-14.00HT	18.75	M20 X 1.5	22.5	17.50	4.75
	M 14 X 1.5	M20 X 1.5	20.0	3600-14.00HT	18.75	M20 X 1.5	22.5	17.50	4.75
	M 16 X 2.0	M22 X 1.5	22.0	3600-625T	20.5	M22 X 1.5	24.5	17.75	6.35
	M 16 X 1.5	M22 X 1.5	22.0	3600-625T	20.5	M22 X 1.5	24.5	17.75	6.35
	M 18 X 1.5	M24 X 1.5	24.0	3600-18.00HT	22.5	M24 X 1.5	26.5	19.75	6.35
	M 20 X 2.5	M30 X 2.0	30.0	3600-875T	28.0	M30 X 2.0	34.5	25.75	6.35
	M 20 X 1.5	M30 X 2.0	30.0	3600-875T	28.0	M30 X 2.0	34.5	25.75	6.35
	M 22 X 1.5	M32 X 2.0	32.0	3600-22.00HT	30.0	M32 X 2.0	36.5	27.75	6.35
	M 24 X 3.0	M33 X 2.0	33.0	3600-24.00HT	31.0	M33 X 2.0	37.5	28.75	6.35
	M 24 X 2.0	M33 X 2.0	33.0	3600-24.00HT	31.0	M33 X 2.0	37.5	28.75	6.35

	Rosca Interna		Rosca Externa		Macho					
	Tol 6H mm	Tol 6G mm	Q mm	Ferramenta de instalação	A mm	Tol 2B "	T Min. mm	R1 mm	R2 mm	
PAREDE FINA	Nº10 X 24	5/16 X 18	7.87	3600-190T	6.90	UNC 5/16X18	9.40	5.56	3.20	
	Nº10 X 32	5/16 X 18	7.87	3600-190T	6.90	UNC 5/16X18	9.40	5.56	3.20	
	1/4 X 20	3/8 X 16	9.40	3600-250T	8.40	UNC 3/8X16	10.92	7.14	4.75	
	1/4 X 28	3/8 X 16	9.40	3600-250T	8.40	UNC 3/8X16	10.92	7.14	4.75	
	5/16 X 18	7/16 X 14	10.92	3600-312T	10.10	UNC 7/16X14	12.70	8.73	4.75	
	5/16 X 24	7/16 X 14	10.92	3600-312T	10.10	UNC 7/16X14	12.70	8.73	4.75	
	3/8 X 16	1/2 X 13	12.70	3600-375T	11.50	UNC 1/2X13	14.22	10.32	4.75	
	3/8 X 24	1/2 X 13	12.70	3600-375T	11.50	UNC 1/2X13	14.22	10.32	4.75	
	7/16 X 14	9/16 X 12	14.22	3600-375T	13.10	UNC 9/16X12	15.75	11.91	4.75	
	7/16 X 20	9/16 X 12	14.22	3600-375T	13.10	UNC 9/16X12	15.75	11.91	4.75	
	1/2 X 13	5/8 X 11	15.75	3600-500T	14.75	UNC 5/8X11	17.27	13.49	4.75	
	1/2 X 20	5/8 X 11	15.75	3600-500T	14.75	UNC 5/8X11	17.27	13.49	4.75	
	PAREDE REFORÇADA	Nº8 X 32	5/16 X 18	7.87	3600-8GHT	6.90	UNC 5/16X18	9.40	5.56	3.20
		Nº10 X 24	3/8 X 16	7.87	3600-190T	8.40	UNC 3/8X16	9.40	7.14	3.20
Nº10 X 32		3/8 X 16	7.87	3600-190T	8.40	UNC 3/8X16	9.40	7.14	3.20	
1/4 X 20		7/16 X 14	9.40	3600-250T	10.10	UNC 7/16X14	10.92	8.73	4.75	
1/4 X 28		7/16 X 14	9.40	3600-250T	10.10	UNC 7/16X14	10.92	8.73	4.75	
5/16 X 18		1/2 X 13	10.92	3600-312T	11.50	UNC 1/2X13	12.70	10.32	4.75	
5/16 X 24		1/2 X 13	10.92	3600-312T	11.50	UNC 1/2X13	12.70	10.32	4.75	
3/8 X 16		9/16 X 12	12.70	3600-375T	13.10	UNC 9/16X12	14.22	11.91	4.75	
3/8 X 24		9/16 X 12	12.70	3600-375T	13.10	UNC 9/16X12	14.22	11.91	4.75	
7/16 X 14		5/8 X 11	15.75	3600-375T	14.75	UNC 5/8X11	17.27	13.49	4.75	
7/16 X 20		5/8 X 11	15.75	3600-375T	14.75	UNC 5/8X11	17.27	13.49	4.75	
1/2 X 13		3/4 X 16	15.75	3600-500T	17.50	UNF 3/4X16	17.27	16.67	4.75	
1/2 X 20		3/4 X 16	15.75	3600-500T	17.50	UNF 3/4X16	17.27	16.67	4.75	
9/16 X 12		3/4 X 16	20.57	3600-500T	17.50	UNF 3/4X16	23.88	16.67	4.75	
9/16 X 18		3/4 X 16	20.57	3600-500T	17.50	UNF 3/4X16	23.88	16.67	4.75	
5/8 X 11		7/8 X 14	22.10	3600-625T	21.00	UNF 7/8X14	25.40	19.84	7.90	
5/8 X 18		7/8 X 14	22.10	3600-625T	21.00	UNF 7/8X14	25.40	19.84	7.90	
3/4 X 10		1-1/8 X 12	28.45	3600-875T	27.00	UNF 1-1/8X12	33.27	24.61	7.90	
3/4 X 16		1-1/8 X 12	28.45	3600-875T	27.00	UNF 1-1/8X12	33.27	24.61	7.90	
7/8 X 9		1-1/4 X 12	31.75	3600-875T	30.00	UNF 1-1/4X12	36.58	27.75	7.90	
7/8 X 14		1-1/4 X 12	31.75	3600-875T	30.00	UNF 1-1/4X12	36.58	27.75	7.90	
1 X 8		1-3/8 X 12	34.80	3600-100T	33.25	UNF 1-3/8X12	39.62	31	7.90	
1 X 12		1-3/8 X 12	34.80	3600-100T	33.25	UNF 1-3/8X12	39.62	31	7.90	
1 X 14		1-3/8 X 12	34.80	3600-100T	33.25	UNF 1-3/8X12	39.62	31	7.90	
1-1/8 X 7		1-1/2 X 12	41.15	3600-1.1/8HT	36.50	UNF 1-1/2X12	46.74	34	7.90	
1-1/8 X 12		1-1/2 X 12	41.15	3600-1.1/8HT	36.50	UNF 1-1/2X12	46.74	34	7.90	
1-1/4 X 7		1-5/8 X 12	45.97	3600-1.1/4HT	39.75	UNF 1-5/8X12	52.32	37.25	7.90	
1-1/4 X 12		1-5/8 X 12	45.97	3600-1.1/4HT	39.75	UNF 1-5/8X12	52.32	37.25	7.90	
1-1/2 X 6	1-7/8 X 12	50.80	3600-1.1/2HT	46.00	UNF 1-7/8X12	57.91	43.50	7.90		
1-1/2 X 12	1-7/8 X 12	50.80	3600-1.1/2HT	46.00	UNF 1-7/8X12	57.91	43.50	7.90		

## PAREDE FINA E REFORÇADA

Material do inserto	Aço ao carbono - C1215. Aço inoxidável - AISI 303	Nº Guias	4 guias nos insertos com a rosca interna M7 ou maior 2 guias nos insertos com a rosca interna inferior à M7	
Guias	AISI 302		Tolerância do furo prévio	6.90 - 10.80 = +0.100 / -0.025
Tolerâncias	Aço ao carbono - Zincado fosfatado; Aço inoxidável - Passivado			



tapsert<sup>®</sup>  
by celesa



# INSERTOS AUTO-ROSCANTES

Os inserts TAPSERT são inserts auto-roscantes com roscas internas e externas. Eles devem ser instalados num furo previamente feito com o tamanho indicado no catálogo. A parte frontal do inserto TAPSERT consiste num cone de entrada que faz de macho e rosca o furo prévio. A ranhura do inserto permite alojar a limanha gerada na operação. Os inserts TAPSERT são perfeitos para gerar roscas muito fortes em materiais com baixa capacidade de resistência, onde as roscas deterioram-se facilmente.

## Características e Vantagens

- Instalação simples nos furos prévios feitos com brocas de tamanho standard. Como colocador, é usado um parafuso igual à rosca interna.
- Não é necessário usar machos na sua instalação. O próprio inserto faz a rosca.
- O inserto suporta cargas de compressão e tração muito altas.
- Permite apertar em pares extremamente altos em materiais macios como plástico, alumínio, madeira, etc.
- A tolerância da rosca mantém-se apesar de múltiplos usos da rosca. Baixo desgaste.



Aparafuse o Tapsert no parafuso com as ranhuras na parte inferior.  
Ajuste a porca ao comprimento do inserto até que o parafuso esteja nivelado com o inserto.

## INSERTOS AUTO-ROSCANTES COM RANHURA

M  
MF

M/MF

AC

AC

INOX



AC 302



INOX 302



Diagrama	Diagrama	mm	Ø	L	AC	€			INOX	€		
						100-499	500-1999	2000-...		AISI 303	25-499	500-1999
M 2.50 x 0.45	M 4.50 x 0.50	6.00	4.30	8.00	3920-2.5X6	0,48	0,44	0,40	3920-2.5X6SS	0,83	0,79	0,70
M 3 x 0.50	M 5 x 0.50	6.00	4.80	8.00	3920-3X6	0,49	0,45	0,42	3920-3X6SS	0,84	0,80	0,71
M 4 x 0.70	M 6.50 x 0.75	8.00	6.20	10.00	3920-4X8	0,51	0,49	0,46	3920-4X8SS	1,12	1,07	0,96
M 5 x 0.80	M 8 x 1.00	10.00	7.60	13.00	3920-5X10	0,64	0,61	0,57	3920-5X10SS	1,46	1,39	1,25
M 6 x 1.00	M 10 x 1.50	14.00	9.40	17.00	3920-6X14	0,82	0,78	0,70	3920-6X14SS	1,81	1,71	1,54
M 8 x 1.25	M 12 x 1.50	15.00	11.40	18.00	3920-8X15	1,00	0,95	0,86	3920-8X15SS	2,28	2,14	1,94
M 10 x 1.50	M 14 x 1.50	18.00	13.50	22.00	3920-10X18	1,45	1,38	1,25	3920-10X18SS	3,33	3,14	2,84
						25-499	500-1999	2000-...		1-499	500-1999	2000-...
M 12 x 1.75	M 16 x 1.50	22.00	15.50	26.00	3920-12X22	2,28	2,14	1,96	3920-12X22SS	4,49	4,22	3,81
M 14 x 2.00	M 18 x 1.50	24.00	17.50	28.00	3920-14X24	3,10	2,92	2,67	3920-14X24SS	5,90	5,55	5,00
M 16 x 2.00	M 20 x 1.50	22.00	19.50	26.00	3920-16X22	4,16	3,79	3,44	3920-16X22SS	7,23	6,59	5,94
						5-499	500-1999	2000-...		1-499	500-1999	2000-...
M 18 x 2.50	M 22 x 1.50	24.00	21.50	29.00	3920-18X24	6,25	5,68	5,19	3920-18X24SS	7,93	7,22	6,51
M 20 x 2.50	M 26 x 1.50	27.00	25.50	32.00	3920-20X26	7,02	6,41	5,83	3920-20X26SS	9,15	8,34	7,51
M 22 x 2.50	M 26 x 1.50	30.00	25.50	36.00	3920-22X30	8,37	7,61	6,93	3920-22X30SS	10,16	9,26	8,34
M 24 x 3.00	M 30 x 1.50	30.00	29.50	36.00	3920-24X30	10,34	9,44	8,59	3920-24X30SS	11,62	10,58	9,53



3920-6X14P

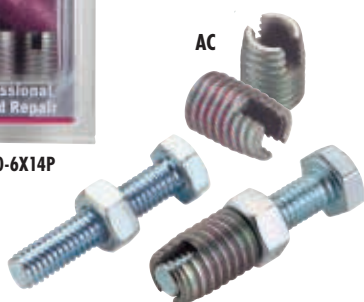


Diagrama	Diagrama	mm	Ø	L	AC	€	AC
M 2.50 x 0.45	M 4.50 x 0.50	6.00	4.30*	8.00	3920-2.5X6P	11,72	2
M 3 x 0.50	M 5 x 0.50	6.00	4.80*	8.00	3920-3X6P	11,72	2
M 4 x 0.70	M 6.50 x 0.75	8.00	6.20*	10.00	3920-4X8P	10,65	2
M 5 x 0.80	M 8 x 1.00	10.00	7.60*	13.00	3920-5X10P	10,65	2
M 6 x 1.00	M 10 x 1.50	14.00	9.40*	17.00	3920-6X14P	10,65	2
M 8 x 1.25	M 12 x 1.50	15.00	11.40*	18.00	3920-8X15P	11,72	2
M 10 x 1.50	M 14 x 1.50	18.00	13.50*	22.00	3920-10X18P	12,78	2
M 12 x 1.75	M 16 x 1.50	22.00	15.50*	26.00	3920-12X22P	14,90	2
M 14 x 2.00	M 18 x 1.50	24.00	17.50*	28.00	3920-14X24P	15,58	2
M 16 x 2.00	M 20 x 1.50	22.00	19.50*	26.00	3920-16X22P	22,35	2

\*Broca previa não incluída

**INSERTOS AUTO-ROSCANTES COM RANHURA**



Diagram	Diagram	mm	Ø	L	BRASS	€			INOX AISI 316L	€		
						100-499	500-1999	2000-...		25-499	500-1999	2000-...
M 3 x 0.50	M 5 x 0.50	6.00	4.80	8.00	3920-3X6LAT	0,48	0,46	0,42	-			
M 4 x 0.70	M 6.5 x 0.75	8.00	6.20	10.00	3920-4X8LAT	0,55	0,51	0,48	3920-4X8DY	1,46	1,39	1,25
M 5 x 0.80	M 8 x 1.00	10.00	7.60	13.00	3920-5X10LAT	0,68	0,64	0,59	3920-5X10DY	1,90	1,79	1,62
M 6 x 1.00	M 10 x 1.50	14.00	9.40	17.00	3920-6X14LAT	0,86	0,82	0,76	3920-6X14DY	2,35	2,22	2,00
M 8 x 1.25	M 12 x 1.50	15.00	11.40	18.00	3920-8X15LAT	1,17	1,09	1,00	3920-8X15DY	3,23	3,05	2,75
M 10 x 1.50	M 14 x 1.50	18.00	13.50	22.00	3920-10X18LAT	2,06	1,94	1,77	-			
						25-499	500-1999	2000-...		1-499	500-1999	2000-...
M 12 x 1.75	M 16 x 1.50	22.00	15.50	26.00	3920-12X22LAT	2,64	2,49	2,27				

**APLICAÇÕES**

- Madeiras duras
- Madeiras macias
- Termoplásticos macios
- Materiais aglomerados



**BRASS 309**

Diagram	Diagram	mm	SOFT		L	BRASS	€		
			Ø	Ø			100-499	500-1999	2000-...
M 3 x 0.50	M 5.5 x 1.60	6.00	4.10	4.20-4.30	9.00	3925-3X6	0,88	0,83	0,79
M 4 x 0.70	M 7 x 2.50	10.00	5.10	5.20-5.30	13.00	3925-4X10	1,19	1,13	1,07
M 5 x 0.80	M 9 x 3.00	12.00	6.60	6.70-6.90	15.00	3925-5X12	1,37	1,30	1,24
M 6 x 1.00	M 10 x 4.00	14.00	7.60	7.70-7.90	17.00	3925-6X14	1,52	1,45	1,38
M 8 x 1.25	M 13 x 4.00	20.00	9.90	10.10-10.30	23.00	3925-8X20	2,08	1,97	1,88
M 10 x 1.50	M 16 x 5.00	23.00	12.40	12.60-12.80	26.00	3925-10X23	3,11	2,95	2,80
							25-499	500-1999	2000-...
M 12 x 1.75	M 19 x 5.00	26.00	15.40	15.60-15.80	30.00	3925-12X26	5,20	4,94	4,68

**Materiais Duros**



**Materiais Macios**



## INSERTOS AUTO-ROSCANTES COM RANHURA

UNC



UNC



AC



INOX



AC 302



INOX 302



UNC		M		mm	Ø	L	AC	€	INOX AISI 303	€
UNC	Nº4 x 40	M 5 x 0.50	6.00	4.80	8.00		3932-4GX6	1,34	3932-4GX6SS	2,47
UNC	Nº6 x 32	M 6 x 0.75	8.00	5.70	10.00		3932-6GX8	1,72	3932-6GX8SS	3,22
UNC	Nº8 x 32	M 6.50 x 0.75	8.00	6.20	10.00		3932-8GX8	2,32	3932-8GX8SS	4,19
UNC	Nº10 x 24	M 8 x 1.00	10.00	7.60	13.00		3932-10GX10	2,63	3932-10GX10SS	4,87
UNC	1/4 x 20	M 10 x 1.50	14.00	9.40	17.00		3932-1/4X14	3,22	3932-1/4X14SS	6,22
UNC	5/16 x 18	M 12 x 1.50	15.00	11.40	18.00		3932-5/16X15	4,19	3932-5/16X15SS	8,24
UNC	3/8 x 16	M 14 x 1.50	18.00	13.50	22.00		3932-3/8X18	5,92	3932-3/8X18SS	11,76
UNC	7/16 x 14	M 16 x 1.50	22.00	15.50	26.00		3932-7/16X22	8,68	3932-7/16X22SS	17,16
UNC	1/2 x 13	M 18 x 1.50	22.00	17.50	26.00		3932-1/2X22	10,93	3932-1/2X22SS	22,85
UNC	5/8 x 11	M 20 x 1.50	22.00	19.50	26.00		3932-5/8X22	12,51	3932-5/8X22SS	22,85

UNF



UNF



AC



INOX



AC 302

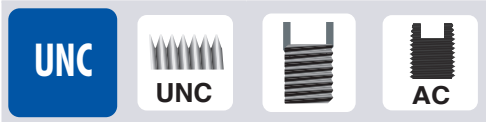


INOX 302



UNF		M		mm	Ø	L	AC	€	INOX AISI 303	€
UNF	Nº10 x 32	M 8 x 1.00	10.00	7.60	13.00		3934-10GX10	2,63	3934-10GX10SS	4,87
UNF	1/4 x 28	M 10 x 1.50	14.00	9.40	17.00		3934-1/4X14	3,22	3934-1/4X14SS	6,22
UNF	5/16 x 24	M 12 x 1.50	15.00	11.40	18.00		3934-5/16X15	4,19	3934-5/16X15SS	8,24
UNF	3/8 x 24	M 14 x 1.50	18.00	13.50	22.00		3934-3/8X18	5,92	3934-3/8X18SS	11,76
UNF	7/16 x 20	M 16 x 1.50	22.00	15.50	26.00		3934-7/16X22	8,68	3934-7/16X22SS	17,16
UNF	1/2 x 20	M 18 x 1.50	22.00	17.50	26.00		3934-1/2X22	10,93	3934-1/2X22SS	22,85
UNF	5/8 x 18	M 20 x 1.50	22.00	19.50	26.00		3934-5/8X22	12,51	3934-5/8X22SS	22,85

**INSERTOS AUTO-ROSCANTES COM RANHURA EM BLISTER**



						€	
UNC Nº4 x 40	M 5 x 0.50	6.00	4.80*	8.00	3932-4GX6P	22,85	2
UNC Nº6 x 32	M 6 x 0.75	8.00	5.70*	10.00	3932-6GX8P	22,85	2
UNC Nº8 x 32	M 6.50 x 0.75	8.00	6.20*	10.00	3932-8GX8P	22,85	2
UNC Nº10 x 24	M 8 x 1.00	10.00	7.60*	13.00	3932-10GX10P	22,85	2
UNC 1/4 x 20	M 10 x 1.50	14.00	9.40*	17.00	3932-1/4X14P	25,85	2
UNC 5/16 x 18	M 12 x 1.50	15.00	11.40*	18.00	3932-5/16X15P	28,42	2
UNC 3/8 x 16	M 14 x 1.50	18.00	13.50*	22.00	3932-3/8X18P	31,00	2
UNC 7/16 x 14	M 16 x 1.50	22.00	15.50*	26.00	3932-7/16X22P	33,57	2
UNC 1/2 x 13	M 18 x 1.50	24.00	17.50*	26.00	3932-1/2X22P	36,14	2
UNC 5/8 x 11	M 20 x 1.50	22.00	19.50*	26.00	3932-5/8X22P	40,30	2

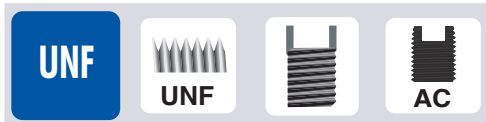


3932-4GX6P



tapsert  
by *celesa*

Rosa



						€	
UNF Nº10 x 32	M 8 x 1.00	10.00	7.60*	13.00	3934-10GX10P	22,85	2
UNF 1/4 x 28	M 10 x 1.50	14.00	9.40*	17.00	3934-1/4X14P	25,85	2
UNF 5/16 x 24	M 12 x 1.50	15.00	11.40*	18.00	3934-5/16X15P	28,42	2
UNF 3/8 x 24	M 14 x 1.50	18.00	13.50*	22.00	3934-3/8X18P	31,00	2
UNF 7/16 x 20	M 16 x 1.50	22.00	15.50*	26.00	3934-7/16X22P	33,57	2
UNF 1/2 x 20	M 18 x 1.50	22.00	17.50*	26.00	3934-1/2X22P	36,14	2
UNF 5/8 x 18	M 20 x 1.50	22.00	19.50*	26.00	3934-5/8X22P	40,30	2



3934-1/4X14P

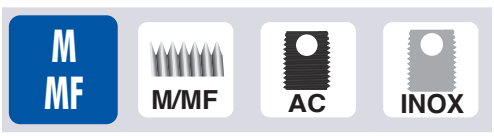


\* Broca previa não incluída.

EXTRAÇÃO



**INSERTO AUTO-ROSCANTES COM 3 FUROS**

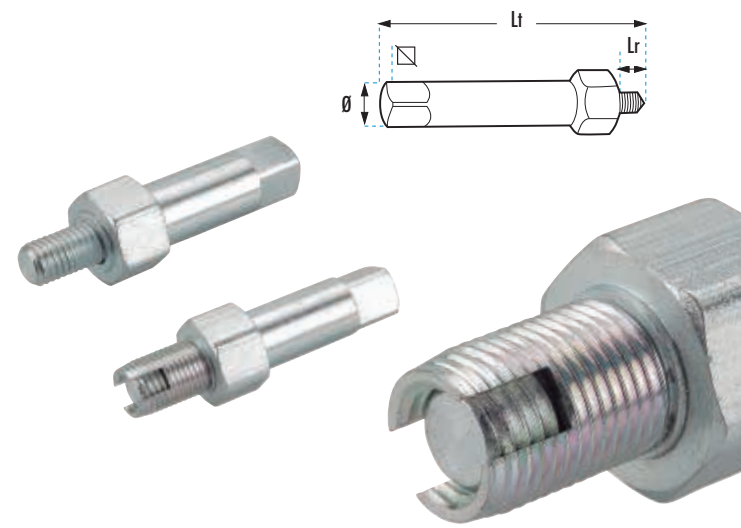


Ø	L	Lr	Ø	Ø	AC	€			INOX	AISI 303	€		
						100-499	500-1999	2000-...			25-499	500-1999	2000-...
M 4 x 0.70	M 6.50 x 0.80	6.00	6.00-6.10	8.00	3333-M4X6	0,76	0,72	0,66	3333-M4X6SS	1,26	1,19	1,09	
M 5 x 0.80	M 8 x 1.00	7.00	7.40-7.50	9.00	3333-M5X7	0,89	0,85	0,78	3333-M5X7SS	1,55	1,47	1,34	
M 6 x 1.00	M 10 x 1.25	8.00	9.30-9.40	10.00	3333-M6X8	1,03	0,97	0,89	3333-M6X8SS	1,94	1,83	1,67	
M 8 x 1.25	M 12 x 1.50	9.00	11.10-11.20	11.00	3333-M8X9	1,23	1,16	1,07	3333-M8X9SS	2,47	2,34	2,12	
M 10 x 1.50	M 14 x 1.50	10.00	13.10-13.20	13.00	3333-M10X10	1,82	1,72	1,56	3333-M10X10SS	3,72	3,50	3,19	
M 12 x 1.75	M 16 x 1.75	12.00	15.00-15.10	15.00	3333-M12X12	2,87	2,70	2,46	3333-M12X12SS	5,95	5,61	5,10	
M 14 x 2.00	M 18 x 2.00	14.00	17.00-17.10	17.00	3333-M14X14	3,74	3,52	3,20	3333-M14X14SS	6,84	6,43	5,85	
M 16 x 2.00	M 20 x 2.00	14.00	19.00-19.10	17.00	3333-M16X14	5,08	4,78	4,36	3333-M16X14SS	9,22	8,67	7,90	

Ø	L	Lr	Ø	Ø	AC	€			INOX	AISI 303	€		
						100-499	500-1999	2000-...			25-499	500-1999	2000-...
M 4 x 0.70	M 6.50 x 0.80	8.00	6.10-6.20	10.00	3333-M4X8	0,84	0,79	0,72	3333-M4X8SS	1,42	1,33	1,22	
M 5 x 0.80	M 8 x 1.00	10.00	7.60-7.70	13.00	3333-M5X10	1,06	1,01	0,92	3333-M5X10SS	1,79	1,69	1,54	
M 6 x 1.00	M 10 x 1.25	12.00	9.50-9.60	15.00	3333-M6X12	1,34	1,27	1,17	3333-M6X12SS	2,13	2,03	1,84	
M 8 x 1.25	M 12 x 1.50	14.00	11.30-11.15	17.00	3333-M8X14	1,73	1,64	1,50	3333-M8X14SS	2,79	2,63	2,39	
M 10 x 1.50	M 14 x 1.50	18.00	13.30-13.50	22.00	3333-M10X18	2,50	2,34	2,15	3333-M10X18SS	4,24	4,00	3,64	
M 12 x 1.75	M 16 x 1.75	22.00	15.20-15.40	26.00	3333-M12X22	3,78	3,56	3,24	3333-M12X22SS	9,12	8,58	7,82	
M 14 x 2.00	M 18 x 2.00	24.00	17.20-17.40	28.00	3333-M14X24	5,43	5,11	4,65	3333-M14X24SS	10,80	10,16	9,26	
M 16 x 2.00	M 20 x 2.00	24.00	19.20-19.10	28.00	3333-M16X24	6,33	5,95	5,43	3333-M16X24SS	12,80	12,03	10,96	

**FERRAMENTA PARA INSTALAÇÃO DE INSERTOS AUTO-ROSCANTES**

Ø	L mm	Lr mm	Ø mm	Ø mm	Part	€
M 3 x 0.50	73.00	6.00	12.00	12.00	3920-M3	60,86
M 4 x 0.70	75.00	7.00	12.00	12.00	3920-M4	60,86
M 5 x 0.80	77.00	9.00	12.00	12.00	3920-M5	60,86
M 6 x 1.00	78.00	11.00	12.00	12.00	3920-M6	60,86
M 8 x 1.25	80.00	12.00	12.00	12.00	3920-M8	60,86
M 10 x 1.50	80.00	16.00	18.00	14.00	3920-M10	60,86
M 12 x 1.75	83.50	20.00	18.00	14.00	3920-M12	68,80
M 14 x 2.00	83.50	20.00	22.00	22.00	3920-M14	76,07
M 16 x 2.00	83.50	20.00	22.00	22.00	3920-M16	91,29
M 18 x 2.50	85.50	21.50	26.00	26.00	3920-M18	114,44
M 20 x 2.50	85.50	21.50	26.00	26.00	3920-M20	114,44
M 22 x 2.50	85.50	21.50	30.00	30.00	3920-M22	121,72
M 24 x 3.00	87.50	23.50	30.00	30.00	3920-M24	136,93





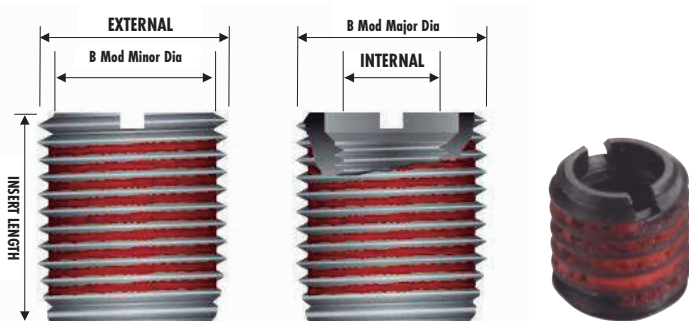
e-zsert<sup>®</sup>  
by *celesa*



# INSERTOS SÓLIDOS COM VEDANTE ANAERÓBICO

## Características e Vantagens

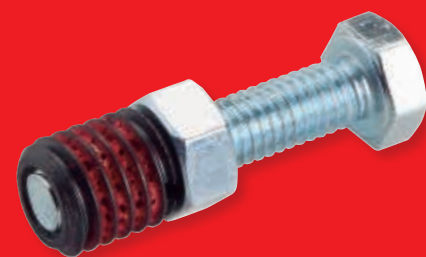
- Fácil instalação do inserto EZ Sert com um parafuso de rosca igual à interna ou também por meio de uma chave de fenda ou ferramenta elétrica.
- Eles são instalados usando machos e brocas Standard.
- O adesivo microencapsulado reage em 3-5 minutos e evita que o inserto deixe o seu alojamento devido às vibrações externas. O inserto fica aderido gerando uma rosca estanque para líquidos e gases com resistência até 400 bar de pressão quando a reação se estabiliza (72 horas).



## EXTRAÇÃO



- NOTA: O inserto EZ SERT requer uma rosca externa ligeiramente diferente da marcada pela norma DIN 13. O diâmetro externo é standard, mas o diâmetro interno é um pouco maior que o normal, então deve adicionar um décimo ao tamanho usual da broca. Exemplo: inserto de rosca externa M6X1, será usada uma broca de 5,1mm em vez de 5mm, o que seria o habitual.




## INSERTOS SÓLIDOS COM VEDANTE ANAERÓBICO

M  
MF

PD

## PAREDE FINA

		L mm				€
M 4 x 0.70	UNC 5/16 x 18h	7.92	6,90	9.52	3320-4.00TWF	5,11
M 5 x 0.80	UNC 5/16 x 18h	7.92	6,90	9.52	3320-5.00TWF	5,11
M 6 x 1.00	UNC 3/8 x 16h	9.52	8,40	11.10	3320-6.00TWF	6,44
M 8 x 1.25	UNC 7/16 x 14h	11.10	10,10	12.70	3320-8.00TWF	7,32
M 10 x 1.50	UNC 1/2 x 13h	12.70	11,50	14.22	3320-10.00TWF	10,34
M 12 x 1.75	UNC 5/8 x 11h	15.75	14,50	17.27	3320-12.00TWF	11,61







AISI 303

AC

## PAREDE REFORÇADA



PR


		L mm			AC	€	AISI 303	€
M 3 x 0.50	M6 x 1.00	6.50	5.10	7.80	3320-3.00HWM	3,15	3320-3.00HWSS	6,93
M 4 x 0.70	M8 x 1.25	7.50	6.90	9.00	3320-4.00HWM	3,36	3320-4.00HWSS	8,42
M 5 x 0.80	M8 x 1.25	7.50	6.90	9.00	3320-5.00HWM	3,79	3320-5.00HWSS	9,19
M 6 x 1.00	M10 x 1.50	10.50	8.60	12.00	3320-6.00HWM	4,26	3320-6.00HWSS	7,17
M 8 x 1.25	M12 x 1.75	12.50	10.40	14.50	3320-8.00HWM	4,81	3320-8.00HWSS	11,39
M 10 x 1.50	M16 x 2.00	17.00	14.00	19.00	3320-10.00HWM	7,41	3320-10.00HWSS	11,36
M 12 x 1.75	M16 x 2.00	17.00	14.00	19.00	3320-12.00HWM	8,33	3320-12.00HWSS	12,96
M 16 x 2.00	M24 x 3.00	20.00	21.00	24.00	3320-16.00HWM	10,04	3320-16.00HWSS	21,67
M 20 x 2.50	M36 x 4.00	30.00	33.00	35.00	3320-20.00HWM	29,59		


## PAREDE REFORÇADA

M 6 x 1.00	UNC 3/8 x 16h	10.31	8.00	11.90	3320-6.00HWF	2,40	3320-6.00HWSSF	9,95
M 8 x 1.25	UNC 1/2 x 13h	12.29	10.70	14.29	3320-8.00HWF	2,94	3320-8.00HWSSF	11,45
M 10 x 1.50	UNC 9/16 x 12h	13.08	12.30	15.08	3320-10.00HWF	3,36	3320-10.00HWSSF	13,08
M 10 x 1.25	UNC 9/16 x 12h	13.08	12.30	15.08	3321-10.00HWF	4,95	3321-10.00HWSSF	-
M 12 x 1.75	UNC 3/4 x 10h	16.66	16.60	19.05	3320-12.00HWF	4,33	3320-12.00HWSSF	18,65
M 14 x 2.00	UNC 7/8 x 9h	17.45	19.50	20.64	3320-14.00HWF	8,69	3320-14.00HWSSF	22,98
M 16 x 2.00	UNC 1 x 8h	19.84	22.00	22.25	3320-16.00HWF	8,66	3320-16.00HWSSF	-


\* Ficha de dados de segurança disponível.


	
M3 x 0.50	M6 x 1.00
M4 x 0.70	M8 x 1.25
M5 x 0.80	M8 x 1.25
M6 x 1.00	M10 x 1.50
M8 x 1.25	M12 x 1.75

	SET 50 Unit M3-M8	AC
10	3320-3.00HW	3320-WK0
10	3320-4.00HW	
10	3320-5.00HW	
10	3320-6.00HW	
10	3320-8.00HW	
		304,41 €


	SET 50 Unit M3-M8	AISI 303
10	3320-3.00HWSS	3320-SSWK0
10	3320-4.00HWSS	
10	3320-5.00HWSS	
10	3320-6.00HWSS	
10	3320-8.00HWSS	
		569,54 €

M8 x 1.25	M12 x 1.75
M10 x 1.50	M16 x 2.00
M12 x 1.75	M16 x 2.00
M16 x 2.00	M 24 x 3.00

	SET 33 Unit M8-M16	AC
10	3320-8.00HW	3320-WK1
10	3320-10.00HW	
8	3320-12.00HW	
5	3320-16.00HW	
		348,61 €

	SET 33 Unit M8-M16	AISI 303
10	3320-8.00HWSS	3320-SSWK1
10	3320-10.00HWSS	
8	3320-12.00HWSS	
5	3320-16.00HWSS	
		602,08 €

M5 x 0.80	M8 x 1.25
M6 x 1.00	M10 x 1.50
M8 x 1.25	M12 x 1.75
M10 x 1.50	M16 x 2.00
M12 x 1.75	M16 x 2.00

	SET 46 Unit M5-M12	AISI 303
10	3320-5.00HWSS	3320-SSWK2
10	3320-6.00HWSS	
10	3320-8.00HWSS	
10	3320-10.00HWSS	
6	3320-12.00HWSS	
		585,82 €



EXTRAÇÃO





t-sert  
by CELESA



# INSERTOS T-SERT COM CABEÇA ESCAREADA

## Características e Vantagens

- T-SERT é um inserto sólido de aplicação universal em todos os tipos de materiais e de fácil instalação.
- T-SERT possui uma parede muito fina devido ao sincronismo entre a rosca externa e interna. Permite a instalação do inserto em espaços apertados.
- Gera vedação na rosca: água, óleo, ...
- T-SERT é um Inserto AUTOBLOCANTE, que fica instalado automaticamente na passagem da ferramenta de instalação, que, por laminação, deforma algumas roscas internas para fora, bloqueando o inserto no seu orifício.
- O assento escareado garante um posicionamento preciso na peça, não havendo necessidade de aplicação de selante adicional. Não desparafusa, nem mesmo em ambientes de vibração extrema.
- Adequado para processos que devem suportar cargas extremas, sem desparafusar.
- O Macho, o escareador e o instalador são exclusivos para os insertos T-SERT.



## INSERTOS T-SERT COM CABEÇA ESCAREADA

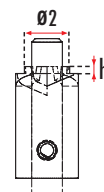
t-sert  
by CELESA

## INSERTO

INSERTO		L		h	Ø	L	3910-3.00x4.3	€	5
M 3 x 0.50	M5 x 0.50	4.30	6.00	0.50	4.50	3.80	3910-3.00x4.3	4,04	5
M 4 x 0.70	M6 x 0.70	6.00	7.00	0.50	5.30	5.50	3910-4.00x6.0	4,04	5
M 5 x 0.80	M7 x 0.80	7.60	8.00	0.50	6.20	7.20	3910-5.00x7.6	4,04	5
M 6 x 1.00	M8 x 1.00	9.40	9.00	0.70	7.00	8.90	3910-6.00x9.4	4,36	5
M 8 x 1.25	M10 x 1.25	11.70	12.00	0.80	8.70	11.20	3910-8.00x11.7	4,50	5
M 10 x 1.50	M12 x 1.50	14.00	14.00	1.00	10.50	13.50	3910-10.00x14.0	5,51	5
M 12 x 1.75	M14 x 1.75	16.00	16.00	1.00	12.70	15.50	3910-12.00x16.2	6,08	5

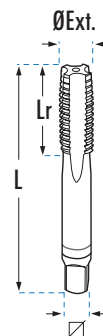
## ESCAREADOR

	Ø mm	L mm	Ø mm	Ø2 mm	h mm		€
M 3 x 0.50	6.50	60.00	3.50	6.50	1.00	3910-3.00AVELL	72,83
M 4 x 0.70	7.50	65.00	3.80	7.50	1.00	3910-4.00AVELL	73,76
M 5 x 0.80	8.50	70.00	5.00	8.50	1.00	3910-5.00AVELL	77,96
M 6 x 1.00	9.50	70.00	5.00	9.50	1.20	3910-6.00AVELL	80,06
M 8 x 1.25	12.50	79.00	7.00	12.50	1.30	3910-8.00AVELL	81,82
M 10 x 1.50	14.50	89.00	8.00	14.50	1.50	3910-10.00AVELL	87,50
M 12 x 1.75	16.50	80.00	9.00	16.50	1.50	3910-12.00AVELL	92,66



## MACHO PARA ROSCAGEM

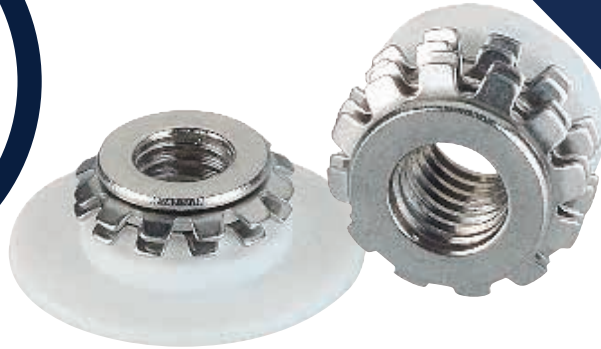
	Ø Ext.	L mm	Lr mm	Ø mm	Ø mm		€
M 3 x 0.50	M5 x 0.50	60.00	20.00	5.08	4.00	3910-3.00I	68,13
M 4 x 0.70	M6 x 0.70	70.00	22.00	6.09	4.90	3910-4.00I	68,13
M 5 x 0.80	M7 x 0.80	68.00	22.00	7.10	4.50	3910-5.00I	72,80
M 6 x 1.00	M8 x 1.00	72.00	22.00	8.12	4.90	3910-6.00I	76,06
M 8 x 1.25	M10 x 1.25	80.00	24.00	10,12	6.00	3910-8.00I	82,60
M 10 x 1.50	M12 x 1.50	88.00	29.00	12,14	7.10	3910-10.00I	102,67
M 12 x 1.75	M14 x 1.75	90.00	30.00	14,15	8.70	3910-12.00I	113,86



## FERRAMENTA PARA INSTALAÇÃO

	L mm	Lr mm	Ø mm	Ø mm		€
M 3 x 0.50	54.00	15.00	3.50	3.80	3910-3.00HIP	61,16
M 4 x 0.70	62.00	18.00	5.00	3.80	3910-4.00HIP	62,67
M 5 x 0.80	71.00	30.00	5.80	5.00	3910-5.00HIP	63,00
M 6 x 1.00	72.00	22.00	7.60	5.00	3910-6.00HIP	68,51
M 8 x 1.25	79.00	25.00	10.00	6.00	3910-8.00HIP	71,40
M 10 x 1.50	90.00	30.00	12.00	7.00	3910-10.00HIP	75,60
M 12 x 1.75	95.00	30.00	15.00	9.00	3910-12.00HIP	88,20

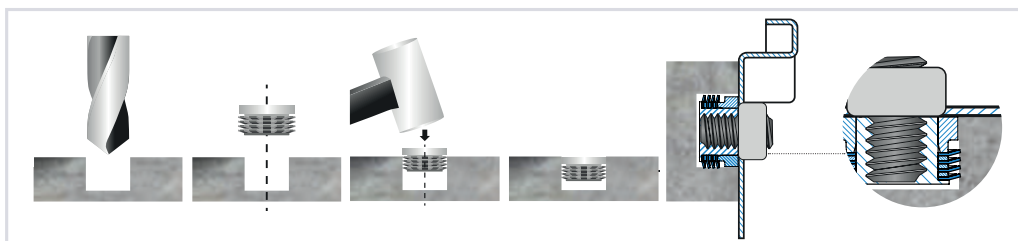




## INSERTOS ROSCADOS PARA ÂNCORAS EM SUPERFÍCIES SÓLIDAS

### Características e Vantagens

- O inserto **WALLSERT** permite a fixação de buchas roscadas em materiais como mármore, granito, pedra natural, cerâmica, pedra sinterizada, materiais compósitos como corian, painel compacto fenólico, superfícies sólidas em geral e uma vasta gama de materiais. Adequado para utilização em interiores e exteriores.
- É uma excelente solução para a inserção fácil de âncoras roscadas em painéis de fachada ventilados, revestimentos exteriores e designs de interiores, tais como cozinhas, casas de banho, mobiliário ...
- O design inovador do **WALLSERT** permite a ancoragem de elementos roscados de uma forma simples, suportando grandes tensões. A sua instalação é muito simples, basta fazer o furo recomendado no material à profundidade recomendada, e inseri-lo exercendo uma pequena pressão sobre a ancoragem, ou um golpe suave com um martelo de nylon.



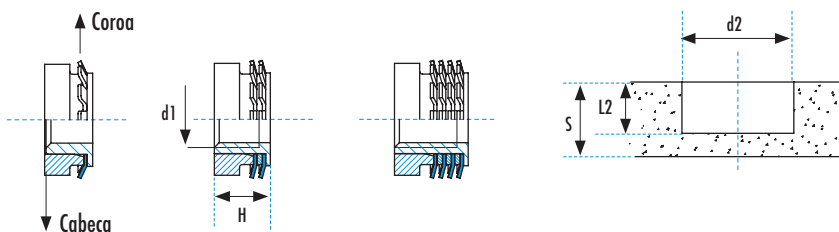
- Disponível em 2 modelos de **WALLSERT**, cabeça reta e cabeça plana.  
O inserto wallert é composto por 3 partes:
  - Bucha roscada, aço inoxidável AISI 303
  - Coroas, aço inoxidável AISI 303
  - Cabeça, nylon PA6



M

INOX  
AISI303wallsert  
by CELESA

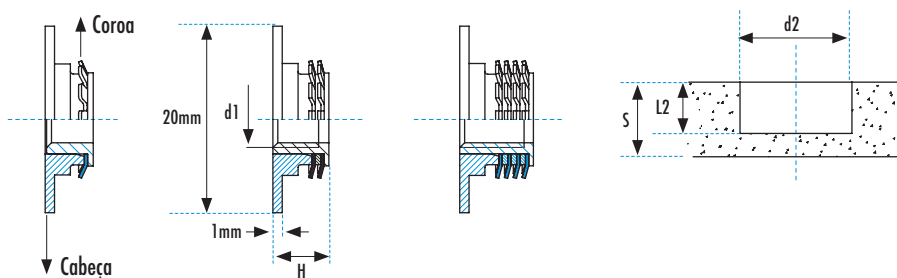
## INSERTOS WALLSERT COM CABEÇA RECTA



d1	H mm	d2 mm	L2 mm	S mm	Nº Coronas	kN x wallsert		€	
M 4 x 0.70	5.00	12.00	5.50	8.00	1	1.1	3820-M4X5SS	2,44	50
M 5 x 0.80							3820-M5X5SS	2,44	50
M 6 x 1.00							3820-M6X5SS	2,44	50
M 4 x 0.70	6.00	12.00	6.50	8.50	2	2.1	3820-M4X6SS	2,67	50
M 5 x 0.80							3820-M5X6SS	2,67	50
M 6 x 1.00							3820-M6X6SS	2,67	50
M 4 x 0.70	8.50	12.00	9.00	11.00	4	3.4	3820-M4X8,5SS	2,89	50
M 5 x 0.80							3820-M5X8,5SS	2,89	50
M 6 x 1.00							3820-M6X8,5SS	2,89	50



## INSERTOS WALLSERT COM CABEÇA PLANA



d1	H mm	d2 mm	L2 mm	S mm	Nº Coronas	kN x wallsert		€	
M 4 x 0.70	5.00	12.00	4.50	7.00	1	0.7	3825-M4X5SS	2,67	50
M 5 x 0.80							3825-M5X5SS	2,67	50
M 6 x 1.00							3825-M6X5SS	2,67	50
M 4 x 0.70	6.00	12.00	5.50	7.50	2	1.9	3825-M4X6SS	2,89	50
M 5 x 0.80							3825-M5X6SS	2,89	50
M 6 x 1.00							3825-M6X6SS	2,89	50
M 4 x 0.70	8.00	12.00	8.05	10.00	4	3.0	3825-M4X8SS	3,11	50
M 5 x 0.80							3825-M5X8SS	3,11	50
M 6 x 1.00							3825-M6X8SS	3,11	50





**rivetsert**  
by *celesa*



# PORCAS DE REBITES

## Características e Vantagens

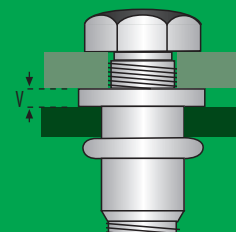
A porca de rebite RIVETSERT é um elemento de fixação mecânico que garante uma rosca forte, resistente e confiável que pode ser usada em muitos materiais, como Metal, Plástico, Fibra de Vidro e Fibra de Carbono. É particularmente útil na Indústria Automotiva, bem como na Indústria Pesada, que tende a reduzir o peso de todos os seus componentes, facilitando os processos de produção, mas assegurando rosca forte.

Sendo a Cabeça Plana a mais universal, as porcas de rebite RIVETSERT foram projetadas especialmente para suportar altos torques de aperto na montagem de todos os tipos de componentes mecânicos:

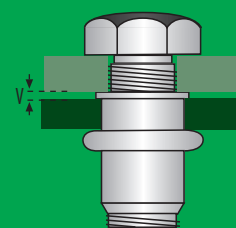
- Excelente solução para obter uma rosca confiável e resistente em peças de espessura reduzida (0,5 mm).
- Função dupla: rebita a junta gerando uma rosca.
- Disponível em três tipos diferentes de cabeças; plana, reduzida e escareada.
- Uso de ferramentas ergonômicas e simples, que podem ser pneumáticas, manuais ou automáticas.

## TIPOS DE CABEÇA: PLANA, REDUZIDA E ESCAREADA

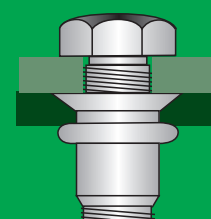
- **PLANA:** É o tipo de cabeça mais versátil e universal. Ele fornece suficiente superfície de suporte para reter todos os tipos de materiais, exceto os extremamente macios e quebradiços, oferecendo um alto torque de aperto. O espaço "V" é considerável.
- **REDUZIDA:** Eles são projetados para as aplicações nas que um material macio ou quebradiço deve ser montado num material de suporte rígido. O espaço em "V" é quase insignificante, mas oferecem torques de aperto mais baixos do que os rebites de Cabeça Plana.
- **ESCAREADA:** Este tipo de cabeça permite rebitar peças de maior espessura e é projetada para obter uma superfície plana e sem projecções, com um grande torque de aperto. O espaço "V" é inexistente, mas é necessário um escareamento prévio.



**PLANA**



**REDUZIDA**



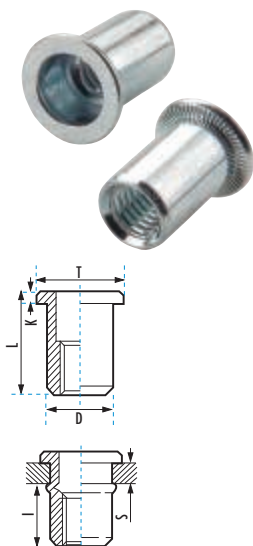
**ESCAREADA**

## PORCAS DE REBITE CILINDRICAS

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MF

HCS

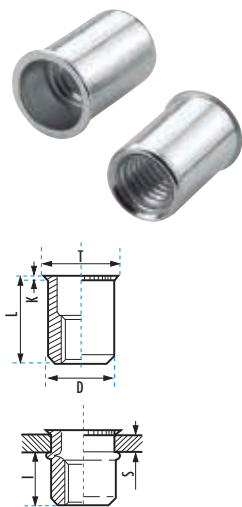
## CABEÇA PLANA - CURTO



	S mm	D mm +0,07/-0,1	 d mm +0,1/-0	T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm	 Nm		€/100 Unit	
M 3x0.50	0.50 - 1.50	4.90	5.00	7.20	0.80	8.50	4.70	2.00	3850-M3	6,95	100
M 4x0.70	0.50 - 2.00	5.90	6.00	8.50	0.80	10.50	6.00	5.00	3850-M4	7,10	100
M 5x0.80	0.50 - 2.50	6.90	7.00	10.00	1.00	13.00	7.50	8.50	3850-M5	7,25	100
M 6x1.00	0.50 - 3.00	8.90	9.00	12.30	1.30	15.50	9.20	15.00	3850-M6	8,76	100
M 8x1.25	1.00 - 3.50	10.90	11.00	15.00	1.50	18.50	11.50	26.00	3850-M8	14,68	50
M 10x1.50	1.00 - 3.50	11.90	12.00	16.00	1.50	19.00	11.00	50.00	3850-M10	24,00	50
M 10x1.50	1.00 - 2.50	12.90	13.00	16.30	1.60	17.00	11.50	50.00	3850-M10E1	24,20	50
M 12x1.75	1.00 - 4.00	14.90	15.00	18.00	1.70	22.00	13.50	80.00	3850-M12	43,88	50
M 12x1.75	1.00 - 4.00	15.90	16.00	22.00	2.00	25.00	16.00	80.00	3850-M12E1	45,09	50

\* Todos os preços cotados referem-se a embalagens de 100 peças

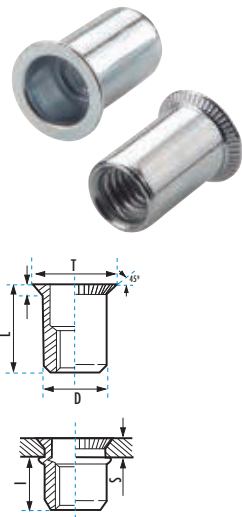
## CABEÇA REDUZIDA - CURTO



	S mm	D mm +0,07/-0,1	 d mm +0,1/-0	T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm	 Nm		€/100 Unit	
M 3x0.50	0.50 - 2.00	4.90	5.00	6.00	0.50	9.00	6.20	1.00	3851-M3	6,95	100
M 4x0.70	0.50 - 2.00	5.90	6.00	7.00	0.50	10.50	6.50	3.00	3851-M4	7,10	100
M 5x0.80	0.50 - 2.00	6.90	7.00	8.00	0.50	11.50	7.00	6.00	3851-M5	7,25	100
M 6x1.00	0.50 - 2.50	8.90	9.00	10.00	0.60	14.00	8.50	11.00	3851-M6	8,76	100
M 8x1.25	1.00 - 3.00	10.90	11.00	12.00	0.60	16.50	10.00	20.00	3851-M8	14,68	100
M 10x1.50	0.50 - 3.50	11.90	12.00	13.00	0.85	18.00	13.00	32.00	3851-M10	24,00	50
M 10x1.50	1.00 - 3.00	12.90	13.00	14.00	0.70	17.70	12.00	32.00	3851-M10E1	24,20	50
M 12x1.75	0.50 - 3.50	14.90	15.00	16.50	0.85	22.50	16.00	50.00	3851-M12	43,88	50

\* Todos os preços cotados referem-se a embalagens de 100 peças

## CABEÇA ESCAREADA - CURTO



	S mm	D mm +0,07/-0,1	 d mm +0,1/-0	T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm	 Nm		€/100 Unit	
M 3x0.50	1.60 - 3.50	4.90	5.00	7.20	1.50	9.50	4.50	1.00	3852-M3	6,95	100
M 4x0.70	1.50 - 3.00	5.90	6.00	9.00	1.50	12.00	6.50	4.00	3852-M4	7,10	100
M 5x0.80	1.50 - 3.50	6.90	7.00	10.00	1.50	13.00	7.50	8.00	3852-M5	7,25	100
M 6x1.00	1.50 - 4.00	8.90	9.00	12.00	1.50	15.50	9.00	15.00	3852-M6	8,76	100
M 8x1.25	2.00 - 4.50	10.90	11.00	14.00	1.50	18.50	10.00	26.00	3852-M8	14,68	100
M 10x1.50	1.60 - 5.00	11.90	12.00	15.00	1.50	21.00	11.50	45.00	3852-M10	24,00	50
M 10x1.50	1.60 - 5.00	12.90	13.00	16.00	1.50	21.00	11.50	45.00	3852-M10E1	24,20	50

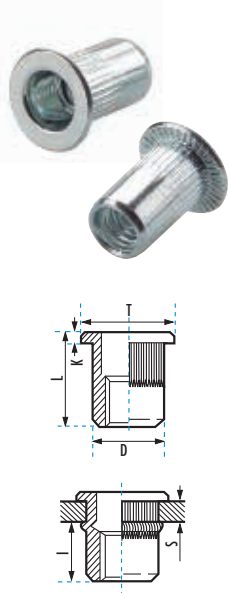
\* Todos os preços cotados referem-se a embalagens de 100 peças



**PORCAS DE REBITE CILINDRICAS ESTRIADAS**



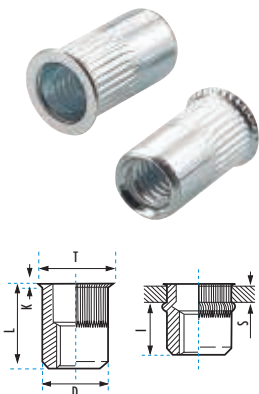
**CABEÇA PLANA**



	S mm	D mm +0,07/-0,1	 Ø +0,1/-0	T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm	 Nm		€/100 Unit	
M 3x0.50	0.50 - 1.50	4.90	5.00	8.00	0.80	10.00	6.00	2.00	3853-M3	6,95	100
M 3x0.50	1.50 - 3.00	4.90	5.00	7.00	0.80	11.50	8.00	2.00	3853-M3E1	7,50	100
M 4x0.70	0.50 - 2.00	5.90	6.00	9.00	0.80	10.50	6.00	5.00	3853-M4	7,10	100
M 4x0.70	2.00 - 3.50	5.90	6.00	9.00	0.80	12.00	6.00	5.00	3853-M4E1	8,29	100
M 5x0.80	0.50 - 2.50	6.90	7.00	10.00	1.00	13.00	7.50	8.50	3853-M5	7,25	100
M 5x0.80	2.50 - 5.00	6.90	7.00	10.00	1.00	16.50	8.50	8.50	3853-M5E1	8,46	100
M 6x1.00	0.50 - 3.00	8.90	9.00	12.30	1.30	15.50	9.20	15.00	3853-M6	8,76	100
M 6x1.00	3.00 - 5.50	8.90	9.00	12.30	1.30	19.50	10.50	15.00	3853-M6E1	11,42	100
M 8x1.25	1.00 - 3.50	10.90	11.00	14.50	1.50	18.50	11.50	26.00	3853-M8	14,68	100
M 8x1.25	3.50 - 6.00	10.90	11.00	14.50	1.50	21.00	11.50	26.00	3853-M8E1	17,76	100
M 10x1.50	1.00 - 3.50	11.90	12.00	16.00	1.70	19.00	12.50	50.00	3853-M10	24,00	50
M 10x1.50	3.00 - 6.00	11.90	12.00	16.00	1.60	24.00	18.50	50.00	3853-M10E1	25,38	50
M 10x1.50	1.00 - 4.00	12.90	13.00	17.00	1.70	21.50	13.50	50.00	3853-M10E2	24,20	50
M 10x1.50	4.00 - 6.50	12.90	13.00	17.00	1.70	24.00	13.50	50.00	3853-M10E3	28,47	50
M 12x1.75	1.00 - 4.00	14.90	15.00	18.00	1.70	22.00	13.50	80.00	3853-M12	43,88	50
M 12x1.75	4.00 - 6.50	14.90	15.00	18.00	1.70	25.00	14.00	80.00	3853-M12E1	56,21	50
M 12x1.75	1.00 - 3.50	15.90	16.00	22.00	2.00	25.00	15.00	80.00	3853-M12E2	57,73	50
M 12x1.75	3.50 - 6.00	15.90	16.00	22.00	2.00	28.00	16.50	80.00	3853-M12E3	59,84	50

\* Todos os preços cotados referem-se a embalagens de 100 peças

**CABEÇA REDUZIDA**



	S mm	D mm +0,07/-0,1	 Ø +0,1/-0	T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm	 Nm		€/100 Unit	
M 3x0.50	0.50 - 2.00	4.90	5.00	6.00	0.50	9.00	6.50	1.00	3854-M3	6,95	100
M 3x0.50	2.00 - 3.50	4.90	5.00	6.00	0.50	11.50	5.50	1.00	3854-M3E1	7,50	100
M 4x0.70	0.50 - 2.00	5.90	6.00	7.00	0.50	11.20	7.00	3.00	3854-M4	7,10	100
M 4x0.70	2.00 - 4.00	5.90	6.00	7.00	0.50	13.00	7.00	3.00	3854-M4E1	8,29	100
M 5x0.80	0.50 - 2.50	6.90	7.00	8.00	0.50	11.50	7.00	6.00	3854-M5	7,25	100
M 5x0.80	2.00 - 4.00	6.90	7.00	8.00	0.50	13.00	7.00	6.00	3854-M5E1	8,46	100
M 6x1.00	0.50 - 2.50	8.90	9.00	10.00	0.60	14.00	8.50	11.00	3854-M6	8,76	100
M 6x1.00	2.50 - 4.50	8.90	9.00	10.00	0.60	16.00	8.50	11.00	3854-M6E1	11,42	100
M 8x1.25	1.00 - 3.00	10.90	11.00	12.00	0.60	16.50	10.00	20.00	3854-M8	14,68	100
M 8x1.25	3.00 - 5.00	10.90	11.00	12.00	0.60	18.50	10.00	20.00	3854-M8E1	17,76	100
M 10x1.50	1.00 - 3.50	11.90	12.00	13.00	0.70	19.50	13.00	32.00	3854-M10	24,00	50
M 10x1.50	3.50 - 6.00	11.90	12.00	13.00	0.70	22.00	17.00	32.00	3854-M10E1	25,38	50
M 10x1.50	1.00 - 3.50	12.90	13.00	14.00	0.70	19.50	12.50	32.00	3854-M10E2	26,58	50
M 10x1.50	3.50 - 6.00	12.90	13.00	14.00	0.70	22.00	12.50	32.00	3854-M10E3	28,47	50
M 12x1.75	0.50 - 3.50	14.90	15.00	16.50	0.85	22.50	16.00	50.00	3854-M12	43,88	50
M 12x1.75	1.00 - 4.00	15.90	16.00	17.60	0.75	24.20	16.00	50.00	3854-M12E1	45,09	50
M 12x1.75	4.00 - 6.00	15.90	16.00	17.15	0.60	27.00	16.00	50.00	3854-M12E2	59,84	50

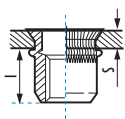
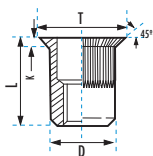
\* Todos os preços cotados referem-se a embalagens de 100 peças





## PORCAS DE REBITE CILINDRICAS ESTRIADAS

rivetsert  
by CELESAM  
MF

HCS

## CABEÇA ESCAREADA



	S mm	D mm +0,07/-0,1	 T mm +0,1/-0	T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm	 Nm		€/100 Unit	
M 3x0.50	1.60 - 2.50	4.90	5.00	6.60	1.05	9.50	4.50	1.00	3855-M3	8,88	100
M 3x0.50	2.50 - 4.00	4.90	5.00	6.60	1.50	10.50	4.50	1.00	3855-M3E1	10,58	100
M 4x0.70	1.50 - 3.00	5.90	6.00	9.00	1.50	12.00	6.50	4.00	3855-M4	9,10	100
M 4x0.70	3.00 - 5.00	5.90	6.00	9.00	1.50	14.00	6.00	4.00	3855-M4E1	11,60	100
M 5x0.80	1.50 - 3.50	6.90	7.00	10.00	1.50	13.00	7.50	8.00	3855-M5	9,13	100
M 5x0.80	3.50 - 6.00	6.90	7.00	10.00	1.50	16.50	8.50	8.00	3855-M5E1	12,75	100
M 6x1.00	1.50 - 4.00	8.90	9.00	12.00	1.50	15.50	9.00	15.00	3855-M6	10,09	100
M 6x1.00	4.00 - 6.00	8.90	9.00	12.00	1.50	18.00	9.00	15.00	3855-M6E1	18,92	100
M 8x1.25	2.00 - 4.50	10.90	11.00	14.00	1.50	18.50	10.00	26.00	3855-M8	19,13	100
M 8x1.25	4.00 - 6.50	10.90	11.00	14.00	1.50	21.00	10.00	26.00	3855-M8E1	19,22	100
M 10x1.50	1.60 - 5.00	11.90	12.00	15.00	1.50	19.00	11.50	45.00	3855-M10	25,38	50
M 10x1.50	5.00 - 7.50	11.90	12.00	15.00	1.50	24.00	11.50	45.00	3855-M10E1	38,98	50
M 10x1.50	2.00 - 5.00	12.90	13.00	16.00	1.50	21.00	11.50	45.00	3855-M10E2	38,97	50
M 10x1.50	5.00 - 7.50	12.90	13.00	16.00	1.50	24.00	11.50	45.00	3855-M10E3	38,98	50
M 12x1.75	1.60 - 5.00	14.90	15.00	18.00	1.50	22.50	14.50	70.00	3855-M12	48,05	50
M 12x1.75	1.70 - 4.50	15.90	16.00	19.00	1.90	24.00	17.50	70.00	3855-M12E1	56,21	50
M 12x1.75	4.00 - 7.50	15.90	16.00	19.00	1.90	29.00	17.50	70.00	3855-M12E2	101,99	50

\* Todos os preços cotados referem-se a embalagens de 100 peças





**rivetsert**  
by CELESA

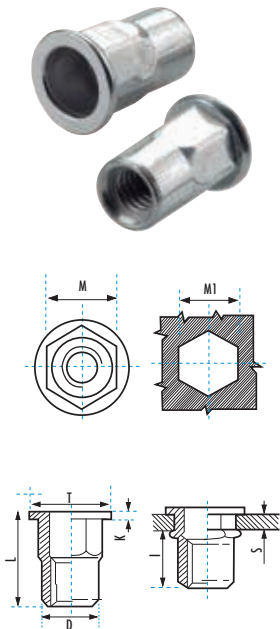
**PORCAS DE REBITE SEMI-SEXTAVADASS**



**rivetsert**  
by CELESA

Rosa

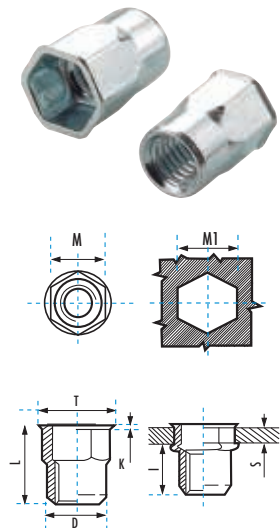
**CABEÇA PLANA**



	S mm	D mm +0,07/-0,1	 ∅ +0,1/-0	T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm	 Nm		€/100 Unit	
M 3x0.50	0.50 - 1.50	4.90	5.00	7.20	0.80	8.50	5.50	2.00	<b>3856-M3</b>	<b>9,67</b>	100
M 4x0.70	0.50 - 2.00	5.90	6.00	9.00	0.80	11.00	6.50	5.00	<b>3856-M4</b>	<b>9,79</b>	100
M 4x0.70	2.50 - 4.00	5.90	6.00	9.00	0.80	13.50	6.50	5.00	<b>3856-M4E1</b>	<b>17,54</b>	100
M 5x0.80	0.50 - 3.00	6.90	7.00	10.00	1.00	13.00	8.00	8.50	<b>3856-M5</b>	<b>10,58</b>	100
M 5x0.80	3.00 - 5.50	6.90	7.00	10.00	0.80	16.00	11.00	8.50	<b>3856-M5E1</b>	<b>17,54</b>	100
M 6x1.00	0.50 - 4.00	8.90	9.00	12.00	1.50	16.50	8.50	15.00	<b>3856-M6</b>	<b>11,96</b>	100
M 6x1.00	3.00 - 5.50	8.90	9.00	13.00	1.50	18.50	10.50	15.00	<b>3856-M6E1</b>	<b>29,62</b>	100
M 8x1.25	1.00 - 4.00	10.90	11.00	15.90	1.50	18.20	10.50	20.00	<b>3856-M8</b>	<b>16,97</b>	100
M 8x1.25	4.00 - 6.00	10.90	11.00	15.00	1.50	20.50	12.50	26.00	<b>3856-M8E1</b>	<b>31,79</b>	100
M 10x1.50	1.00 - 3.50	11.90	12.00	17.00	1.60	19.00	12.00	50.00	<b>3856-M10</b>	<b>27,13</b>	50
M 10x1.50	0.50 - 3.50	12.90	13.00	17.00	1.80	21.00	12.00	50.00	<b>3856-M10E1</b>	<b>27,75</b>	50
M 12x1.75	2.00 - 5.00	15.90	16.00	23.00	2.20	27.50	16.50	80.00	<b>3856-M12</b>	<b>59,84</b>	50

\* Todos os preços cotados referem-se a embalagens de 100 peças

**CABEÇA REDUZIDA**



	S mm	D mm +0,07/-0,1	 ∅ +0,1/-0	T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm	 Nm		€/100 Unit	
M 3x0.50	0.30 - 1.50	4.90	5.00	6.00	0.50	9.00	5.50	1.00	<b>3857-M3</b>	<b>14,63</b>	100
M 3x0.50	1.50 - 2.50	4.90	5.00	6.00	0.50	10.00	5.50	1.00	<b>3857-M3E1</b>	<b>16,80</b>	100
M 4x0.70	0.50 - 2.00	5.90	6.00	7.00	0.50	12.00	8.30	3.00	<b>3857-M4</b>	<b>8,46</b>	100
M 5x0.80	0.50 - 2.50	6.90	7.00	8.00	0.50	13.00	8.70	6.00	<b>3857-M5</b>	<b>9,49</b>	100
M 6x1.00	1.00 - 3.50	8.90	9.00	10.00	0.60	16.00	10.50	11.00	<b>3857-M6</b>	<b>10,70</b>	100
M 8x1.25	1.00 - 3.50	10.90	11.00	12.00	0.65	17.50	11.30	20.00	<b>3857-M8</b>	<b>14,50</b>	100
M 10x1.50	1.00 - 4.00	11.90	12.00	13.25	0.70	18.30	12.80	32.00	<b>3857-M10</b>	<b>23,26</b>	50
M 10x1.50	1.00 - 4.00	12.90	13.00	14.50	0.75	21.00	12.80	32.00	<b>3857-M10E1</b>	<b>23,58</b>	50
M 12x1.75	1.50 - 4.00	15.90	16.00	17.50	0.80	24.00	16.00	50.00	<b>3857-M12</b>	<b>59,28</b>	50

\* Todos os preços cotados referem-se a embalagens de 100 peças

**CABEÇA REDUZIDA - FURAÇÃO**



	S mm	D mm +0,07/-0,1	 ∅ +0,1/-0	T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm	 Nm		€/100 Unit	
M 4x0.70	0.50 - 2.00	6.30	6.40	7.40	0.50	10.50	6.50	3.00	<b>3858-M4</b>	<b>9,67</b>	100
M 5x0.80	0.50 - 2.50	7.10	7.20	8.20	0.50	12.00	7.50	6.00	<b>3858-M5</b>	<b>11,49</b>	100
M 6x1.00	1.00 - 3.00	9.50	9.60	10.60	0.60	15.00	9.20	11.00	<b>3858-M6</b>	<b>12,38</b>	100
M 8x1.25	1.00 - 3.50	10.50	10.60	11.60	0.60	16.50	10.50	20.00	<b>3858-M8</b>	<b>17,10</b>	100

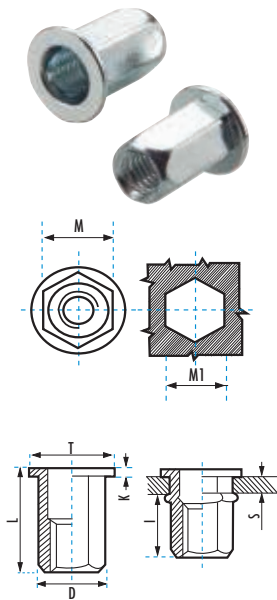
\* Todos os preços cotados referem-se a embalagens de 100 peças


## PORCAS DE REBITE SEXTAVADAS

rivetsert  
by CELESAM  
MF

HCS

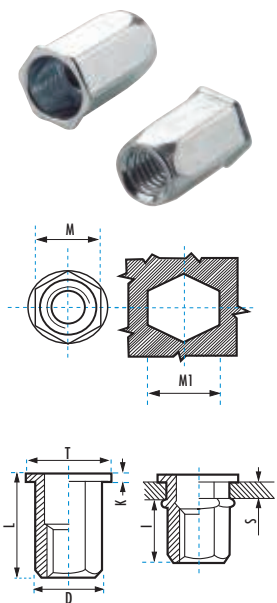
## CABEÇA PLANA






	S mm	M mm	M1 mm	T mm	K mm	L mm	I mm	 Nm		€/100 Unit	
M 4x0.70	0.50 - 2.00	5.90	6.00	9.00	0.80	11.00	6.50	5.00	3859-M4	9,67	100
M 4x0.70	2.00 - 5.00	5.90	6.00	9.00	0.80	13.50	6.50	5.00	3859-M4E1	15,71	100
M 5x0.80	0.50 - 3.00	6.90	7.00	10.00	1.00	14.00	8.00	8.50	3859-M5	10,58	100
M 5x0.80	3.00 - 6.00	6.90	7.00	10.00	1.00	16.50	8.00	8.50	3859-M5E1	16,62	100
M 6x1.00	0.50 - 3.00	8.90	9.00	13.00	1.20	16.00	9.50	15.00	3859-M6	11,96	100
M 6x1.00	3.00 - 5.00	8.90	9.00	13.00	1.50	19.50	8.50	15.00	3859-M6E1	17,54	100
M 8x1.25	1.00 - 3.50	10.90	11.00	16.00	1.50	17.00	9.50	26.00	3859-M8	16,97	100
M 8x1.25	3.50 - 6.00	10.90	11.00	15.00	1.50	21.50	10.50	26.00	3859-M8E1	22,97	100
M 10x1.50	1.00 - 3.50	11.90	12.00	18.00	1.70	21.00	13.50	50.00	3859-M10	27,13	50
M 10x1.50	1.00 - 3.50	12.90	13.00	18.00	1.70	21.00	13.50	50.00	3859-M10E1	27,75	50
M 10x1.50	3.50 - 6.50	12.90	13.00	17.00	1.50	24.00	14.50	50.00	3859-M10E2	42,67	50
M 12x1.75	1.00 - 3.50	14.90	15.00	19.00	2.00	24.30	16.00	80.00	3859-M12	69,51	50
M 12x1.75	2.00 - 5.00	15.90	16.00	23.00	2.00	27.00	16.50	80.00	3859-M12E1	59,84	50

\* Todos os preços cotados referem-se a embalagens de 100 peças

## CABEÇA REDUZIDA



	S mm	M mm	M1 mm	T mm	K mm	L mm	I mm	 Nm		€/100 Unit	
M 3x0.50	0.50 - 1.50	4.90	5.00	6.00	0.45	8.50	5.00	1.00	3860-M3	14,63	100
M 4x0.70	0.50 - 2.50	5.90	6.00	7.00	0.50	11.00	6.70	3.00	3860-M4	8,46	100
M 4x0.70	2.50 - 5.00	5.90	6.00	7.00	0.50	13.50	6.70	3.00	3860-M4E1	12,70	100
M 5x0.80	0.50 - 3.00	6.90	7.00	8.00	0.50	14.50	9.00	6.00	3860-M5	9,49	100
M 5x0.80	3.00 - 5.00	6.90	7.00	8.00	0.50	16.00	9.00	6.00	3860-M5E1	13,59	100
M 6x1.00	1.00 - 3.50	8.90	9.00	10.00	0.60	16.00	10.00	11.00	3860-M6	10,70	100
M 6x1.00	3.50 - 6.00	8.90	9.00	10.00	0.60	18.00	10.00	11.00	3860-M6E1	14,50	100
M 8x1.25	1.00 - 4.00	10.90	11.00	12.00	0.65	18.00	11.50	20.00	3860-M8	14,50	100
M 8x1.25	4.00 - 6.00	10.90	11.00	12.00	0.65	20.00	11.50	20.00	3860-M8E1	21,27	100
M 10x1.50	0.50 - 3.50	11.90	12.00	14.50	1.00	19.00	12.50	32.00	3860-M10	23,26	50
M 10x1.50	1.00 - 3.50	12.90	13.00	14.50	0.75	19.00	12.50	32.00	3860-M10E1	23,58	50
M 10x1.50	3.50 - 6.00	12.90	13.00	14.50	0.75	23.50	14.50	32.00	3860-M10E2	37,47	50
M 12x1.75	1.00 - 4.00	14.90	15.00	17.50	1.10	22.50	-	50.00	3860-M12	75,55	50
M 12x1.75	1.00 - 5.00	15.90	16.00	17.80	1.10	25.00	-	50.00	3860-M12E1	74,94	50
M 12x1.75	5.00 - 7.50	15.90	16.00	17.80	1.10	28.00	-	50.00	3860-M12E2	74,94	50

\* Todos os preços cotados referem-se a embalagens de 100 peças



**rivetsert**  
by *celes*

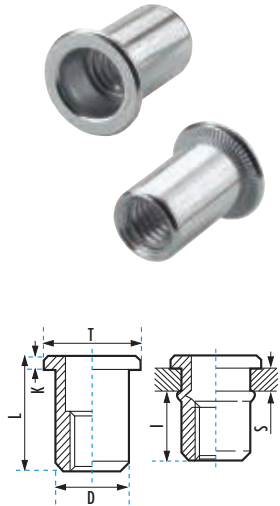
**PORCAS DE REBITE CILINDRICAS**



rivetsert  
by *celes*

Rosa

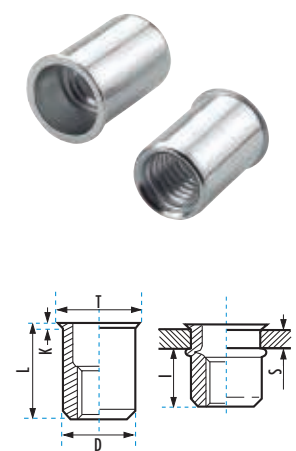
**CABEÇA PLANA**



	S mm	D mm +0,07/-0,1	 Ø +0,1/-0	T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm	 Nm		€/Unit	
M 3x0.50	0.30 - 1.80	4.90	5.00	8.00	0.75	9.00	5.50	2.00	<b>3950-M3</b>	-	25
M 4x0.70	0.50 - 2.00	5.90	6.00	8.50	0.80	10.50	6.00	5.00	<b>3950-M4</b>	0,29	25
M 5x0.80	0.50 - 2.50	6.90	7.00	10.00	1.00	13.00	7.50	8.50	<b>3950-M5</b>	0,32	25
M 6x1.00	0.50 - 3.00	8.90	9.00	12.30	1.30	15.50	9.20	15.00	<b>3950-M6</b>	0,54	25
M 8x1.25	1.00 - 3.50	10.90	11.00	15.00	1.50	18.50	11.50	26.00	<b>3950-M8</b>	0,80	25
M 10x1.50	0.80 - 3.50	11.90	12.00	16.00	1.70	19.00	10.50	50.00	<b>3950-M10</b>	-	1
M 10x1.50	1.00 - 4.00	12.90	13.00	17.00	1.60	21.00	12.50	50.00	<b>3950-M10E1</b>	1,25	1
M 12x1.75	1.00 - 4.00	14.90	15.00	18.00	1.70	22.00	13.50	80.00	<b>3950-M12</b>	-	1
M 12x1.75	1.00 - 4.00	15.90	16.00	23.00	2.00	26.00	16.50	80.00	<b>3950-M12E1</b>	-	1

- Consulte preço e disponibilidade.

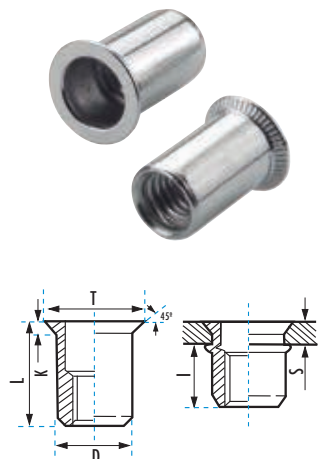
**CABEÇA REDUZIDA**



	S mm	D mm +0,07/-0,1	 Ø +0,1/-0	T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm	 Nm		€/Unit	
M 3x0.50	0.30 - 1.50	4.90	5.00	5.60	0.35	8.50	5.50	1.00	<b>3951-M3</b>	-	25
M 4x0.70	0.50 - 2.00	5.90	6.00	7.00	0.50	10.50	6.50	3.00	<b>3951-M4</b>	0,26	25
M 5x0.80	0.50 - 2.00	6.90	7.00	8.00	0.50	11.50	7.00	6.00	<b>3951-M5</b>	0,30	25
M 6x1.00	0.50 - 2.50	8.90	9.00	10.00	0.60	14.00	8.50	11.00	<b>3951-M6</b>	0,50	25
M 8x1.25	0.50 - 3.00	10.90	11.00	12.00	0.50	16.50	10.50	20.00	<b>3951-M8</b>	0,73	25
M 10x1.50	0.80 - 3.00	11.90	12.00	13.50	0.80	18.00	10.20	32.00	<b>3951-M10</b>	-	1
M 10x1.50	1.00 - 3.50	12.90	13.00	14.10	0.60	19.50	11.50	32.00	<b>3951-M10E1</b>	1,22	1
M 12x1.75	0.5 - 3.5	14.90	15.00	16.50	0.85	22.50	16.00	49.00	<b>3951-M12</b>	-	1

- Consulte preço e disponibilidade.

**CABEÇA ESCAREADA**



	S mm	D mm +0,07/-0,1	 Ø +0,1/-0	T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm	 Nm		€/Unit	
M 3x0.50	1.70 - 3.00	4.90	5.00	8.00	1.50	11.50	5.50	1.00	<b>3952-M3</b>	-	25
M 4x0.70	1.50 - 3.00	5.90	6.00	9.00	1.50	12.00	7.50	4.00	<b>3952-M4</b>	0,35	25
M 5x0.80	1.50 - 3.50	6.90	7.00	10.00	1.50	13.00	7.80	8.00	<b>3952-M5</b>	0,39	25
M 6x1.00	1.50 - 4.00	8.90	9.00	12.00	1.50	15.50	9.00	15.00	<b>3952-M6</b>	0,56	25
M 8x1.25	2.00 - 4.50	10.90	11.00	14.00	1.50	18.50	12.00	26.00	<b>3952-M8</b>	0,84	25
M 10x1.50	1.00 - 4.00	11.90	12.00	15.00	1.50	18.00	10.50	45.00	<b>3952-M10</b>	-	1
M 10x1.50	2.00 - 5.00	12.90	13.00	16.00	1.50	21.00	13.00	45.00	<b>3952-M10E1</b>	1,25	1




- Consulte preço e disponibilidade.

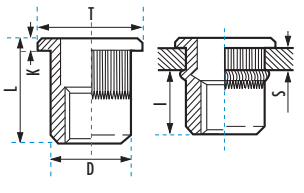
INOX

PORCAS DE REBITE CILINDRICAS ESTRIADAS




rivetsert by CELESA ROSA

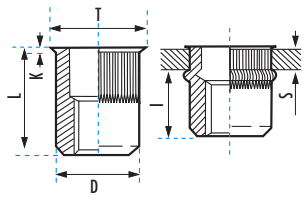
CABEÇA PLANA

	S mm	D mm +0,07/-0,1	$\frac{D}{s}$ +0,1/-0	T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm			€/Unit	
M 3x0.50	0.50 - 1.50	4.90	5.00	7.00	0.80	10.00	5.00	2.00	3953-M3	-	25
M 3x0.50	1.50 - 3.00	4.90	5.00	8.00	0.75	10.00	5.50	2.00	3953-M3E1	-	25
M 4x0.70	0.50 - 2.00	5.90	6.00	9.00	0.80	10.50	6.50	5.00	3953-M4	0,29	25
M 4x0.70	2.50 - 4.00	5.90	6.00	9.00	0.75	12.50	6.50	5.00	3953-M4E1	-	25
M 5x0.80	0.50 - 2.50	6.90	7.00	10.00	1.00	13.00	8.00	8.50	3953-M5	0,32	25
M 5x0.80	2.00 - 4.00	6.90	7.00	10.00	1.00	16.00	8.00	8.50	3953-M5E1	-	25
M 6x1.00	0.50 - 3.00	8.90	9.00	12.30	1.30	15.50	9.20	15.00	3953-M6	0,54	25
M 6x1.00	3.50 - 6.00	8.90	9.00	13.00	1.50	19.00	9.00	15.00	3953-M6E1	0,74	25
M 8x1.25	1.00 - 3.50	10.90	11.00	14.50	1.50	18.50	11.50	26.00	3953-M8	0,80	25
M 8x1.25	3.00 - 6.00	10.90	11.00	14.50	1.50	21.00	11.50	26.00	3953-M8E1	1,02	25
M 10x1.50	0.80 - 3.50	11.90	12.00	16.00	1.70	19.00	10.50	50.00	3953-M10	1,48	1
M 10x1.50	3.50 - 6.00	11.90	12.00	16.00	1.70	22.00	10.50	50.00	3953-M10E1	-	1
M 10x1.50	1.00 - 4.00	12.90	13.00	17.00	1.60	21.00	13.50	50.00	3953-M10E2	1,25	1
M 10x1.50	3.00 - 6.00	12.90	13.00	19.00	2.00	26.00	14.50	50.00	3953-M10E3	1,77	1
M 12x1.75	1.00 - 4.00	14.90	15.00	18.00	1.70	22.00	13.50	80.00	3953-M12	-	1
M 12x1.75	4.00 - 6.50	14.90	15.00	18.00	1.70	25.00	14.00	80.00	3953-M12E1	-	1
M 12x1.75	1.00 - 4.00	15.90	16.00	23.00	2.00	25.00	16.50	80.00	3953-M12E2	2,11	1
M 12x1.75	3.50 - 7.00	15.90	16.00	23.00	1.60	29.00	16.50	80.00	3953-M12E3	-	1






CABEÇA REDUZIDA

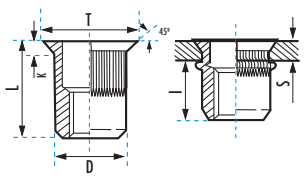
	S mm	D mm +0,07/-0,1	$\frac{D}{s}$ +0,1/-0	T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm			€/Unit	
M 3x0.50	0.50 - 2.00	4.90	5.00	6.00	0.40	9.00	5.50	1.00	3954-M3	-	25
M 3x0.50	1.50 - 2.50	4.90	5.00	5.80	0.50	10.00	5.50	1.00	3954-M3E1	-	25
M 4x0.70	0.50 - 2.00	5.90	6.00	7.00	0.50	10.50	6.50	3.00	3954-M4	0,26	25
M 4x0.70	2.50 - 4.00	5.90	6.00	7.00	0.50	12.50	6.50	3.00	3954-M4E1	0,51	25
M 5x0.80	0.50 - 2.00	6.90	7.00	8.00	0.50	11.50	7.20	6.00	3954-M5	0,30	25
M 5x0.80	2.50 - 4.50	6.90	7.00	8.00	0.50	13.00	6.80	6.00	3954-M5E1	0,62	25
M 6x1.00	0.50 - 3.00	8.90	9.00	10.00	0.60	14.00	9.00	11.00	3954-M6	0,50	25
M 6x1.00	3.00 - 6.00	8.90	9.00	10.00	0.50	17.50	8.60	11.00	3954-M6E1	0,77	25
M 8x1.25	1.00 - 3.50	10.90	11.00	12.00	0.50	16.50	10.50	20.00	3954-M8	0,73	25
M 8x1.25	3.50 - 6.00	10.90	11.00	12.00	0.65	19.50	10.00	20.00	3954-M8E1	1,08	25
M 10x1.50	0.80 - 3.00	11.90	12.00	13.50	0.80	18.00	11.20	32.00	3954-M10	1,48	1
M 10x1.50	2.00 - 4.50	11.90	12.00	13.50	0.80	19.50	11.20	32.00	3954-M10E1	-	1
M 10x1.50	1.00 - 3.50	12.90	13.00	14.00	0.70	17.70	10.70	32.00	3954-M10E2	1,48	1
M 10x1.50	3.00 - 6.00	12.90	13.00	14.00	0.50	23.00	13.30	32.00	3954-M10E3	-	1
M 12x1.75	0.50 - 3.50	14.90	15.00	16.50	0.85	22.50	16.00	50.00	3954-M12	-	1
M 12x1.75	1.00 - 4.00	15.90	16.00	17.60	0.75	24.20	14.00	50.00	3954-M12E1	2,11	1
M 12x1.75	4.00 - 6.00	15.90	16.00	17.50	0.60	27.00	16.00	50.00	3954-M12E2	-	1



3952

CABEÇA ESCAREADA

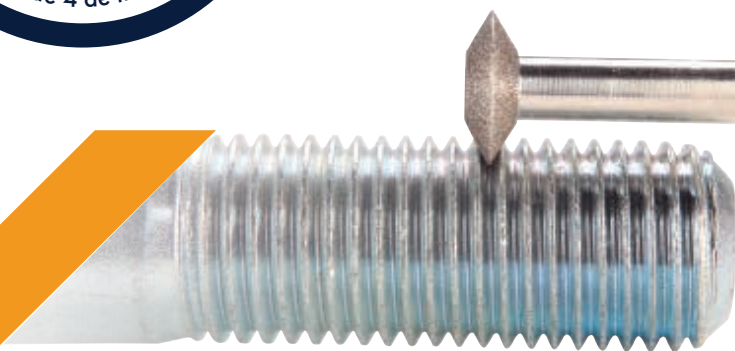
	S mm	D mm +0,07/-0,1	$\frac{D}{s}$ +0,1/-0	T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm			€/Unit	
M 3x0.50	1.70 - 3.00	4.90	5.00	8.00	1.50	11.50	11.50	1.00	3955-M3	0,35	25
M 3x0.50	3.00 - 4.00	4.90	5.00	8.00	1.50	12.50	11.50	1.00	3955-M3E1	-	25
M 4x0.70	1.50 - 3.00	5.90	6.00	9.00	1.50	12.00	7.50	4.00	3955-M4	0,37	25
M 4x0.70	3.50 - 5.00	5.90	6.00	9.00	1.50	13.00	7.50	4.00	3955-M4E1	0,49	25
M 5x0.80	1.50 - 3.50	6.90	7.00	10.00	1.50	13.00	7.00	8.00	3955-M5	0,39	25
M 5x0.80	4.00 - 6.00	6.90	7.00	10.00	1.50	15.00	7.00	8.00	3955-M5E1	0,61	25
M 6x1.00	1.50 - 4.00	8.90	9.00	12.00	1.50	15.50	9.00	15.00	3955-M6	0,56	25
M 6x1.00	4.50 - 6.50	8.90	9.00	12.00	1.50	19.00	9.00	15.00	3955-M6E1	0,95	25
M 8x1.25	2.00 - 4.50	10.90	11.00	14.00	1.50	18.50	12.00	26.00	3955-M8	0,84	25
M 8x1.25	3.50 - 6.50	10.90	11.00	13.70	1.50	21.00	12.00	26.00	3955-M8E1	1,15	25
M 10x1.50	1.50 - 4.00	11.90	12.00	15.00	1.50	18.00	10.50	45.00	3955-M10	-	1
M 10x1.50	3.00 - 6.00	11.90	12.00	15.00	1.50	20.00	10.50	45.00	3955-M10E1	-	1
M 10x1.50	2.00 - 5.00	12.90	13.00	16.00	1.50	21.00	13.00	45.00	3955-M10E2	1,25	1
M 10x1.50	3.50 - 6.50	12.90	13.00	15.70	1.60	25.00	14.50	45.00	3955-M10E3	2,02	1
M 12x1.75	1.60 - 5.00	14.90	15.00	18.00	1.50	22.50	14.50	50.00	3955-M12	-	1
M 12x1.75	1.50 - 4.50	15.90	16.00	19.00	1.70	24.00	14.00	50.00	3955-M12E1	2,11	1
M 12x1.75	4.00 - 7.50	15.90	16.00	19.00	1.90	29.00	17.50	50.00	3955-M12E2	-	1



- Consulte preço e disponibilidade.

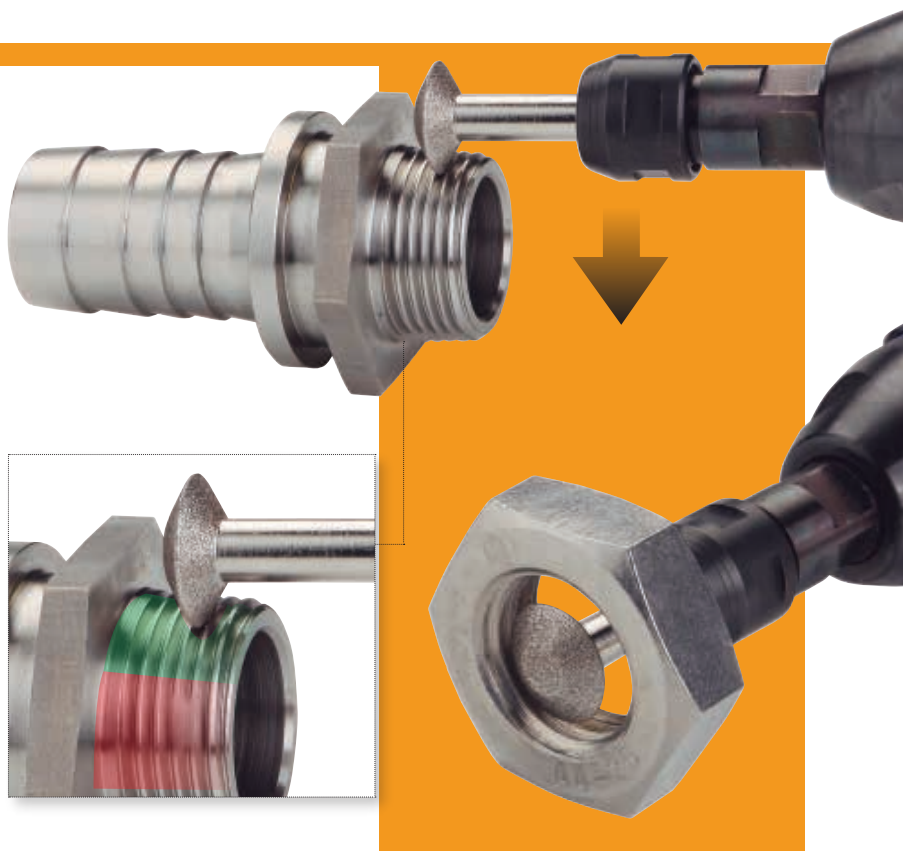


ROTA  
HREAD®  
by CELESA



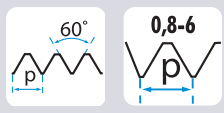
## FRESAS ROTATIVAS CBN PARA REPARAÇÃO DE ROSCAS

- Comece com os fios em boas condições (Zona Verde) e trabalhe na área danificada (Zona Vermelha). Balance a ferramenta sem sobre-pressionar para frente e para trás para repassar os fios danificados. Deixe a ferramenta fazer o trabalho.
- Mantenha a ferramenta limpa e use óleo de corte para aumentar a vida e o desempenho da ferramenta.
- Repita o passo 1 em todas as áreas danificadas.

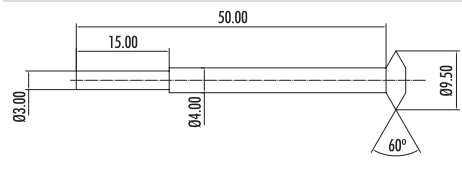


### FRESAS ROTATIVAS CBN PARA REPARAÇÃO DE ROSCAS

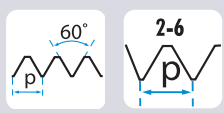
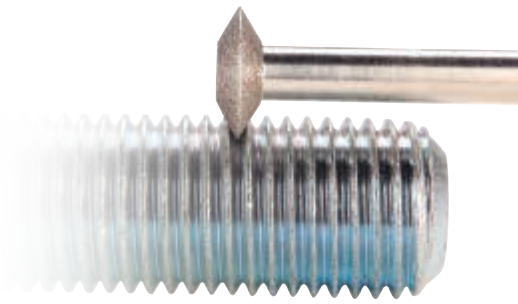
ROTA  
THREAD<sup>®</sup>  
by CELESA  
Rosa



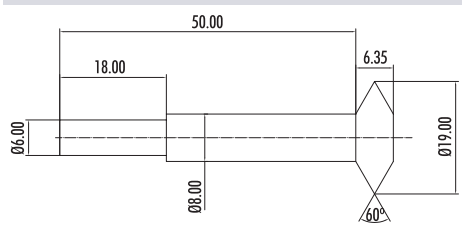
- Repara com precisão tanto as roscas internas como as externas.
- **Limitações:** passo mínimo de 0,80mm ou 28tpi. Nas roscas internas, o tamanho mínimo é de M12 ou 1/2" ou 1/2".



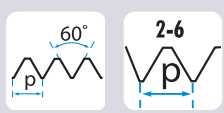
Ref. LRR1  
55,86 €



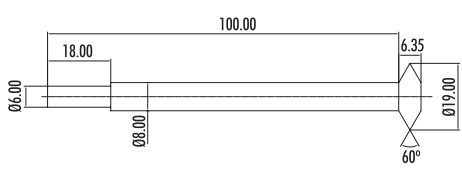
- Repara com precisão tanto as roscas internas como as externas, especialmente passos grossos.
- **Limitações:** passo mínimo de 2mm ou 12 fios. Nas roscas internas, o tamanho mínimo é de M22 ou 7/8.



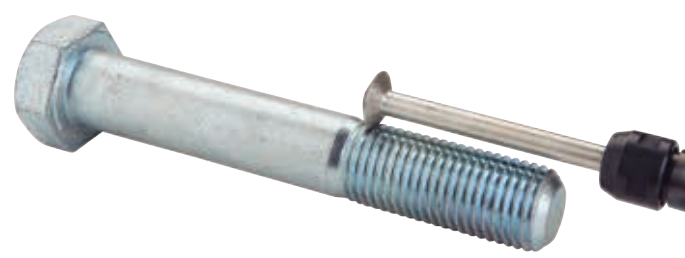
Ref. LRR2  
70,76 €



- Repara com precisão tanto as roscas internas como as externas, especialmente passos grossos.
- **Limitações:** passo mínimo de 2mm ou 12 fios. Nas roscas internas, o tamanho mínimo é de M22 ou 7/8.



Ref. LRR3  
80,07 €

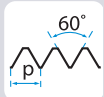
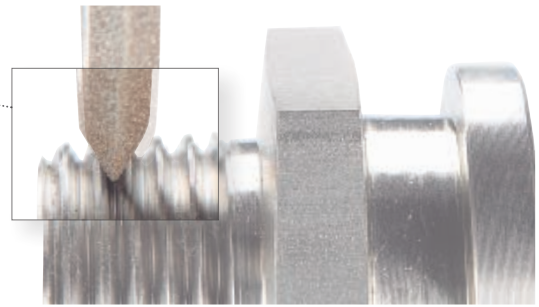


# ROTA THREAD®

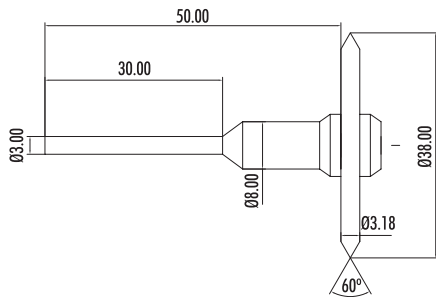
by *ca/esa*

ROTA THREAD®  
by *ca/esa*

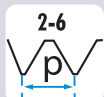
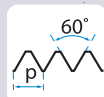
Rosa



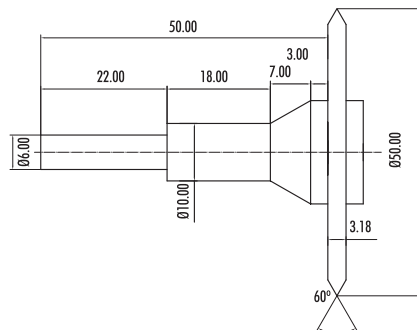
- Repara as roscas externas com precisão. Diâmetro de 38 milímetros para atuar em áreas inacessíveis, como os fios perto da cabeça do parafuso.
- **Limitações:** passo mínimo de 0,8mm ou 28 fios.



Ref. LRR4  
85,65 €



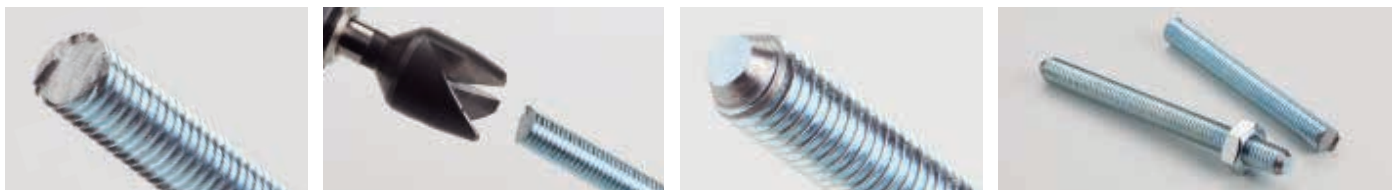
- Repara as roscas externas com precisão. Diâmetro de 50 milímetros para atuar em áreas inacessíveis, como os fios perto da cabeça do parafuso.
- **Limitações:** passo mínimo de 2mm ou 12 fios.



Ref. LRR5  
102,41 €



## ESCAREADOR EXTERNO PARA REPARAÇÃO DE FIOS DE ENTRADA



## Escareador Externo

Os escareadores externos servem para corrigir os fios iniciais dum parafuso ou uma vareta rosçada. Istos fios puderam ser batidos ou cortados por radial, de modo que a rebarba gerada não permite introduzir uma porca nele. O escareador limpa esses fios e gera um chanfro de 60 ° que facilita a entrada da porca.

- Não gera calor ou faíscas.
- O escareador deve ser usado em voltas baixas (Max 500RPM).
- O óleo de corte CUT MAGIC facilita a operação.
- É comumente usado com berbequins de mão, e especialmente de bateria.

HSS



60°



AVEXT

MIN.-MAX.		L <sub>1</sub> mm		€
M8-M18	1/4"	75	AVEXT	28,11

AVMDEXT

MIN.-MAX.			€
5-25 mm	1/4"	AVMDEXT	32,36

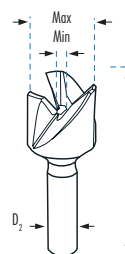
INOX

MD

HSS



60°



AV

MIN.-MAX.	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm		€
M3-M8	3,0	8,0	55	AVX1-60	63,40
M6-M14	6,0	10,0	60	AVX2-60	121,66
M10-M27	10,0	13,0	75	AVX3-60	182,33

## LIMAS PARA REPARAÇÃO DE ROSCAS

Fácil  
de Usar

## Não compre, repare.

**Identificação do passo:** Se você ignora o passo da rosca a ser reparado, insira a lima nos fios saudáveis da rosca até verificar se as cristas e os vales se encaixam perfeitamente, cobrindo todo o perfil olhando a contraluz. É importante dar com o passo exato, pois existem passos que parecem semelhantes e podem causar erros. Se ficarmos confusos, definitivamente vamos estragar a peça.

**Reparação:** Uma vez que o passo é identificado, lime a rosca danificada suavemente, combinando o perfil da lima com o da rosca danificada. Sem abrupto, mas fazendo trabalhar a lima. Não se preocupe em aprofundar muito, a própria lima limita a profundidade do fio. É conveniente começar com os fios saudáveis para guiar a lima corretamente. Use o óleo de corte CUT MAGIC, que facilitará a rebarbação. Verifique a bondade da rosca com uma porca e, se não encaixar confortavelmente, não a force e repasse novamente a rosca.

Para rosças externas  
Passos métricos:

0,75 - 1,00 - 1,25 - 1,50 - 1,75 - 2,00 - 2,50 - 3,00

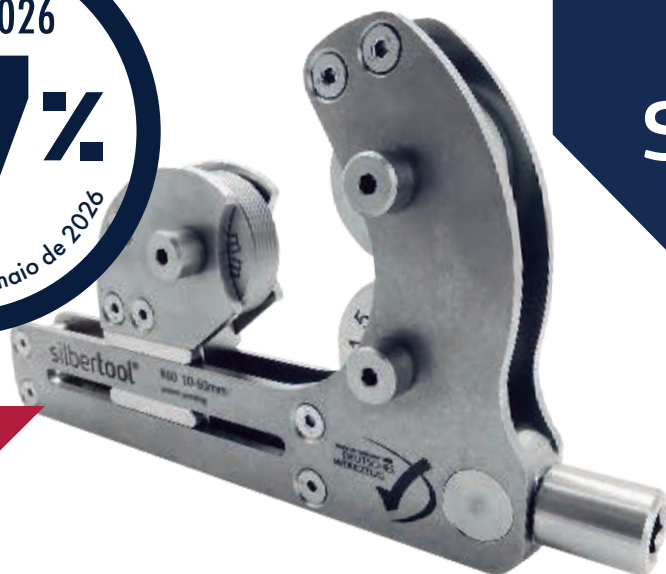
Ref. LR1  
40,09 €Para rosças externas e internas  
Passos métricos:

0,80 - 1,00 - 1,25 - 1,50 - 1,75 - 2,00 - 2,50 - 3,00

Ref. LR2  
60,20 €



**silbertool®**  
by **celesa**

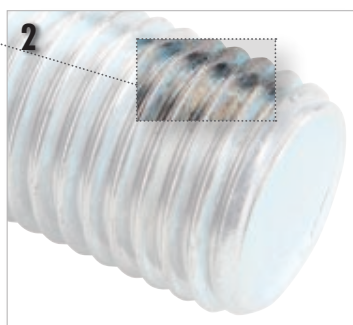
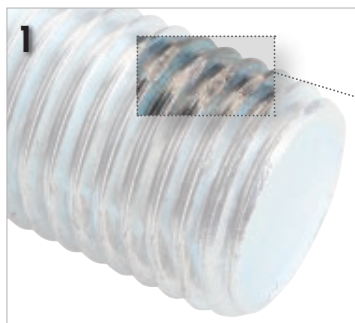


# REPARADOR DE ROSCAS EXTERNAS POR LAMINAÇÃO

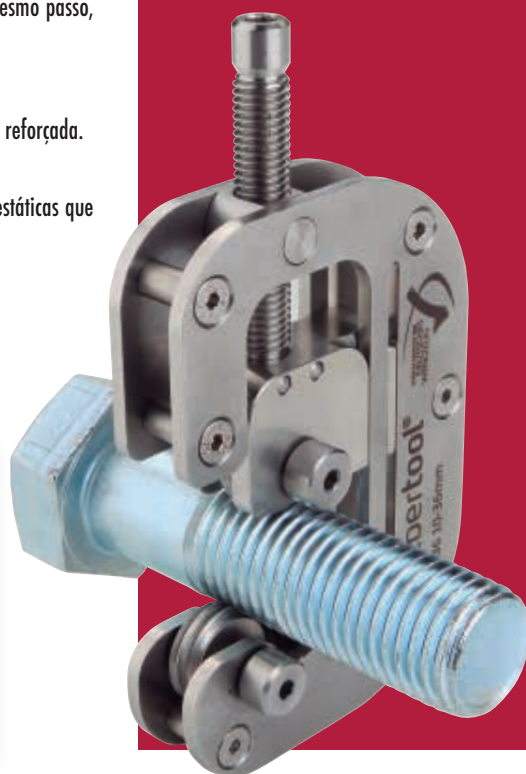
Os reparadores de roscas Silbertool são a solução perfeita para as roscas extremamente danificadas, que não podem ser repassadas por caçonetes ou outros reparadores de roscas externas, pois uma extração do material dos fios suporia enfraquecê-la irremediavelmente e inutilizar o parafuso. A ampla gama de rolos com diferentes passos oferece versatilidade já que só com a mudança dos rolos, as roscas de passos muito diferentes podem ser reparadas. Uma vez fixado o passo, é possível reparar parafusos do mesmo passo, por exemplo: M6X1, M8X1, M10X1, M12X1, M14X1, etc ... versátil, fácil ... muito útil.

## Vantagens

- A rosca é reparada por conformação a frio para que a rosca reparada não seja enfraquecida, mas reforçada.
- Todos os passos são reparados com a mesma ferramenta. Cada rolo tem o seu passo.
- Foi comprovado que uma rosca reparada com Silbertool®, suporta as mesmas cargas dinâmicas e estáticas que a rosca original. Além disso, está provado que oferece maior resistência à fadiga.
- Durante o processo de reparação, a superfície da rosca fica perfeitamente limpa; sem rebites.
- Use o fluido de corte para reduzir o esforço na reparação.



## REPARAÇÃO NÃO INVASIVA




## REPARADOR DE ROSCAS EXTERNAS POR LAMINAÇÃO



Ref. R16





M / MF			R16
M5 - M16	0,50 - 2,00	R16	€ / Unit <b>394,18</b>

Não inclui os rolos.



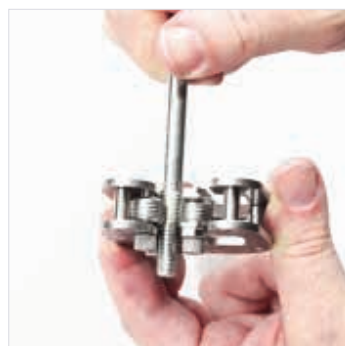
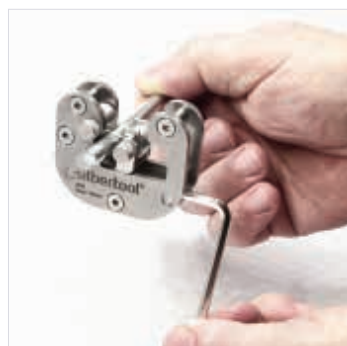
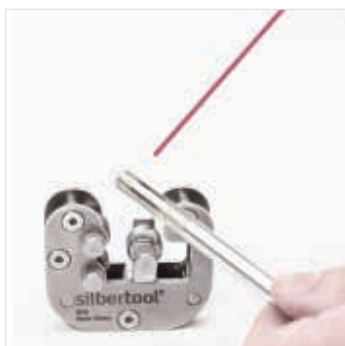
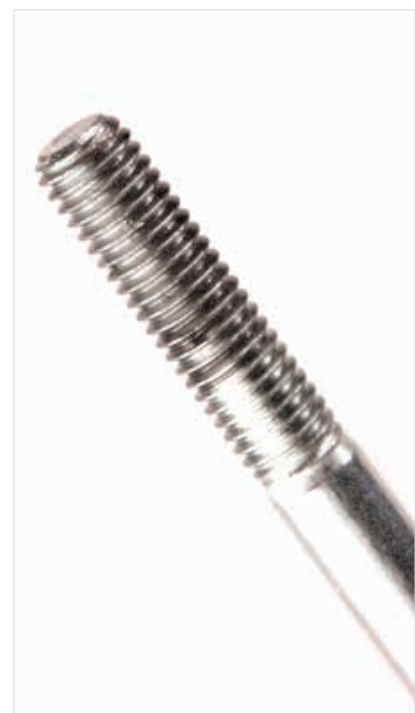
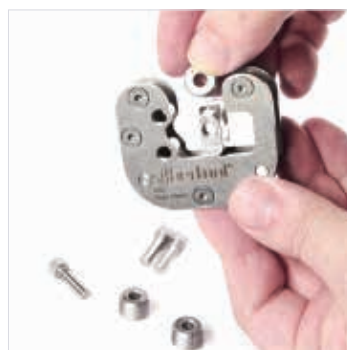
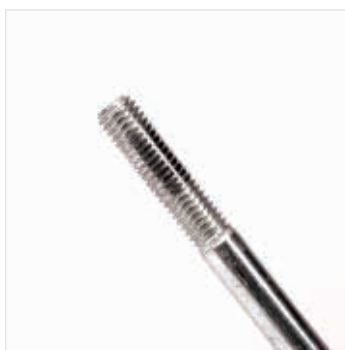
Ref. R160175

## JOGOS DE ROLOS

M / MF			€ / Unit		€ / Unit
M5 - M16	0.50	R160050	84,25	R1610050	112,42
M5 - M16	0.75	R160075	84,25	R1610075	112,42
M5 - M16	0.80	R160080	84,25	R1610080	112,42
M5 - M16	1.00	R160100	84,25	R1610100	112,42
M5 - M16	1.25	R160125	84,25	R1610125	112,42
M5 - M16	1.50	R160150	84,25	R1610150	112,42
M5 - M16	1.75	R160175	84,25	R1610175	112,42
M5 - M16	2.00	R160200	84,25	R1610200	112,42



Ref. R160125



**REPARADOR DE ROSCAS EXTERNAS POR LAMINAÇÃO**

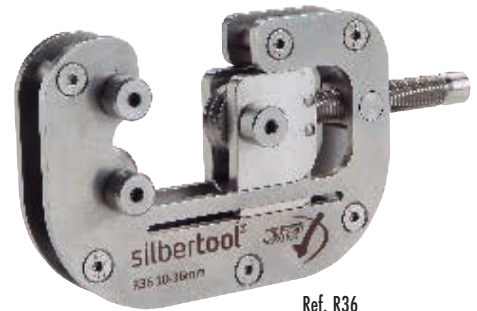


Ref. R360250



**JOGOS DE ROLOS**

M / MF			€/ Unit		€/ Unit
M10 - M36	0.50	R360050	128,37	R36I0050	154,10
M10 - M36	0.75	R360075	128,37	R36I0075	154,10
M10 - M36	1.00	R360100	128,37	R36I0100	154,10
M10 - M36	1.25	R360125	128,37	R36I0125	154,10
M10 - M36	1.50	R360150	128,37	R36I0150	154,10
M10 - M36	1.75	R360175	128,37	R36I0175	154,10
M10 - M36	2.00	R360200	128,37	R36I0200	154,10
M10 - M36	2.50	R360250	128,37	R36I0250	154,10
M10 - M36	3.00	R360300	128,37	R36I0300	154,10
M10 - M36	3.50	R360350	128,37	R36I0350	154,10
M10 - M36	4.00	R360400	128,37	R36I0400	154,10



Ref. R36

M / MF			€/ Unit
M10 - M36	0.50 - 4.00	R36	900,12

Não inclui os rolos.



Ref. R600050



**JOGOS DE ROLOS**

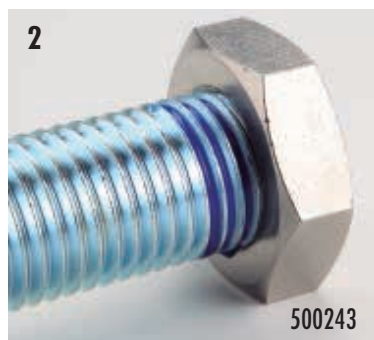
M / MF			€/ Unit		€/ Unit
M10 - M60 - M110	0.50	R600050	231,27	R60I0050	257,00
M10 - M60 - M110	0.80	R600080	231,27	R60I0080	257,00
M10 - M60 - M110	1.00	R600100	231,27	R60I0100	257,00
M10 - M60 - M110	1.25	R600125	231,27	R60I0125	257,00
M10 - M60 - M110	1.50	R600150	231,27	R60I0150	257,00
M10 - M60 - M110	1.75	R600175	231,27	R60I0175	257,00
M10 - M60 - M110	2.00	R600200	231,27	R60I0200	257,00
M10 - M60 - M110	2.50	R600250	231,27	R60I0250	257,00
M10 - M60 - M110	3.00	R600300	231,27	R60I0300	257,00



Ref. R60

M / MF			€/ Unit
M10 - M60	0.50 - 3.00	R60	1.157,37
M50 - M110	0.50 - 3.00	R110	1.800,50

Não inclui os rolos.



## Aderentes anaeróbicos para roscas

Este produto foi concebido para fixar e selar juntas roscadas no campo industrial, obtendo uma maior resistência mecânica na mesma.

### Vantagens

- 1. A característica destacada dos aderentes anaeróbicos é o endurecimento da ligação após do contato de metal com metal sob ausência de ar.
- 2. Desta forma, obtém-se uma fixação resistente as vibrações, aos impactos e extremamente resistente aos produtos químicos e solventes.
- 3. Graças ao estado líquido do POWERLOCK, é possível preencher completamente osocos do acoplamento, selar os vazamentos e proteger contra a corrosão causada por agentes externos, permitindo uma maior durabilidade do acoplamento roscado. Além disso, o POWERLOCK é muitas vezes aplicado no campo da vedação das flanges.
- 4. A aplicação do POWERLOCK é simples e rápida; o aderente consegue o endurecimento inicial em poucos minutos e o endurecimento final em poucas horas a temperatura ambiente.
- 5. POWERLOCK é adequado especialmente para todos os metais e para certos plásticos.

### Principais aplicações

- Conexões aparafusadas de M5 a M36.
- Permite fixar de forma segura caxonetes, buchas, parafusos, eixos e outras peças montadas.
- Sela conexões hidráulicas e pneumáticas.

### Materiais ativos e passivos

#### Materiais ativos (secagem rápida)

- Bronze
- Ferro
- Cobre
- Latão
- Aço

#### Materiais passivos (secagem lenta)

- Aço de alta liga
- Alumínio, níquel, zinco, ouro
- Camadas de óxido

500222



	Cor	Faixa de aplicação	Viscosidade a +25	Folga max.	Resistência à ruptura	Força residual	Resistência ao cisalhamento (N/mm <sup>2</sup> )	Tempo de cura fase inicial a temperatura ambiente	Tempo de cura total a temperatura ambiente	Temperatura de trabalho	€
500222 *		M1-M36	1.000 mPa-s	0,20 mm	4-8 Nm	2-4 Nm	3-5 N/mm <sup>2</sup> (435-725 psi)	10-20 min.	3-6 h.	-60 - +150°C (-76 - +302°F)	42,99
500243 **		M1-M36	2.000 - 7.000 mPa-s	0,25 mm	17-22 Nm	8-12 Nm	9-13 N/mm <sup>2</sup> (1.305-1.885 psi)	10-20 min.	1-3 h.	-60 - +150°C (-76 - +302°F)	42,99
500270 ***		M1-M20	500 mPa-s	0,15 mm	28-35 Nm	50-65 Nm	15-20 N/mm <sup>2</sup> (2.175-2.900 psi)	10-20 min.	3-6 h.	-60 - +150°C (-76 - +302°F)	42,99

\* Força baixa (desmontagem fácil)

\*\* Força meia (desmontagem com ferramenta)

\*\*\* Força alta (desmontagem com calor)



### Limpeza previa à utilização de adesivos e vedantes.

O limpador de superfícies utiliza-se para limpar e desengordurar as superfícies que devem ser coladas ou seladas com os adesivos e os vedantes POWERLOCK. Limpa e evapora-se sem deixar rasto.



500001

16,01 €



500572

PTFE



500572



Rosa

## Vedantes de roscas para tubulação em sistemas hidráulicos e pneumáticos

Os vedantes de tubulações rosçadas POWERLOCK impedem vazamentos de qualquer fluido gasoso e líquido usado na indústria, que são conduzidos a altas pressões.

### Vantagens

- São resistentes à maioria dos fluidos aplicados na indústria e evitam as obstruções das peças de conexão (cotovelos, etc.) em sistemas hidráulicos e pneumáticos (como acoiteceria usando cânhamo ou fitas de teflon).
- A conexão rosçada fica protegida contra a corrosão de tais fluidos e as diferentes resistências disponíveis permitem uma desmontagem mesmo após vários anos de conexão estável.
- Os selantes POWERLOCK são a melhor opção para criar uma união rosçada ESTANQUE e evitar o risco de vazamento.



### Recomendações de Uso

#### Aplicação direta

POWERLOCK aplica-se diretamente desde a sua ponta dosadora evitando o contato direto da ponta dosadora com o metal. Se é uma questão de uniões prensadas e elementos de união de grande medida, molhe ambas as superfícies formando uma camada fina e uniforme. No caso de roscas em furos cegos, aplique uma quantidade suficiente do POWERLOCK no furo. No caso de parafusos e parafusos, aplique o aderente em forma anular. Não verter novamente à garrafa o POWERLOCK que já tenha estado em contato com o metal. Mesmo as partículas mais finas levam ao endurecimento na garrafa.



500542

	Cor	Faixa de aplicação	Viscosidade a +25	Folga max.	Resistência à ruptura	Força residual	Resistência ao cisalhamento (N/mm <sup>2</sup> )	Tempo de cura fase inicial a temperatura ambiente	Tempo de cura total a temperatura ambiente	Temperatura de trabalho	€
500542 		G 1/8"-3/4"	500 mPa-s	0,15 mm	12-15 Nm	18-22 Nm	8-12 N/mm <sup>2</sup> (1.160-1.740 psi)	10-20 min.	2-4 h.	-60 - +150°C (-76 - +302°F)	42,99
500572 ** 		G 1/8"-3"	17.000-50.000 mPa-s	0,40 mm	7-10 Nm	2-4 Nm	4-6 N/mm <sup>2</sup> (580-870 psi)	20-40 min.	5-10 h.	-60 - +150°C (-76 - +302°F)	25,84

\*\* PTFE líquido

\* Ficha de dados de segurança disponível.



<b>FREE</b>	Inserto standard (livre)	<b>...X</b>	Código de Família	<b>HSS</b>	Macho manual HSS
<b>LOCK</b>	Inserto Auto-bloqueador	<b>1.0D</b>	Longitude do inserto instalado = $\varnothing \times 1.0$	<b>HSS</b>	Macho manual M/MF, UNC, UNF, 8 UN, NPT
<b>M/MF</b>	Métrica e métrica fina	<b>1.5D</b>	Longitude do inserto instalado = $\varnothing \times 1.5$	<b>HSS</b>	Macho manual BSW, BSF, BSP, BSB
<b>UNC</b>	Rosca americana UNC	<b>2.0D</b>	Longitude do inserto instalado = $\varnothing \times 2.0$	<b>HSS</b>	Macho manual BA
<b>UNF</b>	Rosca americana UNF	<b>2.5D</b>	Longitude do inserto instalado = $\varnothing \times 2.5$	<b>HSS-V3</b>	Macho com dupla entrada para as velas de ignição
<b>BSW</b>	Rosca inglesa Whitworth	<b>3.0D</b>	Longitude do inserto instalado = $\varnothing \times 3.0$	<b>HSS-V3</b>	Macho Helicoidal 35° HSS-V3 (3%V)
<b>BSF</b>	Rosca inglesa Withworth fina	<b>3.5D</b>	Longitude do inserto instalado = $\varnothing \times 3.5$	<b>HSS-V3</b>	Macho com entrada corrigida HSS-V3 (3%V)
<b>BSP</b>	Rosca inglesa BSP / GAS	<b>X.XD</b>	Codificação da long. do inserto instalado = $\varnothing \times "D"$	<b>TOL5H-6H</b>	Macho em tolerância 5H/6H
<b>BSP</b>	Rosca inglesa BSP / GAS	<b>AISI 304</b>	Inserto de aço inoxidável 304	<b>TOL (2B-3B)</b>	Macho em tolerância 2B-3B
<b>NPT</b>	Rosca conica Americana NPT	<b>Carro de insertos</b>	Longitude da rosca da vela de ignição	<b>Carro de insertos</b>	Carro de insertos
<b>8-UN</b>	Rosca Americana UN-8 Fios	<b>Series curtas</b>	Conformidade em encomenda especial	<b>Series curtas</b>	Series curtas
<b>BA</b>	Rosca inglesa	<b>Series medias</b>	Conformidade de inserto	<b>Series medias</b>	Series medias
<b>BSB</b>	Rosca inglesa BSB (Latão)	<b>Series longas</b>	Broca de HSS	<b>Series longas</b>	Series longas
		<b>Verificador passa, não passa</b>		<b>Verificador passa, não passa</b>	Ferramentas de instalação manual



Diâmetro do inserto    Passo em mm e polegada    Longitude instalada    Unidades da embalagem    Nº de Inserts    Diâmetro da broca    Macho    Ferramenta de instalação Nº    Quebrador