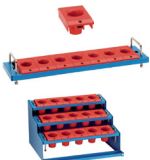


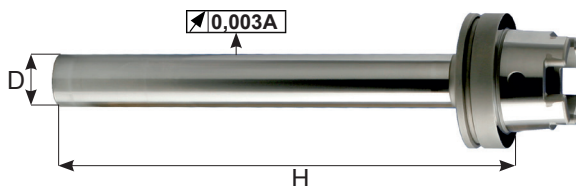


**PROGRAMA**

|                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
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| PAG. 11                                                                             | PAG. 11                                                                             | PAG. 11                                                                             | PAG. 12                                                                             | PAG. 12                                                                             | PAG. 12                                                                              | PAG. 13                                                                               |
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| PAG. 18                                                                             | PAG. 19                                                                             | PAG. 20                                                                             | PAG. 20                                                                             |                                                                                     |                                                                                      |                                                                                       |

**DIN/69893**

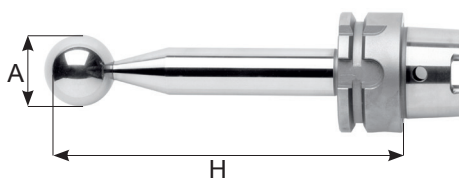
Barra de control con certificado HSK  
Test arbor with accuracy certificate HSK



| REFERENCIA        | FAM | COD  | D  | FORMA    | H   |
|-------------------|-----|------|----|----------|-----|
| HSK32A.H180.CK24  | 3   | -    | 24 | HSK32-A  | 180 |
| HSK40A.H180.CK24  | 3   | -    | 24 | HSK40-A  | 180 |
| HSK50A.H236.CK32  | 3   | -    | 32 | HSK50-A  | 236 |
| HSK63A.H346.CK40  | 3   | -    | 40 | HSK63-A  | 346 |
| HSK80A.H346.CK40  | 3   | -    | 40 | HSK80-A  | 346 |
| HSK100A.H349.CK40 | 3   | -    | 40 | HSK100-A | 349 |
| HSK25E.H140.CK20  | 3   | -    | 20 | HSK25-E  | 140 |
| HSK40E.H300.CK32  | 2   | 6940 | 32 | HSK40-E  | 300 |
| HSK50E.H150.CK24  | 3   | -    | 24 | HSK50-E  | 150 |
| HSK50E.H300.CK40  | 2   | 6941 | 40 | HSK50-E  | 300 |
| HSK63E.H390.CK40  | 2   | 6942 | 40 | HSK63-E  | 390 |
| HSK50F.H300.CK40  | 2   | 6788 | 40 | HSK50-F  | 300 |
| HSK63F.H346.CK40  | 3   | -    | 40 | HSK63-F  | 346 |
| HSK63F.H380.CK40  | 2   | 6789 | 40 | HSK63-F  | 380 |

**DIN/69893**

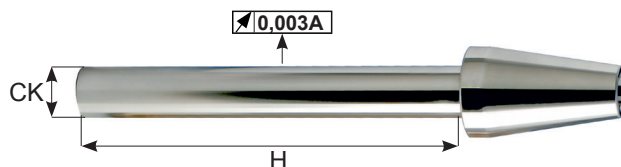
Mandrino de control HSK (5 Ejes)  
Runout test arbors HSK (5 Axis)



| REFERENCIA        | FAM | FORMA    | A  | H   |
|-------------------|-----|----------|----|-----|
| HSK32A.H150.B30   | 3   | HSK32-A  | 30 | 150 |
| HSK40A.H150.B30   |     | HSK40-A  | 30 | 150 |
| HSK50A.H150.B30   |     | HSK50-A  | 30 | 150 |
| HSK63A.H150.B30   |     | HSK63-A  | 30 | 150 |
| HSK63AL.H200.B30  |     | HSK63-A  | 30 | 200 |
| HSK100A.H150.B30  |     | HSK100-A | 30 | 150 |
| HSK100AL.H200.B30 |     | HSK100-A | 30 | 200 |
| HSK63F.H150.B30   | 3   | HSK63-F  | 30 | 150 |
| HSK63F.H200.B30   |     |          | 30 | 200 |

**MAS/403BT**

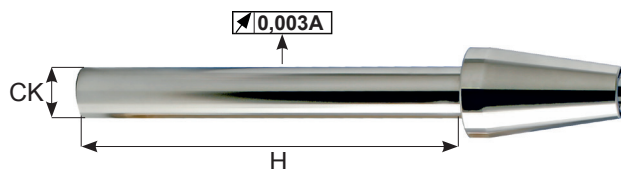
Barra de control con certificado MAS/403BT  
Test arbor with accuracy certificate MAS/403BT



| REFERENCIA     | FAM | CK | FORMA | H   |
|----------------|-----|----|-------|-----|
| BT30.H200.CK32 | 1   | 32 | AD    | 200 |
| BT40.H300.CK40 | 1   | 40 | AD    | 300 |
| BT50.H320.CK40 | 3   | 40 | AD    | 320 |
| BT50.H300.CK50 | 1   | 50 | AD    | 300 |

**DIN/69871**

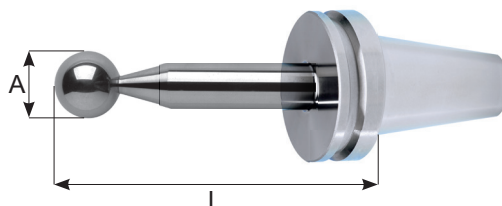
Barra de control con certificado DIN/69871  
Test arbor with accuracy certificate DIN/69871



| REFERENCIA     | FAM | CK | FORMA | H   |
|----------------|-----|----|-------|-----|
| TC30.H200.CK32 | 1   | 32 | AD    | 200 |
| TC40.H300.CK40 | 1   | 40 | AD    | 300 |
| TC50.H320.CK40 | 3   | 40 | AD    | 320 |
| TC50.H300.CK50 | 1   | 50 | AD    | 300 |

**MAS/403BT**

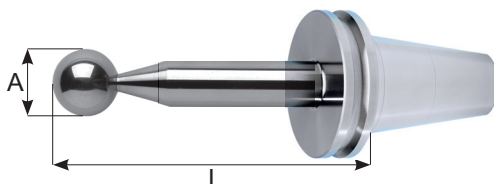
Mandrino de control para cono ISO 7/24 (5 Ejes)  
Runout test arbors for 7/24 taper spindles (5 Axis)



| REFERENCIA    | FAM | MODELO | NORMA     | A  | L   |
|---------------|-----|--------|-----------|----|-----|
| BT40.H150.B30 | 3   | BT40   | JIS B6339 | 30 | 150 |
| BT50.H150.B30 |     | BT50   | JIS B6339 | 30 | 150 |

**DIN/69871**

**Mandrino de control para cono ISO 7/24 (5 Ejes)**  
*Runout test arbors for 7/24 taper spindles (5 Axis)*



| REFERENCIA    | FAM | MODELO | NORMA | A  | L   |
|---------------|-----|--------|-------|----|-----|
| TC30.H200.B30 | 3   | TC30   | -     | 30 | 200 |
| TC40.H150.B30 |     | TC40   | -     | 30 | 150 |
| TC50.H150.B30 |     | TC50   | -     | 30 | 150 |

**ISO/26623-1**

**Barra de control Cono Poligonal - PSC**  
*Control bar Polygonal Taper - PSC*



| REFERENCIA     | FAM | C  | D  | L   |
|----------------|-----|----|----|-----|
| C32-BCN20-L180 | 18  | 32 | 20 | 180 |
| C40-BCN32-L180 | 18  | 40 | 32 | 180 |
| C50-BCN32-L180 | 18  | 50 | 32 | 180 |
| C50-BCN32-L245 |     | 50 | 32 | 245 |
| C50-BCN40-L280 |     | 50 | 40 | 280 |
| C63-BCN40-L180 | 18  | 63 | 40 | 182 |
| C63-BCN40-L232 |     | 63 | 40 | 232 |
| C63-BCN40-L352 |     | 63 | 40 | 352 |



## Medidor fuerza tracción Analógico Mechanical Pull Force Gauge with analog indicator



| REFERENCIA | FAM | MODELO        | REFERENCIA    | FAM | MODELO     |
|------------|-----|---------------|---------------|-----|------------|
| 76.785.025 | 3   | HSK A/C/E 25  | 76.785.130    | 3   | SK30/CAT30 |
| 76.785.032 |     | HSK A/C/E 32  | 76.785.130.BT |     | BT30       |
| 76.785.040 |     | HSK A/C/E 40  | 76.785.140    |     | SK40/CAT40 |
| 76.785.050 |     | HSK A/C/E 50  | 76.785.140.BT |     | BT40       |
| 76.785.063 |     | HSK A/C/E 63  | 76.785.150    |     | SK50/CAT50 |
| 76.785.080 |     | HSK A/C/E 80  |               |     |            |
| 76.785.100 |     | HSK A/C/E 100 |               |     |            |
| 76.785.705 |     | CAPTO C5      |               |     |            |
| 76.785.706 |     | CAPTO C6      |               |     |            |

## Tablas de tracción de tiro y capacidad Mechanical Pull Force Gauges

| REFERENCIA      | FUERZA MINIMA<br>SUGERIDA DE<br>TRACCION | CAPACIDAD    |
|-----------------|------------------------------------------|--------------|
| HSK25           | 2.8 kN                                   | 0.5 – 10 kN  |
| HSK32           | 5.0 kN                                   | 1.0 – 15 kN  |
| HSK40           | 6.8 kN                                   | 2.0 – 20 kN  |
| HSK50           | 11.0 kN                                  | 2.0 – 25 kN  |
| HSK63           | 18.0 kN                                  | 5.0 – 40 kN  |
| HSK80           | 28.0 kN                                  | 10.0 – 50 kN |
| HSK100          | 45.0 kN                                  | 10.0 – 70 kN |
| SK30/BT30/CAT30 | 6.0 kN                                   | 1.0 – 15 kN  |
| SK40/BT40/CAT40 | 12.0 kN                                  | 2.0 – 25 kN  |
| SK50/BT50/CAT50 | 25.0 kN                                  | 5.0 – 40 kN  |



KN= kilonewton

## Máquina de medición LARTH *Presetter LARTH*

### Características:

Aparato para medir herramientas

- Rango de medición: X 130mm (Ø 260mm) Z 360mm.
- Resolución de medición: X / Z : 0.001 mm.
- Postprocesador RISC 32 bits y sistema de vision integrado.
- Sensor de imagen C-MOS resolución 0.001 mm.
- Lentes telecéntricas y iluminador LED.
- Area de imagen enmarcada: Alrededor de 5x5 mm.
- Aumentos de 20x.
- TFT color LCD 5.7" LED (tamaño imagen 90x120 mm).
- Pantalla táctil en todas las operaciones.
- Muestra radio / diámetro, mm / pulg, abs / incr.
- Capacidad de medición con auto focalización a pantalla completa.
- Enfoque control barras eje "X" y eje "Z"
- Ciclo de cómputo automático de radio y ángulo.
- Gestion de origen de hasta 9 máquinas de control numérico.
- Gestión de tablas de herramientas de hasta 9 máquinas de control numérico.
- Herramienta correctora de almacenamiento específico de T, LX, LZ, radio de inserción.
- Almacenamiento de datos en memoria flash.
- Puerto USB para conexión a PC (Windows OS).
- Actualización de la BIOS a través del puerto USB.
- Fuente de alimentación externa a 24 Vcc.
- Dimensiones ocupadas: L=512 mm, H=827 mm, P=406 mm, Peso= 45Kg.

### Opciones:

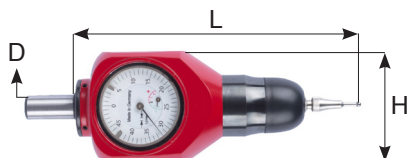
- Impresora de etiquetas:
- ISO/ BT/ HSK/ CAPTO/ VDI adaptadores intercambiables.
- Software DDP - Post Procesamiento de datos: generador de ficheros corregidos, en más de 50 formatos de máquinas CNC mediante un creador universal de post-procesadores. Copia de seguridad fácil de usar y restauración de los orígenes de la máquina y lista de herramientas.

### Versiones:

- Porta husillo rotativo intercambiable ISO/ BT40/ BT50/ HSK CAPTO/ VDI.
- Porta husillos rotativo fijo ISO40/ ISO50



**Dispositivo de centrado tridimensional 3D Estando Ø 12 Alta precisión**  
*3D Sensor waterproof - shank Ø 12*



**PRECISIÓN**  
**0.01mm**

| REFERENCIA | FAM | D  | H  | L   |
|------------|-----|----|----|-----|
| 3D-Pro     | 3   | 12 | 52 | 160 |

*Nota: Carcasa totalmente impermeable, incluso para las máquinas con refrigeración continua, el indicador y la sonda están completamente sellados*

**Dispositivo de centrado tridimensional 3D Ø 12 Alta precisión**  
*3D Sensor - shank Ø 12*



**PRECISIÓN**  
**0.01mm**

| REFERENCIA | FAM | D  | H  | L   |
|------------|-----|----|----|-----|
| 3D-Eco     | 3   | 12 | 52 | 160 |

**Punta Sonda**  
*Spare Probes*



| REFERENCIA | FAM | L  | Ø |
|------------|-----|----|---|
| Sonda 3    | 3   | 27 | 3 |
| Sonda 6    |     | 62 | 6 |

**Estuche para Dispositivo 3D**  
*3D Edge Finder in Fitted-Case*

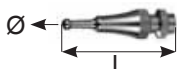


## Dispositivo de centrado tridimensional 3D Ø 12 3D Sensor - shank Ø 12



| REFERENCIA | FAM | D  | L   | H  |
|------------|-----|----|-----|----|
| 3D-TSCH    | 1   | 12 | 123 | 44 |

### Recambio para Ø 3 Short tips - Ø 3



| REFERENCIA | FAM | L  | Ø |
|------------|-----|----|---|
| 3D-LSC6    | 1   | 31 | 3 |

### Recambio para Ø 6 Long tips - Ø 6



| REFERENCIA | FAM | L  | Ø |
|------------|-----|----|---|
| 3D-LSC3    | 1   | 68 | 6 |

## Dispositivo de centrado tridimensional 3D Ø 20 3D Sensor - shank Ø 20



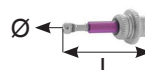
| REFERENCIA | FAM | D  | L   | H  |
|------------|-----|----|-----|----|
| 3D-PD      | 1   | 20 | 133 | 65 |

### Recambio para Ø 8 Long tips - Ø 8



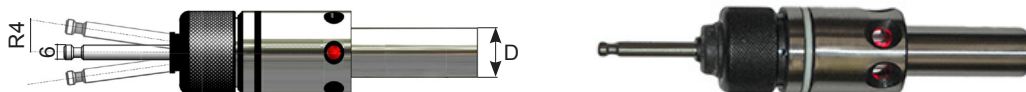
| REFERENCIA | FAM | L    | Ø |
|------------|-----|------|---|
| 3D-LCD8    | 1   | 74.5 | 8 |

### Recambio para Ø 4 Short tips - Ø 4



| REFERENCIA | FAM | L  | Ø |
|------------|-----|----|---|
| 3D-LCD4    | 1   | 33 | 4 |

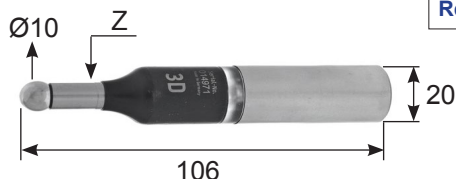
Dispositivo de centrado tridimensional 3D Ø 20 (3 Ejes) Luminoso y Sonoro  
*3D Sensor - shank Ø 20 (3 Axis) Optical & Acoustic*



| REFERENCIA | D  | FAM |
|------------|----|-----|
| 00120060   | 20 | 20  |

Dispositivo de centrado tridimensional 3D Ø 20 (3 Ejes)  
*3D Sensor - shank Ø 20 (3 Axis)*

Luminoso  
*Optical*

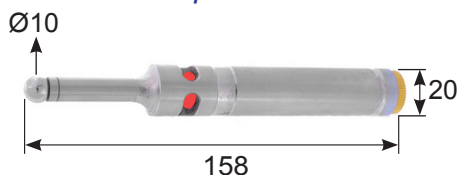


Z = 2mm  
 Recorrido Eje Z

| REFERENCIA | FAM |
|------------|-----|
| 3D-D20EF   | 1   |

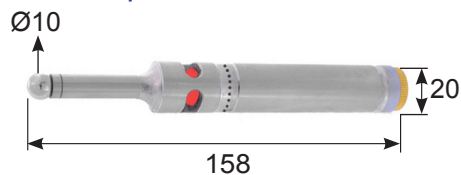
Dispositivo de centrado 2D Ø 20 (2 Ejes)  
*2D Sensor - shank Ø 20 (2 Axis)*

Luminoso  
*Optical*



| REFERENCIA | FAM |
|------------|-----|
| SOE-20L    | 7   |

Luminoso y Sonoro  
*Optical & Acoustic*



| REFERENCIA | FAM |
|------------|-----|
| SOE-20LB   | 7   |

## Centradores mecánicos flotante *Floating position detectors*

**Acero**  
*Steel*

**FIG. 1**



**FIG. 2**



**Antimagnetico**  
*Antimagnetic*

**FIG. 1**



**FIG. 2**



**Cerámico**  
*Ceramic*

**FIG. 1**



**FIG. 2**



| REFERENCIA                      | FAM | REFERENCIA                     | FAM | REFERENCIA                      | FAM |
|---------------------------------|-----|--------------------------------|-----|---------------------------------|-----|
| SME-1020 (10x10) <b>FIG. 1</b>  | 7   | TN-10 (10x10) <b>FIG. 1</b>    | 7   | MEP-1020 (10x10) <b>FIG. 1</b>  | 7   |
| SME-420 (10x10x4) <b>FIG. 2</b> |     | TN-410 (10x10x4) <b>FIG. 2</b> |     | MEP-420 (10x10x4) <b>FIG. 2</b> |     |

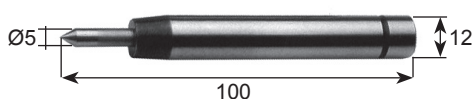
## Muelles para centradores *Replacement springs*

| REFERENCIA    | FAM |
|---------------|-----|
| PEF 01/02-1PC | 1   |



## Punta de trazado *Jig borer for milling machine*

**FIG. 1**



**FIG. 2**



| REFERENCIA               | FAM |
|--------------------------|-----|
| 014.08.012 <b>FIG. 1</b> | 19  |

| REFERENCIA               | FAM |
|--------------------------|-----|
| 014.08.016 <b>FIG. 2</b> | 19  |

Dispositivo de altura mecánico, magnético con comparador  
*Mechanical - Magnetic height resetter with comparator*



| REFERENCIA | FAM |
|------------|-----|
| ZIP-50     | 7   |



| REFERENCIA | FAM |
|------------|-----|
| ZIP-50A    | 7   |

Dispositivo de altura mecánico, magnético con comparador  
*Mechanical - Magnetic height resetter with comparator*



| REFERENCIA | FAM |
|------------|-----|
| ZOV-50     | 7   |

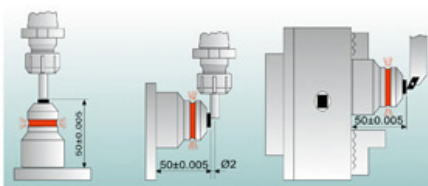


| RECAMBIO | FAM |
|----------|-----|
| ZOV-50R  | 7   |

Dispositivo Axial magnético luminoso  
*Mechanical - Magnetic height resetter with comparator*



| REFERENCIA | FAM |
|------------|-----|
| ZOP-50     | 7   |



**Soporte de montaje con rodillos 90°**  
*Tool assembly device with rollers 90°*



| REFERENCIA | FAM | MODELO                         |
|------------|-----|--------------------------------|
| TBRL1.32   | 1   | HSK32-CAPTO C3                 |
| TBRL1.40   | 1   | HSK40-CAPTO C4                 |
| TBRL1.46   | 1   | BT30                           |
| TBRL1.50   | 1   | HSK50-TC-BT-ISO-CAT30-CAPTO C5 |
| TBRL1.63   | 1   | HSK63-TC-BT-ISO-CAT40-CAPTO C6 |
| TBRL1.80   | 1   | HSK-80 CAPTO C8                |
| TBRL1.97   | 1   | TC50                           |
| TBRL1.100  | 1   | HSK100-BT-ISO50                |

**Soporte de montaje con rodillos 45°**  
*Tool assembly device with rollers 45°*



| REFERENCIA | FAM | MODELO                         |
|------------|-----|--------------------------------|
| TBRL2.63   | 1   | HSK63-TC-BT-ISO-CAT40-CAPTO C6 |

**Soporte de montaje con rodillos**  
*Tool assembly device with rollers*



| REFERENCIA | FAM | MODELO                         |
|------------|-----|--------------------------------|
| TBRL4.63AX | 1   | HSK63-TC-BT-ISO-CAT40-CAPTO C6 |

El rodamiento bloquea la flange del porta herramientas sin ningun contacto con el cono  
*The toolholder's flange is clamped by the sliding-bearing. No contact with the taper.*

Todo soporte de montaje debe estar fijado al banco de trabajo o al carro portamandrilos.  
*The tool assembly device must be fixed to a bench or to a tool cart*

Soporte de montaje con rodillos  
*Tool assembly device with rollers*



| REFERENCIA | FAM | MODELO                         |
|------------|-----|--------------------------------|
| TBRL6.63KT | 1   | HSK63-TC-BT-ISO-CAT40-CAPTO C6 |

Soporte de montaje con rodillos orientable en vertical y horizontal  
*Indexable type the tool-head can be set in vertical and horizontal position*



| REFERENCIA  | FAM | MODELO                         |
|-------------|-----|--------------------------------|
| TBRL20.630R | 1   | HSK63-TC-BT-ISO-CAT40-CAPTO C6 |

Soporte de montaje con rodillos orientable en 5 posiciones  
*Indexable type the tool-head can be set in 5 positions*



| REFERENCIA  | FAM | MODELO                         |
|-------------|-----|--------------------------------|
| TBRL21.630E | 1   | HSK63-TC-BT-ISO-CAT40-CAPTO C6 |

El rodamiento bloquea la flange del porta herramientas sin ningun contacto con el cono  
*The toolholder's flange is clamped by the sliding-bearing. No contact with the taper.*

Todo soporte de montaje debe estar fijado al banco de trabajo o al carro portamandrilos.  
*The tool assembly device must be fixed to a bench or to a tool cart*

**Soporte de montaje orientable en 5 posiciones**  
*Indexable type the tool-head can be set in 5 positions*



| REFERENCIA | FAM | MODELO          |
|------------|-----|-----------------|
| TBAX.30    | 1   | TC/BT/CAT/ISO30 |
| TBAX.40    | 1   | TC/BT/CAT/ISO40 |
| TBAX.50    | 1   | TC/BT/CAT/ISO50 |
| TBAX.63    | 1   | HSK63           |

**Soporte de montaje orientable en vertical y horizontal**  
*Indexable type the tool-head can be set in vertical and horizontal position*



| REFERENCIA | FAM | MODELO                 |
|------------|-----|------------------------|
| TBK.30     | 1   | TC-BT-CAT-ISO30        |
| TBK.40     | 1   | HSK63-TC-BT-CAT-ISO40  |
| TBK.45     | 2   | TC-BT-ISO45            |
| TBK.50     | 1   | HSK100-TC-BT-CAT-ISO50 |

**Soporte de montaje orientable HSK DIN/69893**  
*Indexable type the tool-head HSK DIN/69893*



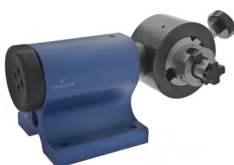
| REFERENCIA | FAM | COD  | MODELO                |
|------------|-----|------|-----------------------|
| SMU-HSK25  | 2   | 4598 | HSK-A+C - B+D - E - F |
| SMU-HSK32  |     | 4599 |                       |
| SMU-HSK40  |     | 4600 |                       |
| SMU-HSK50  |     | 4601 |                       |
| SMU-HSK63  |     | 4602 |                       |
| SMU-HSK80  |     | 4603 |                       |
| SMU-HSK100 |     | 4604 |                       |

**Soporte de montaje orientable ISO PSC-26623-1 (KM)**  
*Polygon and (KM) ISO PSC-26623-1 shanks*



| REFERENCIA      | FAM | COD  | MODELO           |
|-----------------|-----|------|------------------|
| SMU-K25         | 2   | 4598 | ISO 26623-1 - KM |
| SMU-K32-PSC32   |     | 4599 |                  |
| SMU-K40-PSC40   |     | 4600 |                  |
| SMU-K50-PSC50   |     | 4601 |                  |
| SMU-K63-PSC63   |     | 4602 |                  |
| SMU-K80-PSC80   |     | 4603 |                  |
| SMU-K100-PSC100 |     | 4604 |                  |

Soporte de montaje orientable en 4 posiciones a 360°  
*Indexable type the tool-head can be set in 4 positions 360°*



| REFERENCIA | FAM | MODELO          |
|------------|-----|-----------------|
| TBTS.30    | 1   | TC-BT-CAT-ISO30 |
| TBTS.40    | 1   | TC-BT-CAT-ISO40 |
| TBTS.50    | 1   | TC-BT-CAT-ISO50 |
| TBTS.63HSK | 1   | HSK63A          |

Soporte de montaje fijo ACERO  
*Steel tool assembly device*



| REFERENCIA | FAM | COD  | MODELO          |
|------------|-----|------|-----------------|
| BMU-CONO30 | 2   | 2190 | TC-BT-CAT-ISO30 |
| BMU-CONO40 |     | 2191 | TC-BT-CAT-ISO40 |
| BMU-CONO50 |     | 2193 | TC-BT-CAT-ISO50 |

Soporte de montaje fijo ALUMINIO  
*ALUMINUM tool assembly device*



| REFERENCIA | FAM | MODELO          |
|------------|-----|-----------------|
| TAL40      | 1   | TC-BT-CAT-ISO40 |
| TAL50      | 1   | TC-BT-CAT-ISO50 |

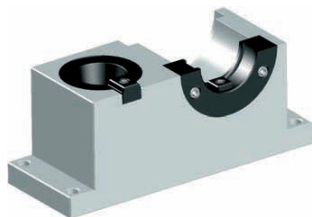
### Soporte de montaje fijo Tool assembly device



| REFERENCIA | FAM | MODELO         |
|------------|-----|----------------|
| TB3.SK30   | 1   | SK30-DIN/69871 |
| TB3.SK40   | 1   | SK40-DIN/69871 |
| TB3.SK50   | 1   | SK50-DIN/69871 |
| TB3.BT30   | 1   | BT30           |
| TB3.BT40   | 1   | BT40           |
| TB3.BT50   | 1   | BT50           |

### Soporte de montaje fijo Tool assembly device

| REFERENCIA         | FAM | COD  | MODELO |
|--------------------|-----|------|--------|
| SMD-ISO30/DIN2080  | 2   | 4605 | ISO30  |
| SMD-ISO40/DIN2080  |     | 4606 | ISO40  |
| SMD-ISO50/DIN2080  |     | 4607 | ISO50  |
| SMD-TC30/DIN/69871 | 2   | 4608 | TC30   |
| SMD-TC40/DIN/69871 |     | 4609 | TC40   |
| SMD-TC50/DIN/69871 |     | 4610 | TC50   |
| SMD-BT30/MAS403    | 2   | 4611 | BT30   |
| SMD-BT40/MAS403    |     | 4612 | BT40   |
| SMD-BT50/MAS403    |     | 4613 | BT50   |



| REFERENCIA    | FAM | COD  | MODELO    |
|---------------|-----|------|-----------|
| SMD-HSK32A+C  | 2   | 4618 | HSK32A+C  |
| SMD-HSK40A+C  |     | 4619 | HSK40A+C  |
| SMD-HSK50A+C  |     | 4620 | HSK50A+C  |
| SMD-HSK63A+C  |     | 4621 | HSK63A+C  |
| SMD-HSK100A+C |     | 4622 | HSK100A+C |
| SMD-HSK40E    | 2   | 4623 | HSK40E    |
| SMD-HSK50E+F  |     | 4624 | HSK50E+F  |
| SMD-HSK63E+F  |     | 4625 | HSK63E+F  |

| REFERENCIA          | FAM | COD  | MODELO |
|---------------------|-----|------|--------|
| SMD-VDI16/DIN/69880 | 2   | 9341 | VDI16  |
| SMD-VDI20/DIN/69880 |     | 4614 | VDI20  |
| SMD-VDI30/DIN/69880 |     | 4615 | VDI30  |
| SMD-VDI40/DIN/69880 |     | 4616 | VDI40  |
| SMD-VDI50/DIN/69880 |     | 4617 | VDI50  |
| SMD-VDI60/DIN/69880 |     | 9342 | VDI60  |

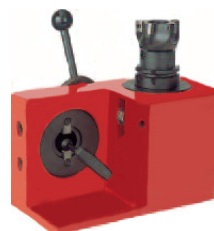
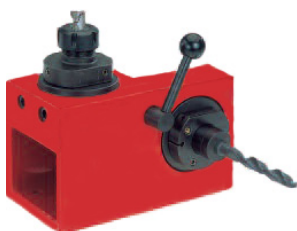
**Soporte de Montaje para Mango Cilíndrico**  
*Tool assembly device for cylindrical tooling*



| REFERENCIA | FAM | DESCRIPCION                                 |
|------------|-----|---------------------------------------------|
| TCY50-UNV  | 1   | SOPORTE CON ADAPTADORES Ø16 Ø20 Ø25 Ø32 Ø40 |

Todo soporte de montaje debe estar fijado al banco de trabajo o al carro portamandrilos.  
*The tool assembly device must be fixed to a bench or to a tool cart*

**Soporte de montaje VDI DIN/69880**  
*Tool assembly device for VDI DIN/69880*



| REFERENCIA | FAM | Ø   | DIN   | NORMA |
|------------|-----|-----|-------|-------|
| 76.445.020 | 3   | Ø20 | 69880 | VDI   |
| 76.445.030 | 3   | Ø30 | 69880 | VDI   |
| 76.445.040 | 3   | Ø40 | 69880 | VDI   |
| 76.445.050 | 3   | Ø50 | 69880 | VDI   |

Todo soporte de montaje debe estar fijado al banco de trabajo o al carro portamandrilos.  
*The tool assembly device must be fixed to a bench or to a tool cart*

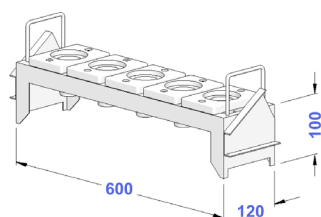


## Porta conos Plastic bushes



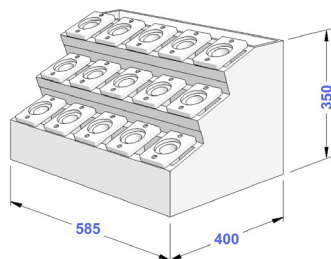
| REFERENCIA                  | FAM | COD  |  |
|-----------------------------|-----|------|-------------------------------------------------------------------------------------|
| SOPORTE.ISO30               | 2   | 4416 | 0033                                                                                |
| SOPORTE.ISO40               |     | 4417 |                                                                                     |
| SOPORTE.ISO45               |     | 4418 |                                                                                     |
| SOPORTE.ISO50               |     | 4419 |                                                                                     |
| SOPORTE.HSK50-KM50-PSC50    | 2   | 4430 | 0033                                                                                |
| SOPORTE.HSK63-KM63-PSC63    |     | 4431 |                                                                                     |
| SOPORTE.HSK100-KM100-PSC100 |     | 5543 |                                                                                     |
| SOPORTE.CM4                 | 2   | 4400 | 0033                                                                                |
| SOPORTE.CM5                 |     | 4418 |                                                                                     |
| SOPORTE.Ø32-VDI30           | 2   | 5531 | 0033                                                                                |
| SOPORTE.Ø40-VDI40           |     | 5532 |                                                                                     |
| SOPORTE.Ø50-VDI50           |     | 5533 |                                                                                     |

## Unidad porta conos Bench unities



| REFERENCIA                 | FAM | COD  |  | ← N° |
|----------------------------|-----|------|-------------------------------------------------------------------------------------|------|
| UNIDAD.ISO30               | 2   | 4404 | 4416                                                                                | 6    |
| UNIDAD.ISO40               |     | 4405 | 4417                                                                                | 6    |
| UNIDAD.ISO45               |     | 4330 | 4418                                                                                | 6    |
| UNIDAD.ISO50               |     | 4406 | 4419                                                                                | 5    |
| UNIDAD.HSK50-KM50-PSC50    | 2   | 4428 | 4430                                                                                | 6    |
| UNIDAD.HSK63-KM63-PSC63    |     | 4429 | 4431                                                                                | 6    |
| UNIDAD.HSK100-KM100-PSC100 |     | 4794 | 5543                                                                                | 5    |
| UNIDAD.CM4                 | 2   | 4329 | 4400                                                                                | 6    |
| UNIDAD.CM5                 |     | 4330 | 4418                                                                                | 6    |
| UNIDAD.Ø32-VDI30           | 2   | 5369 | 5531                                                                                | 6    |
| UNIDAD.Ø40-VDI40           |     | 5370 | 5532                                                                                | 6    |
| UNIDAD.Ø50-VDI50           |     | 5371 | 5533                                                                                | 5    |

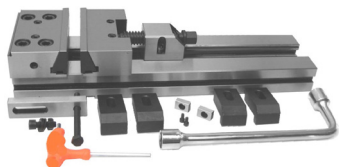
## Expositor porta conos Tools stores



| REFERENCIA              | FAM | COD  |  | ← N° |
|-------------------------|-----|------|---------------------------------------------------------------------------------------|------|
| MAG.ISO30               | 2   | 3700 | 4416                                                                                  | 15   |
| MAG.ISO40               |     | 3701 | 4417                                                                                  | 15   |
| MAG.ISO45               |     | 3702 | 4418                                                                                  | 15   |
| MAG.ISO50               |     | 3703 | 4419                                                                                  | 12   |
| MAG.HSK50-KM50-PSC50    | 2   | 3750 | 4430                                                                                  | 15   |
| MAG.HSK63-KM63-PSC63    |     | 3751 | 4431                                                                                  | 15   |
| MAG.HSK100-KM100-PSC100 |     | 3875 | 5543                                                                                  | 12   |
| MAG.CM4                 | 2   | 3696 | 4400                                                                                  | 15   |
| MAG.CM5                 |     | 3702 | 4418                                                                                  | 15   |
| MAG.Ø32-VDI30           | 2   | 3705 | 5531                                                                                  | 15   |
| MAG.Ø40-VDI40           |     | 3706 | 5532                                                                                  | 15   |
| MAG.Ø50-VDI50           |     | 5557 | 5533                                                                                  | 12   |

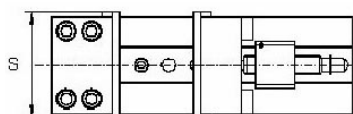
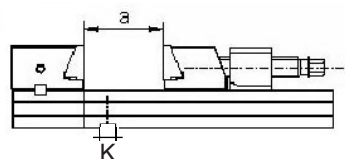
## MORDAZAS DE PRECISION

### Mordaza Serie Standard Standard series vises



| REFERENCIA | FAM | S   | a <sub>max</sub> | K  | Kg |
|------------|-----|-----|------------------|----|----|
| GT150-200  | 1   | 150 | 200              | 16 | 25 |
| GT150-300  | 1   | 150 | 300              | 16 | 29 |
| GT200-300  | 1   | 200 | 300              | 16 | 69 |
| GT200-400  | 1   | 200 | 400              | 16 | 74 |

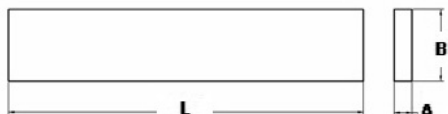
### Mordaza de precisión High precision vises



| REFERENCIA | FAM | S   | a <sub>max</sub> | K  | Kg |
|------------|-----|-----|------------------|----|----|
| VS150-200  | 1   | 150 | 200              | 16 | 25 |
| VS150-300  | 1   | 150 | 300              | 16 | 29 |
| VS175-200  | 1   | 175 | 200              | 16 | 37 |
| VS175-300  | 1   | 175 | 300              | 16 | 42 |
| VS200-300  | 1   | 200 | 300              | 16 | 69 |
| VS200-400  | 1   | 200 | 400              | 16 | 74 |
| VS200-500  | 1   | 200 | 500              | 16 | 79 |

## CALAS PARALELAS

### Calas paralelas para fresado Set of precision parallels



| REFERENCIA   | FAM | A  | L   | B                                         | UNID |
|--------------|-----|----|-----|-------------------------------------------|------|
| PRL160-8/16  | 1   | 8  | 160 | 12-17-22-25-28-32-36-38                   | 16   |
| PRL150-8/28  | 1   | 8  | 150 | 14-16-18-20-22-24-26-28-30-32-35-40-45-50 | 28   |
| PRL150-10/28 | 1   | 10 | 150 | 14-16-18-20-22-24-26-28-30-32-35-40-45-50 | 28   |
| PRL200-8/16  | 1   | 8  | 200 | 17-22-26-28-32-36-38-42                   | 16   |
| PRL200-10/28 | 1   | 10 | 200 | 14-16-18-20-22-24-26-28-30-32-35-40-45-50 | 28   |