



MONOFORCE

**High precision
ultra-tight
toolholder**

**Präzisionsspannzangenfutter
mit hochfester
Werkzeugspannung**

**Portaherramientas de
precisión de fuerte
blocaje**

**Porte-outil de
précision à
serrage fort**

**Portautensile di
precisione a
forte serraggio**



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DIN 69893 HSK-A



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DIN 69871 AD+B

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MAS 403 BT AD+B

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KIT

HSK / DIN / BT

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MONOforce is a new addition to D'Andrea range of tool holders, which complements the existing balanceable FORCE chuck from Toprun family.

This new chuck provides an economical and innovative solution for tool holding, where precision and high clamping forces for the cutting tool are required.

MONOforce is available with tapers conforming to DIN 69871, MAS-BT and both in ISO 40 and 50 sizes, and also HSK 63. The chuck accepts reduction bushes to suit cutters having shank sizes ranging from Ø 3 mm. to Ø 25 mm.

MONOforce can also be supplied in kit form, which includes of a set of reduction bushes and clamping wrench. **MONOforce** toolholders are manufactured by D'Andrea in their modern manufacturing plants in Italy.

MONOforce ist eine neue Ergänzung zur D'Andrea Werkzeughalterserie und komplettiert die bestehende auswuchtbare FORCE-Spannzange aus der Toprun-Familie. Dieses neue innovative und wirtschaftliche Aufnahmefutter ist ausgelegt für Werkzeugspannungen, bei denen höchste Präzision und Spannkraft zur Klemmung von Fräswerkzeugen gefordert ist.

MONOforce ist erhältlich mit Aufnahmekegeln nach DIN 69871, MAS-BT, in ISO 40 und ISO 50 Ausführung sowie als HSK 63. Das Futter kann mittels Reduzierhülsen für Fräser von Ø 3 - 25 mm eingesetzt werden.

MONOforce wird auch als Set angeboten inklusive Reduzierhülsen und Klemmschrauben. Alle **MONOforce**-Werkzeughalter werden in den modernen Produktionsstätten von D'Andrea in Italien hergestellt.

MONOforce representa la nueva solución ideal y económica para el equipamiento de todas las Máquinas Herramientas donde existen exigencias de precisión y necesidad de blocaje de herramientas que necesitan elevadas cargas de torsión.

MONOforce acompaña al ya famoso Force de la familia Toprun, el sistema patentado de portaherramientas integrales equilibrables.

El programa **MONOforce** para husillos maquina HSK 63, DIN 69871 y MAS-BT está realizado en los tamaños ISO 40 y ISO 50 con pinzas de reducción de Ø 12 mm, Ø 20 mm y de Ø 32 mm disponibles estándar en toda la gamma diametral compatible con estos diámetros de alojamientos para blocaje de Ø 3 mm a Ø 25 mm.

Los portaherramientas **MONOforce**, enteramente producidos por D'Andrea, están disponibles también en prácticos Kits completos con pinzas de reducción y llaves de blocaje.

Le **MONOforce** vient agrandir la série de produits D'Andréa dans la gamme des attachements appartenant à la famille Toprun et concernant les attachements équilibrables Force.

Ce nouvel attachement est une solution économique et innovatrice dans le domaine des outils de serrage où précision et grande force de clamage sont nécessaires pour les outils coupants.

MONOforce est disponible avec des cônes conformément aux normes DIN 69871, MAS-BT toutes les deux en ISO 40, 50 et également HSK 63. Les attachements acceptent des pinces de réduction afin de pouvoir appliquer des outils coupants ayant des queues entre Ø 3 et Ø 25 mm.

MONOforce peut être fourni en kit, comprenant un set de pinces de réduction ainsi que la clé de serrage. Les attachements **MONOforce** sont fabriqués par D'Andréa dans leur nouvelle usine située en Italie.

MONOforce rappresenta la nuova soluzione ideale ed economica per l'attrezzatura di tutte le macchine utensili ove sussistano esigenze di precisione e necessità di serraggio utensili sollecitati a elevati carichi torsionali.

MONOforce si affianca al già noto Force della famiglia Toprun, il sistema brevettato di portautensili integrali bilanciabili.

Il programma **MONOforce** è costruito nella versione per mandrini macchina HSK 63, nonché DIN 69871 e MAS-BT realizzati nelle grandezze ISO 40 e 50 e permette l'impiego di bussole di riduzione da Ø 12 mm, Ø 20 mm. e Ø 32 mm. disponibili standard in tutta la gamma diametrale compatibile con questi diametri d'alloggiamento per serraggi da Ø 3 mm. a Ø 25 mm.

I portautensili **MONOforce** – interamente prodotti dalla D'Andrea – sono disponibili anche in pratici kit completi di bussole di riduzione e chiave di serraggio.



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Portautensile di precisione a forte serraggio

INSTRUCTIONS

- After lightly tightening by hand, tighten further by spanner (fig.1).
- Tighten by hand. Don't use hammer!
- Only for finishing operations and when higher run-out accuracy is required, return chuck ring just a little 1°- 2° after face contact (fig. 2).
- Don't clamp without end mill

MONTAGEANLEITUNG

- Erst leicht von Hand anziehen, dann weiter mit dem Schlüssel festziehen. (fig. 1)
- Nur per Hand anziehen - keinen Hammer verwenden !
- Drehen Sie nur für Schlichtbearbeitungen und wenn eine höhere Rundlaufgenauigkeit gefordert ist, die Spannmutter nach dem Flächenkontakt etwas zurück, max. 1 - 2° (fig. 2)
- Spannmutter nur mit Schafffräser klemmen.

INSTRUCCIONES

- Después de haber girado a mano la tuerca, bloquear a fondo con la llave de apriete correspondiente (fig. 1).
- Apretar a mano. No utilizar nunca el martillo o tubo de prolongación !
- Sólo para operaciones de acabado, o donde se solicita una mayor precisión de run-out, después de apretar con la llave correspondiente, aflojar nuevamente de 1°- 2° después del contacto (fig.2).
- No girar la tuerca sin la herramienta incorporada.

ISTRUCCIONES

- Après un léger serrage manuel, continuez à serrer à l'aide de la clé de serrage. (fig. 1).
- Serrer à la main. Ne pas utiliser un marteau!
- Seulement pour des opérations de finition et uniquement lorsqu'une plus grande précision est requise, faire tourner très légèrement le joint du mandrin, 1°- 2° maximum, après le contact (fig. 2).
- Ne serrer pas le joint du mandrin sans la fraise.

ISTRUZIONI

- Dopo aver serrato a mano la ghiera, bloccare a fondo con l'apposita chiave di serraggio (fig.1).
- Serrare a mano. Non usare mai martello o tubo di prolunga!
- Solo per operazioni di finitura, ove è richiesto una maggiore precisione di run-out, dopo il serraggio con l'apposita chiave, allentare nuovamente di 1°- 2° dopo il contatto (fig. 2).
- Non serrare la ghiera senza utensile inserito.



fig.1



fig.2

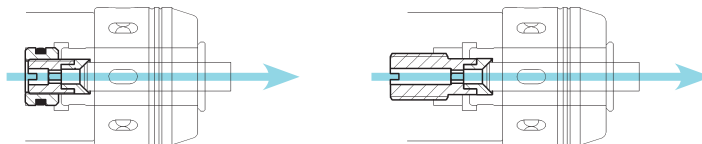
SETTING SCREW FOR INTERNAL COOLANT SUPPLY

EINSTELLSCHRAUBE FÜR INNERE KÜHLMITTELZUFUHR

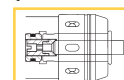
TORNILLO REGULACIÓN PASO REFRIGERANTE

VIS DE RÉGLAGE POUR L'ALIMENTATION DE REFFROIDISSEMENT

VITE REGOLAZIONE CON PASSAGGIO REFRIGERANTE



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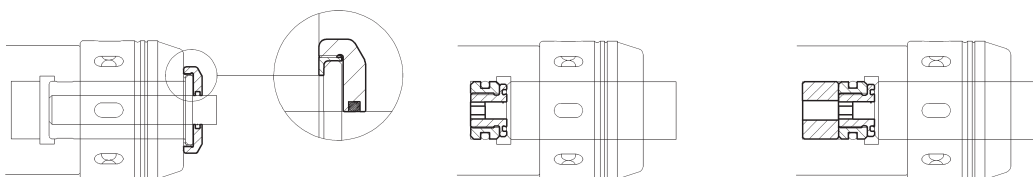
SEALING DEVICE FOR HIGH PRESSURE COOLANT SUPPLY (max. 40 BAR)

DICHTVORRICHTUNG FÜR HOCHDRUCK-KÜHLMITTELZUFUHR (max. 40 BAR)

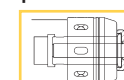
DISPOSITIVOS DE RETENCIÓN PARA EL REFRIGERANTE A ALTA PRESIÓN (màx. 40 BAR)

SYSTÈME D'ÉTANCHÉITÉ POUR L'ALIMENTATION DE REFFROIDISSEMENT HAUTE PRESSION (max. 40 BAR)

DISPOSITIVI A TENUTA PER REFRIGERANTE AD ALTA PRESSIONE (max. 40 BAR)



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USING THE GH RING-NUT AND THE VCR THE MAXIMUM PRESSURE IS 40 BAR

DURCH ANWENDUNG DES GEWINDERINGS GH UND DES VCR BETRÄGT DER MAXIMALDRUCK 40 BAR

USANDO LA TUERCA ANULAR GH Y EL VCR, LA PRESIÓN MÁX. ES DE 40 BAR.

EN UTILISANT LA FRETTE GH ET LE VCR LA PRESSION MAXIMUM EST DE 40 BAR

IMPIEGANDO LA GHIERA GH E IL VCR LA PRESSIONE MAX È DI 40 BAR

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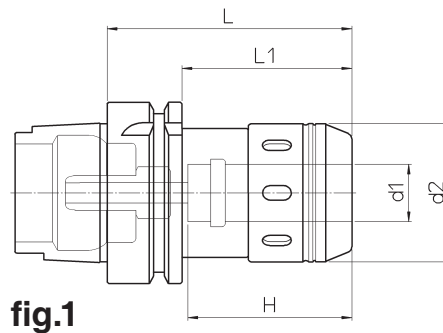


fig.1

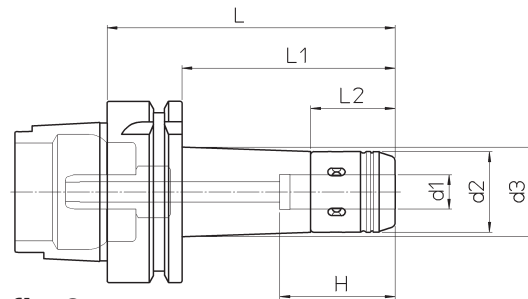


fig.2

Supplied with coolant
tube - Without
clamping wrench

Lieferung inklusive
Kühlmittelrohr. Ohne
Spannzangen und
Spannschlüssel.

Completo con racor
para el refrigerante
-Llave de apriete
excluida

Pourvu de raccord
pour liquide
d'arrosage - Sans clef
de serrage

Completo di raccordo
per il refrigerante -
Chiave di serraggio
esclusa

| HSK-A | REF. | CODE | d ₁ | d ₂ | d ₃ | H | L | L ₁ | L ₂ | kg | fig. |
|-------|------------------|-----------------|----------------|----------------|----------------|----|-----|----------------|----------------|-----|------|
| 63 | HSK-A63 MF12.70 | 71HSK-A63MF1207 | 12 | 28 | - | 46 | 70 | 44 | - | 0.8 | 1 |
| | HSK-A63 MF12.100 | 71HSK-A63MF1210 | | | 32 | | 100 | 74 | 29.5 | 1.1 | 2 |
| | HSK-A63 MF20.85 | 71HSK-A63MF2008 | 20 | 48 | - | 60 | 85 | 59 | - | 1.2 | 1 |
| | HSK-A63 MF20.125 | 71HSK-A63MF2012 | | | | | 125 | 99 | | 1.7 | 2 |
| | HSK-A63 MF32.105 | 71HSK-A63MF3210 | 32 | 66 | - | 80 | 105 | - | - | 2 | 1 |
| | HSK-A63 MF32.140 | 71HSK-A63MF3214 | | | | | 140 | | | 2.6 | 2 |

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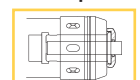
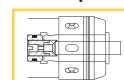
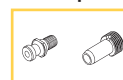
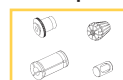
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DIN 69871 AD+B



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fig.1

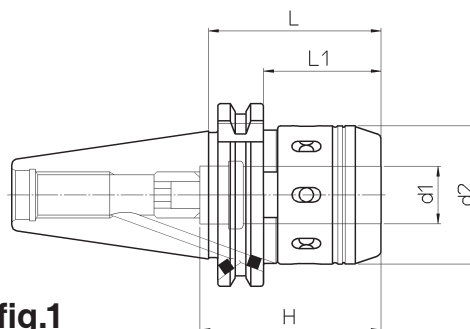
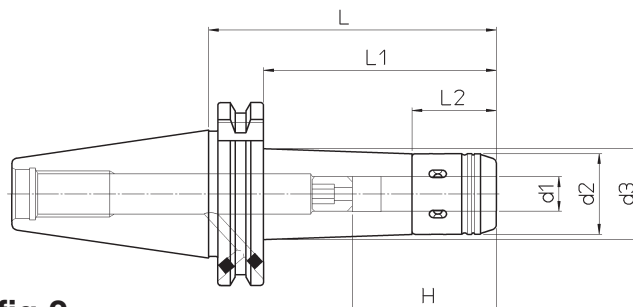


fig.2



Without
clamping wrench

Ohne Spannschlüssel.

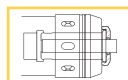
Llave de apriete
excluida

Sans clef de serrage

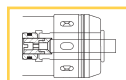
Chiave di serraggio
esclusa

| DIN | REF. | CODE | d ₁ | d ₂ | d ₃ | H | L | L ₁ | L ₂ | kg | fig. | | |
|-----|--------------------------|-----------------|----------------|----------------|----------------|-----|-----|----------------|----------------|-----|------|-----|---|
| 40 | DIN69871-AD+B40 MF12.50 | 71DIN-B40MF1205 | 12 | 28 | – | 46 | 50 | 31 | – | 0.8 | 1 | | |
| | DIN69871-AD+B40 MF12.100 | 71DIN-B40MF1210 | | | 32 | | 100 | 81 | 29.5 | 1.2 | 2 | | |
| | DIN69871-AD+B40 MF20.60 | 71DIN-B40MF2006 | 20 | 48 | – | 63 | 60 | 41 | – | 1.1 | 1 | | |
| | DIN69871-AD+B40 MF20.100 | 71DIN-B40MF2010 | | | | | 100 | 81 | | 1.4 | 2 | | |
| | DIN69871-AD+B40 MF32.95 | 71DIN-B40MF3209 | 32 | 66 | | 80 | 95 | – | | 1.6 | 1 | | |
| | DIN69871-AD+B40 MF32.140 | 71DIN-B40MF3214 | | | | 140 | – | 2.0 | | 2 | | | |
| 50 | DIN69871-AD+B50 MF20.80 | 71DIN-B50MF2008 | 20 | 48 | | – | 63 | 80 | | 61 | – | 2.3 | 1 |
| | DIN69871-AD+B50 MF20.125 | 71DIN-B50MF2012 | | | | | | 125 | | 106 | | 2.7 | 2 |
| | DIN69871-AD+B50 MF32.75 | 71DIN-B50MF3207 | 32 | 66 | 90 | | 75 | 56 | 2.8 | 1 | | | |
| | DIN69871-AD+B50 MF32.160 | 71DIN-B50MF3216 | | | | | 160 | 141 | 3.2 | 2 | | | |

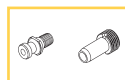
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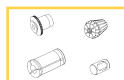
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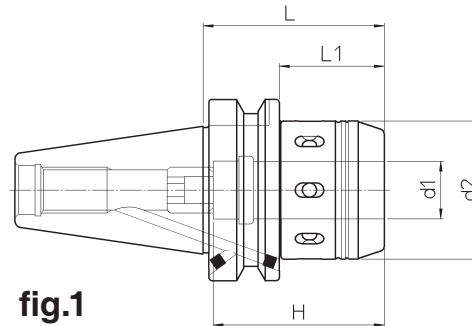


fig.1

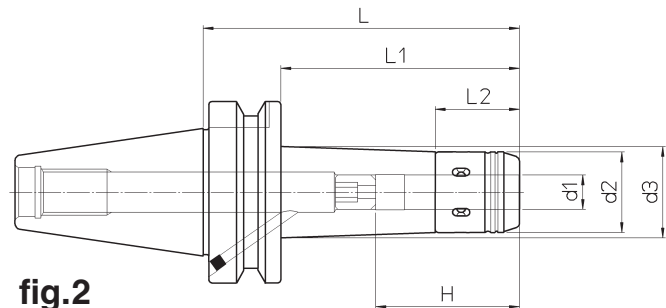


fig.2

Without
clamping wrench

Ohne Spannschlüssel.

Llave de apriete
excluida

Sans clef de serrage

Chiave di serraggio
esclusa

| BT | REF. | CODE | d ₁ | d ₂ | d ₃ | H | L | L ₁ | L ₂ | kg | fig. |
|----|---------------------------|-----------------|----------------|----------------|----------------|-----|-----|----------------|----------------|-----|------|
| 40 | MAS403 BT40-AD+B MF12.60 | 71MBT-B40MF1206 | 12 | 28 | – | 46 | 60 | 33 | – | 0.9 | 1 |
| | MAS403 BT40-AD+B MF12.100 | 71MBT-B40MF1210 | | | 32 | | | | 29.5 | | |
| | MAS403 BT40-AD+B MF20.63 | 71MBT-B40MF2006 | 20 | 48 | 63 | 63 | 36 | 1.3 | 1 | | |
| | MAS403 BT40-AD+B MF20.100 | 71MBT-B40MF2010 | | | | 100 | 73 | | | 1.9 | 2 |
| | MAS403 BT40-AD+B MF32.90 | 71MBT-B40MF3209 | 32 | 66 | 80 | 90 | – | 2.1 | 1 | | |
| | MAS403 BT40-AD+B MF32.140 | 71MBT-B40MF3214 | | | | 140 | – | | | 3.1 | 2 |
| 50 | MAS403 BT50-AD+B MF20.85 | 71MBT-B50MF2008 | 20 | 48 | – | 63 | 85 | 47 | 3.7 | | |
| | MAS403 BT50-AD+B MF20.125 | 71MBT-B50MF2012 | | | | | 125 | 87 | | 4.1 | 2 |
| | MAS403 BT50-AD+B MF32.95 | 71MBT-B50MF3209 | 32 | 66 | 90 | 95 | 57 | 4.4 | 1 | | |
| | MAS403 BT50-AD+B MF32.160 | 71MBT-B50MF3216 | | | | 160 | 122 | | | 4.9 | 2 |

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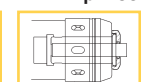
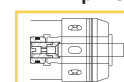
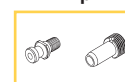
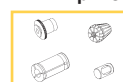
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MONOforce



HSK

KIT K01 MONOforce 12

- 1 MONOforce 12
- 1 RC 12.04
- 1 RC 12.06
- 1 RC 12.08
- 1 RC 12.10
- 1 CHV 28



DIN

KIT K01 MONOforce 20

- 1 MONOforce 20
- 1 RC 20.06
- 1 RC 20.08
- 1 RC 20.10
- 1 RC 20.12
- 1 RC 20.16
- 1 CHV 50

KIT K01 MONOforce 32

- 1 MONOforce 32
- 1 RC 32.06
- 1 RC 32.08
- 1 RC 32.10
- 1 RC 32.12
- 1 RC 32.16
- 1 RC 32.20
- 1 RC 32.25
- 1 CHV 75



BT

| HSK-A | REF. | CODE |
|-------|-----------------------------------|-----------------|
| 63 | KIT K01 MONOFORCE 12.70 HSK63 | 7KHSK-A63MF1207 |
| | KIT K01 MONOFORCE 20.85 HSK63 | 7KHSK-A63MF2008 |
| | KIT K01 MONOFORCE 32.105 HSK63 | 7KHSK-A63MF3210 |
| DIN | REF. | CODE |
| 40 | KIT K01 MONOFORCE 12.50 DIN40AD+B | 7KDIN-B40MF1205 |
| | KIT K01 MONOFORCE 20.60 DIN40AD+B | 7KDIN-B40MF2006 |
| | KIT K01 MONOFORCE 32.95 DIN40AD+B | 7KDIN-B40MF3209 |
| 50 | KIT K01 MONOFORCE 20.80 DIN50AD+B | 7KDIN-B50MF2008 |
| | KIT K01 MONOFORCE 32.75 DIN50AD+B | 7KDIN-B50MF3207 |
| BT | REF. | CODE |
| 40 | KIT K01 MONOFORCE 12.60 BT40AD+B | 7KMBT-B40MF1206 |
| | KIT K01 MONOFORCE 20.63 BT40AD+B | 7KMBT-B40MF2006 |
| | KIT K01 MONOFORCE 32.90 BT40AD+B | 7KMBT-B40MF3209 |
| 50 | KIT K01 MONOFORCE 20.85 BT50AD+B | 7KMBT-B50MF2008 |
| | KIT K01 MONOFORCE 32.95 BT50AD+B | 7KMBT-B50MF3209 |