

# PIBOMULTI

Standard

SWISS



MADE



<http://www.pibomulti.com> - [info@pibomulti.com](mailto:info@pibomulti.com)  
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## Standard

Têtes angulaires  
Winkelköpfe  
Angular heads

Multiplicateurs de vitesse  
Schnellaufspindeln  
Spindle speeders

Têtes revolver  
Revolverköpfe  
Turret heads



18'000 rpm

p. 3



50'000 rpm

p. 43



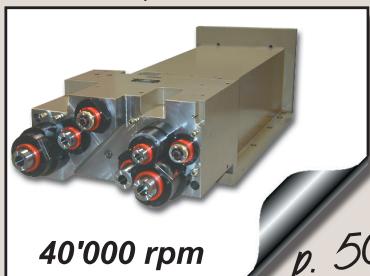
40 kW

p. 48

Têtes multibroches  
Mehrspindelköpfe  
Multispindle heads

Rallonges de broches  
Spindelverlängerungen  
Spindle extensions

Tête à broches alternées  
Köpfe mit abwechselnden Spindeln  
Multi heads with alternating spindles



40'000 rpm

p. 50



p. 51



p. 51

# LES AVANTAGES PIBOMULTI - DIE PIBOMULTI VORTEILE PIBOMULTI ADVANTAGES

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 **PIBOMULTI** est reconnu pour vous offrir un choix incomparable de têtes angulaires adaptées à tout type de machines qui vous permettront de résoudre vos problèmes d'usinage et qui vous apporteront des solutions efficaces, afin de réduire vos temps de production. En effet, les têtes angulaires **PIBOMULTI** vous offriront la possibilité de fraiser, percer ou tarauder dans tous les angles et dans toutes les grandeurs. Elles sont efficaces pour contrer les usinages difficiles jugés impossibles. Les têtes angulaires **PIBOMULTI** sont adaptées à toutes les opérations d'usinage requises à la configuration de la pièce.

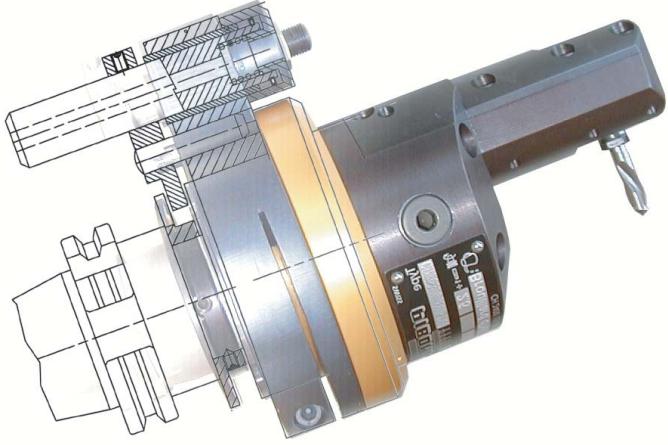
- à l'intérieur d'alésages ou de poches
- lors d'encombrements réduits
- accès difficilement atteignables
- éviter les serrages multiples

Les têtes angulaires standard ou spéciales **PIBOMULTI** sont des produits haut de gamme, livrables en tout type de cône ISO, HSK ou flasquées, avec une ou plusieurs sorties de broches adaptées aux outils et à la configuration de la pièce.

Elles sont rigides, compactes, légères, fiables et de grande longévité. Les têtes angulaires **PIBOMULTI** sont construites avec soins et usinées avec une grande précision, parfois conçues aux limites de la faisabilité, montées avec :

- des roulements de broche à contact oblique ou à rouleaux coniques de précision, selon cas et utilisation
- des engrenages hélicoïdaux de précision en acier de haute résistance, cémentés, trempés et rectifiés ou rodés
- elles peuvent vous offrir un arrosage central à 50 bars
- elles sont graissées à vie ou en option lubrifiées par air/huile vous permettant de plus grande vitesse de rotation ainsi qu'une grande longévité.

*De la conception à la réalisation !  
Vom Entwurf bis zur Verwirklichung !  
From design to realization !*



 **PIBOMULTI** ist führend in der Produktion von Winkelköpfen und besonders bekannt durch seine grosse Produktpalette. Die **PIBOMULTI**-Winkelköpfe steigern erheblich den Automatisierungsgrad der Produktionsmaschinen und reduzieren somit im gleichen Masse die Produktionszeiten. So z.B. wenn durch sie Mehrfachauflastungen vermieden oder die Bearbeitungsprobleme erst lösbar werden.

Die Winkelköpfe sind universell einsetzbar. In unterschiedlichsten Größen und in allen Winkelstellungen wird mit ihnen gebohrt, gefräst, ausgedreht, gewindegeschnitten usw. In Sonderausführungen können sie der Form des Werkstückes angepasst werden und können so Bearbeitungsoperationen erfüllen die zunächst als unmöglich erschienen. Solche Einsatzfälle sind :

- in engen Bohrungen oder Taschen,
- schmalen Bearbeitungsfenstern
- kollisionsträchtigen Vorrichtungssituationen

Die **PIBOMULTI** - Winkelköpfe, in Standard- wie in Sonderausführung, sind Produkte höchster Qualität. Sie sind für alle Maschinenschnittstellen lieferbar : alle Steilkegelarten, Hohlschaftkegel oder Anflanschlösungen. Die Abtriebsspindeln können für alle gängigen Werkzeugaufnahmesysteme ausgelegt sein : Spannzangen, Weldon, Whistle Notch, HSK, ABS, Capto usw. bis hin zu Sonderaufnahmen nach Kundenzzeichnung. Grundsätzlich können die Winkelköpfe mit einer oder mehreren Abtriebsspindeln versehen sein.

Allgemein zeichnen sich die **PIBOMULTI** - Winkelköpfe durch ihre Steifigkeit, Kompaktheit, Zuverlässigkeit und lange Lebensdauer aus. Ein kleiner Nebenaspekt ist das gefällige Design. Unsere Konstrukteure gehen in der Entwicklung bis an die Grenze des technisch machbaren, welches in der Produktion durch höchste Präzision und Sorgfalt realisiert wird. Einige technische Merkmale sind:

- Schrägschulter-Spindellager oder Schrägrillenlager höchster Qualität
- Helikoidal-Winkelgetriebe aus hochfestem Stahl, gehärtet, geschliffen, geläppt und oberflächenbeschichtet
- Schmierung als Dauerfettschmierung, Oelnebelschmierung oder Öl-Luft-Schmierung, entsprechend der Einsatzbestimmung
- Innere Kühlmittelzuführung bis zu 50 bar Druck (optional)

Anwender, rund um den Globus, vertrauen täglich **PIBOMULTI**-Winkelköpfen.

 **PIBOMULTI** angle heads are recognized worldwide for bringing effective solutions to manufacturing problems, reducing production time, and for their adaptability to any type of machine.

The variety of choices among **PIBOMULTI** angle heads makes possible milling, drilling or tapping at every angle and in every size, effectively handling manufacturing situations often considered impossible. **PIBOMULTI** heads can be designed to

- Operate inside bores or pockets
- Reach areas with difficult access or small clearances
- Reduce multiple set-ups of parts

Whether standard or special, **PIBOMULTI** angle heads are available in any type of shank, ISO, HSK or flanged, with one or several spindle outputs adapted to tools and to the configuration of the work piece.

**PIBOMULTI** angle heads are rigid, compact, light, reliable and engineered for long life. **PIBOMULTI** designs and manufactures all its products with care and precision, often successfully pushing the limits of engineering feasibility. Angle head features include:

- Spindle bearings with angular contact or precision conical roller bearings, according to the application to be performed
- Precision, steel helical bevel gears are surface-treated, hardened and ground, providing high resistance to wear
- Thru-tool coolant up to 50 bar pressure is available
- Lubrication via permanent grease pack or air-oil mist for higher RPM capability and longer life.

# SOMMAIRE - ZUSAMMENFASSUNG - SUMMARY

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## Cône ISO + HSK

Tête équerre à pince pour percer fraiser et tarauder  
Winkelkopf mit Zangen zum Bohren, Fräsen und Gewindeschneiden  
Angular head with collets for drilling, milling and tapping



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Tête équerre à pince à multiplication pour percer fraiser et tarauder  
Winkelkopf mit Uebersetzung und Zangen zum Bohren,  
Fräsen und Gewindeschneiden  
Angular head with collets with ratio for drilling, milling and tapping

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Tête équerre de sciage  
Winkelkopf zum Sägen  
Sawing angular head

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Tête équerre à cône  
Winkelkopf mit Steilkegel  
Angular head with shank



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Tête équerre réglable à pince pour percer et fraiser  
Einstellbarer Winkelkopf mit Zangen zum Bohren und Fräsen  
Adjustable angular head with collets for drilling and milling

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Tête angulaire réglable à cône  
Einstellbarer Winkelkopf mit Steilkegel  
Adjustable angular head with shank

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## Cône ISO + HSK

Tête pour usiner dans les alésages  
Kopf für die Bearbeitung in Bohrungen  
Head for machining inside of bores



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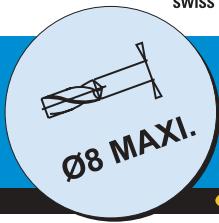
## VDI

Tête pour tour  
Kopf für Drehmaschine  
Head for lathe



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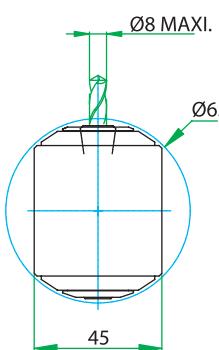
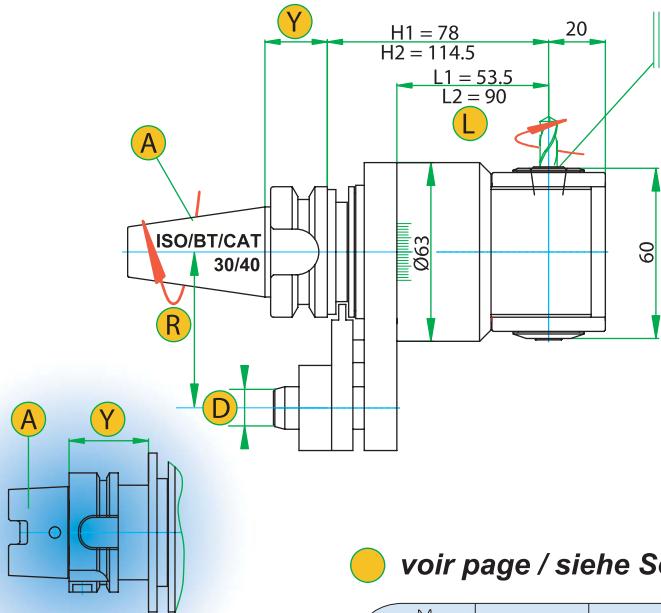


# CEP 08 L1 - CEP 08 L2

7'000 rpm

SPECIAL : 10 000 rpm

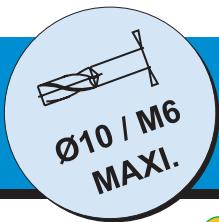
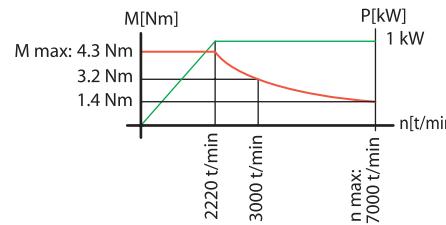
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	kW	Nm		
7000 t/min u/min rpm	1.0 kW	4.3 Nm	1 à 1	≈ 1.5 à 3 kg

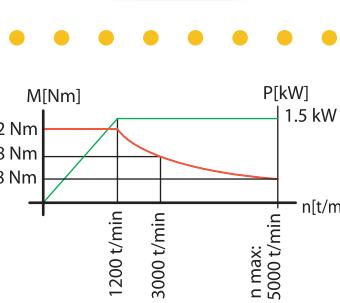
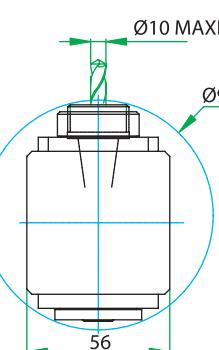
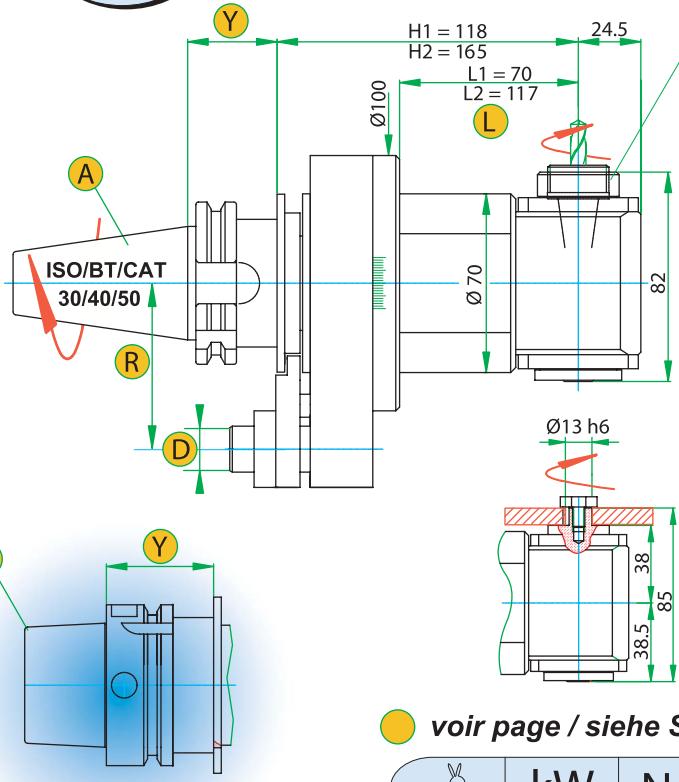
HSK 40/50/63



# CEP 10 L1 - CEP 10 L2

5'000 rpm

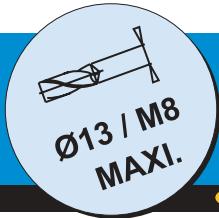
SPECIAL : 7 000 rpm



HSK 63/80

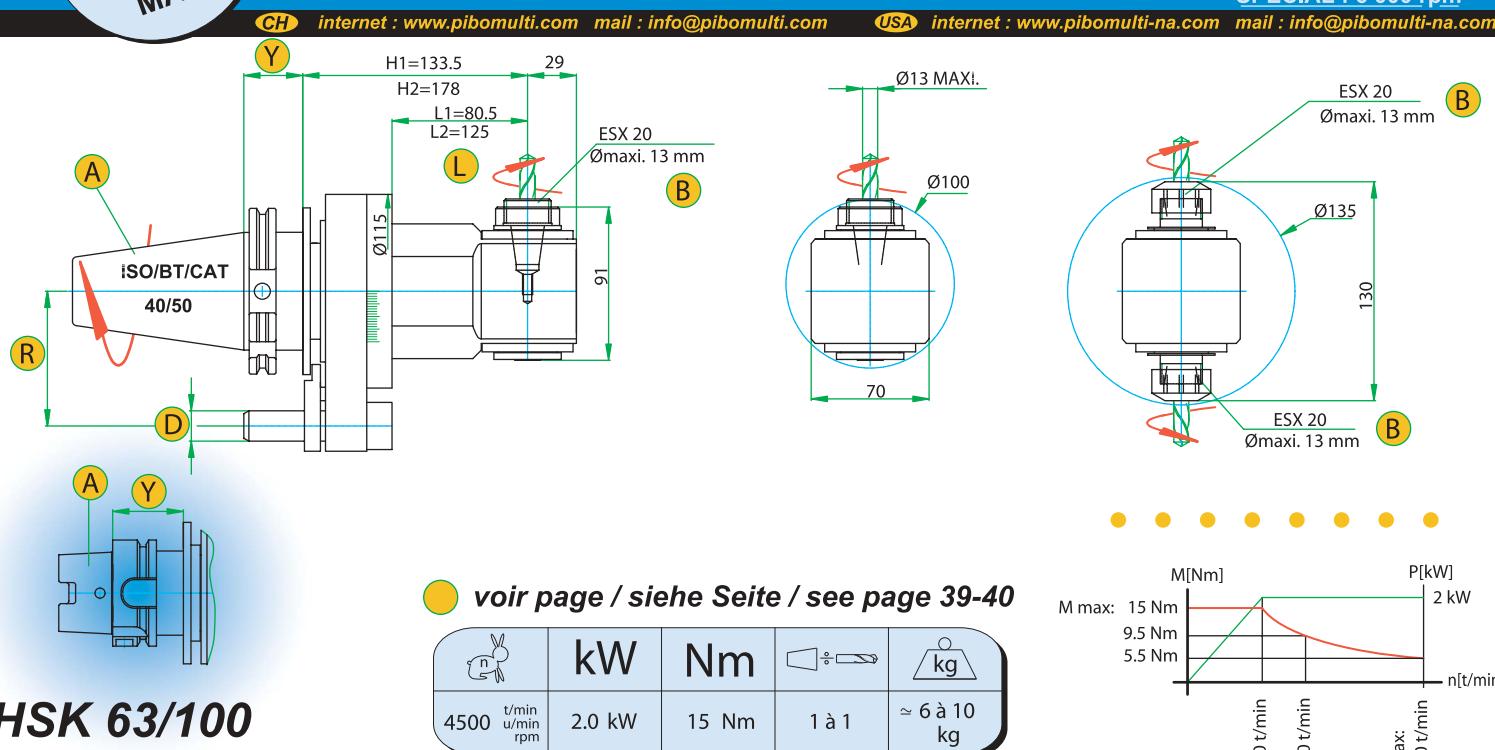
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	kW	Nm		
5000 t/min u/min rpm	1.5 kW	12 Nm	1 à 1	≈ 5.5 à 9 kg

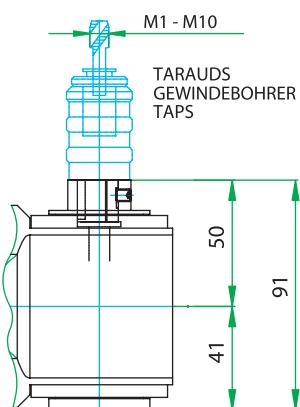


# CEP 13 L1 - CEP 13 L2

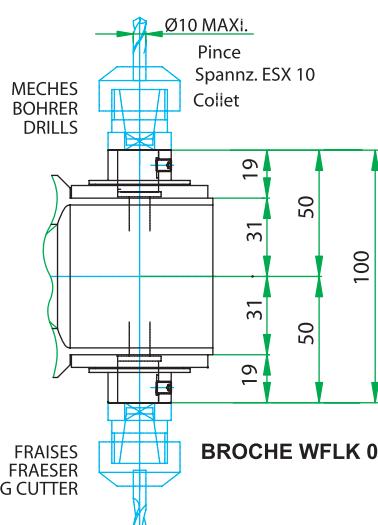
4'500 rpm  
SPECIAL : 6 000 rpm



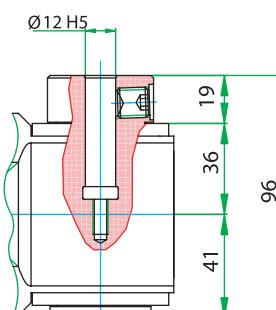
BROCHE WFLK 013/A308



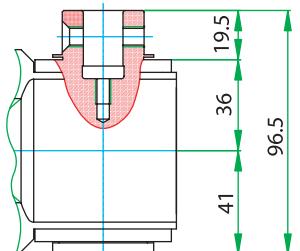
BROCHE WFLK 013/A308



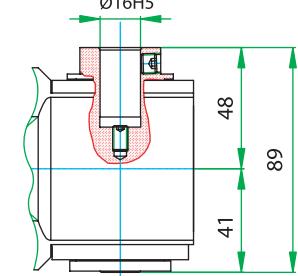
WHISTLE NOTCH DIN 1835-E



ABS 32

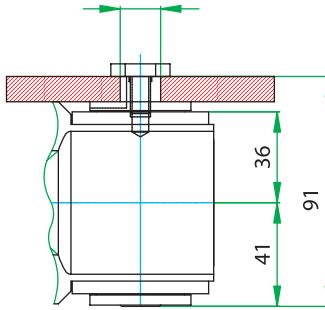


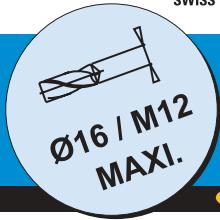
Cyl. Ø16



Cyl. Ø16 OU Cyl. Ø22

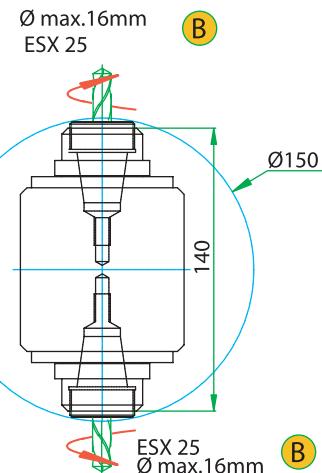
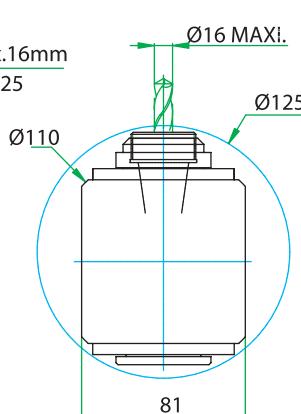
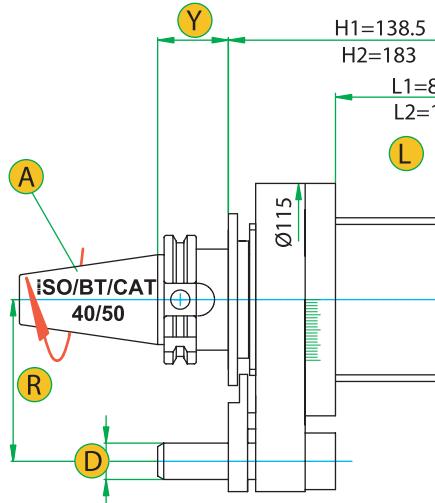
Ø16 h6 / Ø22 h6





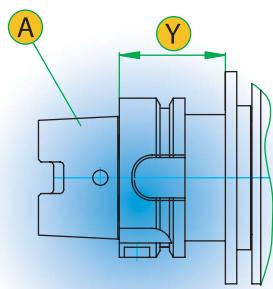
# CEP 16 L1 - CEP 16 L2

 4'500 rpm  
 SPECIAL : 5 500 rpm

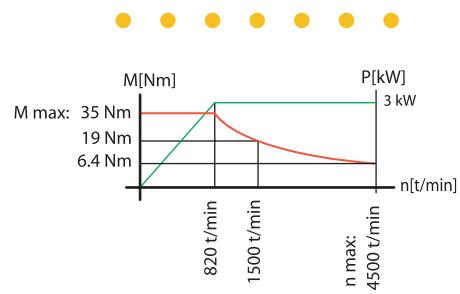
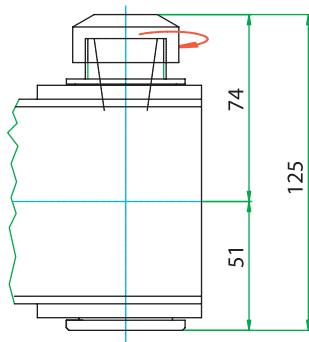
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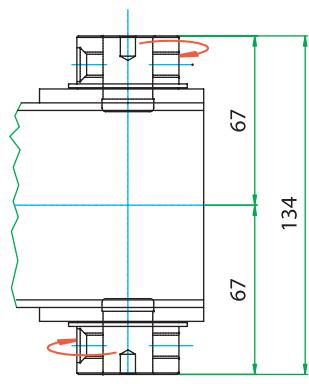
	kW	Nm		
4500 t/min u/min rpm	3.0 kW	35 Nm	1 à 1	≈ 6.5 à 11 kg



## HSK 63/100


 ESX 25  
 Ø MAX 16 mm


ABS 40

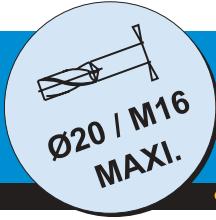


CEP 16 HSK



CEP 20 L1

ABS 40

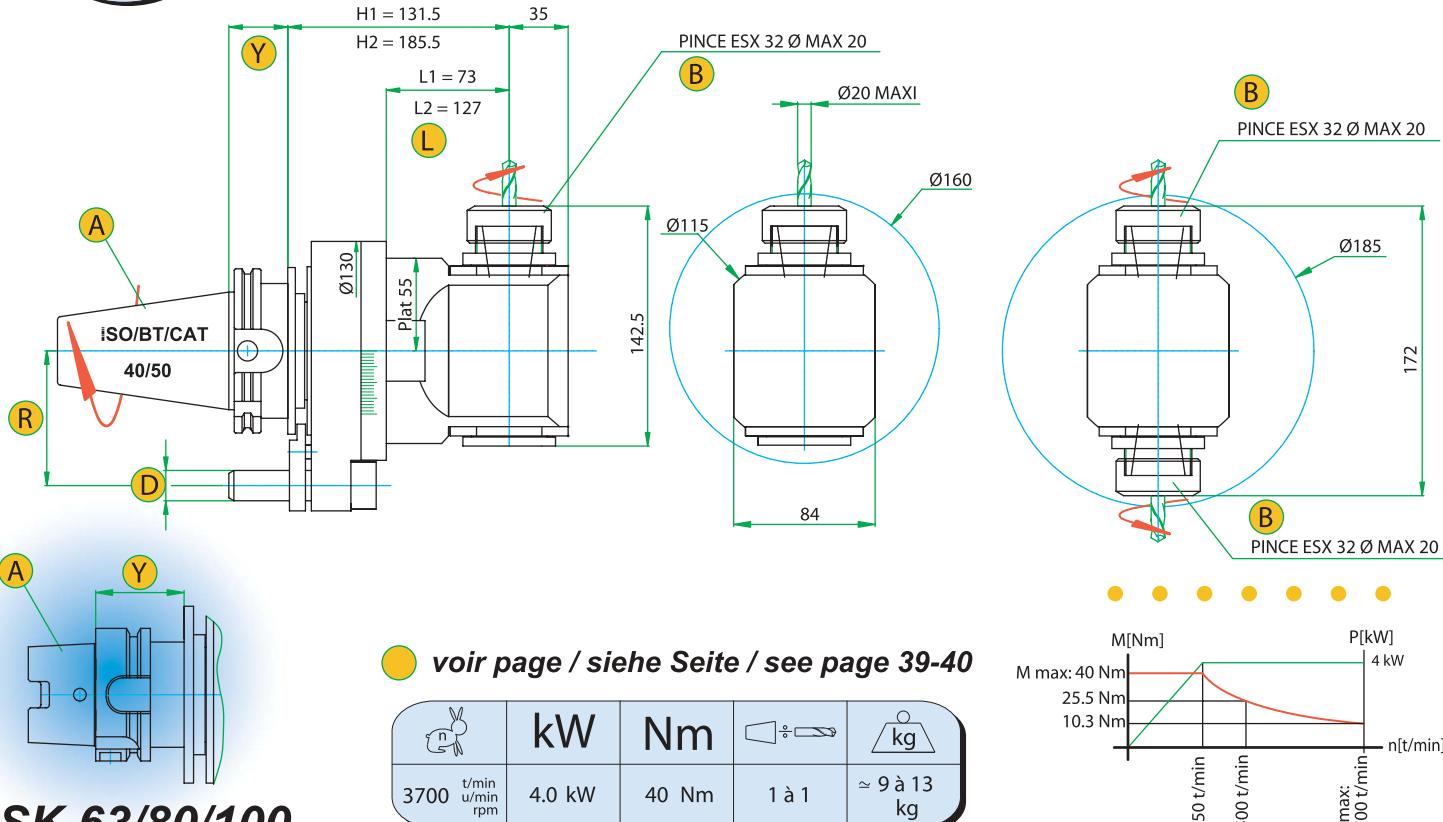


Angular Heads

# CEP 20 L1 - CEP 20 L2

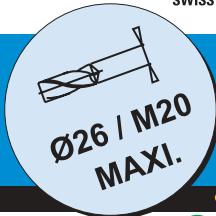
3'700 rpm  
SPECIAL : 7 000 rpm

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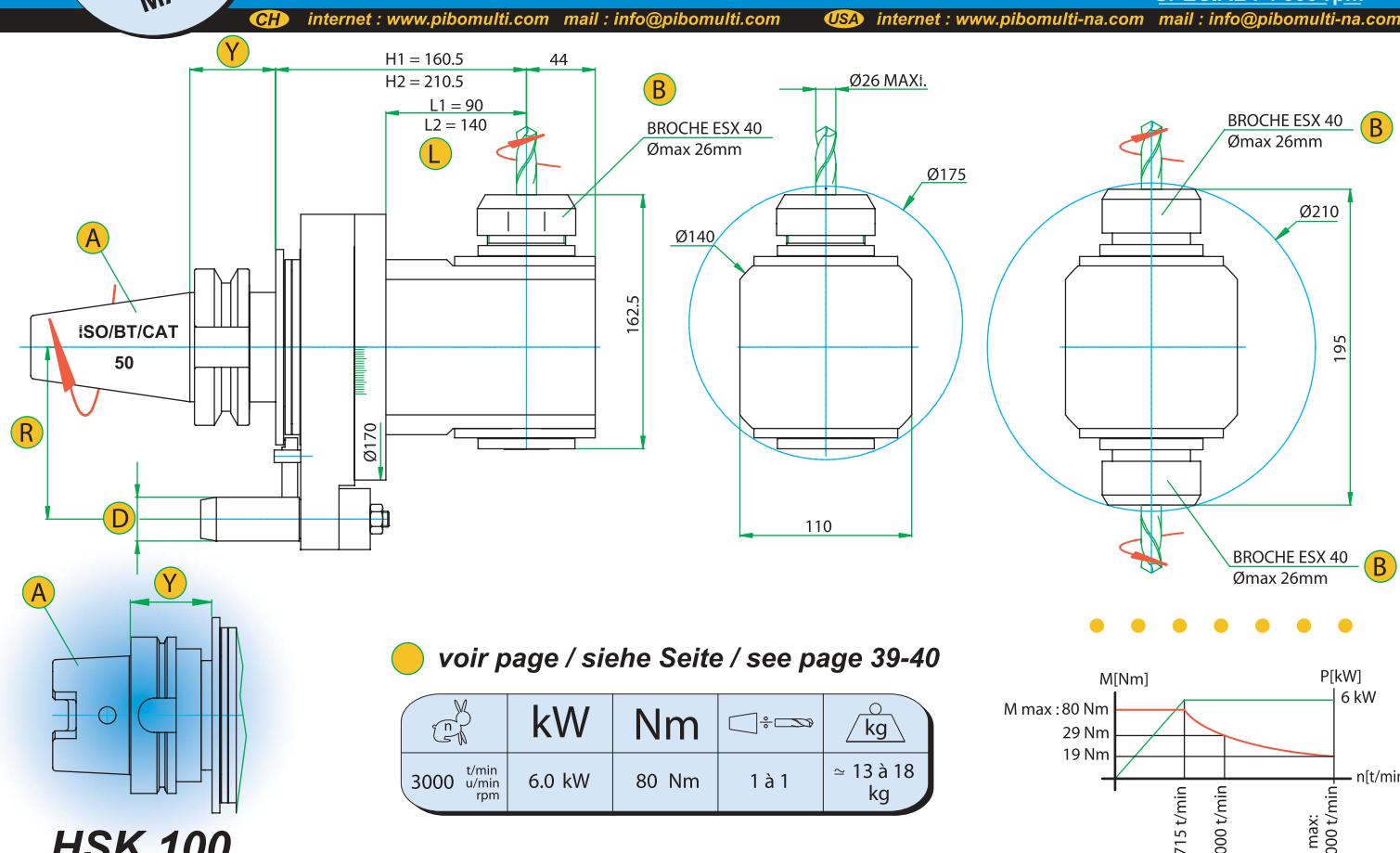


HSK 63/80/100

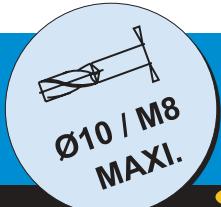
<b>HSK40 MAPAL</b> 	<b>BROCHE WELDON 20</b> 	<b>ABS 50</b> 	<b>1 BROCHE</b>
	<b>BROCHE CM 2</b> 	<b>ABS 25</b> 	<b>2 BROCHES</b>
<b>BROCHE CYL. Ø22 OU BROCHE CYL. Ø32</b> Ø22h6 OU Ø32h6 	<b>BROCHE KM 40</b> 	<i>Autres broches sur demande Andere Spindeln auf Anfrage Another spindle on request</i>	
			<b>WFLK 115/A308</b> Porte outil de perçage, fraîsage et taraudage Werkzeughalter zum Bohren, Fräsen und Gewindeschneiden Tool-holder for drilling, milling and tapping 



# CEP 26 L1 - CEP 26 L2

 3'000 rpm  
 SPECIAL : 4 000 rpm


<b>WFLK 225</b> 	<b>Broche 2 sorties WFLK 225</b> 	<b>BROCHE ABS 40</b> 	<b>ABS 63</b> 	<b>ABS 63</b> 
<b>BROCHE CYL 22</b> 	<b>BROCHE CYL 22</b> 	<b>BROCHE CYL 40</b> 	<b>CM3</b> 	<b>BROCHE CK6 - MVS63-36</b> 
<b>WELDON Ø 25</b> 	<b>WELDON Ø 25</b> 	<b>WELDON Ø 32</b> 	<b>CAPTO-4</b> 	Autres broches sur demande Andere Spindeln auf Anfrage Another spindle on request



# CMP 10 L1 - CMP 10 L2

10'000 rpm

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**BROCHE W 10**

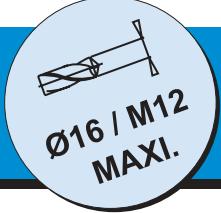
**HDK 63**

**W10-06-44-0**

**AUTRE BROCHE SUR DEMANDE  
ANDERE SPINDELN AUF ANFRAGE  
ANOTHER SPINDLE ON REQUEST**

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BROCHE SPINDEL SPINDLE	kW	Nm	kg
10000 t/min u/min rpm	2.0 kW	12 Nm	1 à 2.22 $\approx$ 5 à 6 kg



# CMP 16 L1 - CMP 16 L2

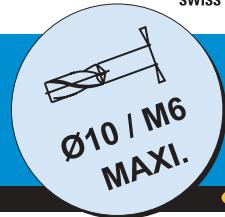
7'000 rpm

**HSK 63/80/100**

**PINCE SPANNZ. ESX 25  
COLLET max Ø16**

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BROCHE SPINDEL SPINDLE	kW	Nm	kg
7000 t/min u/min rpm	4.0 kW	20 Nm	1 à 2 $\approx$ 15 à 17 kg



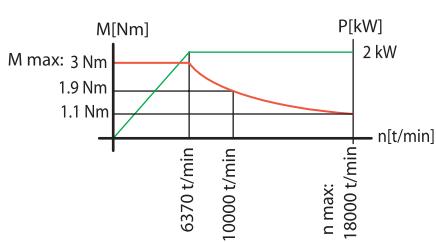
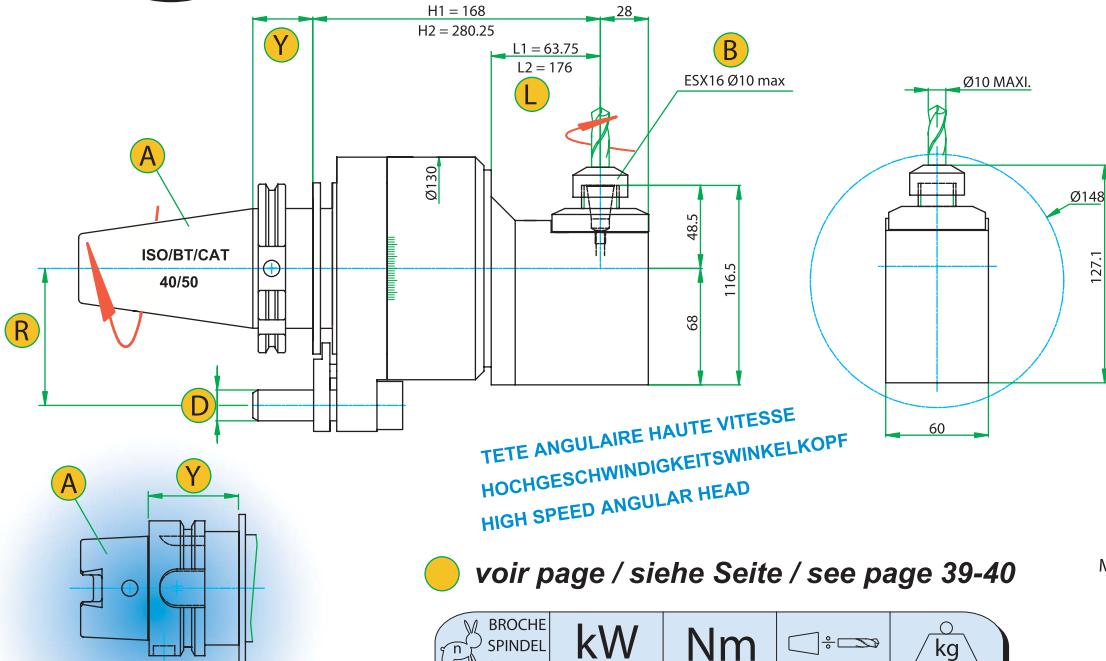
Ø10 / M6  
MAXI.

# CMP 10X5 L1 - CMP 10X5 L2

**18'000 rpm**

 internet : [www.pibomulti.com](http://www.pibomulti.com) mail : [info@pibomulti.com](mailto:info@pibomulti.com)

 internet : [www.pibomulti-na.com](http://www.pibomulti-na.com) mail : [info@pibomulti-na.com](mailto:info@pibomulti-na.com)



HSK 63/80/100

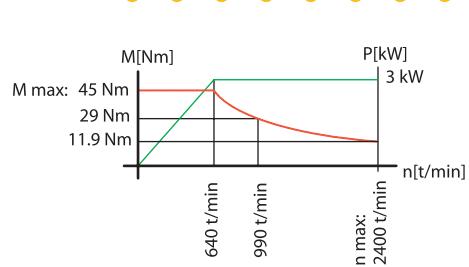
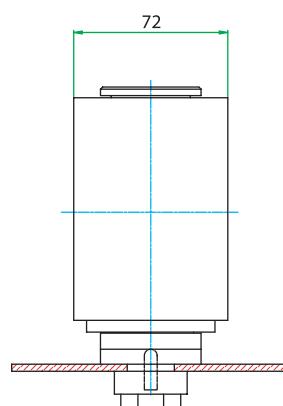
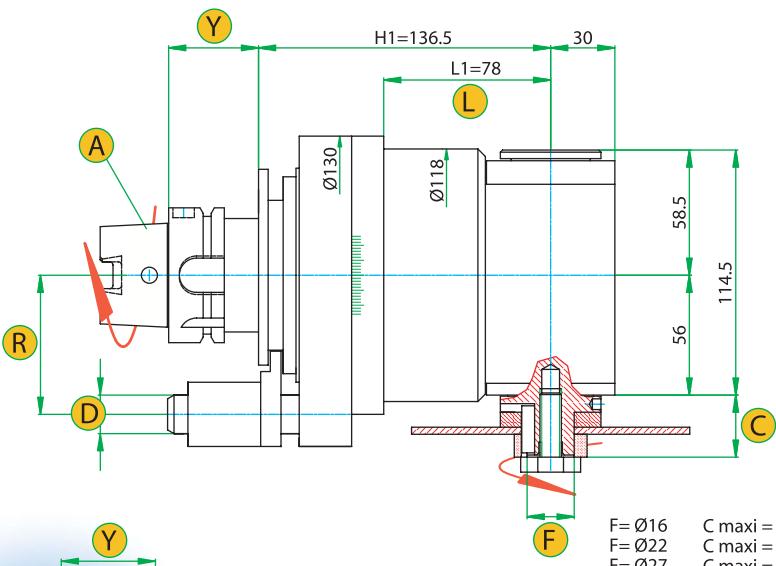
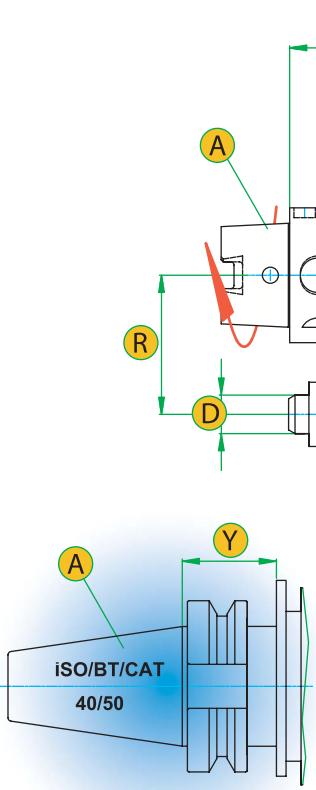
 voir page / siehe Seite / see page 39-40

	BROCHE SPINDEL SPINDLE	kW	Nm		
18000 t/min u/min rpm	2.0 kW	3.0 Nm	1 à 5	$\approx 8.5 \text{ à } 12 \text{ kg}$	

# TETE DE SCIAGE SÄGEKOPF SAWING HEAD

# **CEF 16/22/27/32**

**2'400 rpm**



 voir page / siehe Seite / see page 39-40

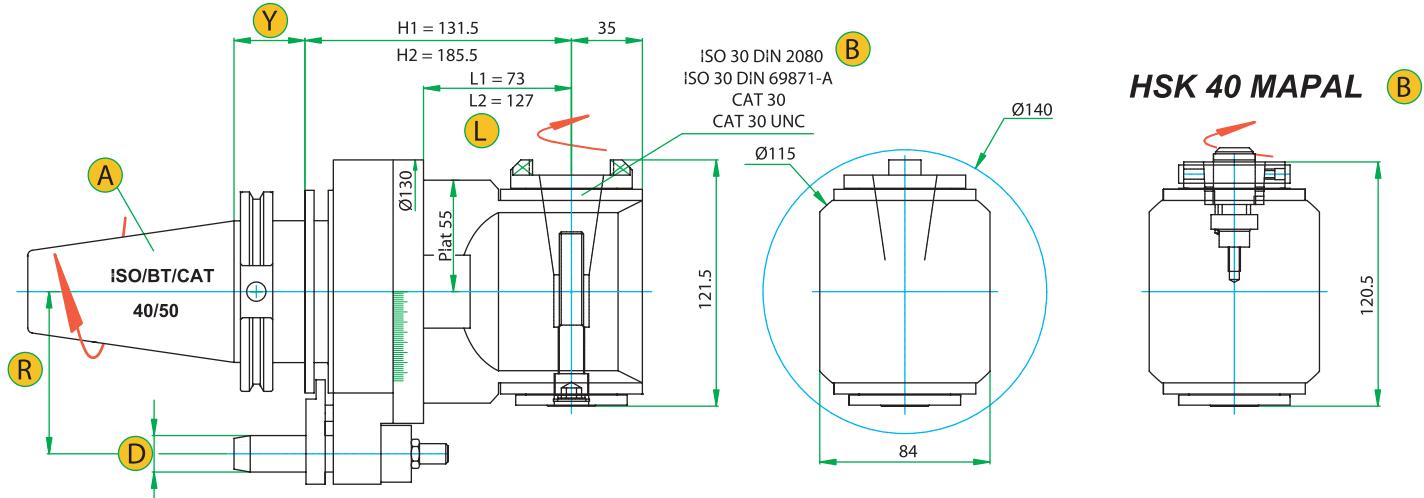
BROCHE SPINDEL SPINDLE	kW	Nm		
2400 t/min u/min rpm	3.0 kW	45 Nm	1 à 0.74	≈ 6 à 6.5 kg

# CEC 30 L1 - CEC 30 L2

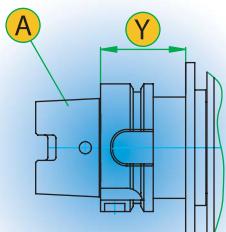
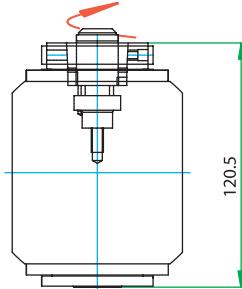
3'700 rpm  
SPECIAL : 5 000 rpm

CH internet : [www.pibomulti.com](http://www.pibomulti.com) mail : [info@pibomulti.com](mailto:info@pibomulti.com)

USA internet : [www.pibomulti-na.com](http://www.pibomulti-na.com) mail : [info@pibomulti-na.com](mailto:info@pibomulti-na.com)

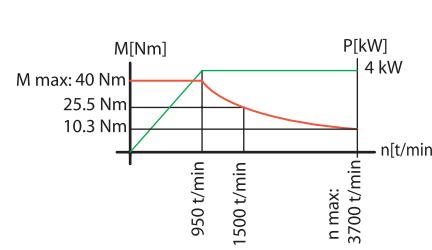


HSK 40 MAPAL (B)

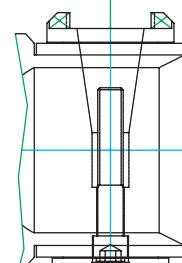
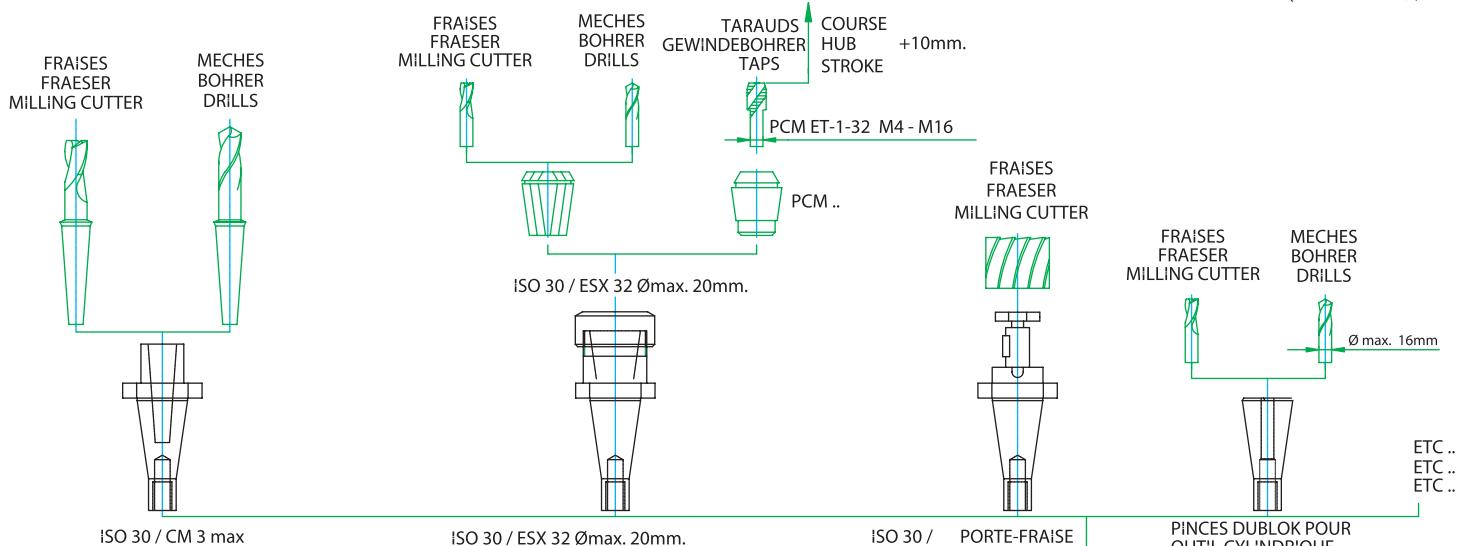


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	kW	Nm		kg
3700 t/min u/min rpm	4.0 kW	40 Nm	1 à 1	≈ 9 à 13 kg



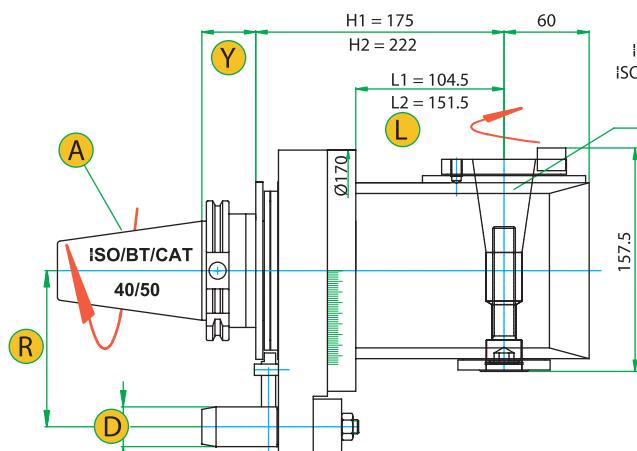
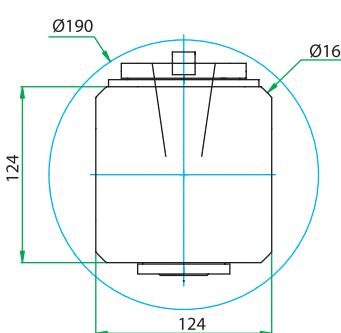
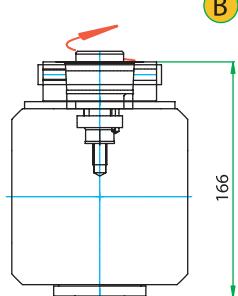
## HSK 63/80/100



# CEC 40 L1 - CEC 40 L2

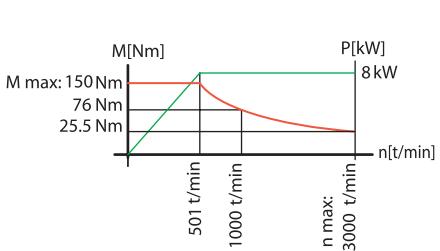
3'000 rpm

 CH internet : [www.pibomulti.com](http://www.pibomulti.com) mail : [info@pibomulti.com](mailto:info@pibomulti.com)

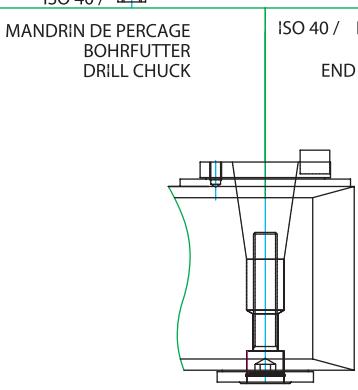
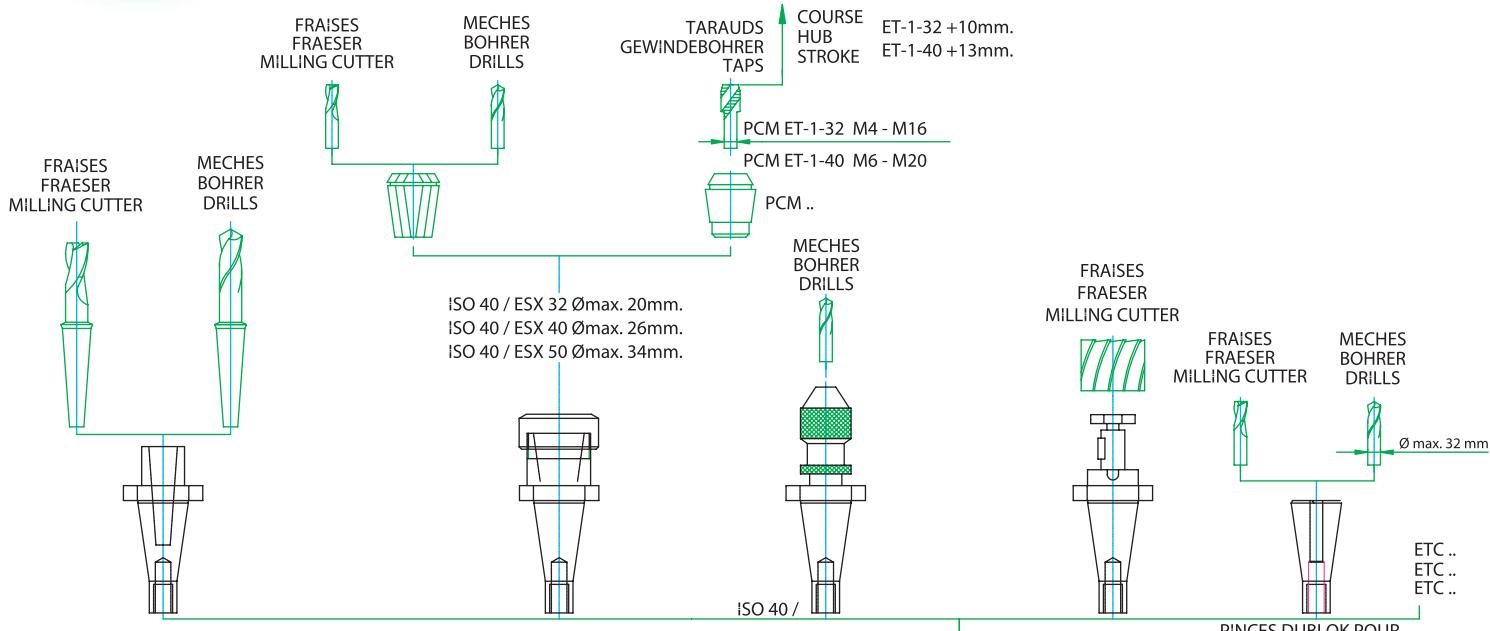
 USA internet : [www.pibomulti-na.com](http://www.pibomulti-na.com) mail : [info@pibomulti-na.com](mailto:info@pibomulti-na.com)

 ISO 40 DIN 2080  
 ISO 40 DIN 69871-A  
 CAT 40  
 CAT 40 UNC

**HSK 63**


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	kW	Nm		
3000 t/min	8.0 kW	150 Nm	1 à 1	≈ 20 à 25 kg



## HSK 80/100/125



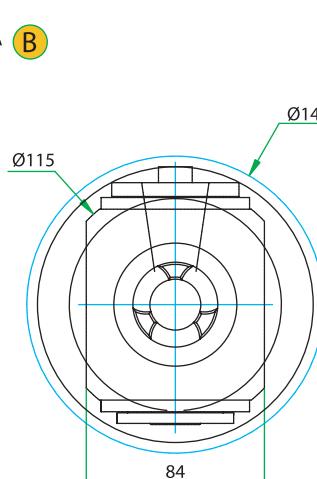
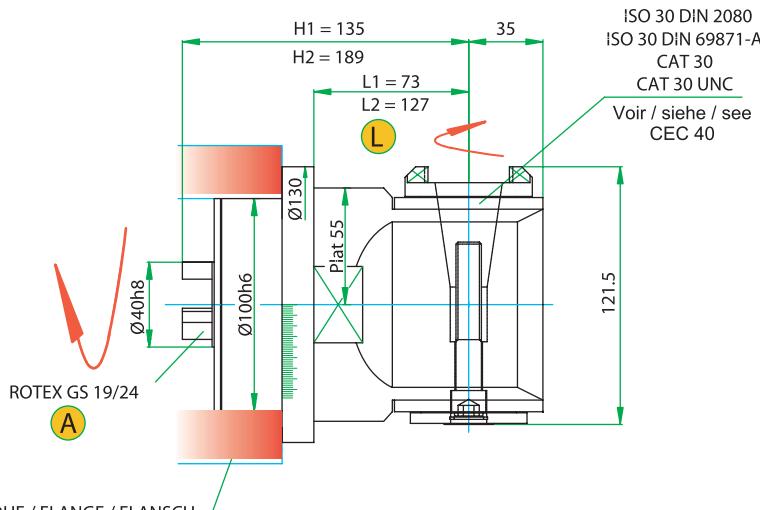
## FLASQUE FLANGE FLANSCH

CH internet : [www.pibomulti.com](http://www.pibomulti.com) mail : [info@pibomulti.com](mailto:info@pibomulti.com)

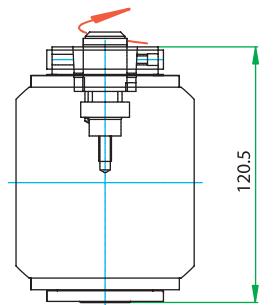
USA internet : [www.pibomulti-na.com](http://www.pibomulti-na.com) mail : [info@pibomulti-na.com](mailto:info@pibomulti-na.com)

## FEC 30

3'700 rpm  
SPECIAL : 5 000 rpm



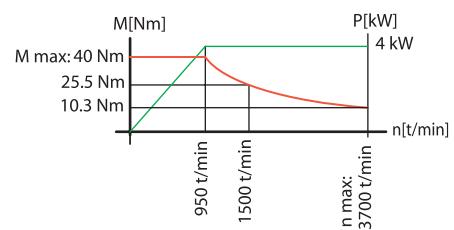
**HSK40 MAPAL** (B)



FLASQUE / FLANGE / FLANSCH

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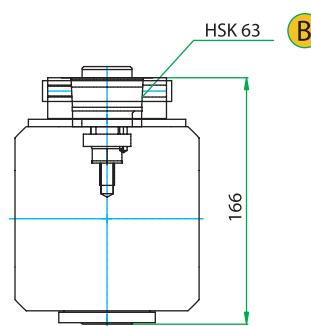
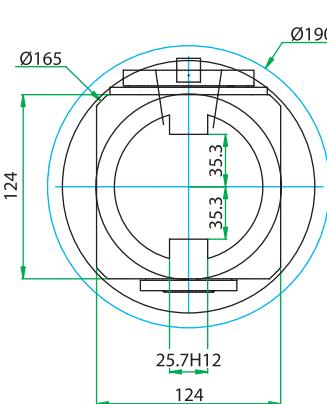
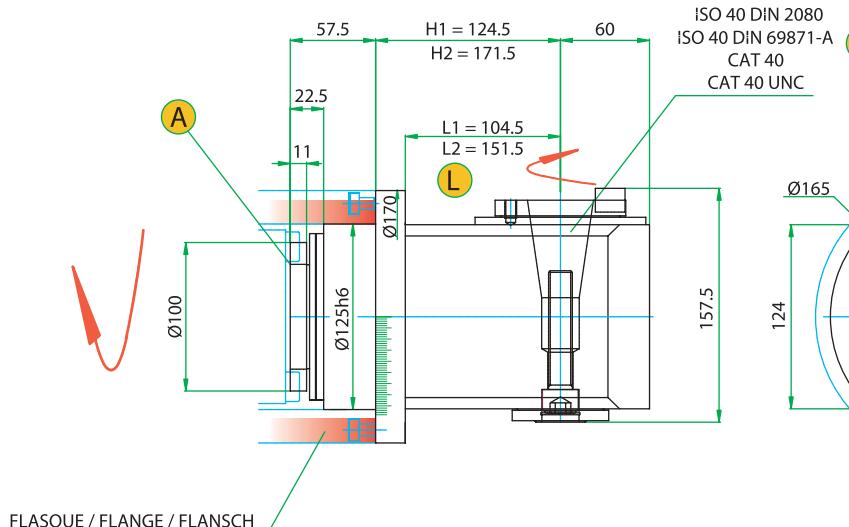
	kW	Nm		kg
3700 t/min u/min rpm	4.0 kW	40 Nm	1 à 1	≈ 9 à 13 kg



## FLASQUE FLANGE FLANSCH

## FEC 40

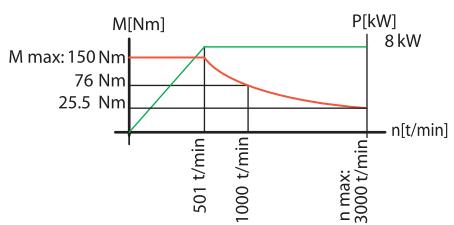
3'000 rpm



FLASQUE / FLANGE / FLANSCH

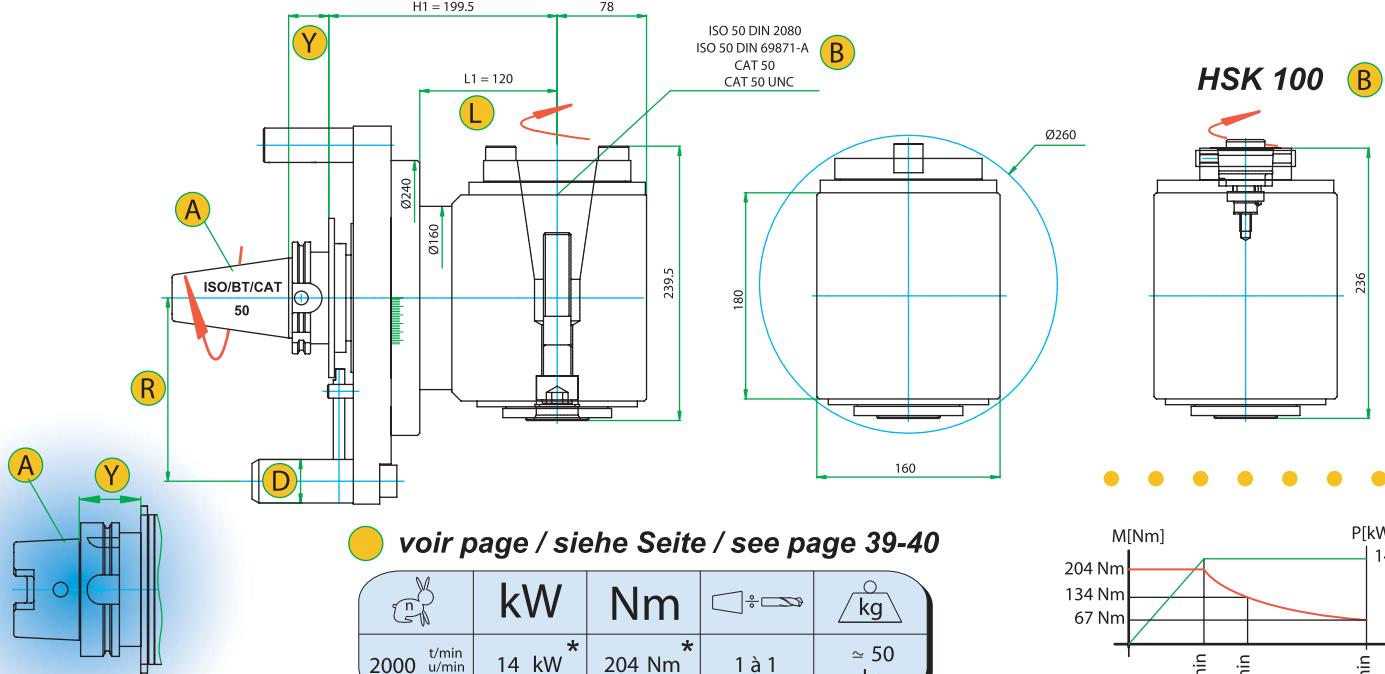
voir page / siehe Seite / see page 39-40

	kW	Nm		kg
3000 t/min u/min rpm	8.0 kW	150 Nm	1 à 1	≈ 20 à 25 kg



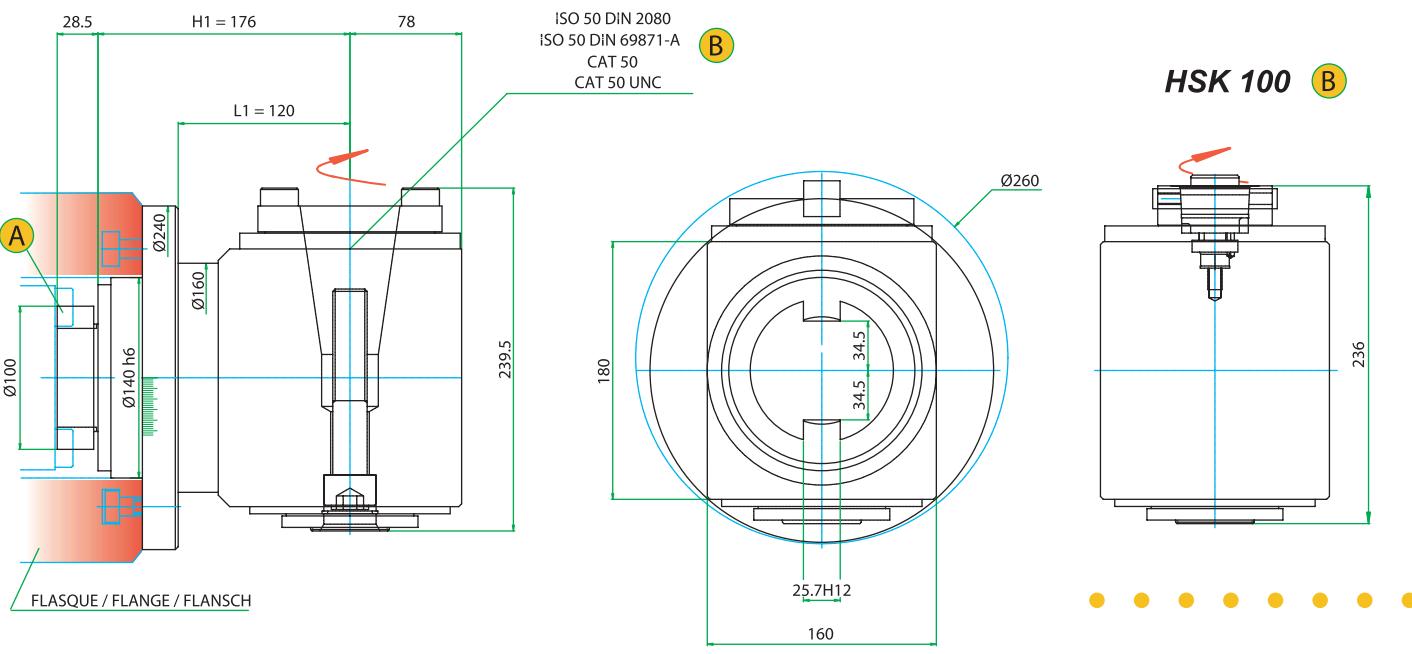
**CEC 50**

2'000 rpm

(CH) internet : [www.pibomulti.com](http://www.pibomulti.com) mail : [info@pibomulti.com](mailto:info@pibomulti.com)(USA) internet : [www.pibomulti-na.com](http://www.pibomulti-na.com) mail : [info@pibomulti-na.com](mailto:info@pibomulti-na.com)**HSK 100/125****FLASQUE  
FLANGE  
FLANSCH****FEC 50**

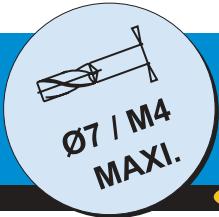
2'000 rpm

\* Sur demande, avec porte-broche CTAR 50-20, voir page 21  
 Auf Anfrage mit Spindelhalter CTAR 50-20, siehe Seite 21  
 On request with spindle holder CTAR 50-20, see page 21



(\*) voir page / siehe Seite / see page 39-40

t/min u/min rpm	kW	Nm	1 à 1	kg
2000	14 kW	204 Nm	1 à 1	≈ 50 kg

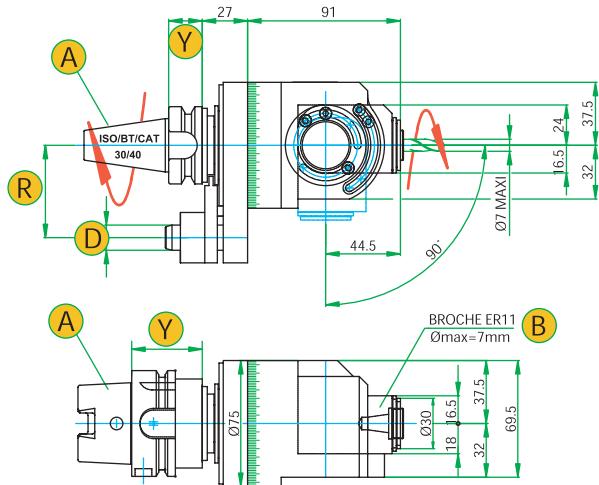


# CTAR 07

10'000 rpm

CH internet : [www.pibomulti.com](http://www.pibomulti.com) mail : [info@pibomulti.com](mailto:info@pibomulti.com)

USA internet : [www.pibomulti-na.com](http://www.pibomulti-na.com) mail : [info@pibomulti-na.com](mailto:info@pibomulti-na.com)

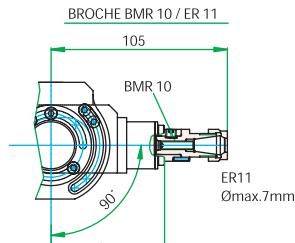


HSK 40/50/63

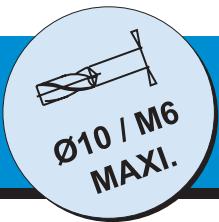
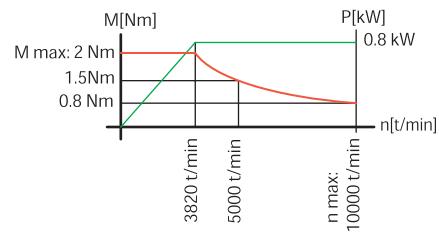
voir page / siehe Seite / see page 39-40

AUTRE BROCHE SUR DEMANDE  
ANDERE SPINDELNAUF ANFRAGE  
ANOTHER SPINDLE ON REQUEST

BROCHE SPINDEL SPINDLE	kW	Nm	t/min	kg
10000 t/min u/min rpm	0.8 kW	2 Nm	1 à 3.2	≈ 3 à 4 kg

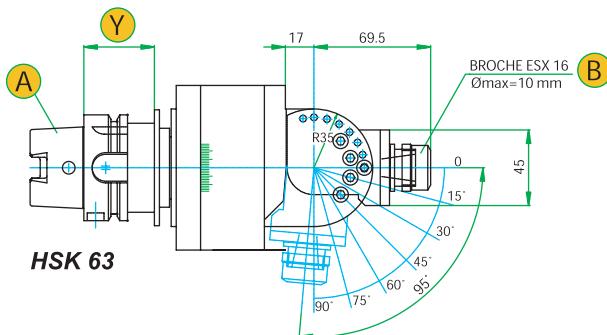


A CHANGEMENT RAPIDE  
SCHNELLWECHSEL  
QUICK CHANGE



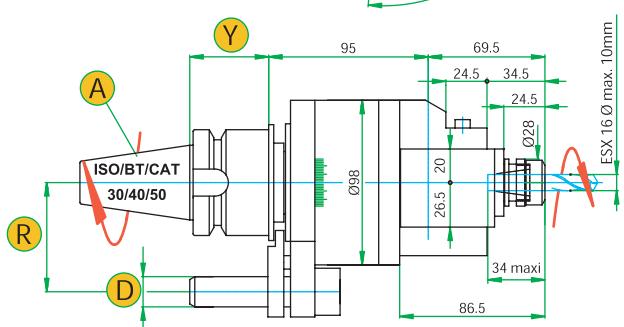
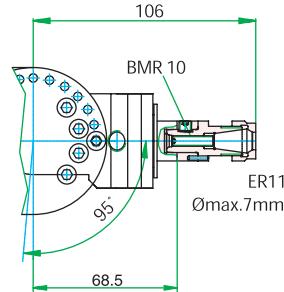
# CTAR10

7'000 rpm

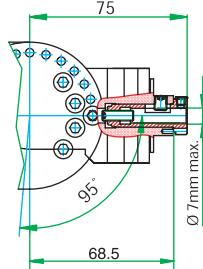


HSK 63

BROCHE BMR 10 / ER 11



BROCHE BMR 10  
DOUILLE W07-11-38



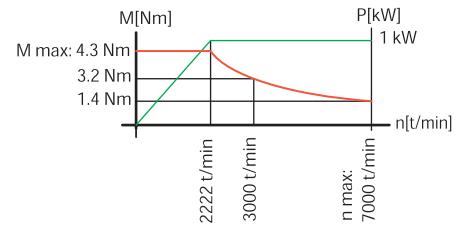
A CHANGEMENT RAPIDE  
SCHNELLWECHSEL  
QUICK CHANGE

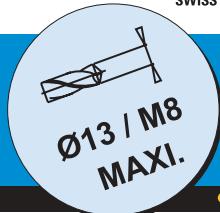
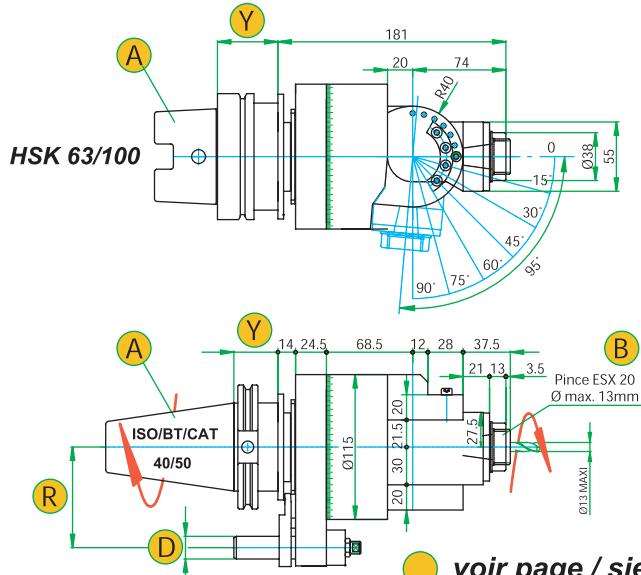
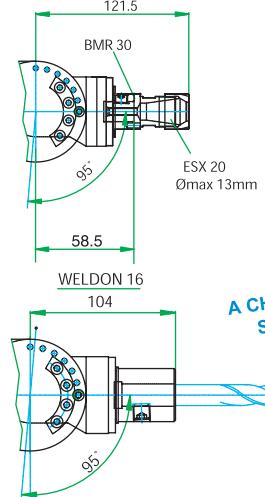


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AUTRE BROCHE SUR DEMANDE  
ANDERE SPINDELNAUF ANFRAGE  
ANOTHER SPINDLE ON REQUEST

BROCHE SPINDEL SPINDLE	kW	Nm	t/min	kg
7000 t/min u/min rpm	1.0 kW	4.3 Nm	1 à 2	≈ 6.5 à 7.5 kg

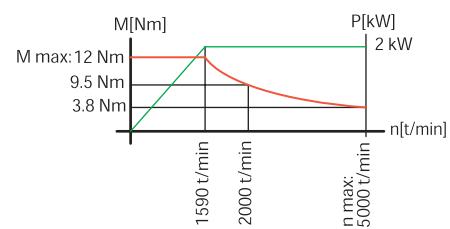
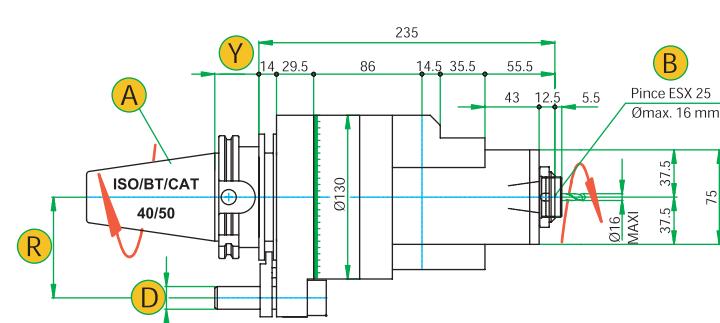
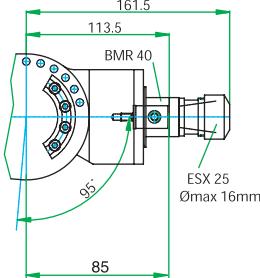


**CTAR 13**(CH) internet : [www.pibomulti.com](http://www.pibomulti.com) mail : [info@pibomulti.com](mailto:info@pibomulti.com)(USA) internet : [www.pibomulti-na.com](http://www.pibomulti-na.com) mail : [info@pibomulti-na.com](mailto:info@pibomulti-na.com)
 5'000 rpm  
 SPECIAL : 6 000 rpm
**BMR 30 / ESX 20 Ø Max. 13 mm**

voir page / siehe Seite / see page 39-40

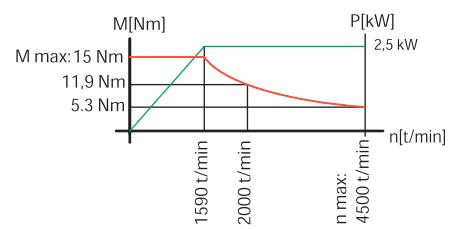
 AUTRE BROCHE SUR DEMANDE  
 ANDERE SPINDELN AUF ANFRAGE  
 ANOTHER SPINDLE ON REQUEST

BROCHE SPINDEL SPINDLE	kW	Nm	kg
5000 t/min u/min rpm	2.0 kW	12 Nm	1 à 1.6 ≈ 12 à 14 kg


 Ø16 / M12  
 MAXI.
**CTAR 16**
 4'500 rpm  
 SPECIAL : 5 500 rpm
**BMR 40 / ESX 25 Ø Max. 16 mm**
 A CHANGEMENT RAPIDE  
 SCHNELLWECHSEL  
 QUICK CHANGE

 AUTRE BROCHE SUR DEMANDE  
 ANDERE SPINDELN AUF ANFRAGE  
 ANOTHER SPINDLE ON REQUEST

n t/min u/min rpm	kW	Nm	kg
4500	2.5 kW	15 Nm	1 à 1.39 ≈ 13 à 15 kg



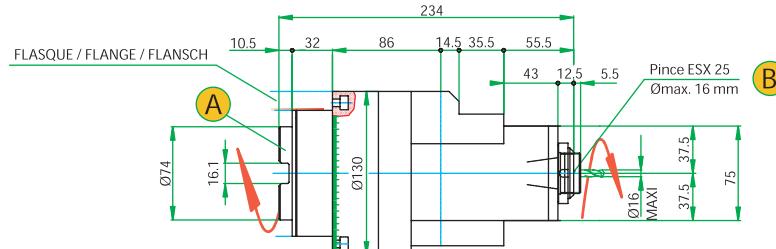


## FLASQUE FLANGE FLANSCH

## FTAR 16

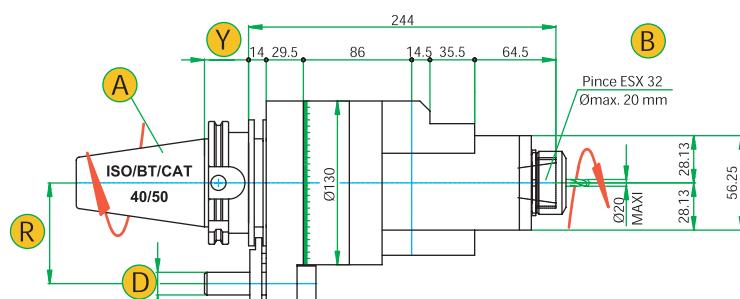
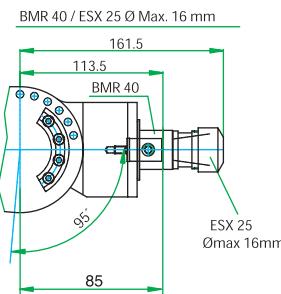
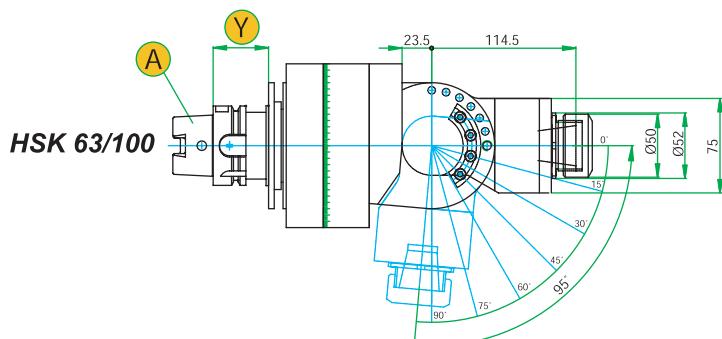
4'500 rpm  
SPECIAL : 5 500 rpm

CH internet : [www.pibomulti.com](http://www.pibomulti.com) mail : [info@pibomulti.com](mailto:info@pibomulti.com) USA internet : [www.pibomulti-na.com](http://www.pibomulti-na.com) mail : [info@pibomulti-na.com](mailto:info@pibomulti-na.com)

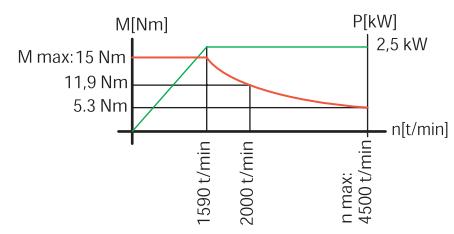


## CTAR 20

4'500 rpm  
SPECIAL : 5 500 rpm

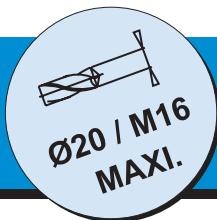


A CHANGEMENT RAPIDE  
SCHNELLWECHSEL  
QUICK CHANGE



AUTRE BROCHE SUR DEMANDE  
ANDERE SPINDELNAUF ANFRAGE  
ANOTHER SPINDLE ON REQUEST

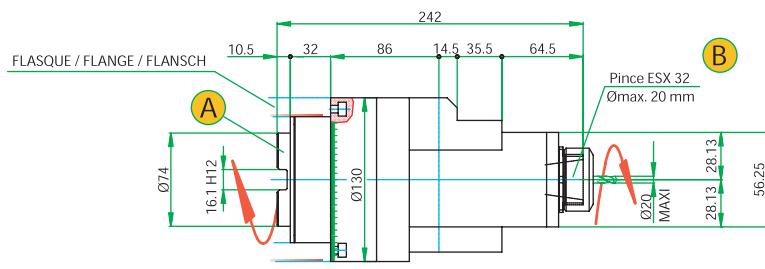
BROCHE SPINDEL SPINDLE	kW	Nm	kg
4500 t/min u/min rpm	2.5 kW	15 Nm	1 à 1.39 ≈ 13 à 15 kg

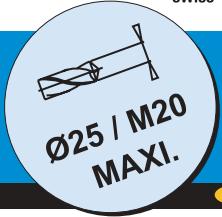


## FLASQUE FLANGE FLANSCH

## FTAR 20

4'500 rpm  
SPECIAL : 5 500 rpm



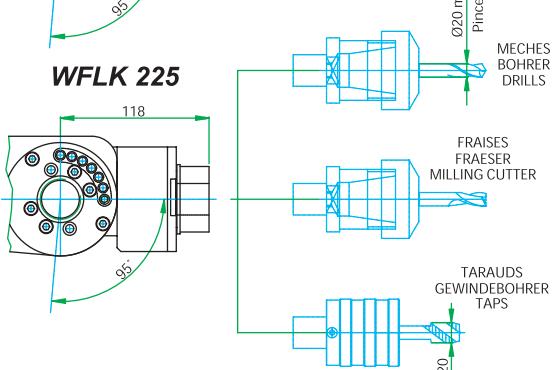
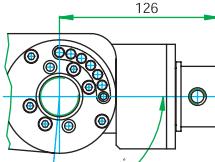
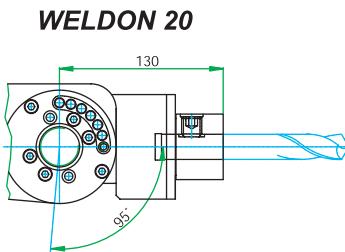
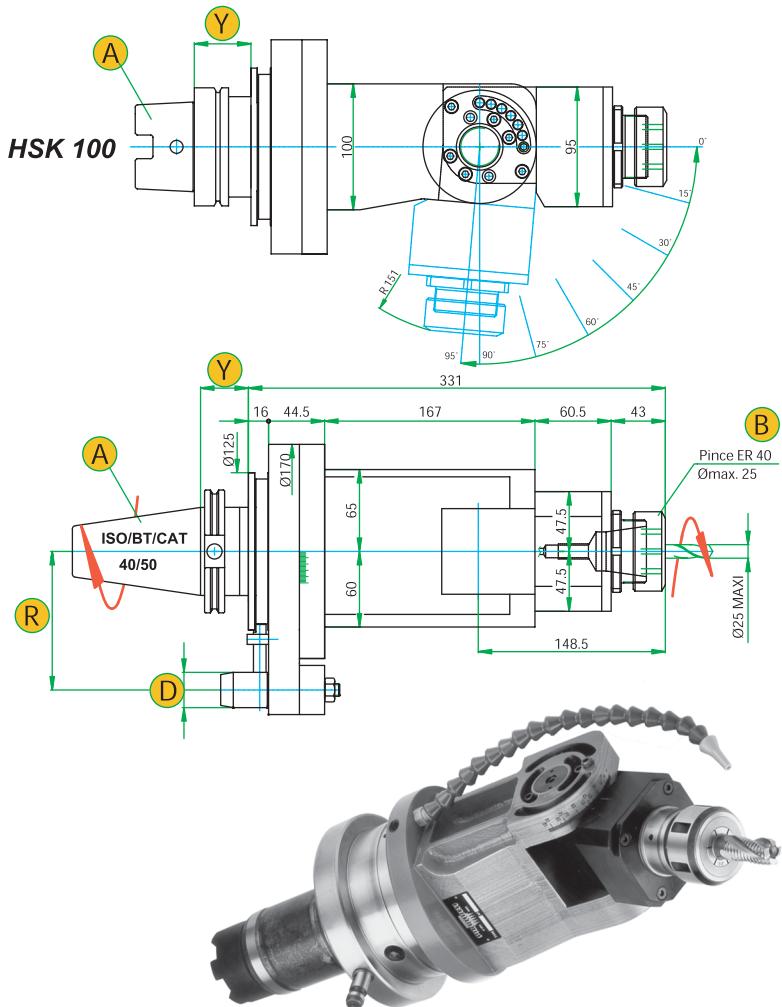


# CTAR 25

**3'000 rpm**

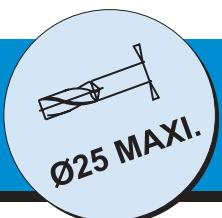
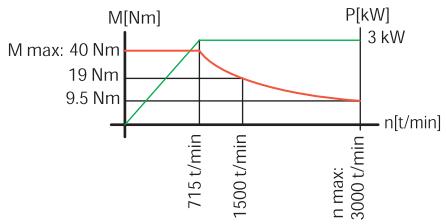
 internet : [www.pibomulti.com](http://www.pibomulti.com) mail : [info@pibomulti.com](mailto:info@pibomulti.com)

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 voir page / siehe Seite / see page 39-40

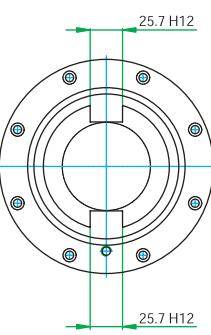
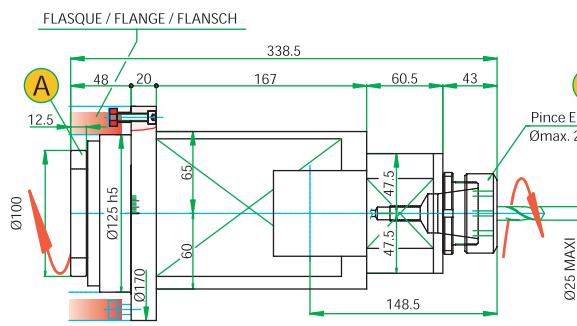
BROCHE SPINDEL SPINDLE	kW	Nm		 kg
3000 t/min u/min rpm	3.0 kW	40 Nm	1 à 1	≈ 30 à 33 kg



# **FLASQUE FLANGE FLANSCH**

# FTAR 25

**3'000 rpm**

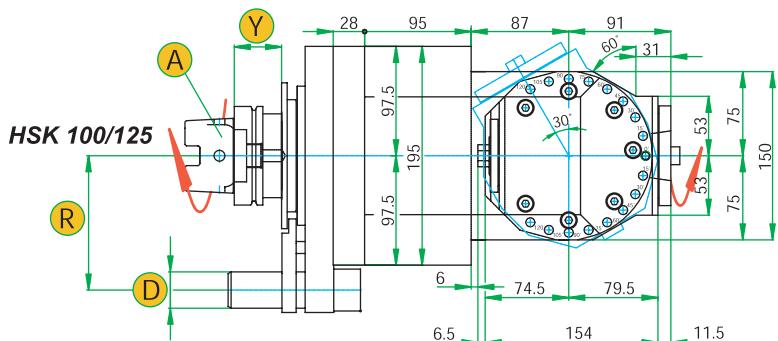


# CTAR 40 / CTARH 40

3'000 rpm

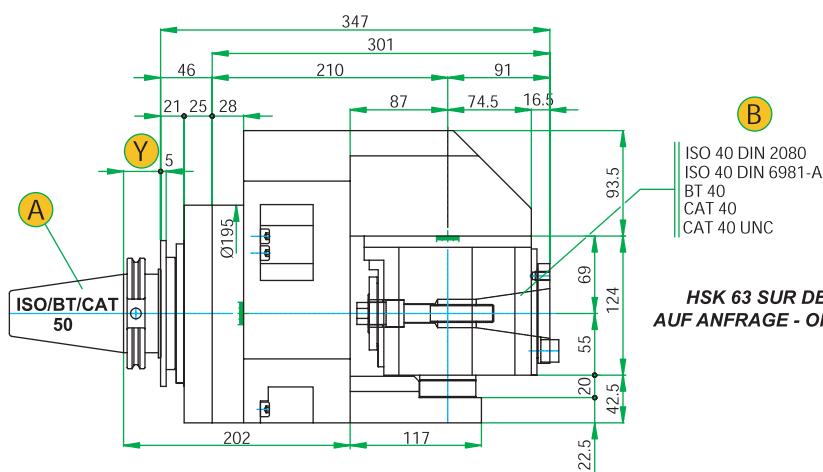
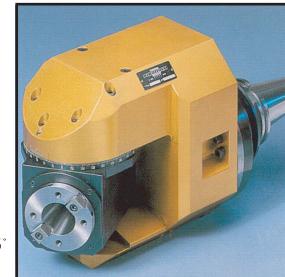
CH internet : [www.pibomulti.com](http://www.pibomulti.com) mail : [info@pibomulti.com](mailto:info@pibomulti.com)

USA internet : [www.pibomulti-na.com](http://www.pibomulti-na.com) mail : [info@pibomulti-na.com](mailto:info@pibomulti-na.com)

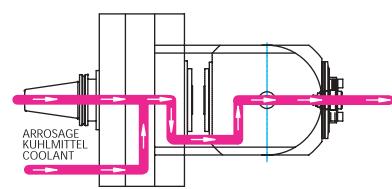


CTAR 40  
GOUPILE D'INDEXION PAS 15°  
INDEXIERUNGSTIFT TEILUNG 15°  
LOCATION PIN THREAD 15°

CTARH 40  
DENTURE HIRTH 360° PAS 2.5°  
HIRTH-VERZAHNUNG 360° TEILUNG 2.5°  
HIRTH-COUPLED 360° THREAD 2.5°



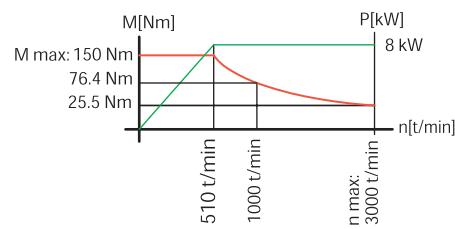
HSK 63 SUR DEMANDE  
AUF ANFRAGE - ON REQUEST



ARROSAGE CENTRAL  
INNERE KÜHLMITTELZUFLUHR  
COOLANT THROUGH CENTRE

voir page / siehe Seite / see page 39-40

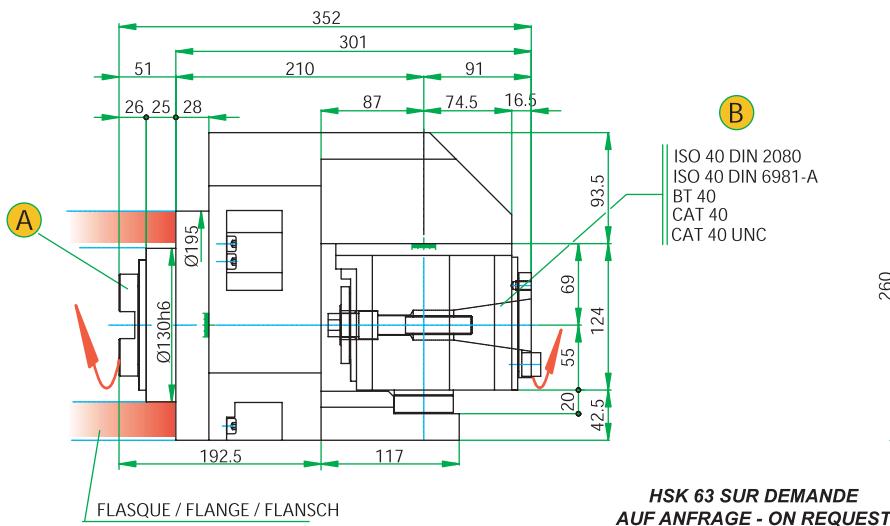
BROCHE SPINDEL SPINDLE	kW	Nm		
3000 t/min u/min rpm	8.0 kW	150 Nm	1 à 1.5	≈ 45 kg



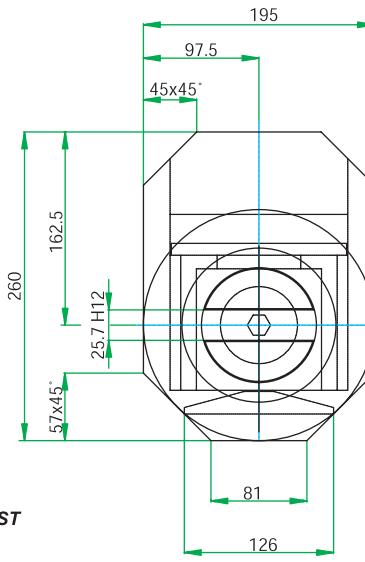
## FLASQUE FLANGE FLANSCH

# FTAR 40 / FTARH 40

3'000 rpm



HSK 63 SUR DEMANDE  
AUF ANFRAGE - ON REQUEST

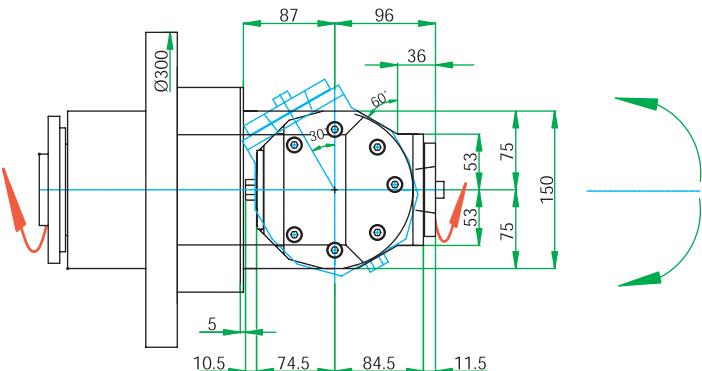


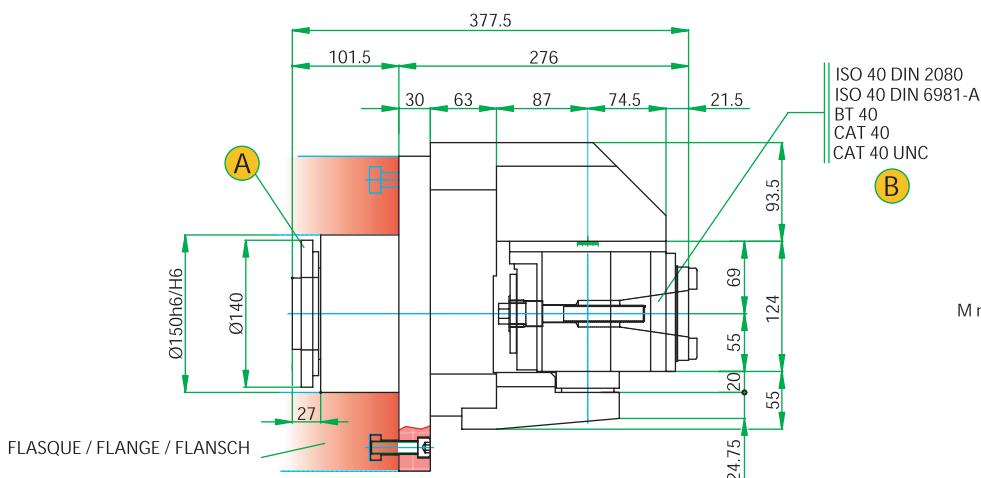
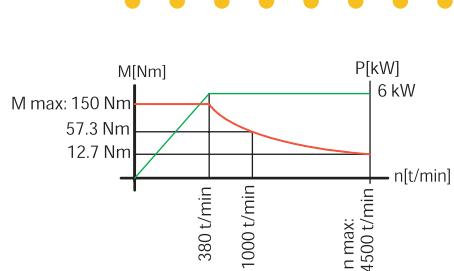
# FTAR 40 - 2.5 / FTARH 40 - 2.5

4'500 rpm

 CH internet : [www.pibomulti.com](http://www.pibomulti.com) mail : [info@pibomulti.com](mailto:info@pibomulti.com)

 USA internet : [www.pibomulti-na.com](http://www.pibomulti-na.com) mail : [info@pibomulti-na.com](mailto:info@pibomulti-na.com)

 Voir / siehe / see  
**CTAR 40**

**CTAR 40**  
 GOUPIELE D'INDEXION PAS 15°  
 INDEXIERUNGSTIFT TEILUNG 15°  
 LOCATION PIN THREAD 15°

**±120° OU**  
**CTARH 40**  
 DENTURE HIRTH 360° PAS 2.5°  
 HIRTH-VERZAHNUNG 360° TEILUNG 2.5°  
 HIRTH-COUPPLING 360° THREAD 2.5°

 HSK 63 SUR DEMANDE  
 AUF ANFRAGE - ON REQUEST


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BROCHE SPINDEL SPINDLE	kW	Nm		kg
4500 t/min u/min rpm	6.0 kW	150 Nm	1 à 2.5	≈ 50 kg

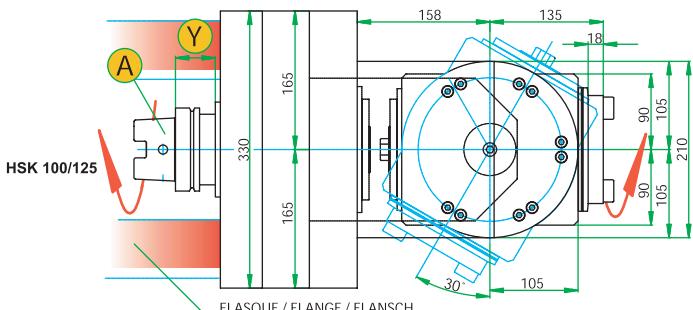

**FTAR 40**

**CTAR 50**

**FTAR 50**

# CTARH 50-20 1'800 rpm

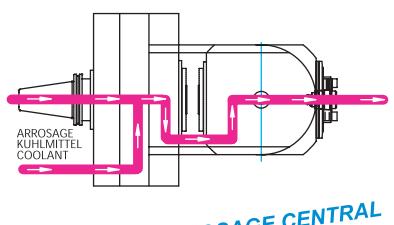
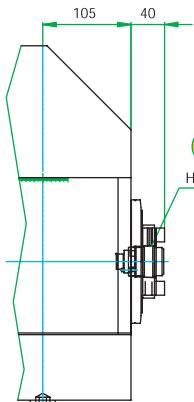
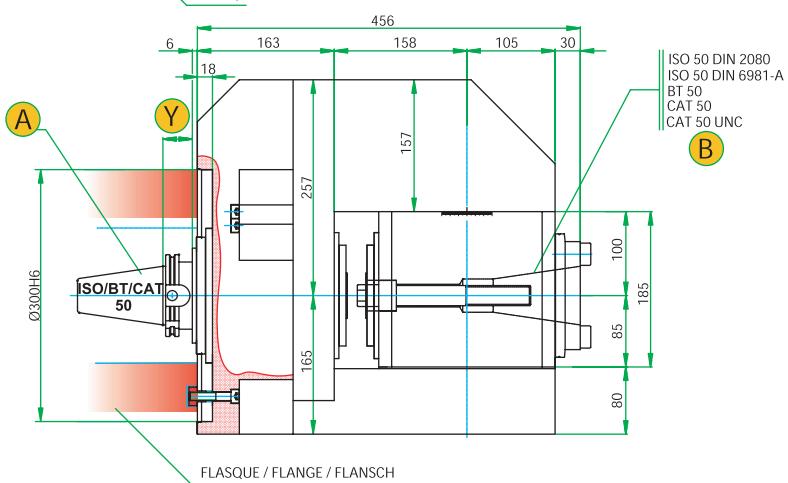
CH internet : [www.pibomulti.com](http://www.pibomulti.com) mail : [info@pibomulti.com](mailto:info@pibomulti.com)



# CTARH 50-20-2 3'600 rpm

USA internet : [www.pibomulti-na.com](http://www.pibomulti-na.com) mail : [info@pibomulti-na.com](mailto:info@pibomulti-na.com)

indexion à denture tous les 2.5°  
Indexierung mit Verzahnung alle 2,5°  
Indexing device with teeth every 2.5°



ARROSAGE CENTRAL  
INNERE KÜHLMITTELZUFUHR  
COOLANT THROUGH CENTRE

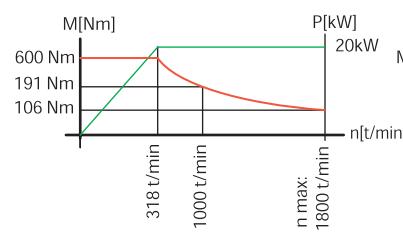
HSK 80 SUR DEMANDE  
AUF ANFRAGE - ON REQUEST

## CTAR 50-20

1 CTAR 50-20

2 CTAR 50-20-2

	BROCHE SPINDEL SPINDLE	kW	Nm	Ø mm %	kg
1	1800 T/min u/min rpm	20 kW	600 Nm	1 à 1	≈ 200 kg
2	3600 T/min u/min rpm	20 kW	400 Nm	1 à 2	≈ 200 kg



## CTAR 50-20-2

BROCHE  
SPINDEL  
SPINDLE

M[Nm]

P[kW]

n[t/min]

M max: 400 Nm

n max:

3600 t/min

BROCHE  
SPINDEL  
SPINDLE

95.5 Nm

n max:

2000 t/min

BROCHE  
SPINDEL  
SPINDLE

53 Nm

n max:

477 t/min

BROCHE  
SPINDEL  
SPINDLE

106 Nm

n max:

1000 t/min

BROCHE  
SPINDEL  
SPINDLE

191 Nm

n max:

318 t/min

BROCHE  
SPINDEL  
SPINDLE

600 Nm

n max:

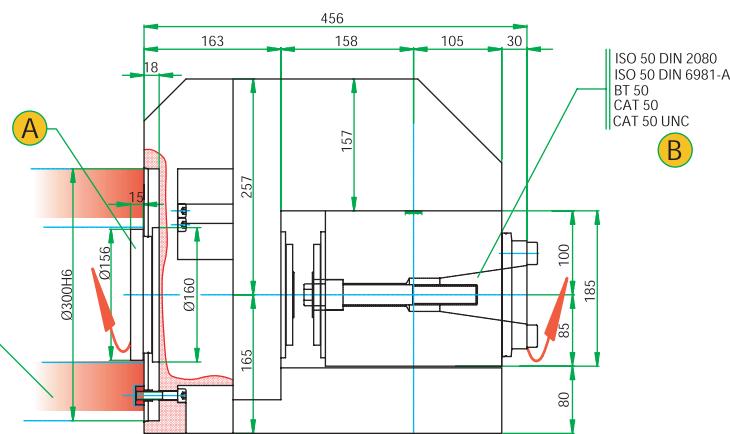
1800 t/min

BROCHE  
SPINDEL  
SPINDLE

# FLASQUE FLANGE FTARH 50-20 1'800 rpm FLANSCH

# FTARH 50-20-2 3'600 rpm

FLASQUE / FLANGE / FLANSCH



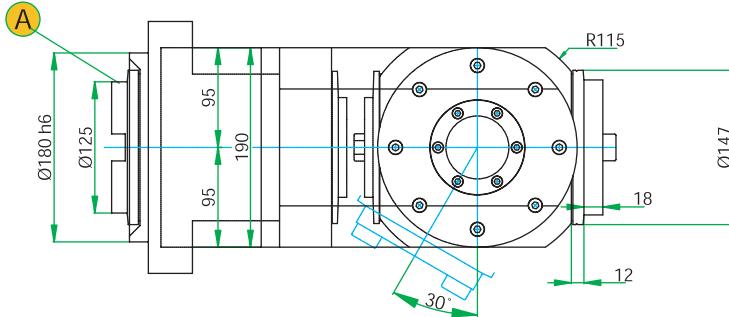
HSK 63 (B)

HSK 80 SUR DEMANDE  
AUF ANFRAGE - ON REQUEST

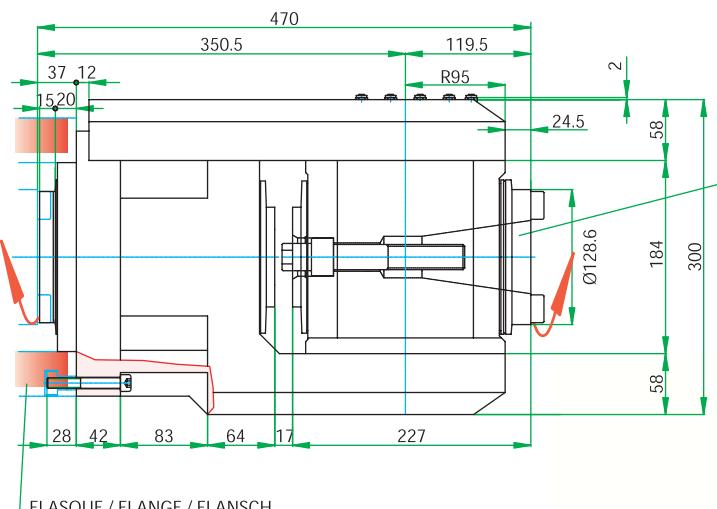
**FLASQUE  
FLANGE  
FLANSCH**
**FTARH 50-14**

2'000 rpm

 CH internet : [www.pibomulti.com](http://www.pibomulti.com) mail : [info@pibomulti.com](mailto:info@pibomulti.com)

 USA internet : [www.pibomulti-na.com](http://www.pibomulti-na.com) mail : [info@pibomulti-na.com](mailto:info@pibomulti-na.com)


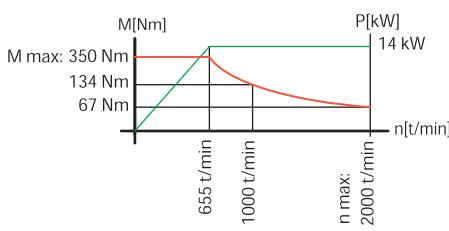
+/- 120° ou indexierung mit Verzahnung alle 2,5° location device with teeth every 2.5°

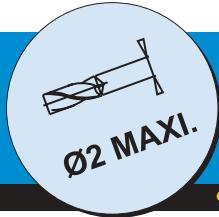

 HSK 63-80 SUR DEMANDE  
AUF ANFRAGE - ON REQUEST

FLASQUE / FLANGE / FLANSCH

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BROCHE SPINDEL SPINDLE	kW	Nm		kg
2000 u/min rpm	14 kW	350 Nm	1 à 1	≈ 140 kg



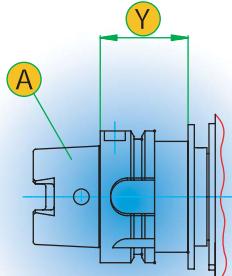


# CDP 02 L1/L2/L3/L...

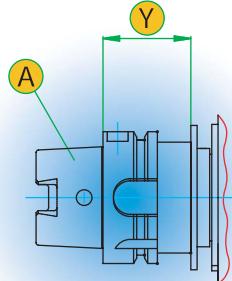
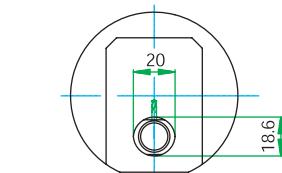
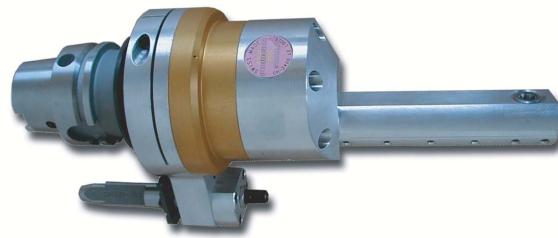
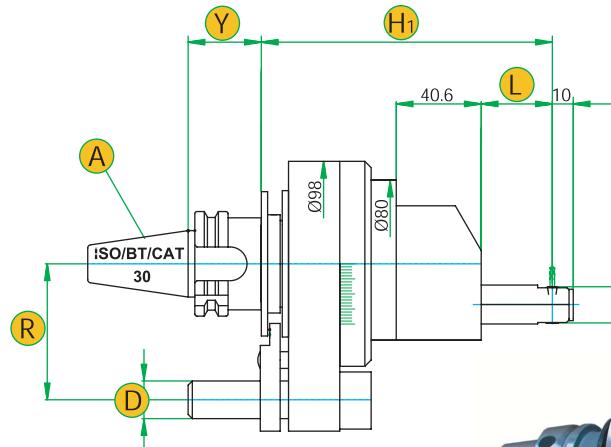
8'000 rpm

CH internet : [www.pibomulti.com](http://www.pibomulti.com) mail : [info@pibomulti.com](mailto:info@pibomulti.com)

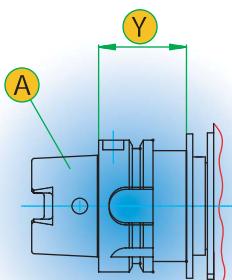
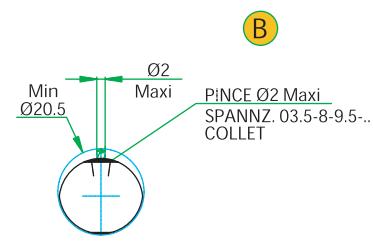
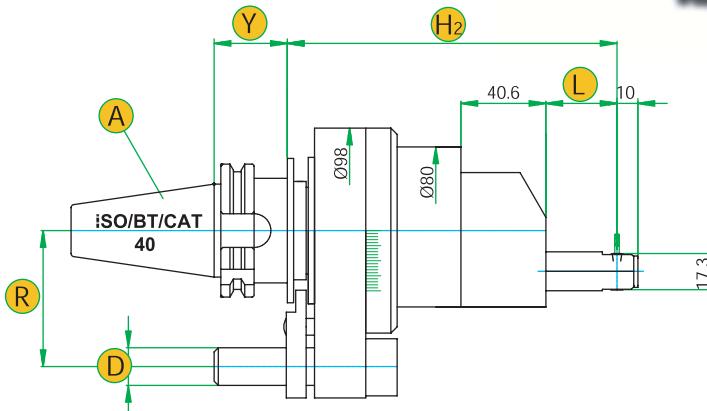
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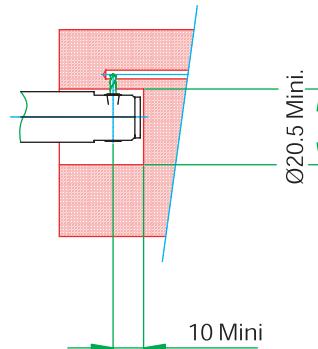
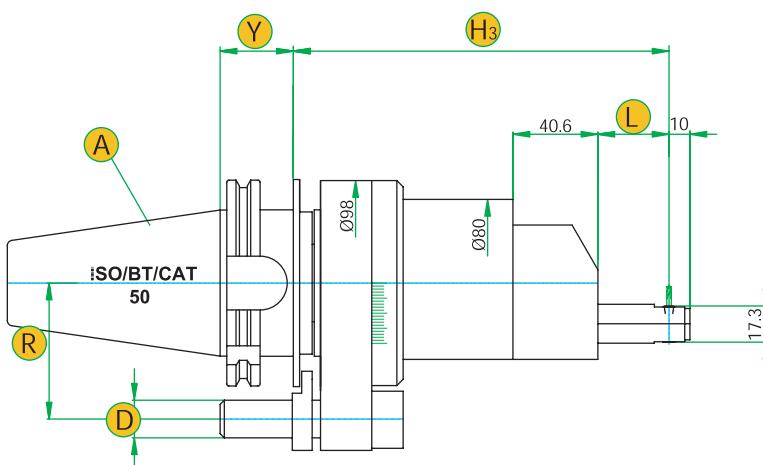
HSK 40 A  
HSK 50 A  
HSK 63 A



HSK 50 A  
HSK 63 A



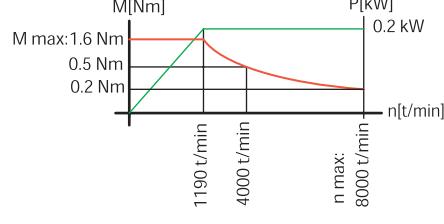
HSK 63 A  
HSK 80 A  
HSK 100 A

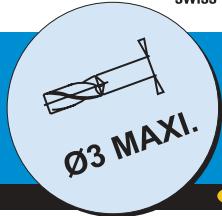


	L	H1	H2	H3
L1	34	139.1	157.6	179.6
L2	49.5	154.6	173.1	195.6
L3	65	170.1	188.6	210.6

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BROCHE SPINDEL SPINDLE	kW	Nm	kg
8000 t/min u/min rpm	0.2 kW	1.6 Nm	1 à 2.5 ≈ 3 à 4 kg

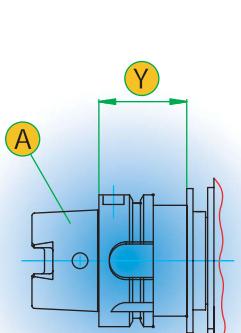
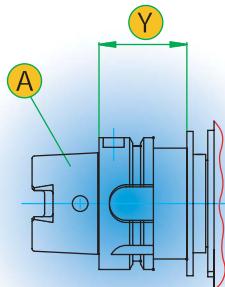
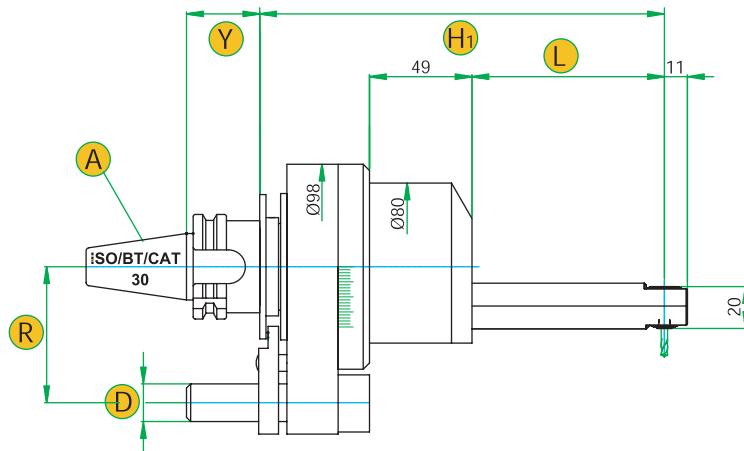
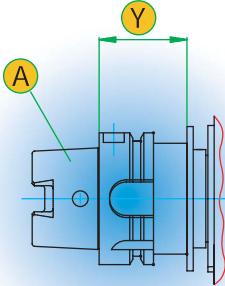
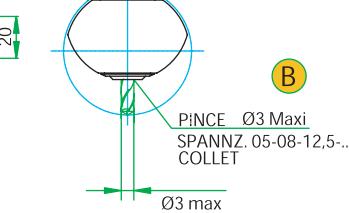
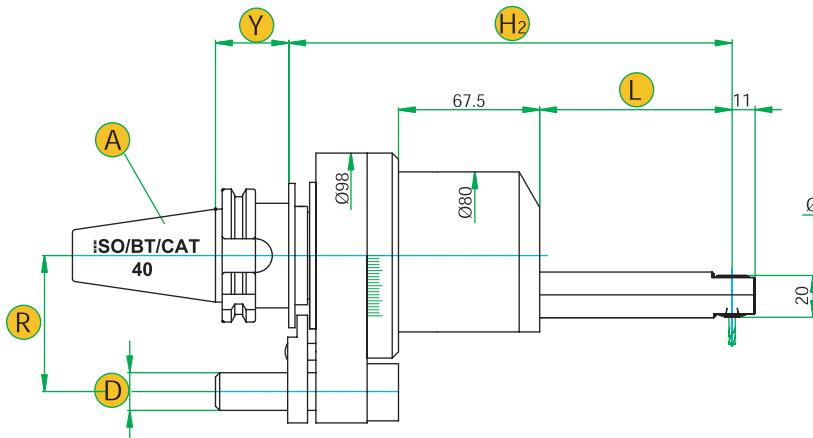
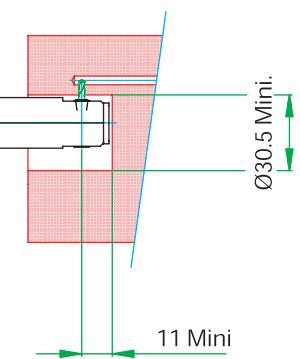
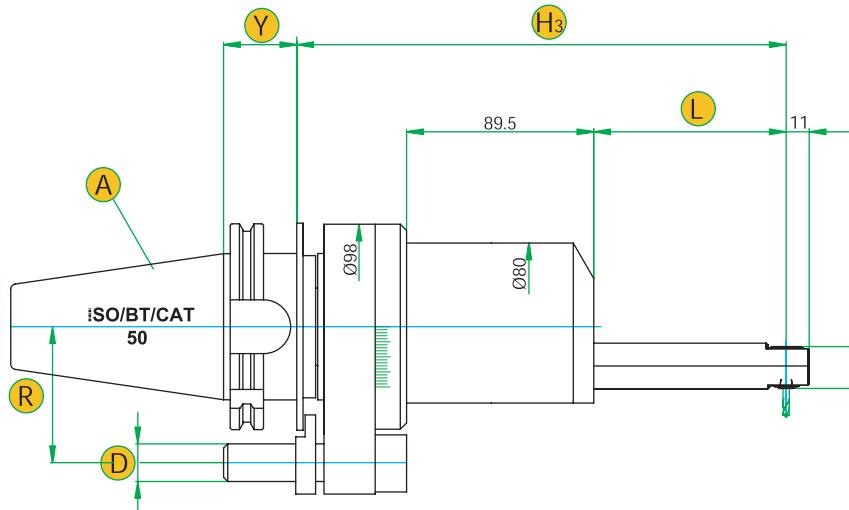




# CDP 03 L1/L2/L3/L...

6'000 rpm

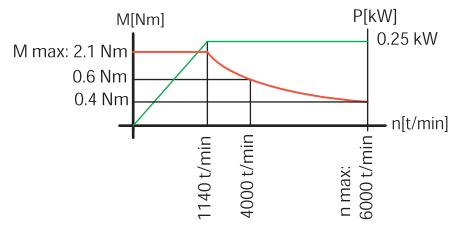
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 HSK 40 A  
HSK 50 A  
HSK 63 A

 HSK 50 A  
HSK 63 A

 HSK 63 A  
HSK 80 A  
HSK 100 A


	L	H1	H2	H3
L1	50	151.5	170	192
L2	71	172.5	191	213
L3	79.5	181	199.5	221.5
L4	92	193.5	212	234
L5	112	214.5	233	255
L6	134	235.5	254	276

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BROCHE SPINDEL SPINDLE	kW	Nm	kg
6000 t/min rpm	0.25 kW	2.1 Nm	1 à 3 ≥ 3 à 4 kg



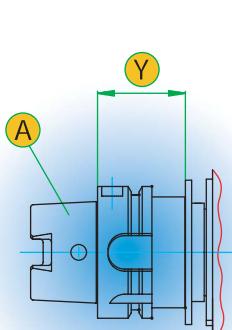


# CDP 04 L1/L2/L3/L...

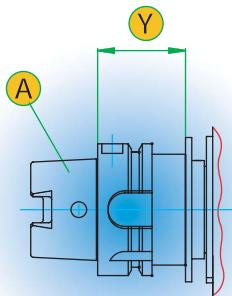
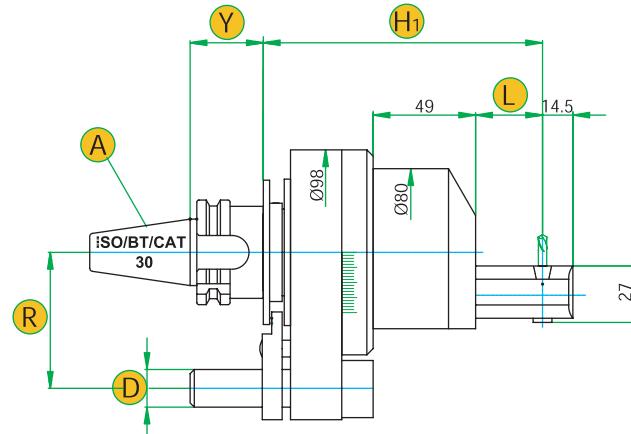
8'000 rpm

CH internet : [www.pibomulti.com](http://www.pibomulti.com) mail : [info@pibomulti.com](mailto:info@pibomulti.com)

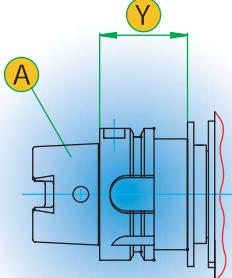
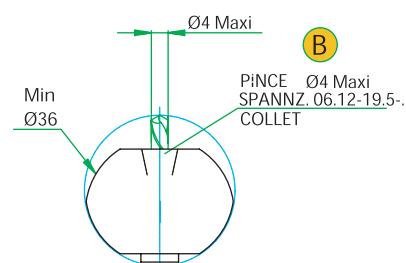
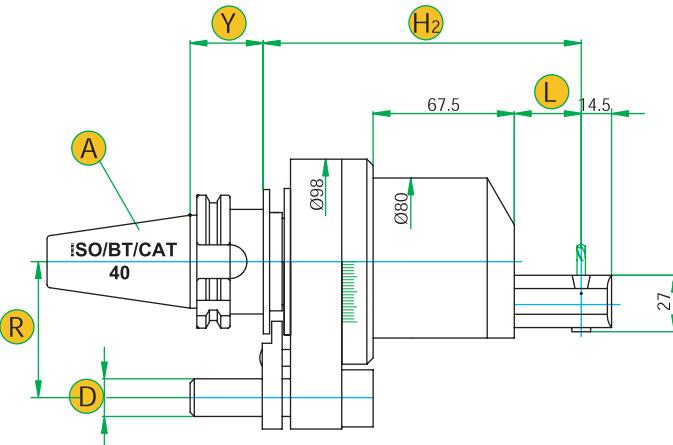
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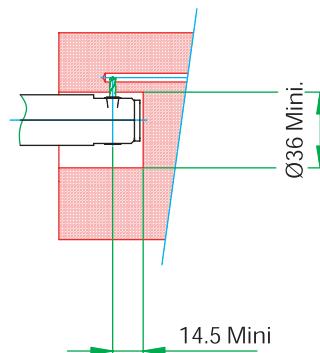
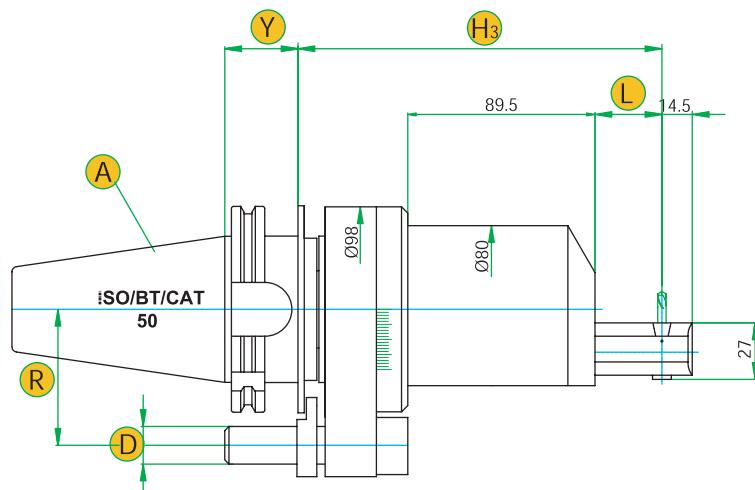
HSK 40 A  
HSK 50 A  
HSK 63 A



HSK 50 A  
HSK 63 A

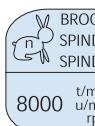


HSK 63 A  
HSK 80 A  
HSK 100 A



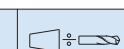
	L	H1	H2	H3
L1	32	133.5	152	174
L2	56	157.5	176	198
L3	80	181.5	200	222
L4	104	205.5	224	246

voir page / siehe Seite / see page 39-40



kW

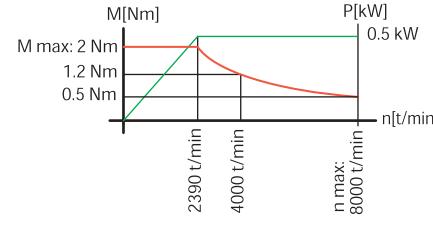
Nm

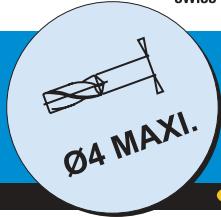


8000 t/min u/min rpm

1 à 3

≈ 3.5 à 4.5 kg



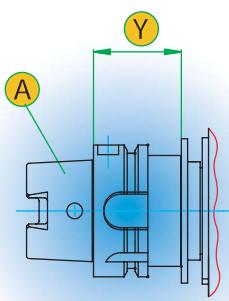


# CDP 041 L1/L2/L3/L...

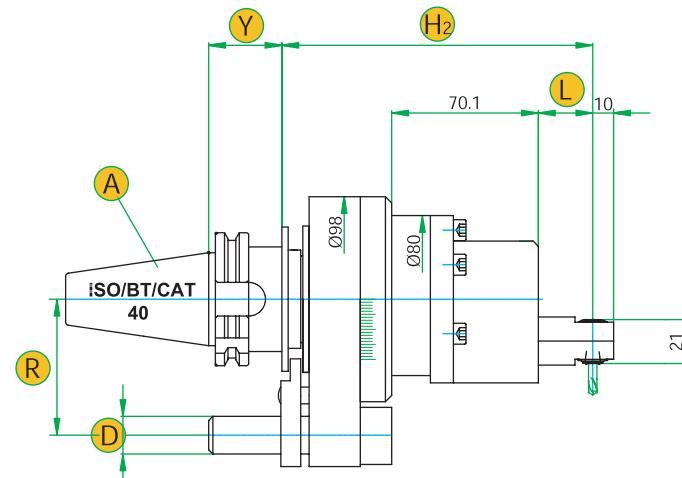
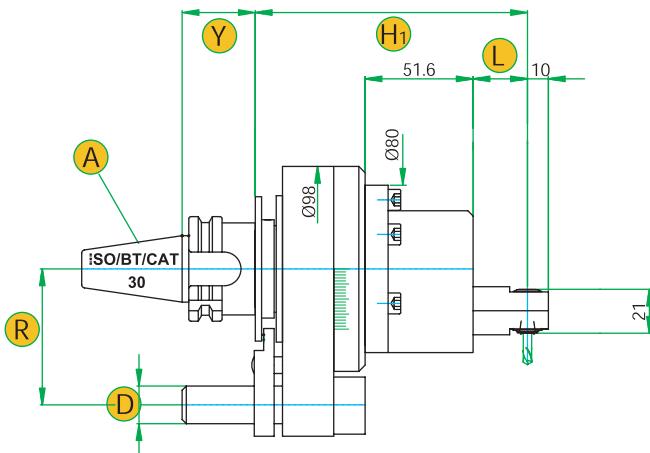
10'000 rpm

CH internet : [www.pibomulti.com](http://www.pibomulti.com) mail : [info@pibomulti.com](mailto:info@pibomulti.com)

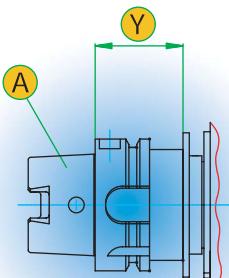
USA internet : [www.pibomulti-na.com](http://www.pibomulti-na.com) mail : [info@pibomulti-na.com](mailto:info@pibomulti-na.com)



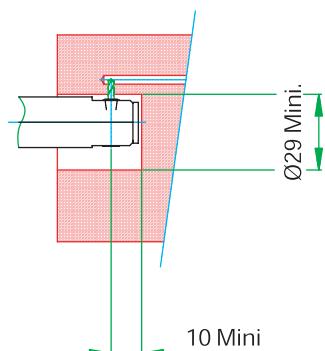
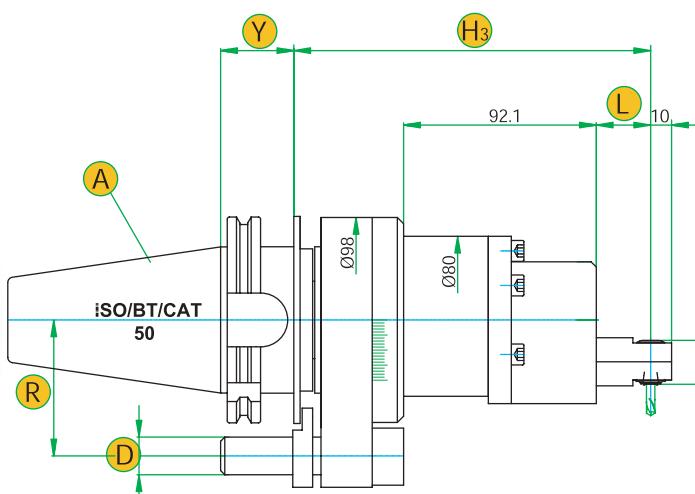
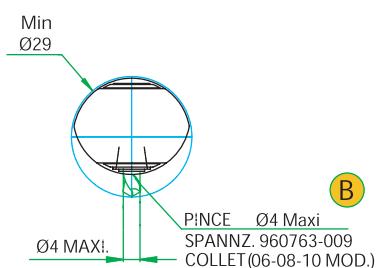
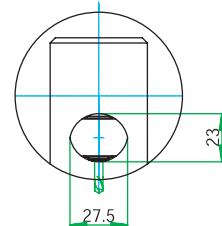
HSK 40 A  
HSK 50 A  
HSK 63 A



HSK 50 A  
HSK 63 A

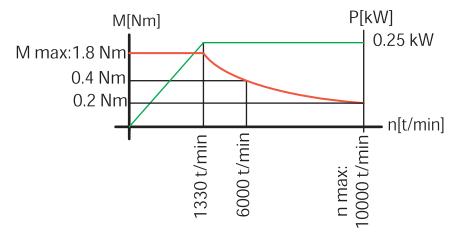


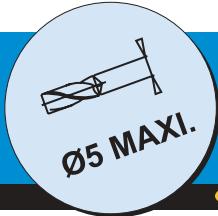
HSK 63 A  
HSK 80 A  
HSK 100 A



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BROCHE SPINDEL SPINDLE	kW	Nm	t/min	kg
10000 t/min rpm	0.25 kW	1.8 Nm	1 à 2.5	≈ 3.5 à 4.5 kg



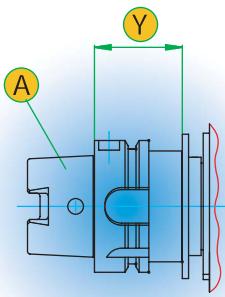


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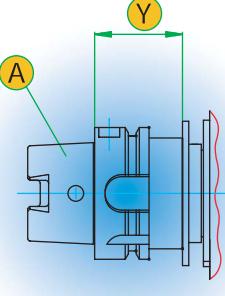
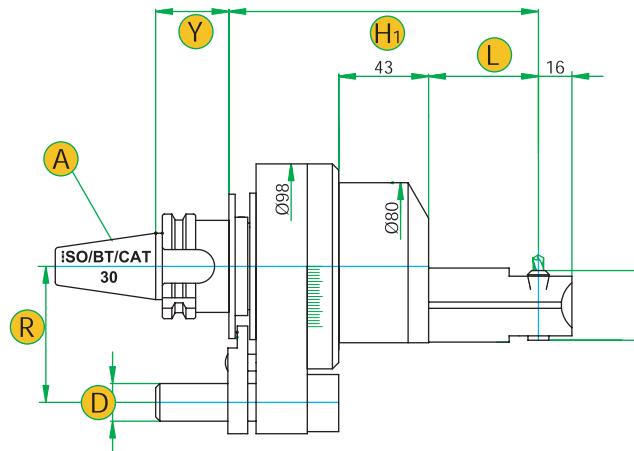
5'400 rpm

CH internet : [www.pibomulti.com](http://www.pibomulti.com) mail : [info@pibomulti.com](mailto:info@pibomulti.com)

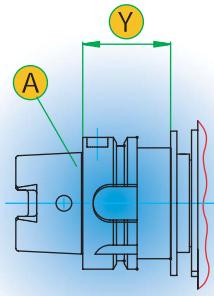
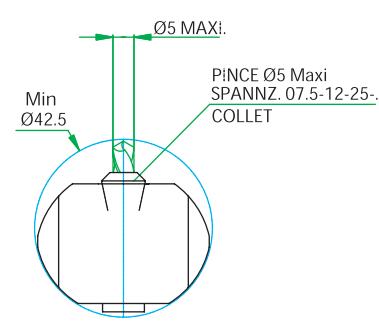
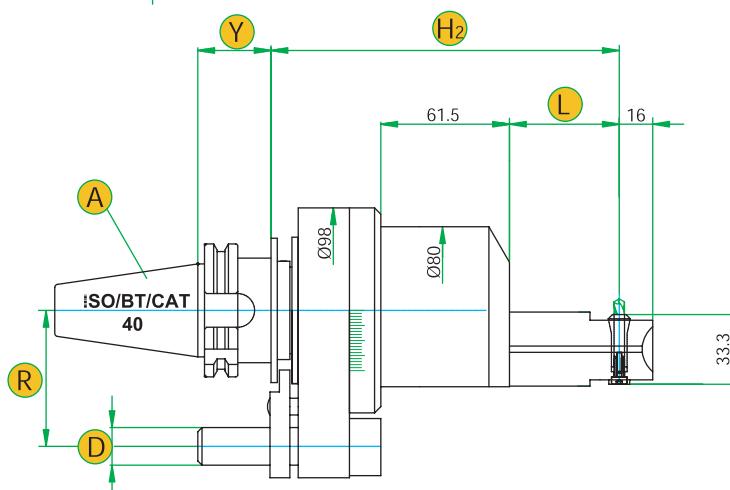
USA internet : [www.pibomulti-na.com](http://www.pibomulti-na.com) mail : [info@pibomulti-na.com](mailto:info@pibomulti-na.com)



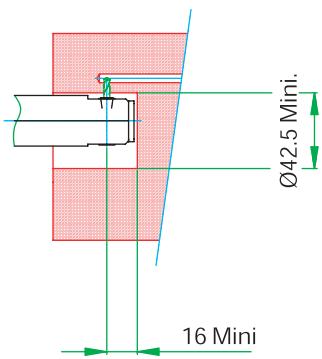
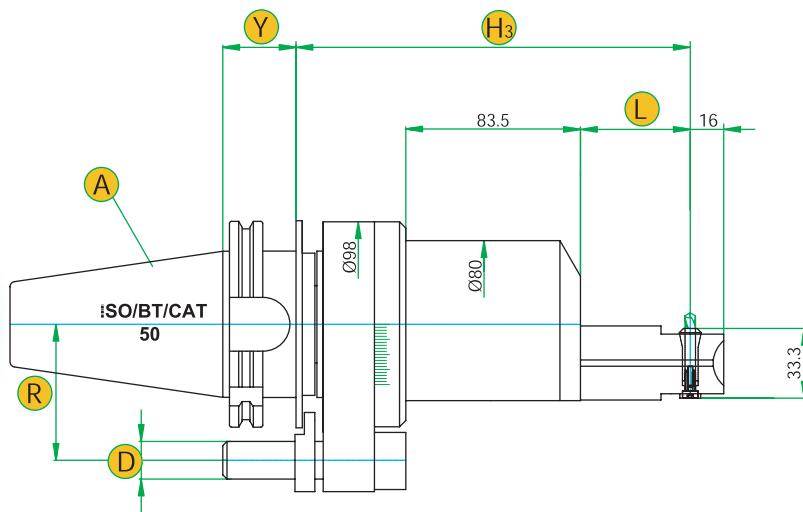
HSK 40 A  
HSK 50 A  
HSK 63 A



HSK 50 A  
HSK 63 A



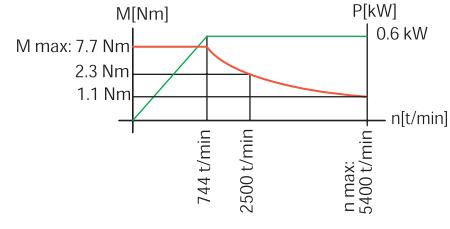
HSK 63 A  
HSK 80 A  
HSK 100 A

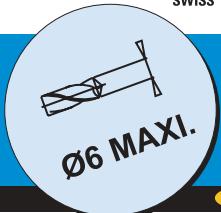


	L	H1	H2	H3
L1	52.5	148	166.5	188.5
L2	82.5	178	196.5	218.5
L3	112.5	208	226.5	248.5
L4	142.5	238	256.5	278.5
L5	172	267.5	286	308

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BROCHE SPINDEL SPINDLE	kW	Nm	kg
5400 t/min u/min rpm	0.6 kW	7.7 Nm	1 à 1.6 ≥ 4 à 7 kg

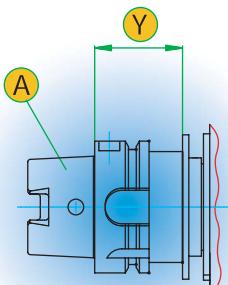
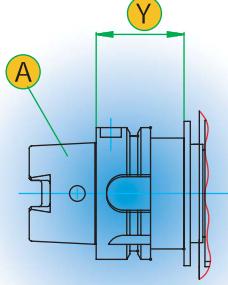
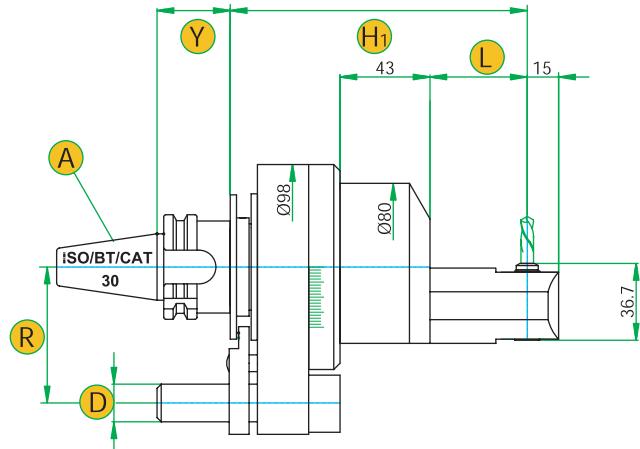
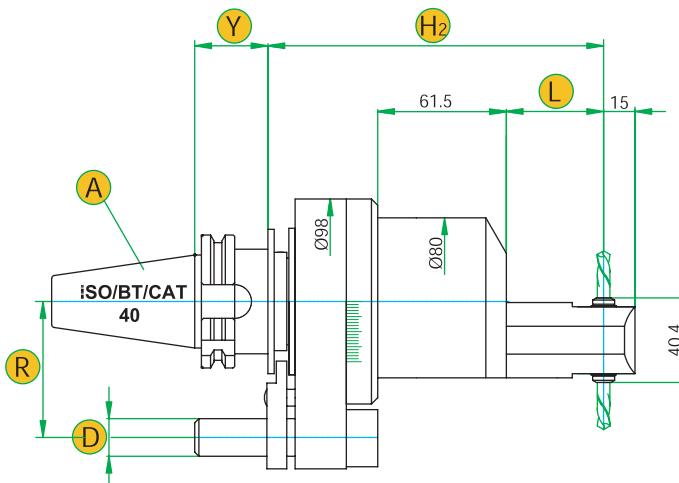
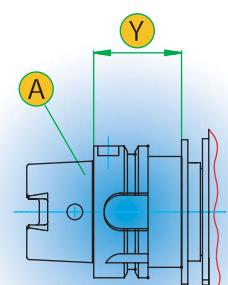
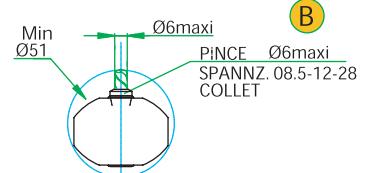
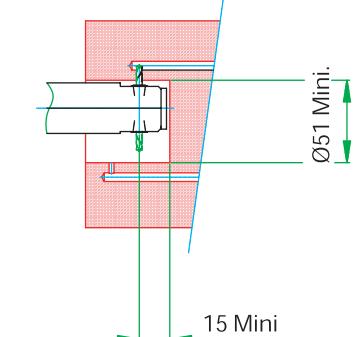
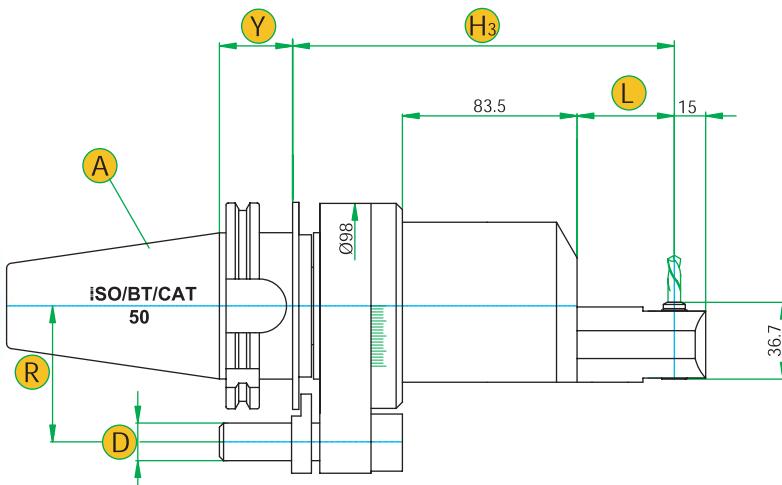
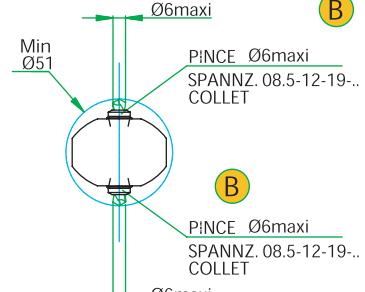




# CDP 06 L1/L2/L3/L...

8'000 rpm

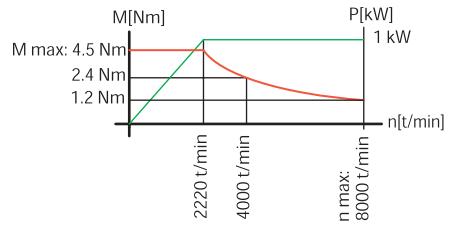
 CH internet : [www.pibomulti.com](http://www.pibomulti.com) mail : [info@pibomulti.com](mailto:info@pibomulti.com)

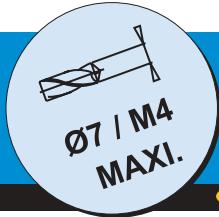
 USA internet : [www.pibomulti-na.com](http://www.pibomulti-na.com) mail : [info@pibomulti-na.com](mailto:info@pibomulti-na.com)

 HSK 40 A  
 HSK 50 A  
 HSK 63 A

 HSK 50 A  
 HSK 63 A

 BROCHE 1 SORTIE  
 SPINDEL 1 AUSGANG  
 SPINDLE 1 OUTPUT

 HSK 63 A  
 HSK 80 A  
 HSK 100 A

 BROCHE 2 SORTIES  
 SPINDEL 2 AUSGÄNDE  
 SPINDLE 2 OUTPUTS


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	L	H1	H2	H3
L1	46.5	142	160.5	182.5
L2	74.5	170	188.5	210.5
L3	102.5	198	216.5	238.5

BROCHE SPINDEL SPINDLE	kW	Nm	Ø mm	kg
8000 t/min u/min rpm	1.0 kW	4.5 Nm	1 à 2.5	≈ 4 à 7 kg



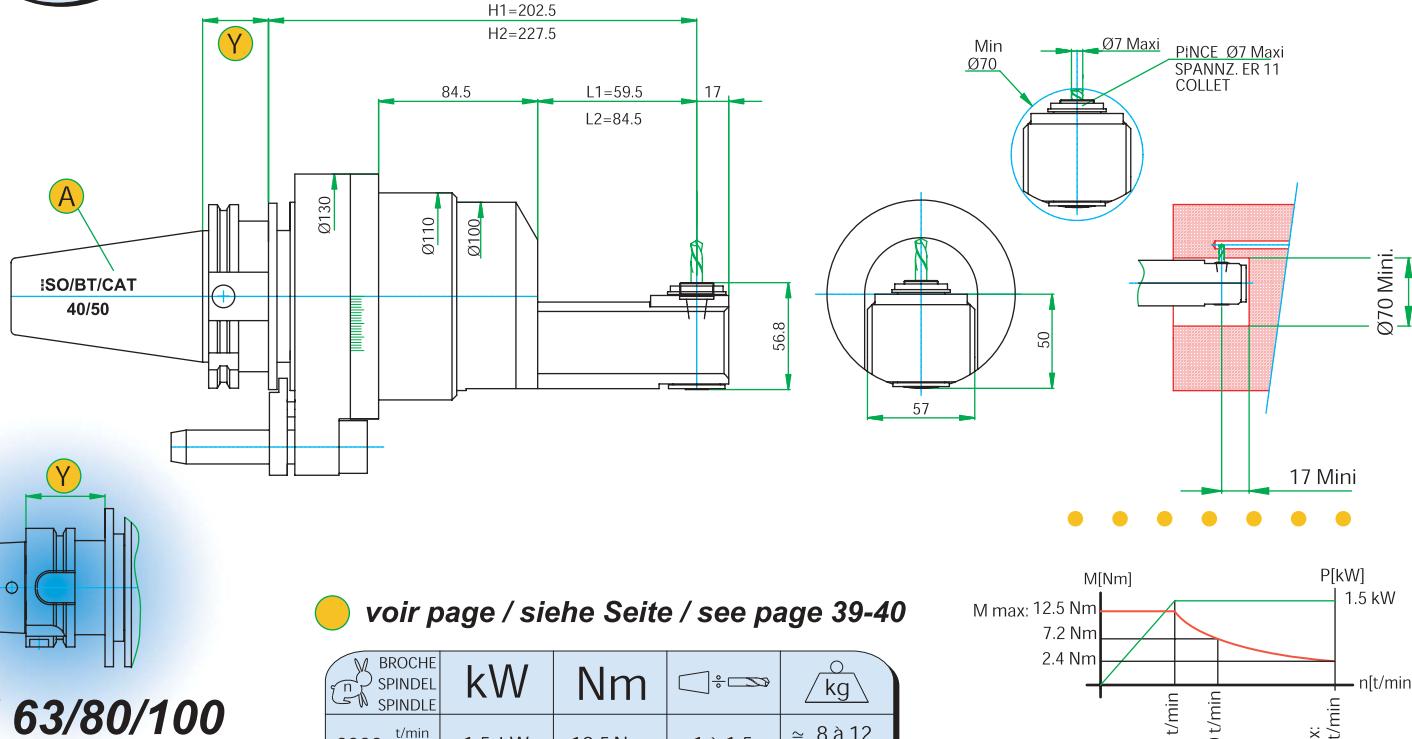


# CDP 07 L1/L2/L...

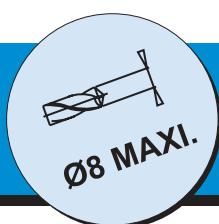
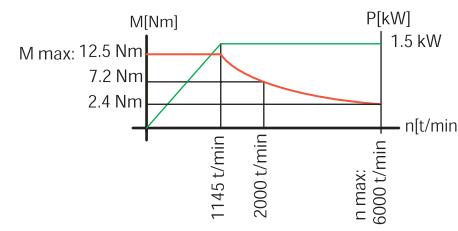
6'000 rpm

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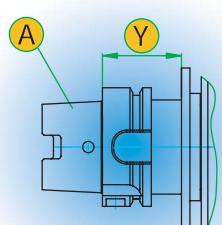
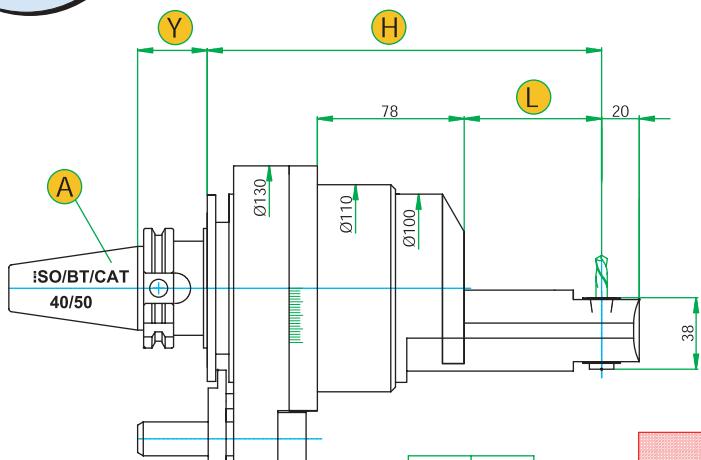


HSK 63/80/100

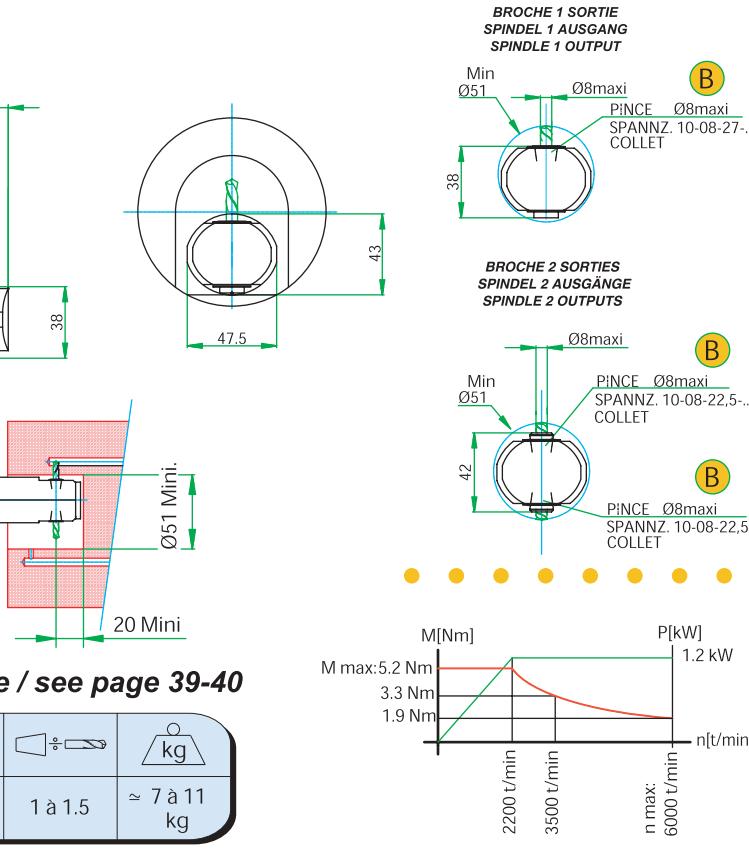


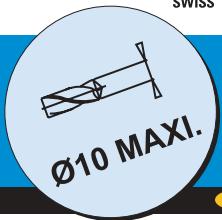
# CDP 08 L1/L2/L3/L...

6'000 rpm



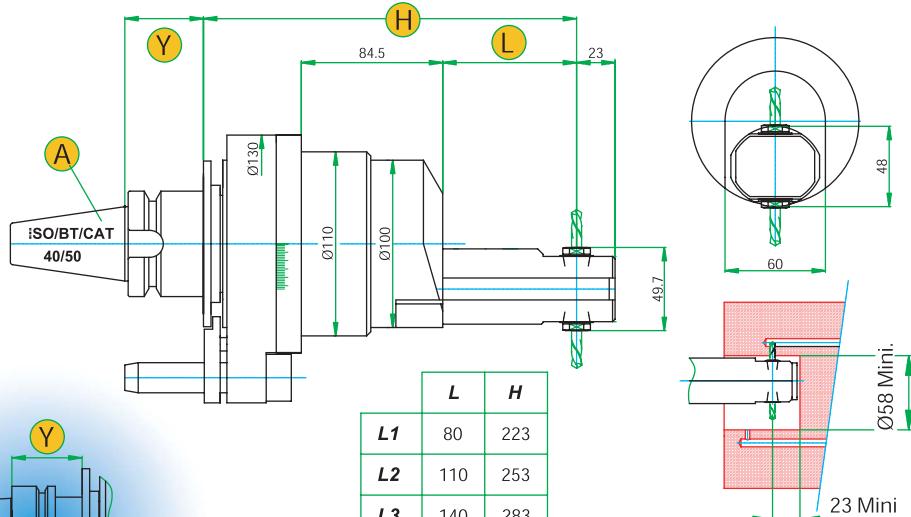
HSK 63/80/100





# CDP 10 L1/L2/L3/L...

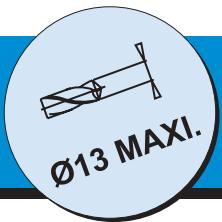
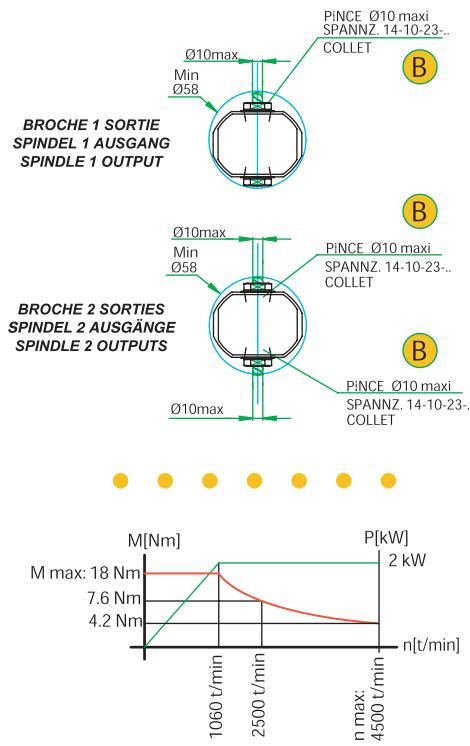
4'500 rpm

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BROCHE SPINDEL SPINDLE	kW	Nm	kg
4500 t/min u/min rpm	2.0 kW	18 Nm	1 à 1.5 ≈ 12 à 15 kg

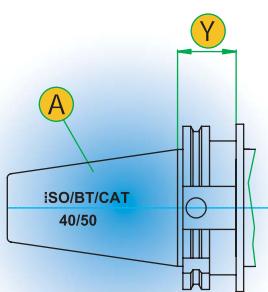
HSK 63/80/100



# CDP 13 L1/L2/L...

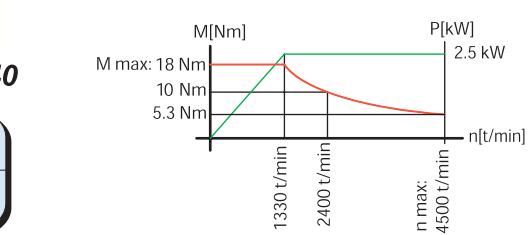
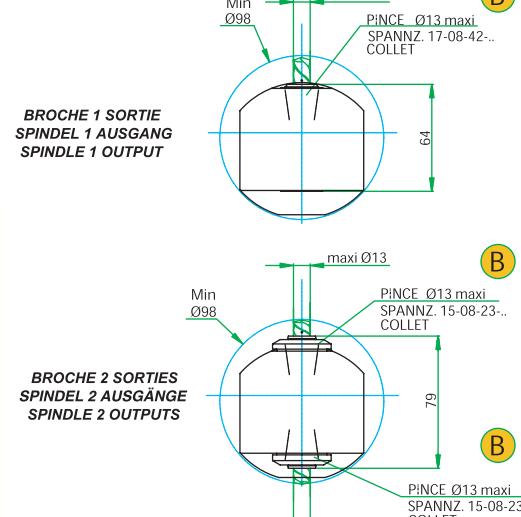
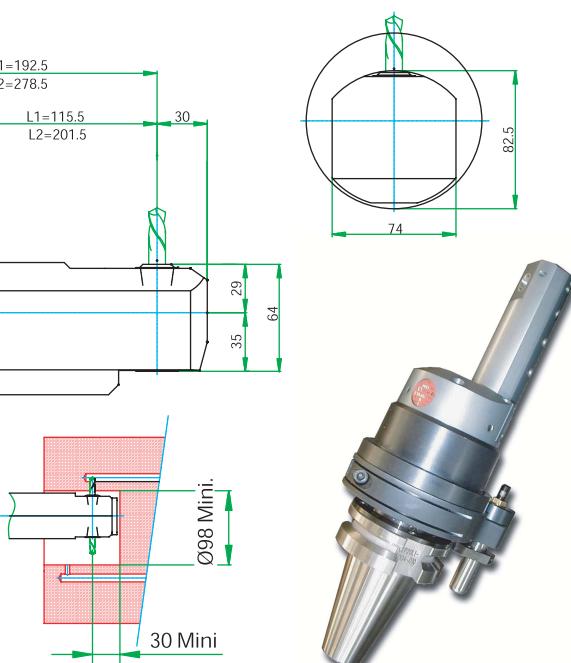
4'500 rpm

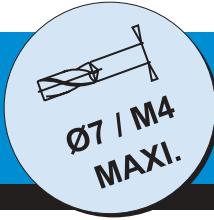
HSK 63/100



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BROCHE SPINDEL SPINDLE	kW	Nm	kg
4500 t/min u/min rpm	2.5 kW	18 Nm	1 à 2 ≈ 7 à 12 kg





TETE POUR TOUR

KOPF FUR DREHMASCHINE

HEAD FOR TURNING MACHINE

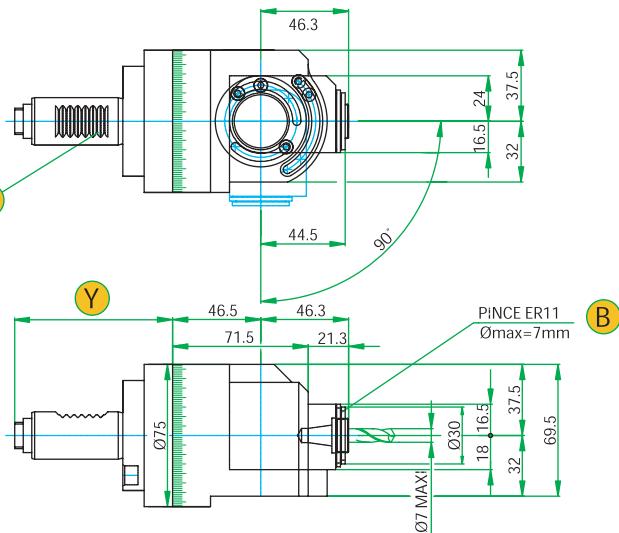
CH internet : [www.pibomulti.com](http://www.pibomulti.com) mail : [info@pibomulti.com](mailto:info@pibomulti.com)

USA internet : [www.pibomulti-na.com](http://www.pibomulti-na.com) mail : [info@pibomulti-na.com](mailto:info@pibomulti-na.com)

# TTAR 07

10'000 rpm

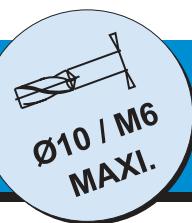
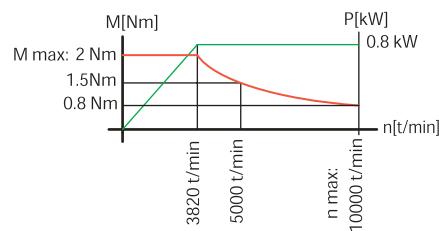
VDI 20-25-30 A



Voir / siehe / see  
CTAR 07

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BROCHE SPINDEL SPINDLE	kW	Nm	kg
10000 t/min u/min rpm	0.8 kW	2.0 Nm	1 à 3.2



TETE POUR TOUR

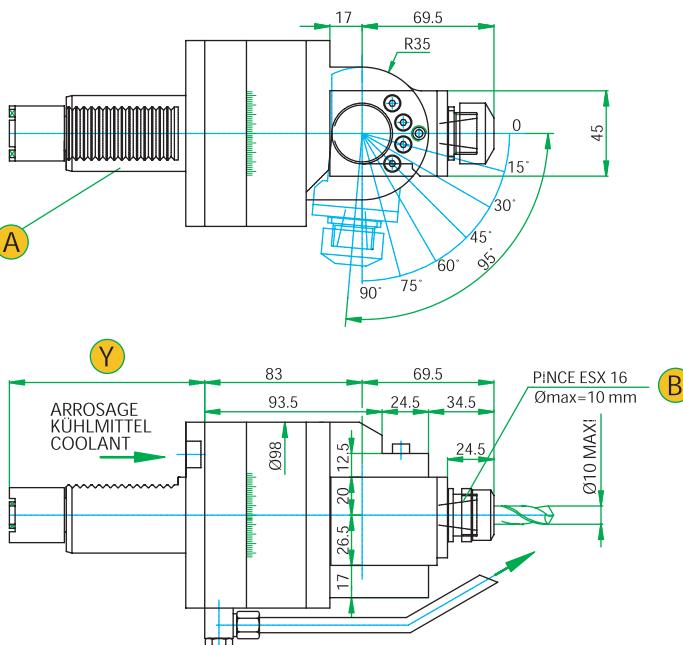
KOPF FUR DREHMASCHINE

HEAD FOR TURNING MACHINE

# TTAR 10

7'000 rpm

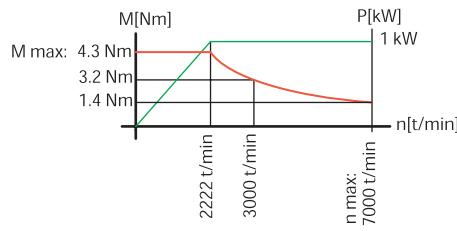
VDI 30/40/50 A

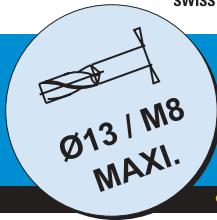


Voir / siehe / see  
CTAR 10

voir page / siehe Seite / see page 39-40

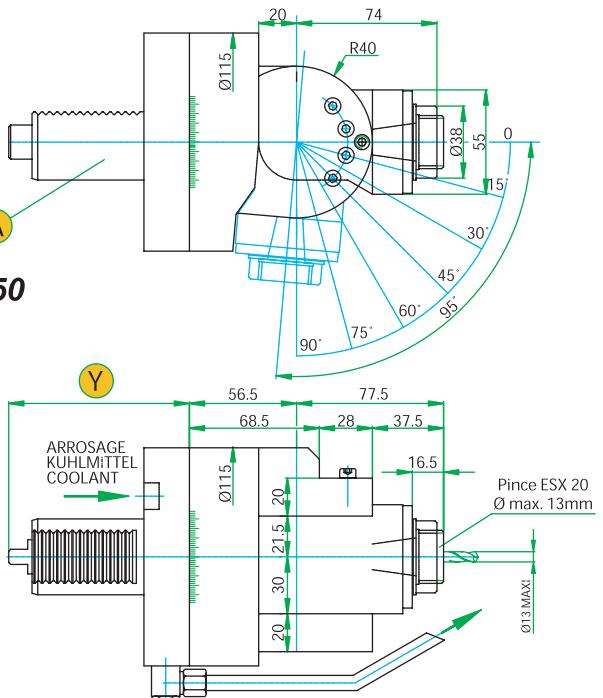
BROCHE SPINDEL SPINDLE	kW	Nm	kg
7000 t/min u/min rpm	1.0 kW	4.3 Nm	1 à 2



**TETE POUR TOUR****KOPF FUR DREHMASCHINE****HEAD FOR TURNING MACHINE**CH internet : [www.pibomulti.com](http://www.pibomulti.com) mail : [info@pibomulti.com](mailto:info@pibomulti.com)**TTAR 13**

5'000 rpm

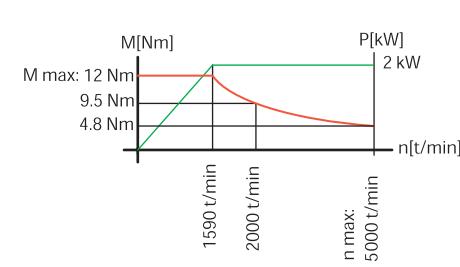
SPECIAL : 6 000 rpm

**VDI 30/40/50**

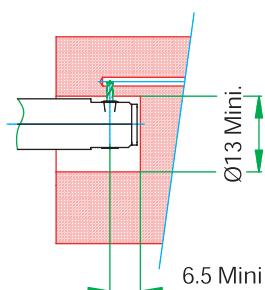
voir page / siehe Seite / see page 39-40

Voir / siehe / see  
CTAR 13

BROCHE SPINDEL SPINDLE	kW	Nm	kg
5000 t/min u/min rpm	2.0 kW	12 Nm	1 à 1.6 ≈ 11 kg

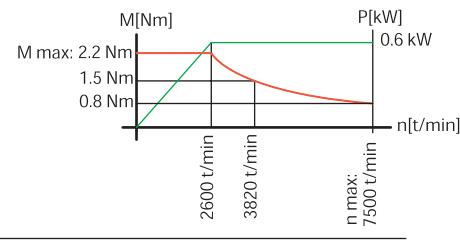
**TETE POUR TOUR****KOPF FUR DREHMASCHINE****HEAD FOR TURNING MACHINE****TDC 03 L1**

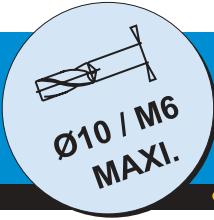
7'500 rpm

**VDI 25**

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BROCHE SPINDEL SPINDLE	kW	Nm	kg
7500 t/min u/min rpm	0.6 kW	2.2 Nm	1 à 3.75 ≈ 4 kg





TETE POUR TOUR

KOPF FÜR DREHMASCHINE

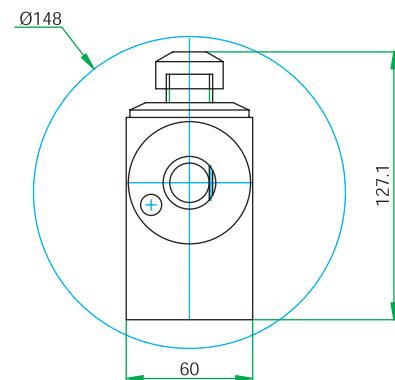
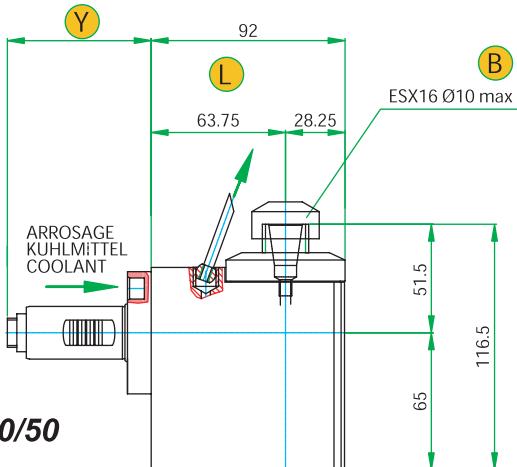
HEAD FOR TURNING MACHINE

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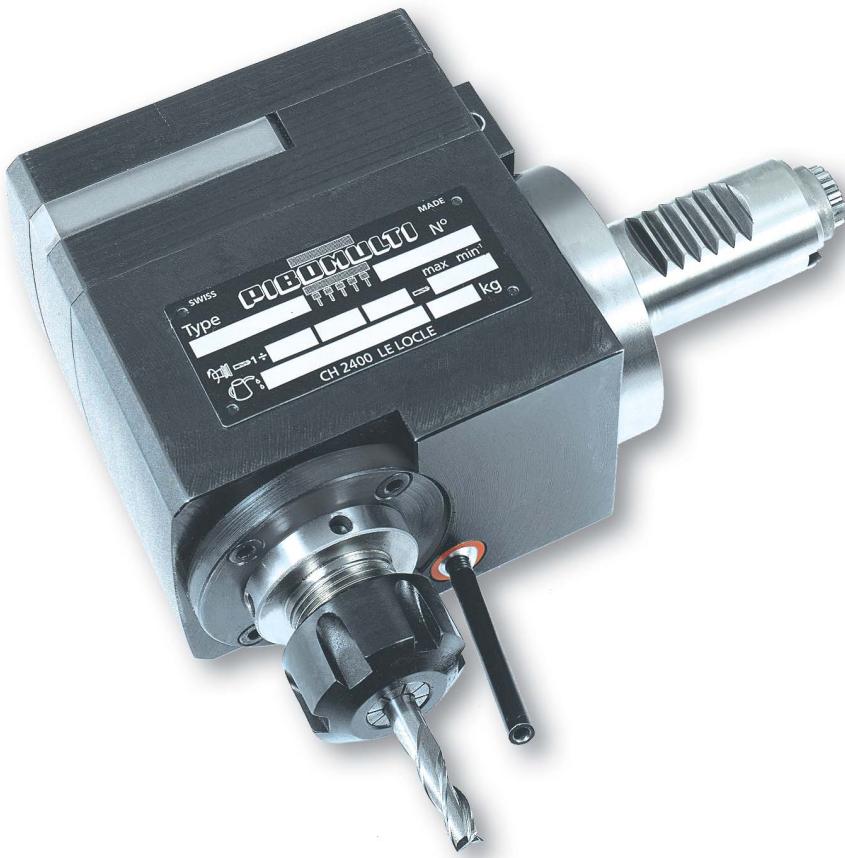
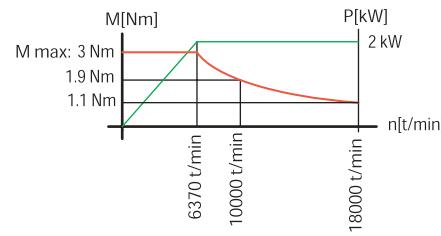
TTE 10X5

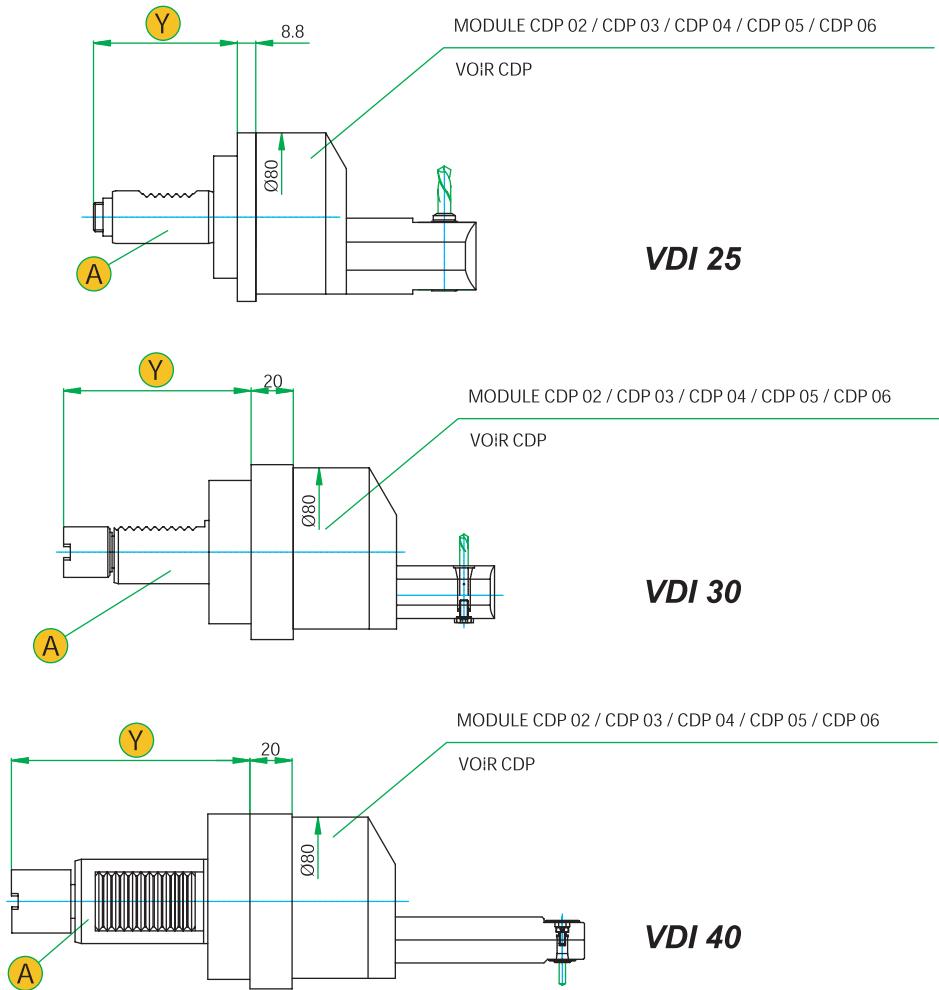
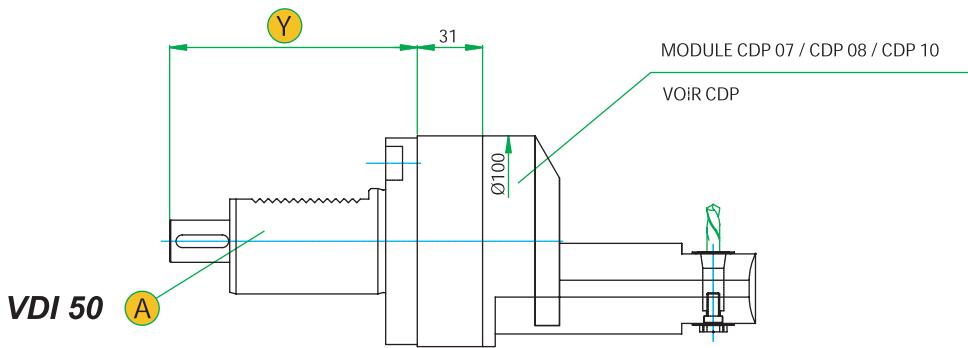
18'000 rpm

VDI 25/30/40/50


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BROCHE SPINDEL SPINDLE	kW	Nm	$\frac{1}{2}$ - 1	kg
18000 t/min u/min rpm	2.0 kW	3.0 Nm	1 à 5	≈ 4 à 6 kg



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**TETE POUR TOUR****KOPF FUR DREHMASCHINE****HEAD FOR TURNING MACHINE****TDP 07/08/10**
● voir page / siehe Seite / see page 39-40

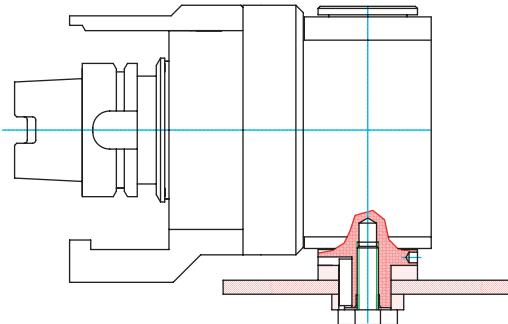
# PROGRAMME - PROGRAMM - PROGRAM CHIRON

CH internet : [www.pibomulti.com](http://www.pibomulti.com) mail : [info@pibomulti.com](mailto:info@pibomulti.com)

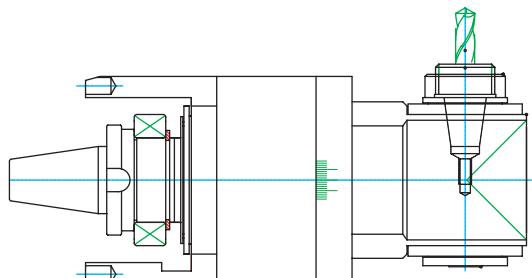
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## POUR - FÜR - FOR CHIRON

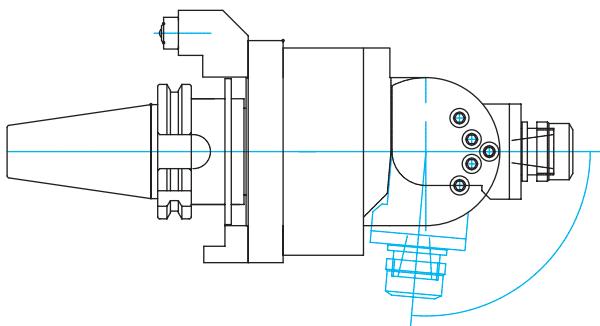
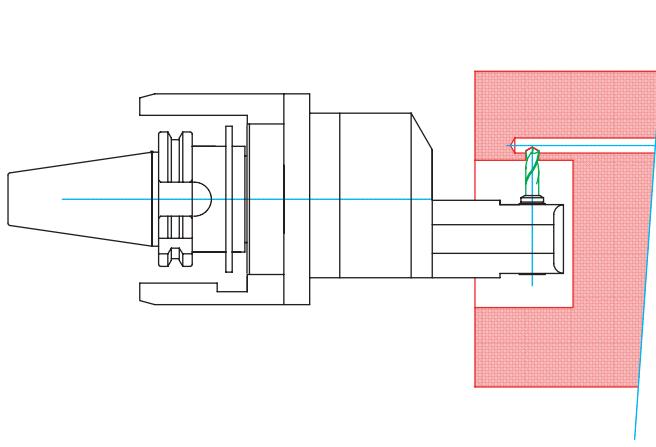
FZ 08 / FZ 15 / FZ 18 / DZ 18 / FZ 12 / DZ 12 / FZ 22 / DZ 22 / FZ 28 / DZ 28



TETE DE SCIAGE  
SÄGEKOPF  
SAWING HEAD



TETES PERCAGE FRAISAGE TARAUDAGE  
KÖPFE ZUM BOHREN, FRÄSEN, GEWINDESCHNEIDEN  
HEADS FOR DRILLING, MILLING AND TAPPING



TETES ANGULAIRES REGLABLES  
EINSTELLBARE WINKELKÖPFE  
ADJUSTABLE ANGULAR HEADS



SUR DEMANDE / AUF ANFRAGE / ON REQUEST

# ARROSAGE - KÜHLMITTEL - COOLANT

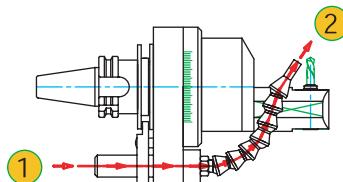
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① ARRIVEE D'ARROSAGE KÜHLMITTEL EINGANG COOLANT INPUT

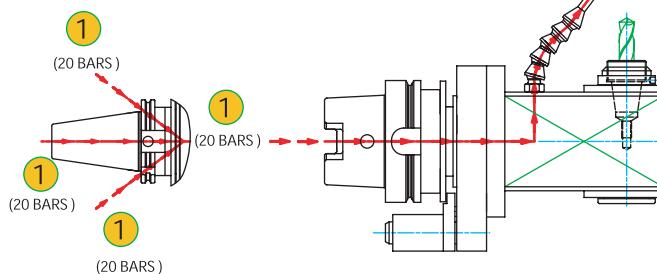
Arrosage par l'indexion  
Kühlung durch die Indexierung  
Coolant through locating

② SORTIE D'ARROSAGE KÜHLMITTEL AUSGANG COOLING OUTPUT



POUR / FÜR / FOR :  
TOUS LES MODELES  
ALLE MODELLE  
ALL THE MODELS

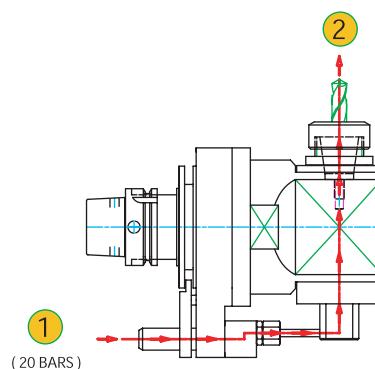
Entrée par le centre, sortie extérieur  
Eingang durch Zentrum, Ausgang aussen  
Inlet thru the centre, outlet outside



POUR / FÜR / FOR :  
CEP 16  
CEP 20 / CEC 30

... SUR DEMANDE  
AUF ANFRAGE / ON REQUEST

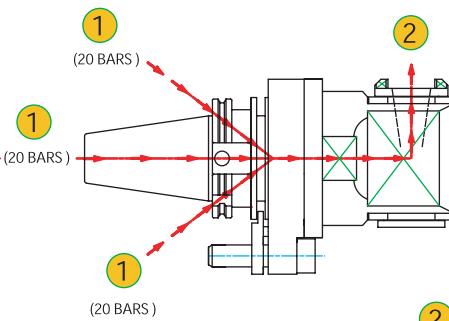
Entrée par l'indexion, sortie centre broche  
Eingang über Indexierung, Ausgang durch Spindelzentrum  
Inlet thru location device, outlet thru spindle centre



POUR / FÜR / FOR :  
CEP 20  
CEP 16  
CEP 13  
CEP 10  
CMP 10

... SUR DEMANDE  
AUF ANFRAGE / ON REQUEST

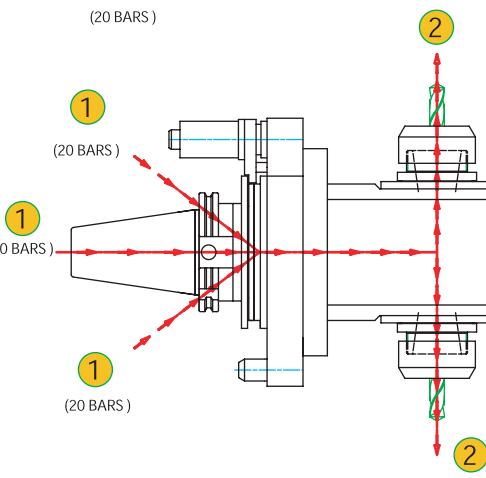
Entrée par le centre, sortie centre broche  
Eingang durch Zentrum, Ausgang durch Spindelzentrum  
Inlet thru the centre, outlet thru spindle centre



POUR / FÜR / FOR :  
CEC 30  
CEC 40

... SUR DEMANDE  
AUF ANFRAGE / ON REQUEST

Entrée par le centre, sortie centre broche  
Eingang durch Zentrum, Ausgang durch Spindelzentrum  
Inlet thru the centre, outlet thru spindle centre



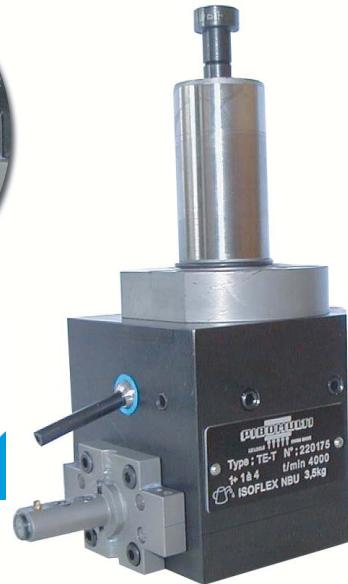
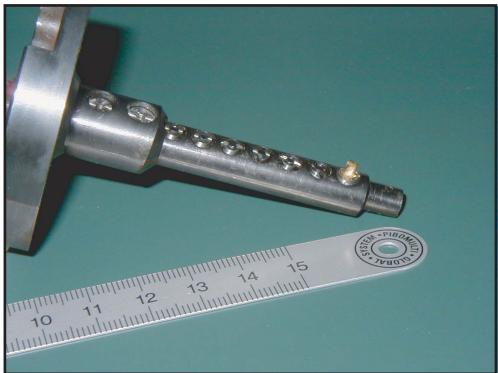
POUR / FÜR / FOR :  
CEP 26

... SUR DEMANDE  
AUF ANFRAGE / ON REQUEST

## TETES SPECIALES - SONDER-WINKELKOEPFE - SPECIAL HEADS

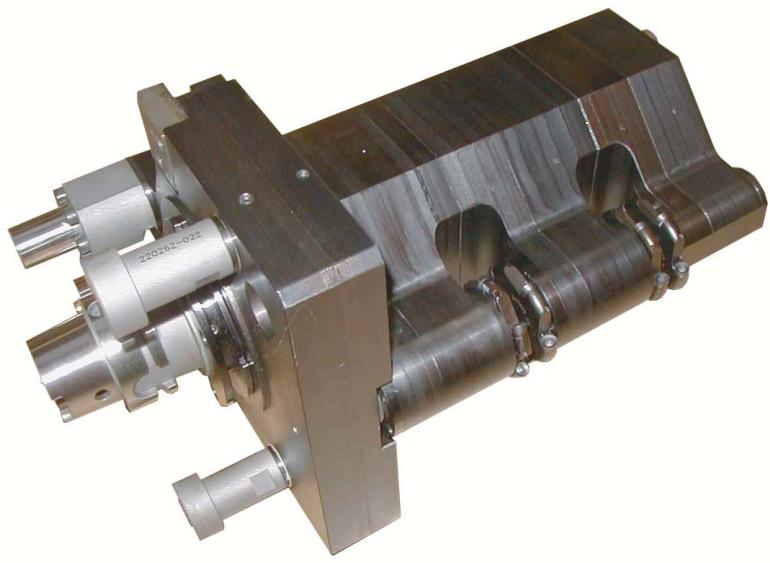
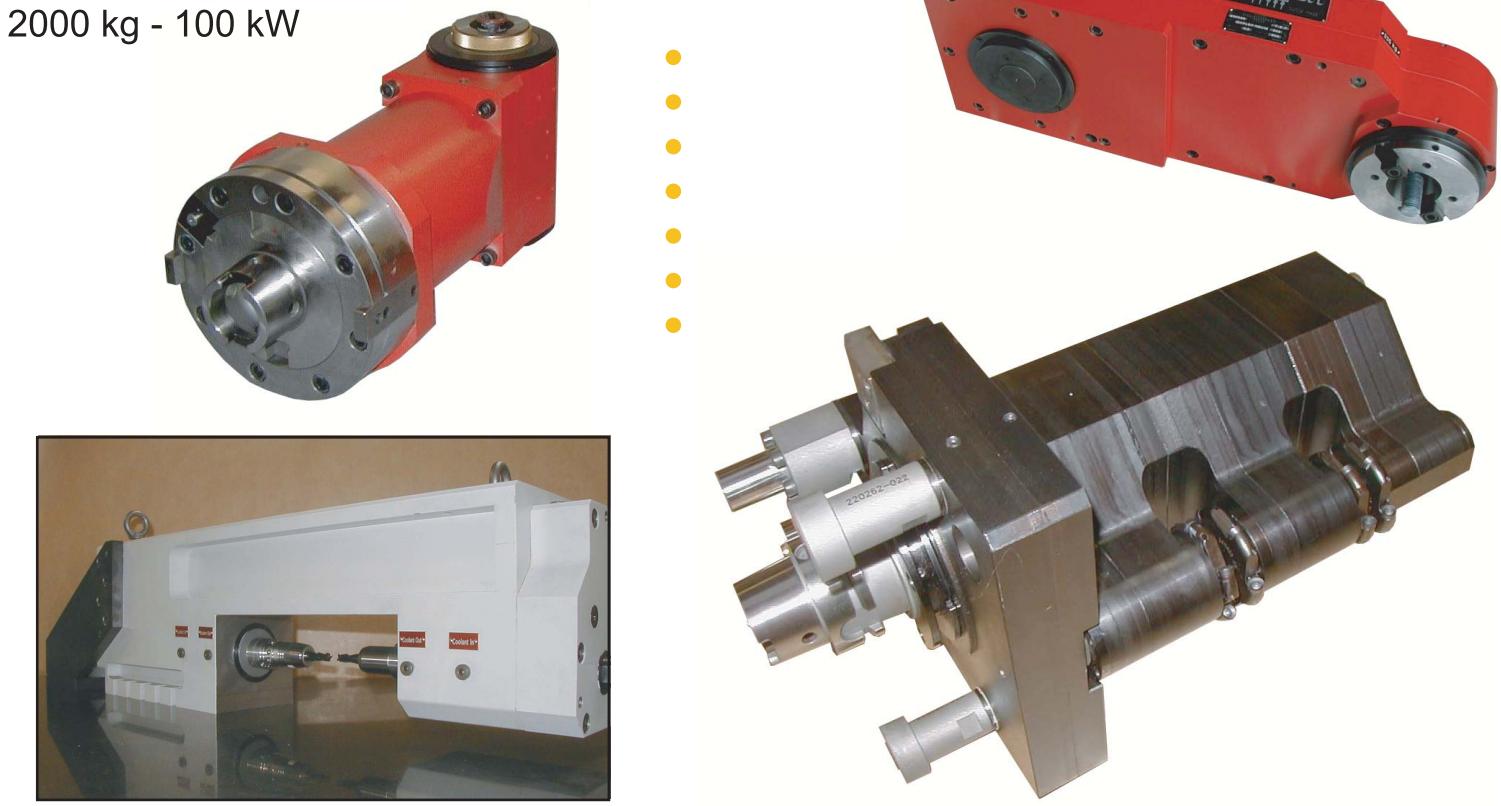
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Miniature - Miniatur - Small ...



... Ou de grande puissance  
oder mit grosser Leistung  
or big power

2000 kg - 100 kW



**OUTILS TOURNANTS - ANGETRIEBENE WERKZEUGE - DRIVEN TOOLS**

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**Multiplicateurs de vitesse**

**Schnellaufspindeln**  
**Spindle speeders**

Jusqu'à / Bis / Up to  
40'000 rpm

**Spécifique pour meulage**  
**Speziell zum Schleifen**  
**Specific for grinding**



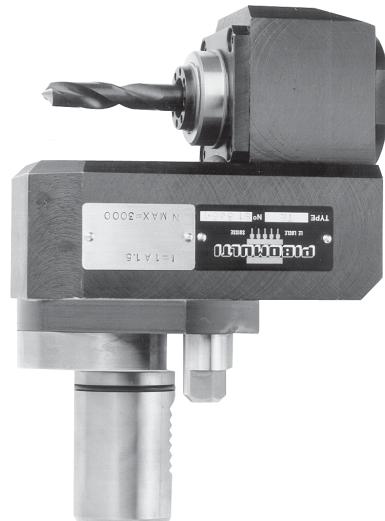
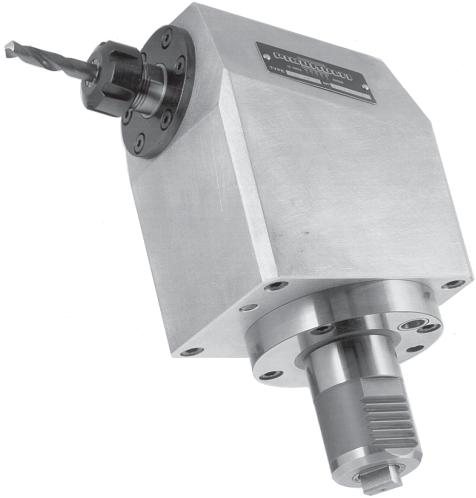
**Têtes universelles**  
**Universalköpfe**  
**Universal heads**



**Têtes angulaires pour tour**  
**Winkelköpfe für Drehmaschine**  
**Angular heads for turning machine**



**Têtes angulaires avec multiplicateur intégré**  
**Winkelköpfe mit integrierten Schnellaufspindeln**  
**Angular Heads with integrated Spindle speeders**



# INFORMATIONS TECHNIQUES TECHNISCHE INFORMATIONEN TECHNICAL INFORMATION A/B/D/L/R/Y

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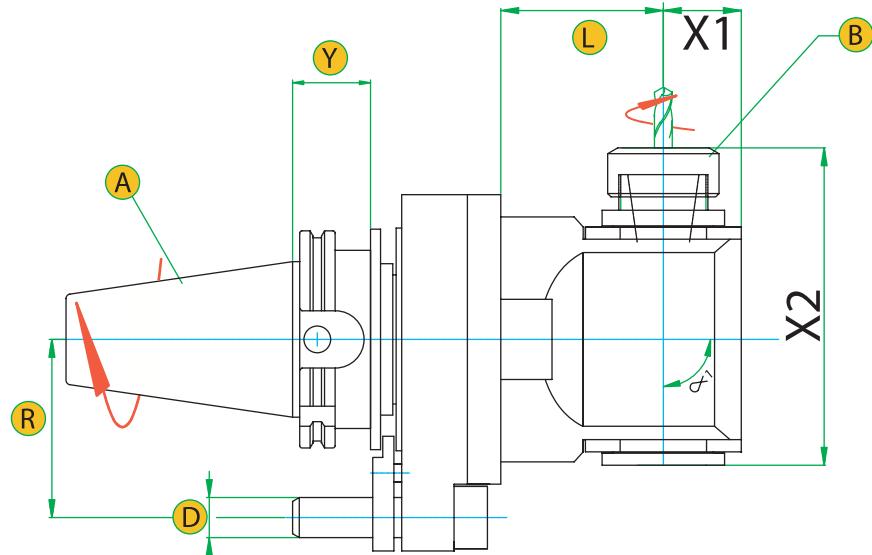
**HORS STANDARD SUR DEMANDE**  
**NICHT STANDARD AUF ANFRAGE**  
**NOT STANDARD ON REQUEST**

X1 ET X2 A PRECISER IMPERATIVEMENT

X1 UND X2 UNBEDINGT ANGEBEN

X1 AND X2 TO BE INDICATED

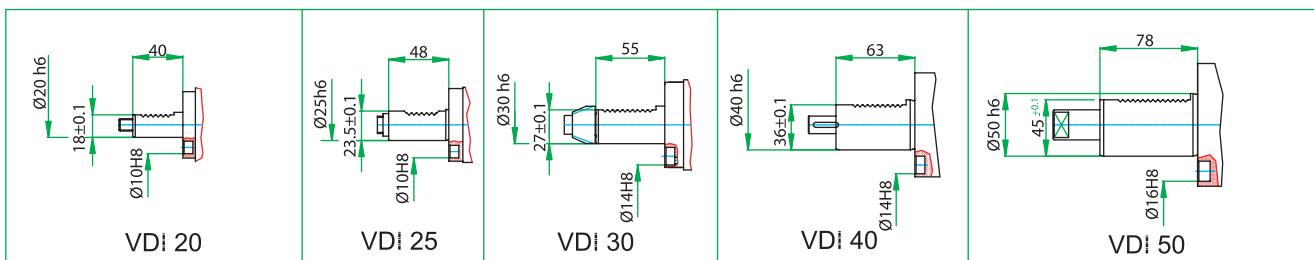
Y SELON TYPE DE CONE ET DE MACHINE  
Y NACH STEIKEGEL UND MASCHINE TYPE  
Y ACCORDING TO SHANK AND MACHINE TYPE



**VDI**

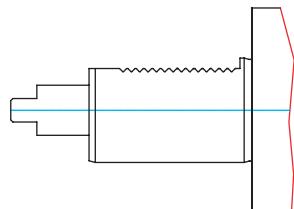
*Exemples de machines équipées / Beispiele von ausgerüsteten Maschinen*  
*Examples of equipped machines :*

*Traub - Index - Mori Seiki - Nakamura - Okuma - Gildemeister - Mazak  
Cincinnati - Biglia - Citizen - Tornos - Star - Emag - Hardinge ...*

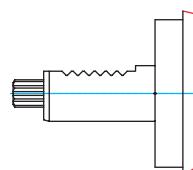


## ENTRAINEMENT PAR / ANTRIEB DURCH / DRIVEN BY :

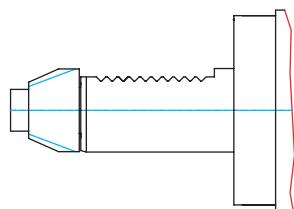
TOURNEVIS / SCHRAUBENZIEHER / SCREW DRIVER :  
DIN 1809



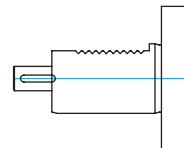
ARBRE CANNELE / KEILWELLE / GROOVED SHAFT :  
DIN 5480 / DIN 5482



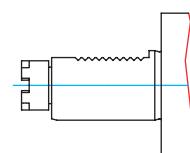
ROUE DENTEE CONIQUE / KONISCHES ZAHNRAD  
BEVEL WHEEL GEAR :



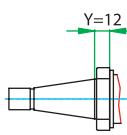
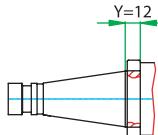
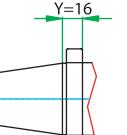
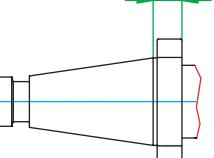
ARBRE CLAVETE / WELLE MIT NUT  
SHAFT WITH KEY :



CRABOT / KLAUE / DRIVING DOG :

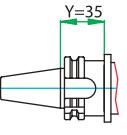
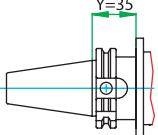
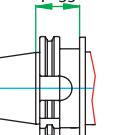
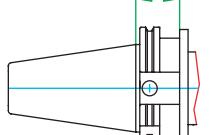
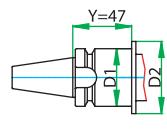
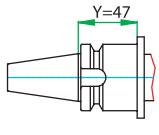
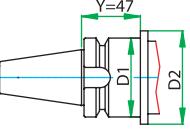
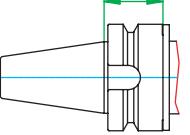
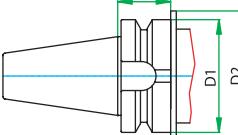
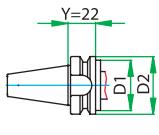
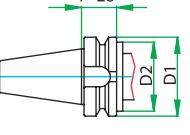
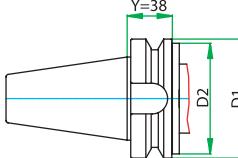
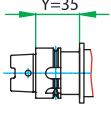
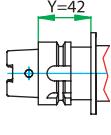
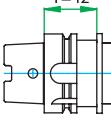
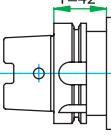
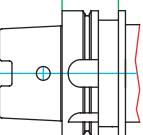
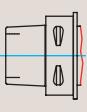
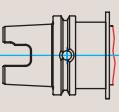


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**A / Y : TYPE DE CONE****A / Y : STEILKEGEL****A / Y : SHANK****CHANGEMENT MANUEL****MANUELLER WECHSEL****MANUAL TOOL CHANGE**

				
ISO 30 DIN 2080		ISO 40 DIN 2080	ISO 45 DIN 2080	ISO 50 DIN 2080 NMBT 50

**A / Y : TYPE DE CONE****A / Y : STEILKEGEL****A / Y : SHANK****CHANGEMENT AUTOMATIQUE****AUTOMATISCHER WECHSEL****AUTOMATIC TOOL CHANGE**

EXECUTION STANDARD / STANDARTAUSFÜHRUNG / STANDARD FABRICATION

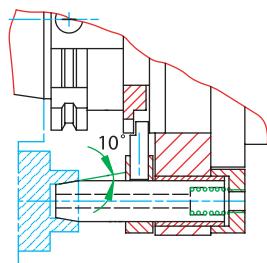
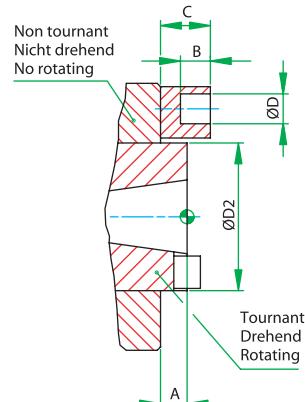
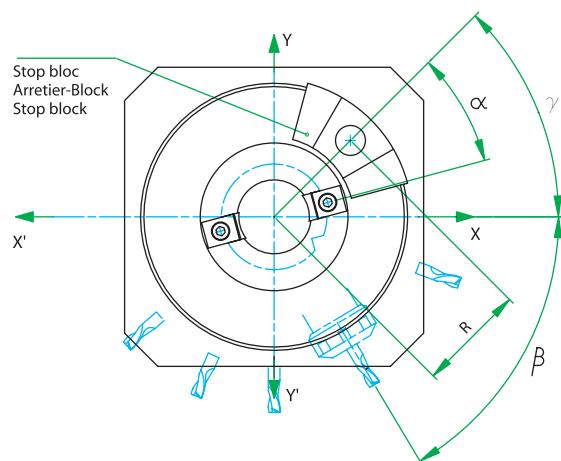
				
ISO 30 DIN 69871-A		ISO 40 DIN 69871-A CAT 40 CAT 40 - 5/8" - 11 UNC	ISO 45 DIN 69871-A CAT 45	ISO 50 DIN 69871-A CAT 50 CAT 50 - 1" - 8 UNC
				
BT 30 D2 > D1	BT 35	BT 40 D2 > D1	BT 45	BT 50 D2 > D1
				
BT 30 D2 < D1		BT 40 D2 < D1		BT 50 D2 < D1
				
HSK 40-A	HSK 50-A	HSK 63-A	HSK 80-A	HSK 100-A
EXECUTION SPECIALE SUR DEMANDE SPEZIALAUSFÜHRUNG AUF ANFRAGE SPECIAL FABRICATION ON REQUEST			ETC ...	SUR DEMANDE AUF ANFRAGE ON REQUEST

# INDEXION - INDEXIERUNG - LOCATION DEVICE

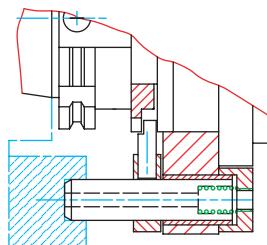
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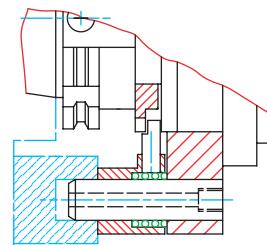
	Conditions requises pour une indexion	Benötigte Details für eine Indexierung	Location device requirements
ØD	Ø du doigt d'indexion	Ø des Positionierungsstiftes	Ø of the location pin
D2	Ø du nez de broche (partie tournante)	Ø der Spindelnase (drehend)	Ø of the spindle nose (rotating)
R	Rayon du doigt d'indexion	Radius des Positionierungsstiftes	Radius of the location pin
A	Distance  - face d'appui	Distanz  - Auflagefläche	Distance  - Orientation location face
B	Extrémité du doigt d'indexion	Stirnseite des Positionierungsstiftes	Front of location pin
C	Epaisseur du stop bloc	Höhe des Arretier-Blocks	Thickness of stop block
α	Angle entre taquets et indexion	Winkel zw. Mitnehmer und Indexierung	Angle between drivers and location device
β	Angle entre axe X et sortie de broche	Winkel zw. X-Achse und Spindelausgang	Angle between X-axis and spindle output
γ	Angle entre l'axe X et le stop bloc	Winkel zw. X-Achse und Arretier-Block	Angle between X-axis and stop block



TYPE A Goupille cône 10° mobile  
TYP A 10° Kon. Beweglicher Stift  
TYPE A 10° Conical moving pin

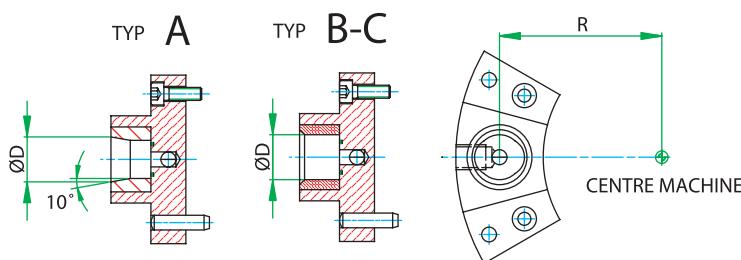


TYPE B Goupille cylindrique mobile  
TYP B Zyl. Beweglicher Stift  
TYPE B Cylindrical moving pin



TYPE C Goupille cylindrique fixe  
TYP C Fester Stift, Zyl.  
TYPE C Cylindrical fixed pin

## STOP BLOC / ARRETIER-BLOCK / STOP BLOCK

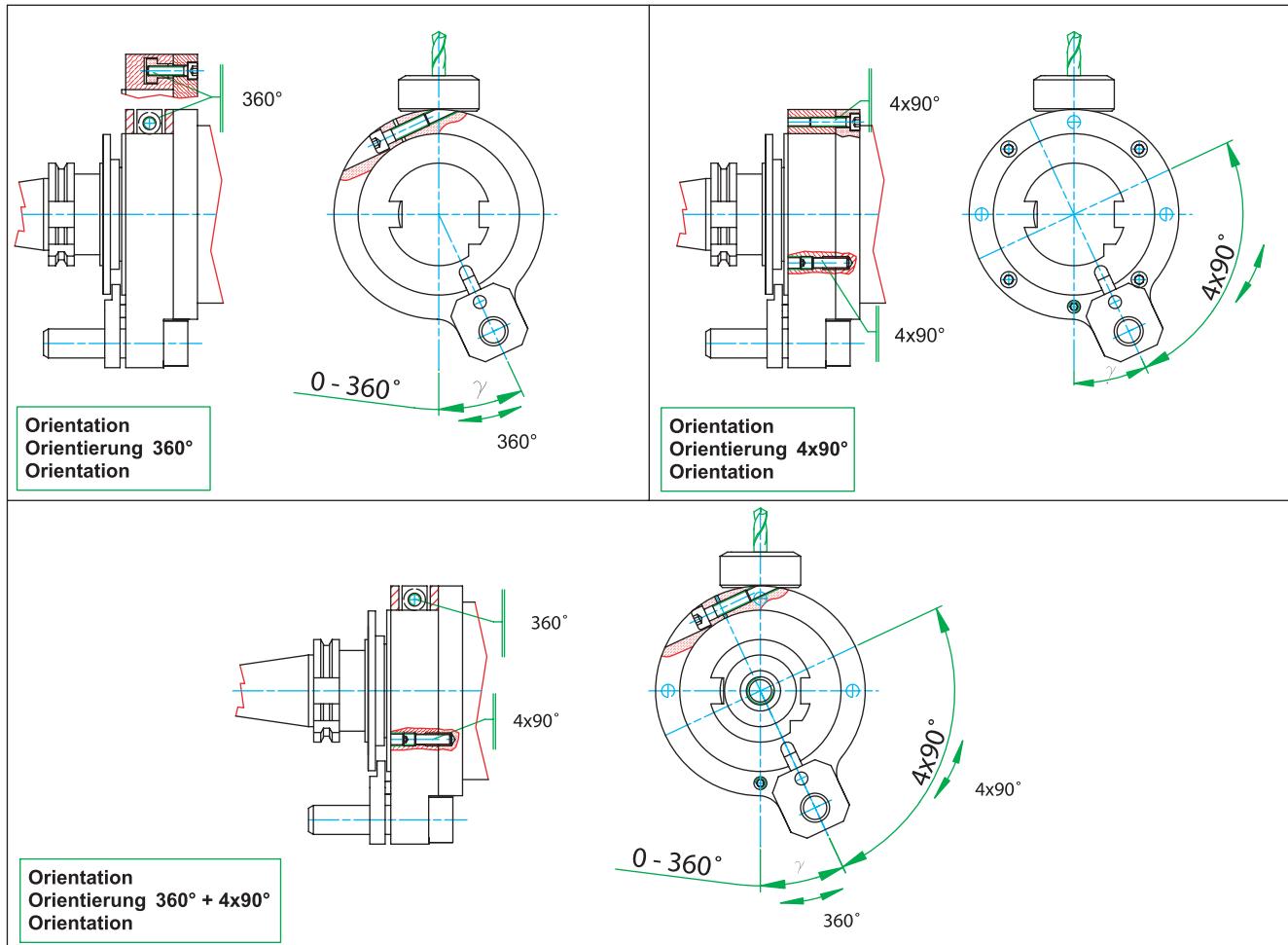


ISO  HSK	R	ØD	REF.
30 / HSK 40-50	55	Ø 15 G6	076-05-206-20 (Typ C)
40 / HSK 63	65 ou 80	Ø 18 G6	076-05-206-10 (Typ C)
		Ø 18 G6 ou 110	076-05-206-30 (Typ A) 076-05-206-10 (Typ B-C)
50 / HSK 80-100	80 ou 100 ou 110	Ø 28	076-05-206-30 (Typ A) 076-05-206-10 (Typ B-C)

# ORIENTATION - ORIENTIERUNG - ORIENTATION

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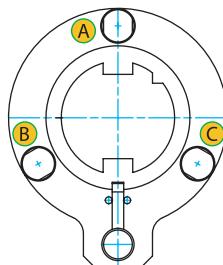
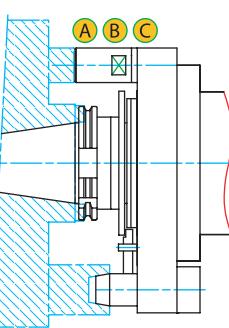
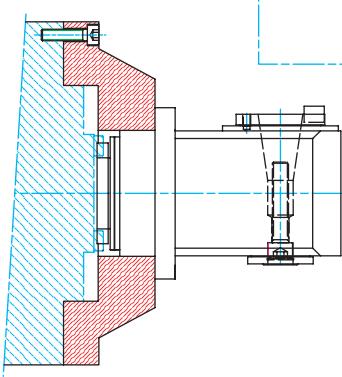
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## TRANSMISSION DE GRANDE PUISSANCE ET RIGIDITÉ STABILITÄT UND UEBERTRAGUNG GROSSER KRÄFTE HIGH POWER TRANSMISSION AND RIGIDITY

INDEXION AVEC APPUIS  
INDEXIERUNG MIT ABSTUETZUNG  
LOCATION DEVICE WITH SUPPORTS

3 OU 4 APPUIS SELON LA MACHINE  
3 ODER 4 AUFLAGEFLÄCHEN , JE NACH MASCHINE  
3 OR 4 SUPPORTS RELATED TO THE MACHINE

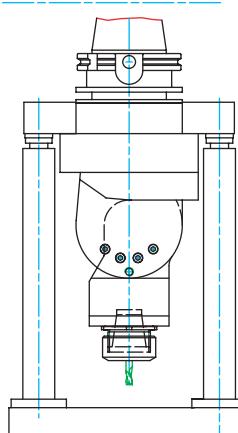


FLASQUE  
FLANSCH  
FLANGE

PICK-UP STATION  
EN CAS DE PROBLEME DE POIDS  
LA STATION PICK UP EST UNE BONNE  
ALTERNATIVE AU CHANGEMENT  
SEMI - AUTOMATIQUE

A PICK-UP STATION IS A GOOD  
ALTERNATIVE WHEN THE TOOL WEIGHT  
OR SIZE EXCEEDS THE CAPABILITY OF  
THE AUTOMATIC TOOL CHANGER

IM FALLE VON GEWICHTSPROBLEMEN ,  
IST DIE PICK UP - STATION EINE  
GUTE ALTERNATIVE ZUM  
HALBAUTOMATISCHEN WECHSEL



# SOMMAIRE - ZUSAMMENFASSUNG - SUMMARY

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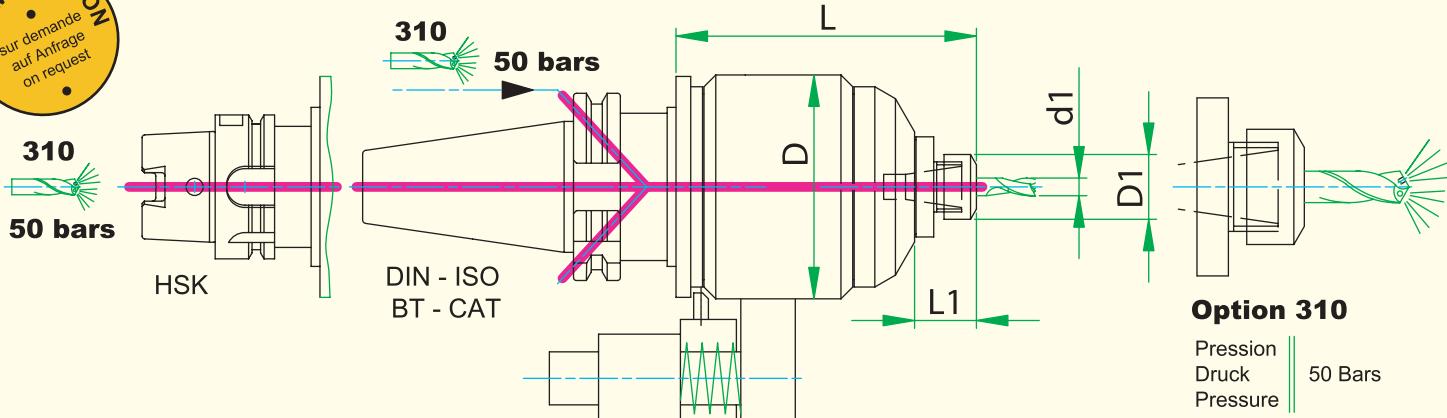
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FX 300

50'000 rpm

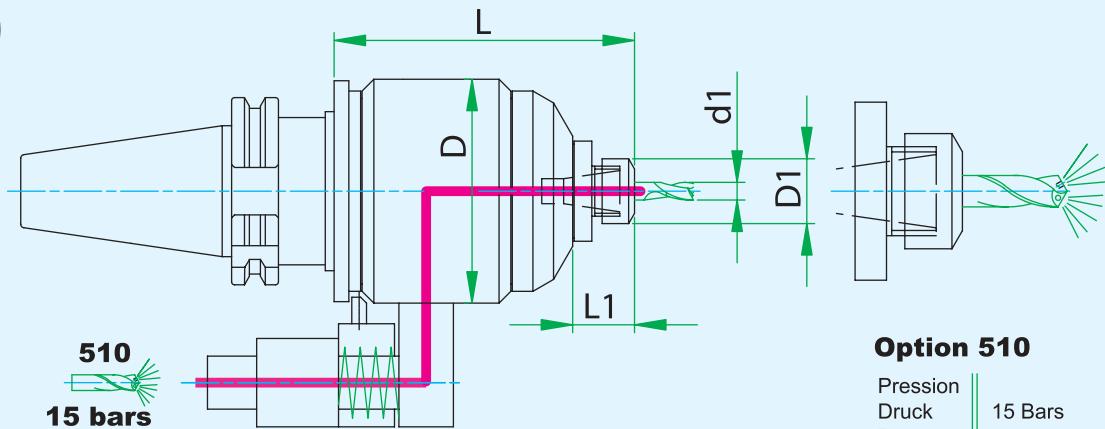


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Schnellaufspindeln für Bearbeitungszentren  
Spindle speeders for machining centre*
*50'000 rpm*
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■:standard - Standard - standard ▲:sur demande - auf Anfrage - on request

Type	Caractéristiques / Angaben Features					Arrosage Kühlmittle: Coolant n max	Pince Zange Collet	Dimensions					D:N - ISO - BT - CAT	HSK		
	n max	kW	Nm	d1	D	D1	L	L1	kg							
X635	1+5	25'000	30'000	1.7	7	-	ER11	0.5 - 7	63	19	99	23	2	■ ■ ▲	32 40 63 80 100	
X766	1+6	25'000	30'000	2.8	8	25'000	■	ETS14	0.5 - 8	76	22	102	21	3.1	▲ ▲ ■	■
X9810	1+10	36'000	40'000	2	5	36'000	■	ETS14	0.5 - 8	98	22	115	21	5	▲ ■	■ ■ ■
X9810-50	1+10	44'000	50'000	2	5	44'000	■	ETS14	0.5 - 8	98	22	115	21	5	▲ ■	■ ■ ■
X765	1+5	18'000	22'000	3.5	12	18'000	■	ER16	0.5 - 10	76	32	111	30	3.5	▲ ▲ ■	■ ■ ■
X986	1+6	16'000	20'000	4.5	18	16'000	■	ER20	1 - 13	98	35	124	32	5.5	■ ■ ■	■ ■ ■
X1055	1+5	14'000	17'000	6.4	29	13'000	■	ER25	1 - 16	105	42	137	35	6.5	■ ■ ■	■ ■ ■
X1057	1+7	15'000	18'000	4	5.7	15'000	■	ER20	1 - 13	105	35	122	32	5.2	■ ■ ■	■ ■ ■
X1205	1+5	12'000	15'000	7	34	12'000	■	ER32	2 - 20	120	50	141	38	10.5	■ ■ ■	■
X1505	1+5	10'000	12'000	8	39	10'000	■	ER50	4 - 34	150	78	177	51	15	▲ ■ ■	■ ■ ■
XM1506	1+6	10'000	12'000	8	24	-	Weidon 25	10 - 40	150	60	264	35	-	■ ■ ■	■ ■ ■	
X1905	1+5	8'000	10'000	10	10	-	OZ1838	10 - 40	190	-	225	-	29	■ ■ ■	■ ■ ■	

Données techniques voir page 47



■:standard - Standard - standard ▲:sur demande - auf Anfrage - on request

Type	Caractéristiques / Angaben Features					Pince Zange Colet	Dimensions					D:N - ISO - BT - CAT	
	n max	kW	Nm	d1	D	D1	L	L1	kg				
076-5-510	1+5	16'000	18'000	3	5.6	ER16	0.5 - 10	76	32	116	28	3	■ ■
120-6-510	1+6	10'000	12'000	6	12	ER25	1 - 16	120	42	175	37	9	■ ■ ■
150-6-510	1+6	8'000	11'000	8	20	OZ1837	5 - 32	150	78	237	51	20	■ ■ ■

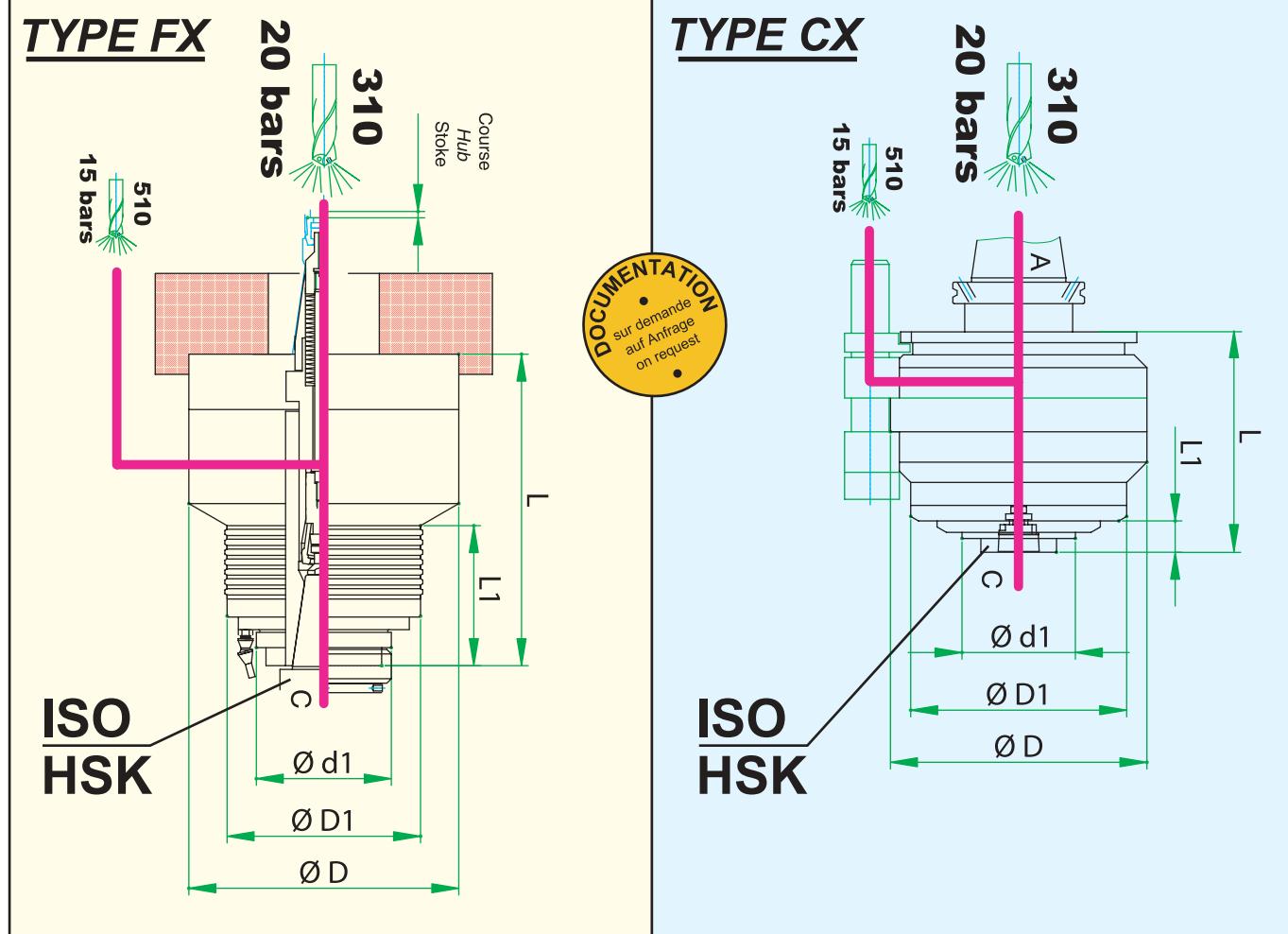
Données techniques voir page 47

Multiplicateur à grand rendement et de grande puissance  
Schnellaufspindeln für hohe Produktivität und grosser Leistung  
Speeders for high productivity and big power

30 kW

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Type	Caractéristiques / Angaben Features					Dimensions					
	n	max.	kW	Nm	C	d1	D	D1	L	L1	kg
FX190-05	1÷5	10'000	12'000	10	130	ISO30/HSK50	121	190	150	210	130 30
FX210-04	1÷4	8'000	10'000	12	260	ISO40/HSK63	142	210	185	240	138 45
FX300-04	1÷4	6'000	8'000	20	405	ISO50/HSK100	150	300	220	346	156 110
FX375-06	1÷6	4'000	5'000	30	830	ISO50/HSK100	180	375	250	385	129 190

Données techniques voir page 47

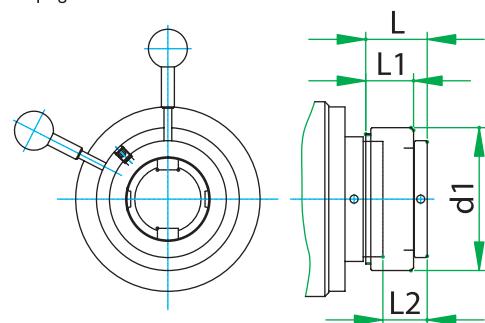
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Type	Caractéristiques / Angaben Features					Dimensions					
	n	max.	kW	Nm	C	d1	D	D1	L	L1	kg
CX1905	1÷5	8'000	10'000	10	190	ISO30/HSK50	121	190	160	230	60 29
CX2104	1÷4	8'000	10'000	12	260	ISO50/HSK100	150	210	186	240	80 38
CX3504	1÷4	4'000	5'000	30	1000	ISO50/HSK100	190	350	290	400	197 185

Données techniques voir page 47

### Ecrou de serrage rapide Pibomulti Schnellwechselmutter Pibomulti Pibomulti quick change nut

Type	Cône outils	d1	L	L1	L2
SER4001-000	ISO 40 DIN 2080	110	43.5	33	28.5
SER4002-000	ISO 40 DIN 69871-A ou CAT 40	110	43.5	33	28.5
SER4004-000	BT 40	110	47	37	32
SER5001-000	ISO 50 DIN 2080	150	48	37.5	30
SER5002-000	ISO 50 DIN 69871-A ou CAT 50	150	48	37.5	30
SER5004-000	BT 50	150	56.5	46	38.5

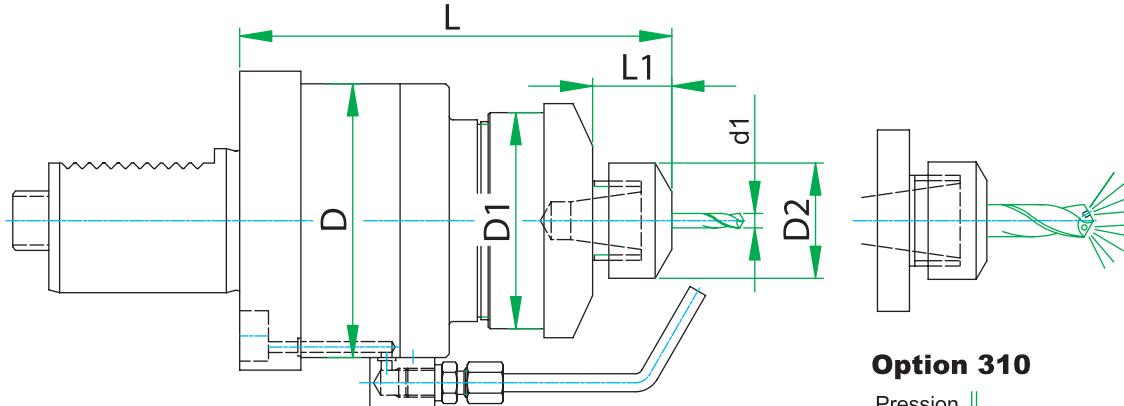


*Multiplicateur de vitesse pour tour  
Schnellaufspindeln für Drehmaschinen  
Spindle speeders for turning machines*

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40'000 rpm


**Option 310**

 Pression || 20 Bars  
 Druck ||  
 Pressure ||

■ :standard - Standard - standard    ▲ :sur demande - auf Anfrage - on request

Type	Caractéristiques / Angaben Features				Pince Zange Collet		Dimensions						adaptation VDI	Entraînement selon machine Antrieb gem. Maschine Drive as per machine
		n max.	kW	Nm			d1	D	D1	D2	L	L1	20 25 30 40 50	
X635T	1÷5	25'000	30'000	2	7	ESX12	0.5 - 7	63	48	19	98	17	■ ■ ■ ▲	
X9810T	1÷10	36'000	40'000	2	5	ETS14	0.5 - 8	98	51	22	120	15.5	■ ■ ▲	
X765T	1÷5	18'000	22'000	4	12	ESX16	0.5 - 10	76	60	32	120	30	■ ■ ■	
X1055T	1÷5	8'000	12'000	6.4	29	ESX25	1 - 16	105	90	-	120	10.5	■	
X1205T	1÷5	12'000	15'000	7	34	ESX32	2 - 20	120	92	50	175	38	▲	■ ■

Sur demande, exécution flasqué et/ou avec arrosage par le centre.

Ausführung mit Flansch und/oder mit Innenkühlung auf Anfrage.

Upon request, flange execution and/or with coolant thru.

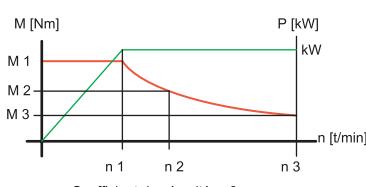


# INFORMATIONS TECHNIQUES TECHNISCHE INFORMATIONEN TECHNICAL INFORMATION

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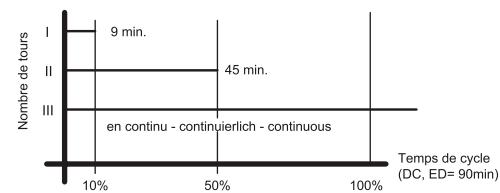
## Graphique de puissance-couple et " n " en continu Drehmoment und Dauerlaufdiagramm Power-torque and " n " in continuous diagram

Puissance et couple max  
Leistung und Drehmoment max  
Power and torque max



Coefficient de sécurité s=3  
Sicherheitskoeffizient s=3  
Security coefficient s=3

Temps d'utilisation en fonction de la vitesse  
Einsatzdauer in Bezug zur max. Drehzahl  
Using time in terms of speed



Type	Couple (Nm)			Nbr. de tours (t/min)			Puissance kW
	M1	M2	M3	n1	n2	n3	
X635	7	1.6	0.54	2'320	10'000	30'000	1.7
X766	8	2.7	0.9	3'340	10'000	30'000	2.8
X9810	5	1	0.5	3'800	20'000	40'000	2
X9810-50	5	1	0.4	3'800	20'000	50'000	2
X765	12	3.3	1.5	2'800	10'000	22'000	3.5
X986	18	4.3	2.1	3'390	10'000	20'000	4.5
X1055	29	6.1	3.6	2'100	10'000	17'000	6.4
X1057	5.7	3.8	2.1	6'700	10'000	18'000	4
X1205	34	6.7	4.4	2'000	10'000	15'000	7
X1505	39	15.3	6.3	2'000	5'000	12'000	8
XM1506	24	15.3	6.4	3'180	5'000	12'000	8
X1905	130	32	9.5	730	3'000	10'000	10
FX190-05 / CX1905	130	32	8	730	3'000	12'000	10
FX210-04 / CX2104	260	38	11.5	440	3'000	10'000	12
FX300-04	405	87	24	471	2'200	8'000	20
CX3504	1'000	280	125	300	1'000	2'300	30
FX375-06	830	130	57	345	2'200	5'000	30
X635T	7	1.9	0.6	2'700	10'000	30'000	2
X9810T	5	0.9	0.5	3'800	20'000	40'000	2
X765T	12	3.8	1.7	3'200	10'000	22'000	4
X1055T	29	7.7	5.1	2'100	8'000	12'000	6.4
X1205T	34	7.6	5	2'250	10'000	15'000	8

Type	Nbr. de tours (t/min)		
	I	II	III
X635	30'000	25'000	20'000
X766	30'000	25'000	20'000
X9810	40'000	36'000	28'800
X9810-50	50'000	44'000	35'200
X765	22'000	18'000	14'400
X986	20'000	16'000	12'800
X1055	17'000	13'000	10'400
X1057	18'000	15'000	12'000
X1205	15'000	12'000	9'600
X1505	12'000	10'000	8'000
XM1506	12'000	10'000	8'000
X1905	10'000	8'000	6'400
FX190-05 / CX1905	12'000	10'000	8'000
FX210-04 / CX2104	10'000	8'000	6'400
FX300-04	8'000	6'000	4'800
CX3504	5'000	4'000	3'200
FX375-06	5'000	4'000	3'200
X635T	30'000	25'000	20'000
X9810T	40'000	36'000	28'800
X765T	22'000	18'000	14'400
X1055T	12'000	8'000	6'400
X1205T	15'000	12'000	9'600



Données techniques  
: entrée - sortie  
n : t/min 50% DC  
n max. : t/min 10% DC  
DC,ED : durée du cycle 90 min



kW : puissance en kW (n)  
Nm : Couple Nm (n)  
kg : poids en kg

Technische Daten  
: Eingang - Ausgang | kW : Leitung kW (n)  
n : U/min 50% DC | Nm : Drehmoment Nm (n)  
n max. : U/min 10% DC | kg : Gewicht in kg  
DC,ED : Zyklusdauer 90 Min

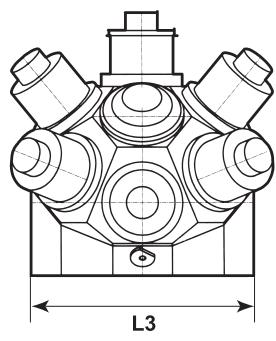
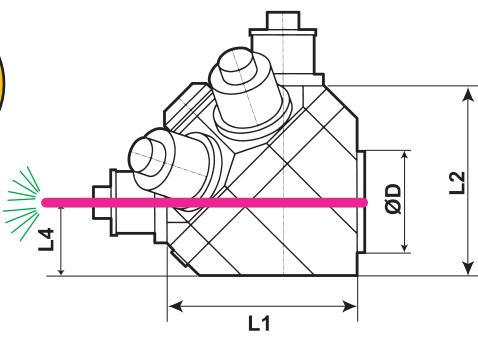


Technical data  
: Input - output  
n : rpm 50% DC  
n max. : rpm 10% DC  
DC,ED : duty cycle 90 Min  
kW : power in kW (n)  
Nm : torque Nm (n)  
kg : weight in kg

# Données techniques    Technische Daten Technical data

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	TRI 150	TRI 200	TRI 300	TRI 400	TRH 300	TRH 400	TRH 500	TRH 800	TRA 200	
NOMBRE DE POSITIONS ANZAHL STATIONEN NUMBER OF STATIONS		2-4-6	2-4-6-8	2-4-6	2-4-6	2-4-6-8	2-4-6-8-12	2-4-6-8	2-4-6-8	2-3-4
PUISANCE TRANSMISIBLE ÜBERTRAGBARE LEISTUNG TRANSMITTING POWER	kW max.	3.7	7	12	22	12	22	40	40	7
COUPE TRANSMISIBLE DREHMOMENT TRANSMITTING TORQUE	Nm	60	110	250	700	250	700	1700	3000	110
VITESSE DE ROTATION MAX. MAX SPINDEL DREHZAHLE MAX ROTATION SPEED	rpm	18'000	16'000	15'000	11'000	15'000	11'000	6'000	4'000	16'000
REPETABILITE DE LA POSITION WIEDERHOLBARKEIT DER SPINDELPOS. REPEAT OF SPINDLE POSITION		+/- 2" (0.0016 mm)	+/- 2" (0.0020 mm)	+/- 2" (0.0025 mm)	+/- 2" (0.003 mm)	+/- 2" (0.0025 mm)	+/- 2" (0.003 mm)	+/- 2" (0.0035 mm)	+/- 2" (0.004 mm)	0.01 mm
PRECISION DE POSITIONNEMENT POSITIONIERGENAUIGKEIT PRECISION OF POSITIONNING		+/- 6" (0.005 mm)	+/- 6" (0.006 mm)	+/- 6" (0.007 mm)	+/- 6" (0.010 mm)	+/- 6" (0.007 mm)	+/- 6" (0.01 mm)	+/- 5" (0.01 mm)	+/- 5" (0.0125 mm)	0.01 mm
TEMPS D'INDEXION 1/6 DE TOUR INDEXIERUNGSZEIT 1/6 DER DREHUNG INDEXING TIME 1/6 OF ROTATION	s.	0.6	0.8	1	1.5	1	1.5	2.5	2.5	0.8
ENCOMBREMENT PLATZBEDARF DIMENSION	L1 (mm) L2 (mm) L3 (mm) L4 (mm) ØD (mm)	160 160 170 75 85	210 210 220 100 100	270 270 290 125 135	390 390 420 180 200	280 280 340 105 135	375 375 440 145 200	505 505 570 145 200	740 740 820 220 270	240 290 370 320 64
POIDS SANS OUTILLAGE GEWICHT OHNE WERKZEUG WEIGHT WITHOUT TOOL	kg	30	55	100	350	100	350	600	2000	100
ENTREE D'ARROSAGE PAR LE CENTRE INNERE KÜHLMITTELZUFUHR COOLANT THROUGH	bars	50 (option 100)	50 (option 100)	50 (option 100)	50 (option 100)	50 (option 100)	50 (option 100)	50	50 (option 100)	50 (option 100)
PRESSION D'HUILE POUR INDEXION OELDRUCK FÜR REVOLVERINDEXIERUNG OIL PRESSURE FOR TURRET INDEX	bars	20 à 50	20 à 50	20 à 50	20 à 50	20 à 50	20 à 30	20 à 30	20 à 30	20 à 50



TRH 500

Un partenaire complet  
Une solution globale

Ein kompletter Partner  
Eine globale Lösung

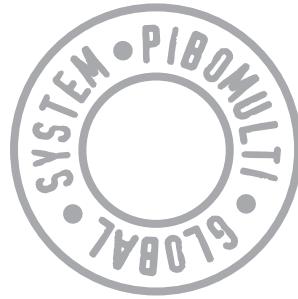
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Module d'usinage flexible  
Das flexible Bearbeitungsmodul  
The flexible machining module



**TRH 806**



**TRH 404**

4 Multibroches / **184 broches**  
4 Mehrspindelköpfe / **184 Spindeln**  
4 Multispindle Heads / **184 Spindles**

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Durch PIBOMULTI-Zubehör beherrschen Sie alle Bearbeitungsaufgaben  
PIBOMULTI accessories allow total control of the design and manufacture process



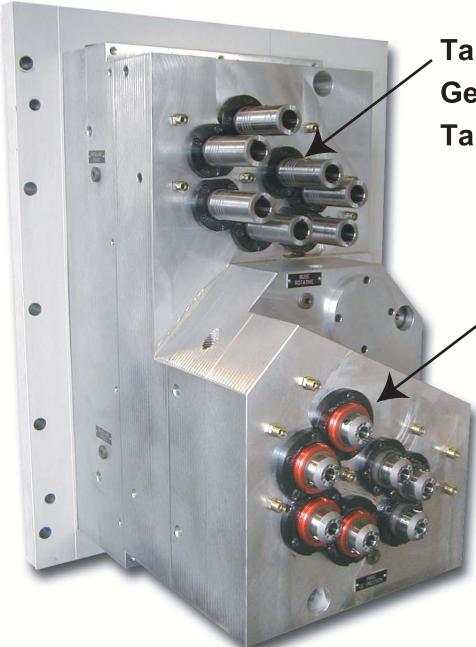
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Unvergleichbares know-how

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Taraudage  
Gewindeschneiden  
Tapping

Perçage  
Bohren  
Drilling



DOCUMENTATION  
sur demande  
auf Anfrage  
on request

• • • • • • •  
Fraisage, perçage et taraudage  
sans changer d'outil

Fräsen, Bohren und Gewindeschneiden  
ohne das Werkzeug zu wechseln

milling, drilling and tapping  
without changing the tool



Entraxes réduits (dès 4.5 mm)  
Vitesse de rotation jusqu'à **40.000 min-1**

Geringer Achsabstand (ab 4.5 mm)  
Drehzahlen bis **40.000 min-1**

Small spindle axis distance (from 4.5 mm)  
Revolution up to **40'000 min-1**



De l'horlogerie au moteur de bateau  
Von der Uhrenindustrie bis zum Schiffsmotor  
From watchmaking to shipbuilding

**Une solution à chaque problème**

**Zu jedem Problem eine Lösung**

**A solution to each problem**

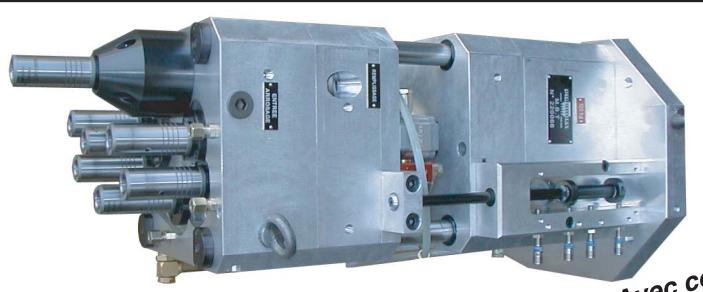
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USA internet : [www.pibomulti-na.com](http://www.pibomulti-na.com) mail : [info@pibomulti-na.com](mailto:info@pibomulti-na.com)

### Tête de taraudage à patronne

### Gewindeschneidkopf mit Leitpatrone

### Tapping head with lead screw



Avec contrôle électrique  
Mit elektrischer Kontrolle  
With electrical control

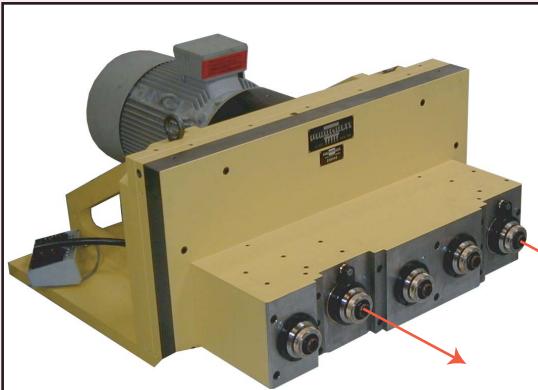
Différents pas dans la même opération  
Verschiedene Steigung in der gleichen Operation  
With different pitches in the same operation



### Têtes à broches alternées

### Multi heads with alternating spindles

### Köpfe mit abwechselnden Spindeln



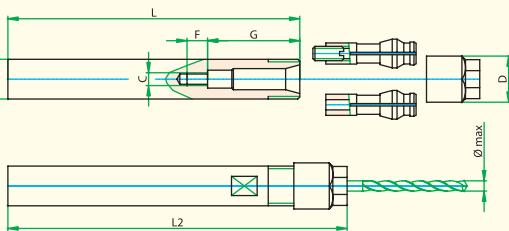
3 broches fixes / 2 mobiles  
3 fixe Spindeln, 2 Vorschübe Spindeln  
3 fixed spindles, 2 stroke spindles



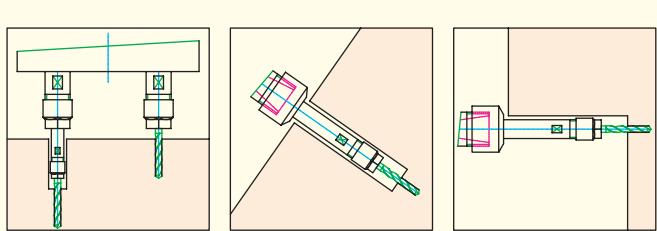
### Rallonges de broches miniatures

### Miniaturspindelverlängerungen

### Minispindle extensions



Type	D1	D2	L1	L2	G	F	C	Ø max	Pince Spannzange Collet	Ecrou Mutter Nut	SW
									C1	C2	
04200	5	5	60	63	9	--	--	2	00402A	00403A	00408A
05200	6	6.35	80	83.5	18	--	--	2.2	0503	00502	SW5 SW6
06200	6	8.5	80	84.5	23	6	M3	3	0603	00602	SW5 SW7
07200	8	9.5	100	105	23	6	M3	3.5	0703	00702	SW7 SW8
08200	8	10.5	100	105	25	8	M4	4.3	0803	00802	SW7 SW9
10200	10	13	100	106	24.5	8	M4	5.3	1003	01002	SW9 SW11
12200	12	15.5	120	126.5	24.5	15	M5	6.5	1203	01202	SW11 SW13
15200	16	19	120	127.5	24.5	20	M6	8.5	1502	01502	SW13 SW17





### Moyens de production

Notre production est assurée par nous même à 95 %, seuls les traitements thermiques et les travaux spécifiques sont réalisés en externe.

Ceci nous donne une grande souplesse de travail et d'organisation et nous permet d'optimiser les délais de fabrication et les impératifs de nos clients.

Le parc de machine est très important, moderne et de première qualité afin d'assurer les charges de production ainsi que la précision exigée.

Un personnel très qualifié à la hauteur de notre réputation, un savoir-faire d'horloger au service de la mécanique de haute précision nous permet de satisfaire pleinement aux sévères exigences de notre clientèle mondiale, et fait de PIBOMULTI un partenaire fiable et compétent dans le domaine de la haute production, principalement dans l'industrie automobile.



### Betriebsmittel



Aufgrund der sehr hohen Fertigungstiefe (ca. 95%, ausgenommen Wärmebehandlung) sind wir in der Lage, schnell und flexibel auf Kundenwünsche zu reagieren und Fabrikationsabläufe zu optimieren.

Unser umfangreicher und modernster Maschinenpark ermöglicht es uns, die hohen Qualitätsanforderungen unserer Kunden zu erfüllen.

Dies in Verbindung mit unserem qualifizierten Personal, ausgestattet mit "Uhrmacherwissen" und Erfahrung in der Hochpräzisionsmechanik, sind wir jetzt und in der Zukunft für unsere Kundschaft ein zuverlässiger und kompetenter Partner.



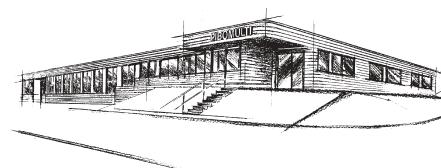
Works 1 : 3000 m <sup>2</sup>	Administration & assembly Dept.	120 employee
Works 2 : 3500 m <sup>2</sup>	Technical office and production	
Construction office .....	CAD (Autocad)	18 stations
Computer .....	GPAO (Prodstar II)	12 stations
Boring machines .....	7 SIP / 3 DIXI	
Machining centres .....	1 DIXI in palettisation (CNC 4 axes)	1 OKUMA 6 palettes - 1 MAZAK - 1 HELLER
Centres of vertical manufacturing (3 axes) CNC .....	4 MIKRON	
CNC Turning Centres (5 axes) .....	1 OKUMA MACTURN 50 - 72 tools 1 MAZAK 300 - 2 spindles 40 tools 1 MAZAK 200 - 40 tools	
CNC Turning Centres .....	TRAUB - NAKAMURA - OKUMA - CINCINNATI	
Motorized tools .....	10 machines	
Tour Teach in .....	GILDMEISTER - CAZENEUVE - HARRISON	
CNC grinding inside - outside .....	7 machines	
Conventional grinding inside - outside .....	TSCHUDIN - KELLENBERG - STUDER - VOUMARD 150 CNC	
Thread grinding .....	8 machines	
Cutting gearings CNC .....	RHEISAUHER	
PFAUTER GLEASON		
3D CMM .....	2 DEA SCIROCCO 900 x 1000 x 1500	

### Physical Plant and Equipment

Ninety-five percent of the manufacturing processes necessary to produce PIBOMULTI products is provided in-house.

Only heat-treating and other specialized items such as surface treatments are outsourced.

Large industrial groups or small shops - all our customers have remained loyal to PIBOMULTI over the years, and have come to rely upon the quality, delivery and service that are the hallmarks of our company.



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Représenté par - Vertreten durch - Represented by :

