

MILLING CHUCK NEW Hi-POWER MILLING CHUCK

BBT/BT
SHANK **A29**

BDV/DV
SHANK **B7**

HSK
SHANK **C19**

ST
SHANK **D5**

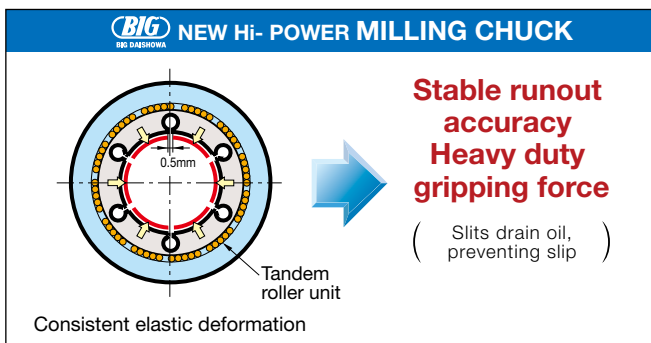
BIG CAPTO
SHANK **E41**



- Highly rigid chuck for resistance against chatter.
- Supports endmilling with its heavy duty gripping force and high runout accuracy.



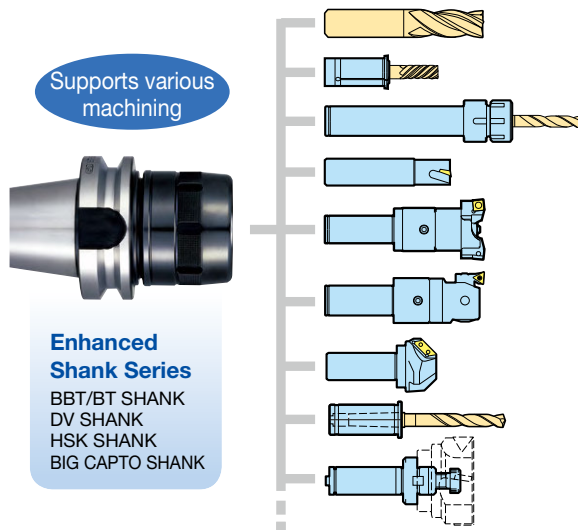
Reliable slit design ensures high accuracy



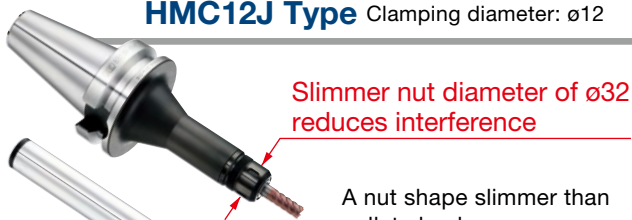
A unique BIG slit shape is adopted to achieve both the essential runout accuracy and gripping force which are the key elements of a milling chuck. Stable clamping is possible due to sufficient elastic deformation and the ability to remove oil film from the tool shank.

The Milling Chuck is also ideal as a basic holder

Allows the reliable use of straight collets as well as boring bars, arbors such as face milling cutters. Also optimal as a basic holder.

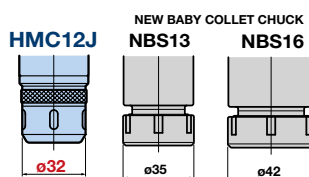


HMC12J Type Clamping diameter: $\phi 12$



Peripheral coolant supply to cutting edge.

A nut shape slimmer than collet chucks



Runout Adjustable RA Holder



Tool edge runout $2\mu\text{m}$ or less

A32

Simple structure allows for easy adjustment of runout accuracy!

Compensates for increased runout of machine tool spindles caused by extended use. Simple structure allows for easy adjustment in the machine.

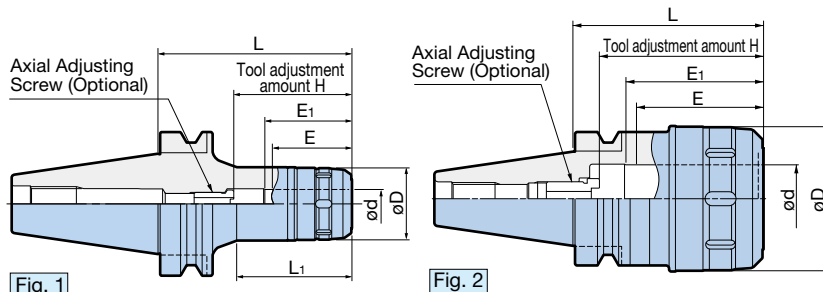
- Consistent hole diameter
- Improved surface roughness
- Increased tool life

Advice



Since the Milling Chuck is a base-holder able to clamp various cylindrical shank tools, it is no exaggeration to say that a single choice will determine the performance of the machine tool. Versatile usability for various machining applications from heavy cuts to fine-cuts with superior gripping force, collapsibility, accuracy, rigidity and durability.

The BIG original slit mechanism supports high power and high-precision endmilling from heavy cuts to fine cuts.



● Model Description

BBT30 - HMC 16 S - 70

- L dimension
- S Type
- Chuck bore
- NEW HI- POWER MILLING CHUCK
- BIG-PLUS BT No.

[S Type] Slim nut to avoid interference

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional BT spindles.

BIG-PLUS BBT SHANK Model	BT SHANK Model	Fig.	ϕd	ϕD	L	L ₁	Tool adjustment amount H	Min. clamping length		Wrench	Weight (kg)
								E	E ₁		
BBT30-HMC16S- 70 *	BT30-HMC16S- 70 *	1	16	43	70	47	71	48	55	FK45-50L	0.78
-HMC20S- 75	-HMC20S- 75	2	20	50	75	—	56 - 66	50	56		0.93
-HMC25S- 90	-HMC25S- 90		25	55	90	—	64 - 74	56	57	FK52-55	1.12
-HMC32S-105	-HMC32S-105		32	62	105	—	70 - 80	60	58	FK58-62L	1.41
BBT40-HMC16S- 75 *	BT40-HMC16S- 75 *	1	16	43	75	45	71	48	55	FK45-50L	1.3
-120 *	-120 *				120	90					1.8
-HMC20S- 75	-HMC20S- 75	1	20	50	75	46	69 - 79	50	56		1.4
-105	-105				105	75					1.9
-120	-120				120	90					2.1
-HMC25S- 75	-HMC25S- 75	1	25	59	75	47	73 - 83	56	57	1.5	
-105	-105				105	77				2.1	
-135	-135				135	107				2.8	
-HMC32S- 90	-HMC32S- 90	2	32	68	90	—	71 - 81	60	64	2.0	
-105	-105				105	—				2.3	
-135	-135				135	—	79 - 89			—	3.0

- Wrench and Axial Adjusting Screw are not included. Please order separately.
 - When using center through coolant;
 - Set screw with sealing compound applied (standard accessory) should be used to plug an air bleeding hole.
 - Oil hole type should be chosen when Straight Collet is required.
 - Please note that BBT(BT)40-HMC32S-90, ATC arm may interfere with the nut in some machines. (36mm from gauge line to nut.)
 - Tool adjustment amount "H" indicates the adjustment length with an Axial Adjusting Screw.
 - When using center through coolant, insert a tool shank into E₁ or more.
- ※ HMC16S requires the hex socket head screw (M8) for axial adjustment. However, please contact us if using for center through applications. H dimension is the max. tool shank length that can be inserted into the holder.

Optional Accessories			
Straight Collet G18	Wrench G22	Mega Wrench G23	Axial Adjusting Screw G22

[S Type] Slim nut to avoid interferenceBIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	BT SHANK Model	Fig.	$\varnothing d$	$\varnothing D$	L	L ₁	Tool adjustment amount H	Min. clamping length		Wrench	Weight (kg)
								E	E ₁		
BBT50-HMC16S-105 ※	-	1	16	43	105	57	71	48	55	FK45-50L	4.2
-135					135	80					4.6
-165					165	100					5.0
-200					200	120					5.8
-HMC20S-105	-	1	20	50	105	57	69 - 79	50	56	FK45-50L	4.3
-135					135	80					4.8
-165					165	100					5.4
-200					200	125					6.0
-300					300	200					8.3
-HMC25S-105	-	1	25	59	105	57	76 - 86	56	57	FK58-62L	4.5
-135					135	87					5.2
-165					165	105					5.9
-200					200	125					7.5
-HMC32S-105	-	1	32	68	105	64	88 - 98	60	72	FK68-75L	4.6
-135					135	89					5.4
-165					165	105					6.4
-200					200	130					7.4
-300					300	200					11.5
-HMC42S-105	-	1	42	85	105	65	93 - 105	70	73	FK80-90L	5.2
-135					135	94					6.2
-165					165	123					7.4
-200					200	130					9.6
-300					300	200					14.1

BT shank models are not available. Please choose BBT shank models.

- Wrench and Axial Adjusting Screw are not included. Please order separately.
- When using center through coolant;
 - Set screw with sealing compound applied (standard accessory) should be used to plug an air bleeding hole.
 - Oil hole type should be chosen when Straight Collet is required.

- Tool adjustment amount "H" indicates the adjustment length with an Axial Adjusting Screw.
- When using center through coolant, insert a tool shank into E₁ or more.

※ HMC16S requires the hex socket head screw (M8) for axial adjustment. However, please contact us if using for center through applications.

H dimension is the max. tool shank length that can be inserted into the holder.

[HMC12J Type] Clamping diameter: $\varnothing 12$

- A slim yet highly rigid milling chuck with $\varnothing 32$ outer diameter nut for reduced interference.

DUAL CONTACT



Center through



■ Jet through coolant securely supplied from chuck nose to cutting edge.

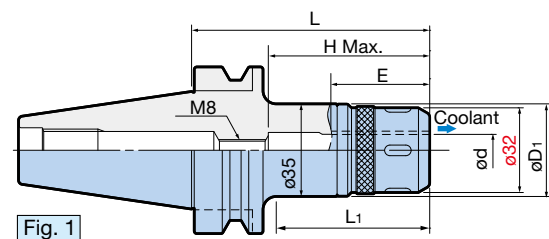


Fig. 1

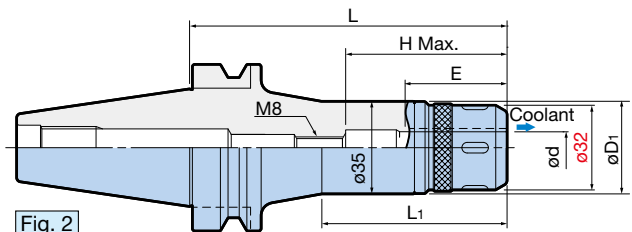
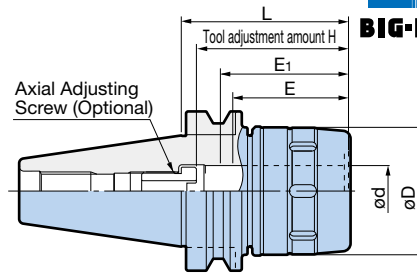


Fig. 2

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	Fig.	Clamping diameter $\varnothing d$	$\varnothing D_1$	L	L ₁	H Max.	Min. clamping length E	Wrench	Weight (kg)
BBT30-HMC12J- 60	1	12	35	60	38	65	43	FK31-33	0.58
BBT40-HMC12J- 90				90	63				1.4
-120	2			120	70				1.6
BBT50-HMC12J-105	1	12	35	105	67	65	43	FK31-33	4.0
-135				135	70				4.3
-165				165	90				4.7

- Wrench is not included. Please order separately.



[Standard Type]

BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	BT SHANK Model	ϕd	ϕD	L	Tool adjustment amount H	Min. clamping length		Wrench	Weight (kg)
						E	E ₁		
BBT50-HMC20 -105 -135	BT50-HMC20 -105	20	60	105	69 - 79	50	55	FK58-62	4.7
	-165			5.4					
	-165			6.1					
-HMC25 -105 -135	-HMC25 -105	25	62	105	74 - 84	56	56	FK58-62	4.6
	-135			5.3					
	-165			5.9					
-HMC32 -105 ▲ -135 ▲	-HMC32 -105	32	80	105	78 - 95	60	71	FK80-90	5.2
	-135 ▲			6.3					
	-165			7.5					
-HMC42 -105 ▲ -135 ▲	-HMC42 -105	42	99	105	93 - 105	70	73	FK92-100	6.0
	-135 ▲			7.5					
	-165			8.8					

1. Wrench and Axial Adjusting Screw are not included. Please order separately.
2. When using center through coolant;
 - Set screw with sealing compound applied (standard accessory) should be used to plug an air bleeding hole.
 - Oil hole type should be chosen when Straight Collet is required.
3. Tool adjustment amount "H" indicates the adjustment length with an Axial Adjusting Screw.
4. When using center through coolant, insert a tool shank into E₁ or more.

Models marked with ▲ in the table above include a vibration prevention screw. This is effective for reducing chatter caused by heavy cutting or long tool projection.

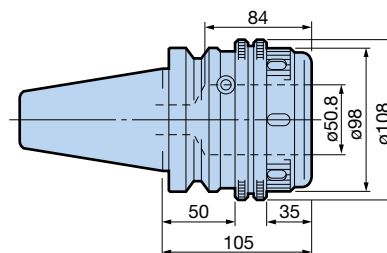
Optional Accessories			
Straight Collet 	Wrench 	Mega Wrench 	Axial Adjusting Screw

Model with vibration prevention screw	Min. clamping length using vibration prevention screws
BBT50-HMC32-□□□▲	88
-HMC42-□□□▲	91

For large diameter ($\phi 50.8$) endmills

Pin locking type which prevents tool slip by adding a special pin.

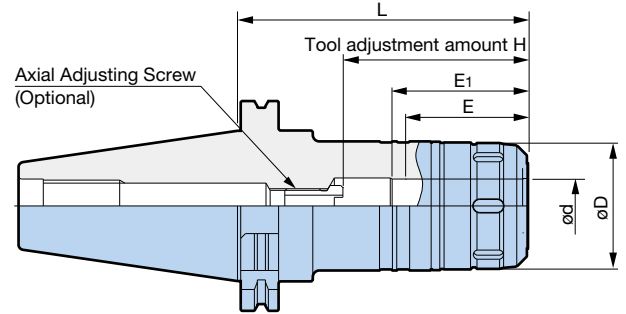
- The double nut mechanism clamps the chuck flange solidly, increasing bending rigidity. Ideal for long and large diameter endmilling. A runout accuracy unrealizable with side lock holders is achieved.



BIG-PLUS (BBT Shank) tools can be used on both BIG-PLUS spindles and conventional **BT spindles**.

BIG-PLUS BBT SHANK Model	BT SHANK Model	Weight (kg)
BBT50-HMC50.8-105	BT50-HMC50.8-105	5.9

The BIG original slit mechanism supports high power and high-precision endmilling from heavy cuts to fine cuts.



BIG-PLUS (BDV Shank) tools can be used on both BIG-PLUS spindles and conventional **DV** spindles.

BIG-PLUS BDV SHANK Model	DV SHANK Model	Clamping diameter $\varnothing d$	$\varnothing D$	L	H	Min. clamping length		Wrench	Weight (kg)
						E	E ₁		
BDV40-HMC20S- 85	DV40-HMC20S- 85	20	50	85	69 - 79	50	56	FK45-50L	1.6
-105	-105			105					1.9
-120	-120			120					2.1
-HMC25S- 95	-HMC25S- 95	25	59	95	71 - 81	56	57	FK58-62L	2.0
-105	-105			105					2.2
-HMC32S- 95	-HMC32S- 95	32	68	95	79 - 89	60	64	FK68-75L	2.1
-105	-105			105					2.3
-135	-135			135					3.0
BDV50-HMC20S-105	DV50-HMC20S-105	20	50	105	69 - 79	50	56	FK45-50L	3.9
-135	-135			135					4.3
-HMC25S-105	-HMC25S-105	25	59	105	76 - 86	56	57	FK58-62L	4.2
-135	-135			135					4.8
-HMC32S-105	-HMC32S-105	32	68	105	88 - 98	60	72	FK68-75L	4.4
-135	-135			135					5.2
-165	-165			165					6.0
-HMC42S-135	-HMC42S-135	42	85	135	93 - 105	70	73	FK80-90L	6.3

1. Wrench and Axial Adjusting Screw are not included. Please order separately.

3. Tool adjustment amount "H" indicates the adjustment length with an Axial Adjusting Screw.

2. When using center through coolant;

4. When using center through coolant, insert a tool shank into E₁ or more.

- Set screw with sealing compound applied (standard accessory) should be used to plug an air bleeding hole.
- Oil hole type should be chosen when Straight Collet is required.

Optional Accessories			
Straight Collet  G18	Wrench  G22	Mega Wrench  G23	Axial Adjusting Screw  G22

[HMC12J Type]

- A slim yet highly rigid milling chuck with $\varnothing 32$ outer diameter nut for reduced interference.



- Jet through coolant securely supplied from chuck nose to cutting edge.

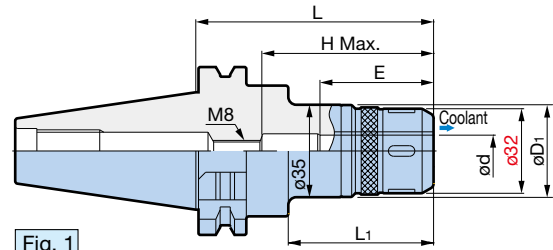


Fig. 1

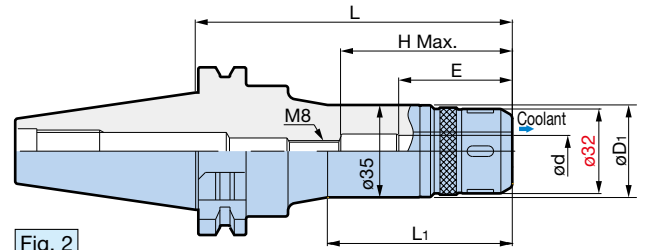


Fig. 2

BIG-PLUS (BDV Shank) tools can be used on both BIG-PLUS spindles and conventional DV spindles.

BIG-PLUS BDV SHANK Model	DV SHANK Model	Fig.	Clamping Diameter $\varnothing d$	$\varnothing D_1$	L	L ₁	H Max.	Min. Clamping Length E	Wrench	Weight (kg)
BDV40-HMC12J- 90	DV40-HMC12J- 90	1	12	35	90	55	65	43	FK31-33	1.4
-120	-120	2			120	1.6				
BDV50-HMC12J-105	DV50-HMC12J-105	1			105	70				3.5
-135	-135	2			135	3.8				

1. Wrench is not included. Please order separately.

The BIG original slit mechanism supports high power and high-precision endmilling from heavy cuts to fine cuts.

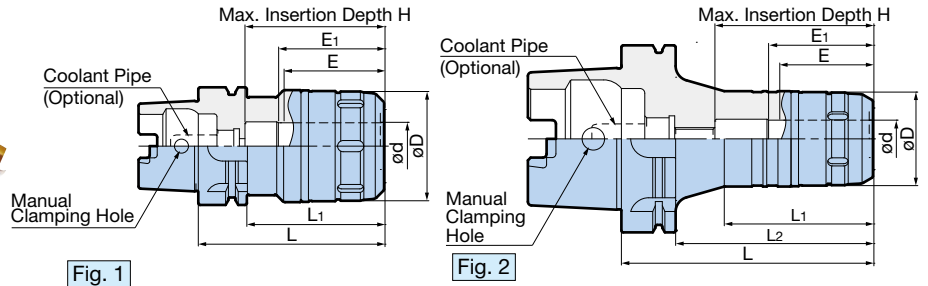
Center through

[S Type]

Model Description

HSK-A40 - HMC 20 - S 85

- L dimension
- S Type
- Chuck bore
- NEW Hi- POWER MILLING CHUCK
- HSK Shank Type



A Type (DIN 69893-1) (ISO 12164)

Model	Fig.	ød	øD	L	L ₁	L ₂	Max. insertion depth H	Min. Clamping Length		Wrench	Weight (kg)
								E	E ₁		
HSK-A 40-HMC20S- 85	1	20	50	85	65	—	66	50	56	FK45-50L	0.9
HSK-A 50-HMC20S- 90	1	20	50	90	64	—	66	50	56	FK45-50L	1.2
-HMC32S-115 ※		32	62	115	89	—	69	56	58	FK58-62L	1.6
HSK-A 63-HMC20S- 90	1	20	50	90	64	—	65	50	56	FK45-50L	1.5
-120 ○				120	94	—	85				1.9
-HMC25S-100	1	25	59	100	74	—	75	56	57	FK58-62L	1.9
-135 △				135	109	—	66 - 76				2.5
-HMC32S-110				110	84	—	85				2.3
-135 ○	1	32	68	135	109	—	90	60	64	FK68-75L	2.6
-165 △				165	139	—	79 - 89				3.2
HSK-A100-HMC20S-105	1	20	50	105	76	—	73	50	56	FK45-50L	3.0
-135 □	2			135	80	106	85				3.5
-165 △				165	100	136	69 - 79				4.1
-HMC25S-105	1	25	59	105	76	—	73	56	57	FK58-62L	3.3
-135 □				135	106	—	90				3.9
-165 △	2	165	105	136	76 - 86	4.8					
-HMC32S-115	1	32	68	115	86	—	83	60	72	FK68-75L	3.9
-135				135	106	—	103				4.4
-165 □				165	105	136	105				5.4
-200 △	2	32	68	200	130	171	90 - 100	60	72	FK68-75L	6.4
-300 △				300	200	271					9.3
-HMC42S-115	1	42	85	115	86	—	83	70	73	FK80-90L	4.9
-135				135	106	—	103				5.5
-165 □				165	136	—	107				6.8

- Wrench must be ordered separately.
- Center through coolant supply is available.
- Models with △ indication can be used with optional axial adjusting screws.
Models with ○ indication require the hex socket head screw (M8) for axial adjustment.
Models with □ indication require the hex socket head screw (M12) for axial adjustment.
Adjusting screws cannot be used with models without the symbols above.
However, for ○ and □ indicated models, please contact us if using for center through applications.
- The straight collet with which ※ marked models can be used is model C32-□□ only.
- H dimension is the max. tool shank length that can be inserted into the holder.
△ marked models show the adjustment amount when using an optional axial adjusting screw.
- Coolant pipe is not included. C65
- When using center through coolant, insert a tool shank into E₁ or more.

Optional Accessories			
STRAIGHT COLLET 	Wrench 	Mega Wrench 	Axial Adjusting Screw

Clamping diameter: $\phi 12$ **NEW Hi- POWER MILLING CHUCK****HSK**
SHANK**[HMC12J Type]**

- A slim yet highly rigid milling chuck with $\phi 32$ outer diameter nut for reduced interference.

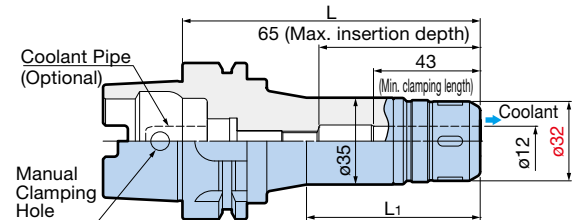
**Center through**

- Jet through coolant securely supplied from chuck nose to cutting edge.

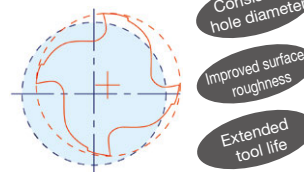
A Type (DIN 69893-1) (ISO 12164)

Model	L	L ₁	Wrench	Weight (kg)
HSK-A63-HMC12J- 90	90	52	FK31-33	1.1
-120 ※	120	70		1.4

1. Wrench must be ordered separately.
2. Coolant pipe is not included. C65
3. ※HSK-A63-HMC12J-120 requires the hex socket head screw (M8) for tool adjustment. However, please contact us if using for center through applications.

Clamping diameter: $\phi 20 - \phi 32$ **Runout Adjustable RA Holder****HSK**
SHANK

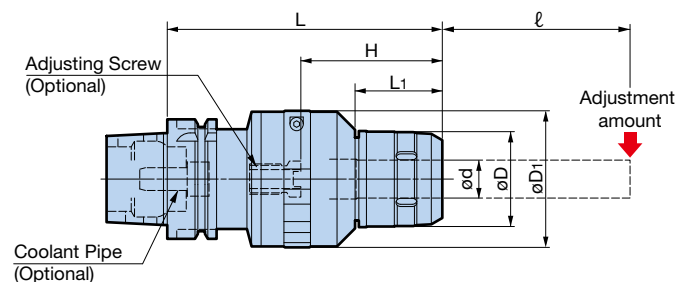
Compensates for increased runout of machine tool spindles caused by extended use.

Center through**Tool edge runout** Within **2 μ m!**

● Model Description

HSK-A63 - HMC 20 S - 145 NRA

- HSK Shank Type
- NEW Hi- POWER MILLING CHUCK
- Chuck bore
- S Type
- L dimension
- Runout Adjustable Type
- NRA

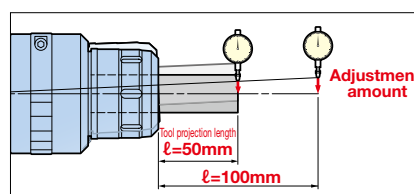
**A Type (DIN 69893-1) (ISO 12164)** ℓ = Tool projection length

Model	ϕd	ϕD	ϕD_1	L	L ₁	H	H Max.	Min. clamping length	Adjustment amount		Wrench	Weight (kg)
									$\ell=50\text{mm}$	$\ell=100\text{mm}$		
HSK-A63-HMC20S-145NRA	20	50	72	145	46	69 - 79	85	45	23 μ m	33 μ m	FK45-50L	2.9
-HMC32S-155NRA ※	32	68	86	155	55	-	120	53	20 μ m	28 μ m	FK68-75L	3.9

1. Wrench and axial adjusting screw must be ordered separately if required.
2. "H" indicates the adjustment amount with an axial adjusting screw (HMA). ※marked models cannot be used with axial adjusting screws.
3. H max. is the maximum tool insertion length when the adjusting screw is removed.
4. Coolant pipe must be ordered separately. C65

Runout adjustment amount

The adjustment amount depends on the holder length and the tool projection length. The maximum adjustment amount possible for 50mm and 100mm tool projection lengths is listed in the table. The maximum adjustment amount is a reference figure available when the Adjusting Screw is tightened with the listed allowable torque.



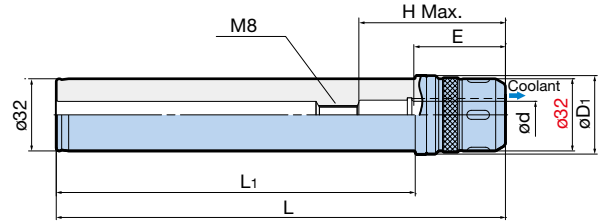
Adjusting Screw allowable torque

NEW Hi- POWER MILLING CHUCK Type	Wrench (Optional accessory)	Allowable torque (N·m)
HMC20S-NRA	CK-T4	8
HMC32S-NRA		

Slim milling chuck with high rigidity.
Nut diameter of $\varnothing 32$ avoids interference.



Jet Through Coolant



● Model Description

- ST32** - **HMC** **12** **J** - **120**
- L dimension
 - Jet Through Type
 - Chuck bore
 - NEW Hi- POWER MILLING CHUCK
 - Cylindrical shank diameter

Model	Clamping diameter $\varnothing d$	$\varnothing D_1$	L	L ₁	H Max.	Min. clamping length E	Wrench Model	Weight (kg)
ST32-HMC12J-120	12	35	120	80	65	43	FK31-33	0.7
-160			160	120				0.9
-200			200	160				1.1

1. Wrench is not included. Please order separately.



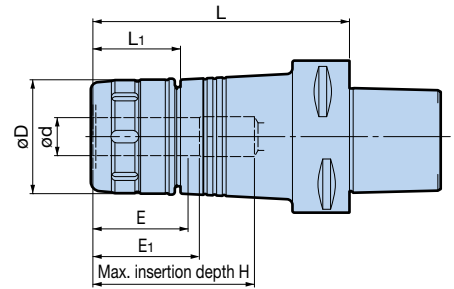
D
MILLING CHUCK

Center through

The BIG original slit mechanism supports high power and high-precision endmilling from heavy cuts to fine cuts.



● Model Description
C5 - **HMC** **16** **S** - **65**
 ● L dimension
 ● S Type
 ● Chuck bore
 ● NEW Hi- POWER MILLING CHUCK
 ● Shank No.



C5/C6/C8

Model	Clamping diameter ϕd	ϕD	L	L ₁	Max. insertion depth H	Min. clamping length		Wrench	Weight (kg)
						E	E ₁		
C5-HMC16S- 65	16	43	65	44	58	48	55	FK45-50L	0.8
-HMC20S- 75	20	50	75	44	68	50	56		1.0
-105			105		85				1.4
-HMC25S- 75※	25	55	75	47	68	56	57	FK52-55	1.3
-105			105		87				1.7
-HMC32S- 85			32		62				85
C6-HMC16S- 70	16	43	70	44	61	48	55	FK45-50L	1.5
-HMC20S- 75	20	50	75	44	66	50	56		1.7
-105			105		85				2.3
-120△			120		69 - 79				2.5
-HMC25S- 75※	25	59	75	45	66	56	57	FK58-62L	2.0
-105			105		87				2.5
-135△			135		73 - 83				3.1
-HMC32S- 90			32		68				90
-105	105	90		2.7					
-135△	135	79 - 89		3.3					
C8-HMC20- 80	20	60	80	46	80	50	56	FK58-62	3.3
-135△			135		69 - 79				4.7
-HMC25- 85	25	62	85	55	85	56	65		3.5
-135△			135		76 - 86				4.7
-HMC32- 95	32	80	95	63	95	60	71	FK80-90	4.5
-135			135		105				5.8

1. Wrench must be ordered separately.
2. The straight collet ※ with which marked models can be used is model C25-□□ only.
3. Models with △ indication can be used with optional axial adjusting screws.
Adjusting screws cannot be used with models without the symbols above.
4. H dimension is the max. tool shank length that can be inserted into the holder.
 △ marked models show the adjustment amount when using an optional axial adjusting screw.
5. When using center through coolant, insert a tool shank into E₁ or more.

For Straight Collets, **G18**

BIG CAPTO SHANK