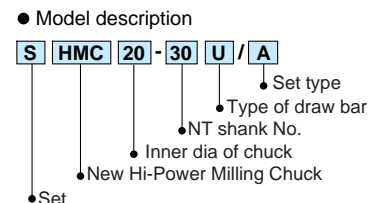


# NEW Hi-POWER MILLING CHUCK

## New Hi-Power Milling Chuck set for conventional machines

Convenient sets include various accessories

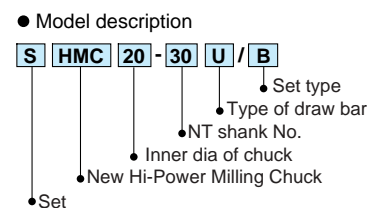
### Set type A



Set type	Set model	Accessory			
		Body	Straight collet	Morse Taper holder	JT Chuck adaptor
A	SHMC20-30(U·M) /A	HMC20-30(U·M)	C20- 6 · 8 · 10 · 12 · 16	C20-MT1	C20-JT6 (ø13 drill chuck is included)
	-40(U·M) /A	-40(U·M)			
	SHMC32-40(U·M) /A	HMC32-40(U·M)	C32- 6 · 8 · 10 · 12 · 16	C32-MT1 · MT2 · MT3	C32-JT6 (ø13 drill chuck is included)
	-50(U·M) /A	-50(U·M)	20 · 25		
	SHMC42-50(U·M) /A	HMC42-50(U·M)	C42- 6 · 8 · 10 · 12 · 16	C42-MT1 · MT2 · MT3	C42-JT6 (ø13 drill chuck is included)
			20 · 25 · 32	MT4	

1. Please advise the draw bar thread, M or U when ordering.  
2. C-spanner is included.

### Set type B



Set type	Set model	Accessory	
		Body	Straight collet
B	SHMC20-30(U·M) /B	HMC20-30(U·M)	C20- 6 · 8 · 10 · 12 · 16
	-40(U·M) /B	-40(U·M)	
	SHMC32-40(U·M) /B	HMC32-40(U·M)	C32- 6 · 8 · 10 · 12 · 16
	-50(U·M) /B	-50(U·M)	20 · 25
	SHMC42-50(U·M) /B	HMC42-50(U·M)	C42- 6 · 8 · 10 · 12 · 16
			20 · 25 · 32

1. Please advise the draw bar thread, M or U when ordering.  
2. C-spanner is included.



# NEW Hi-POWER MILLING CHUCK

BIG DAISHOWA SEIKI CO LTD

CATALOG No. EXm10-1

## High precision design for Heavy cutting

Original inner slit construction ensures high gripping force and rigidity.



### BIG DAISHOWA SEIKI CO LTD

Takaramachi 5-2, Higashiosakashi  
Osaka 579-8025 JAPAN  
Phone : (+81)-72-982-8277 Fax : (+81)-72-982-8370  
<http://www.big-daishowa.com> E-mail: [export@big-net.ne.jp](mailto:export@big-net.ne.jp)



JQA-QMA11602  
AWAJI No.1 Factory  
JQA-QM3913  
FA Dept.

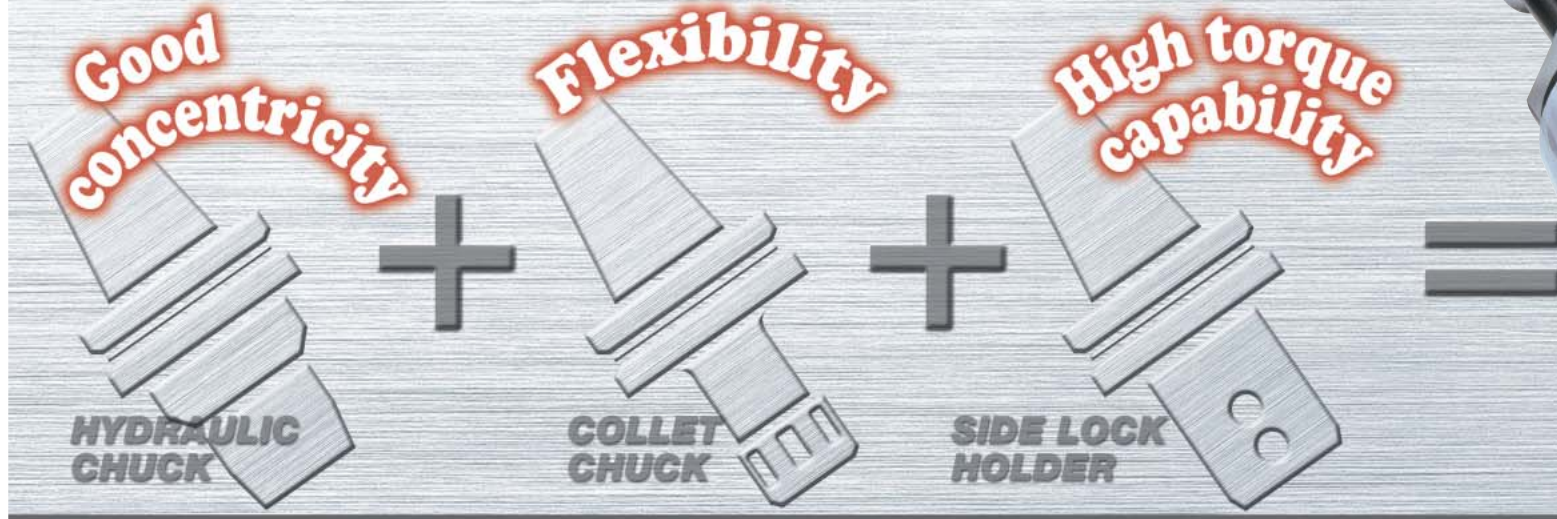
CATALOG No. EXm10-1-0408-4

Subject to technical changes by further developments.

# High precision design for heavy cutting



# NEW Hi-POWER MILLING CHUCK



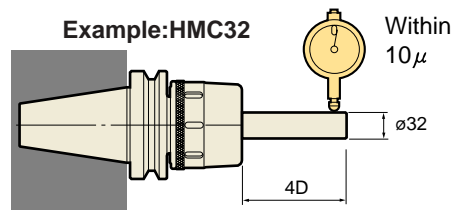
The new Hi-Power Milling Chuck combines the high accuracy of a hydraulic chuck with high torque capability and rigidity.

The New Hi-Power Milling chuck is suitable for both heavy cutting and to be used as the basis of a flexible tool holding system by the insertion of various accessories and parallel reduction collets.

Any shank size from 0.25mm to 20mm can be held by the insertion of a straight shank New Baby Collet Chuck.

## Precise concentricity

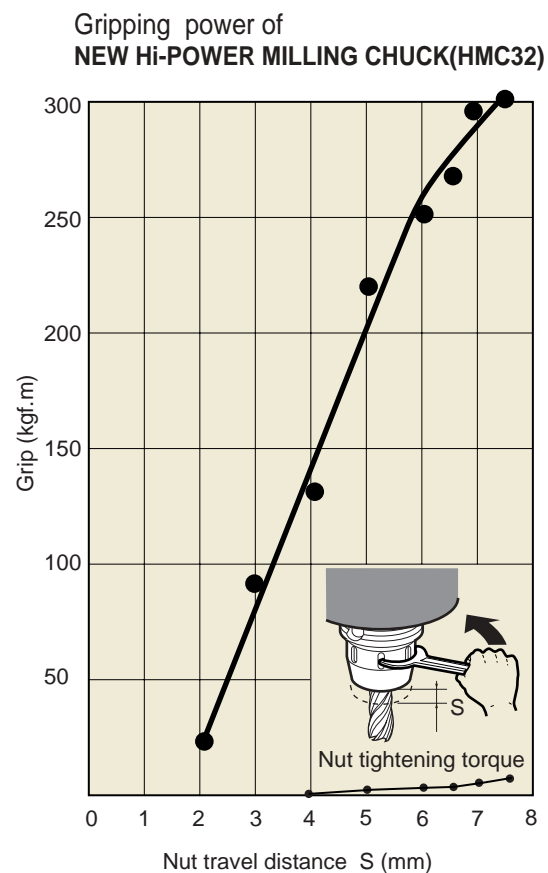
Concentricity is assured by the integral design and clamping by mechanical compression of the annular section by the rolling bearing system. All models are inspected and double checked to meet maximum runout tolerance permitted. (within  $10\mu$  at 4D).



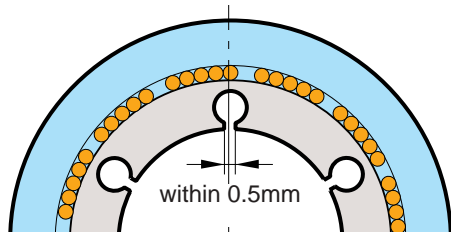
## High gripping force

The rolling lock system minimizes friction during clamping such that even a relatively low clamping torque will achieve high clamping forces in the region of 300 kgf.m.

The extended chucking length means the cutting tool is held tightly by the elastic deformation of this extended length such that the high clamping force is effectively transmitted to the cutting tool.



## Secure and reliable slit design



Slit and small hole

The annular section needs to be substantial in order to provide rigidity but retain the ability to collapse in order to provide sufficient grip. The section of the Hi-Power Milling Chuck has combined holes and slits at regular intervals in order to combine both requirements.

The narrow slit provides the maximum surface area contact for frictional grip whilst maintaining an escape route for any oil film so the co-efficient of friction is kept high.

## Axial adjustment screw

Provides easy adjustment of cutter projection.

## Slits to inner bore

Large shrinkage capability is ensured.

## Secure assembly

End plate is secured by bolts for ensured safety. This is a design feature in common with the high-speed variants.

## Superior sealing

The ingress of contamination by coolant or cutting particles is eliminated for extended tool holder life.

## Roller bearings

Rolling friction is minimised so that the clamping force is greatly increased.

## Rigid design

The substantial section (for 32mm chuck the section is 10mm) prevents chatter and achieves security of cutting.

**MEGA Wrench** is also available

Provides ease and speed of use by non-reversing clutch system.

**BIG-PLUS** SPINDLE SYSTEM PAT. DUAL CONTACT

**SIMULTANEOUS DUAL CONTACT SYSTEM**

- Higher rigidity due to larger contact diameter.
- Improved ATC repeatability.
- Elimination of axial movement at high speeds.

Available for BBT30, BBT40 and BBT50 models.

# NEW Hi-POWER MILLING CHUCK

for machining centers

## DV shank

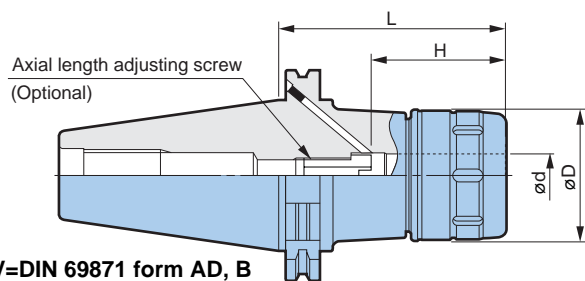
Coolant-Through Hole



- Model description
- DV40 - HMC 20 - 85
- L Length
- Clamping Dia
- New Hi-power Milling Chuck system
- DV shank No.

Model	ød	øD	L	H	Weight (kg)
DV40-HMC20- 85	20	52	85	69 - 79	1.7
- 105			105		1.9
-120			120		2.1
-HMC25- 95	25	62	95	71 - 81	2.0
-105			105		2.2
-HMC32- 95			95		2.1
-105	32	70	105	79 - 84	2.4
-135			135		2.9

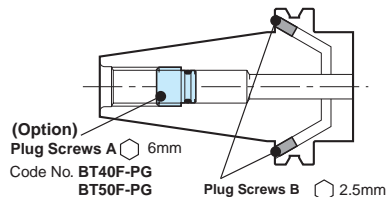
1. Wrench and axial adjusting screw should be ordered separately if required.



DV=DIN 69871 form AD, B

Model	ød	øD	L	H	Weight (kg)
DV50-HMC20-105	20	60	105	69 - 79	4.6
-135			135		5.2
-HMC25-105			105		4.6
-135	25	62	135	74 - 84	5.3
-HMC32-105			105		5.2
-135	32	80	135	78 - 95	6.3
-165			165		7.4
-HMC42-105			105		6.0
-135	42	99	135	93 - 105	7.4

## Plug Screw for flange through coolant



This Plug Screw A(option) prevents coolant leakage through retention knobs.

Bores on form B are sealed with Plug Screw B.

\*Remove 2 pcs Plug Screws B from end face of flange.  
\*Failure to use the Plug Screw "A" or other sealing method may result in coolant contamination of spindle and lead to it's premature failure or accidents.

## BBT/BT shank

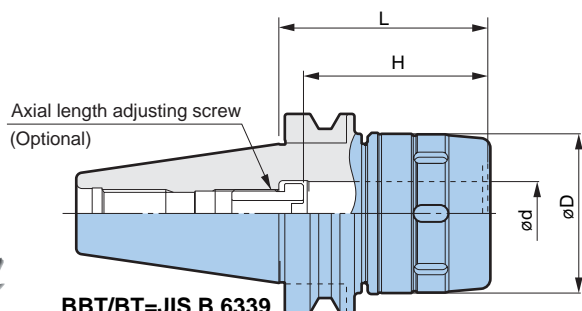
Coolant-Through Hole



- Model description
- BBT30 - HMC 20 - 75
- L Length
- Clamping Dia
- New Hi-power Milling Chuck system
- BBT/BT shank No.

Shank	Model	ød	øD	L	H	Weight (kg)
BBT	BBT30-HMC20- 75	20	52	75	56 - 66	0.95
	-HMC25- 90	25	62	90	56 - 61	1.5
	-HMC32-105	32	70	105	69 - 79	2.1
BT	BT30-HMC20- 75	20	52	75	56 - 65	0.95

- BBT represents the **BIG-PLUS** Spindle System.
- Wrench and axial adjusting screw should be ordered separately if required.
- When using with spindle trough coolant the provided M4 set screw with sealing compound should be fitted to air outlet.
- \*Straight Collet cannot be used with the BBT30-HMC25-90.



BBT/BT=JIS B 6339

Shank	Model	ød	øD	L	H	Weight (kg)
BT	BT40-HMC20- 60	20	60	61	56 - 65	1.4
	- 75			75		1.5
	-105			105		1.9
	-120	25	62	120	69 - 79	2.2
	-HMC25- 85			85		1.9
	-105			105		2.2
	-135	32	70	135	71 - 81	2.5
	-HMC32- 90			90		2.0
	-105			105		2.3
	-135	42	99	135	79 - 84	3.0

## Axial length adjusting screw (Option)

Provides easy adjustment of cutter projection.



Model	Corresponding chuck model
HMA-M16	HMC20, HMC25, BBT50-HMC20N
HMA-M16S	DV40-HMC32, BBT30-HMC32, BT40-HMC32, BBT50-HMC32N
HMA-M24	DV50-HMC32, 42, BT50-HMC32, 42

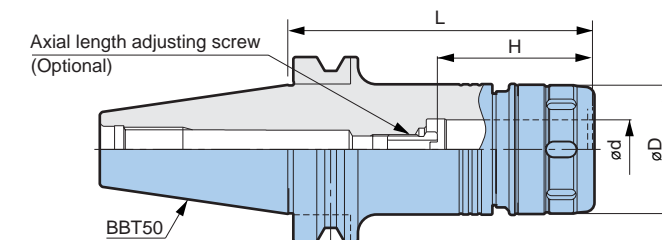
Shank	Model	ød	øD	L	H	Weight (kg)
BT	BT50-HMC20-105	20	60	105	69 - 79	4.7
	-135			135		5.4
	-165			165		6.1
	-HMC25-105	25	62	105	74 - 84	4.6
	-135			135		5.3
	-165			165		5.9

- Wrench and axial adjusting screw should be ordered separately if required.
- When using with spindle trough coolant the provided M4 set screw with sealing compound should be fitted to air outlet.
- ▲mark indicates the vibration reduction screw is included.

Chuck types with vibration prevention screw	Minimum shank insertion length "H"
BT50-HMC32(42)-105 ▲	88(91)
-135 ▲	
-165 ▲	

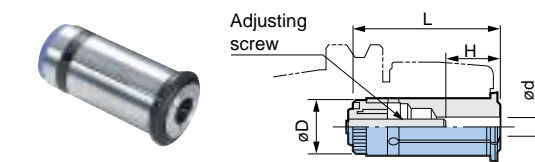
## Slim Type

- BBT50 Milling Chuck with the nut for BT40 models. Smaller nut diameter minimizes interference.



## Adjustable straight collet

- Reduction sleeve for small dia cutters.



## Coolant hole straight collet

Model	ød	øD	L	H
OCA20- 6, 8, 10, 12, 16	20	68	37	30
OCA25- 16, 20				48
OCA32- 6, 8, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25				43
OCA42- 6, 8, 10, 12, 14, 16, 19, 20, 24, 25, 31, 32	25	78.5	37	58
				47
				52

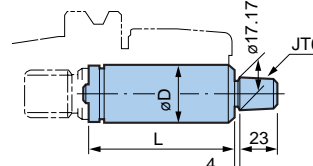
Model	ød	øD	L	H
AC20- 6	20	68	37	30
- 8				48
-10				43
-12	32	84	37	62
-16				47
-20				52
-25	42	99	37	77
AC42- 6				30
- 8				47
-10	42	99	37	77
-12				52
-16				57
-20	32	99	37	62
-25				57
-32	32	62		

- Center through coolant is not provided.
- Coolant hole straight collet (ø20, ø32 and ø42) makes center through available. Sizes are shown in left table.

## Adjustable Jacobs taper adaptor

- JT adaptor for items such as key-less chuck.

Model	øD	L
AC20-JT6	20	65
AC25-JT6	25	78
AC32-JT6	32	90
AC42-JT6	42	110



- Axial length adjusting screw should be ordered separately.
- This adapter can be used with non-ATC machine versions also.

## Adjustable Morse taper holder

- Adaptor for Morse taper shank drills or reamers.

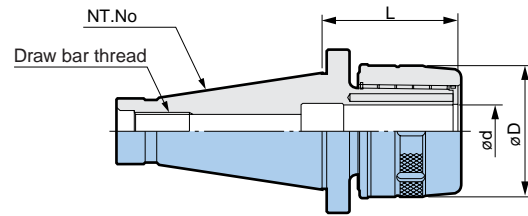
Model	MT No.	øD	L
AC20-MT1	MT1	20	76
-MT2	MT2		91
AC25-MT1	MT1	25	80
-MT2	MT2		91
AC32-MT1	MT1	32	92
-MT2	MT2		112
AC42-MT1	MT1	42	110
-MT2	MT2		113
-MT3	MT3	42	138
-MT4	MT4		138

- Axial length adjusting screw should be ordered separately.
- This adapter can be used with non-ATC machine versions also.

# NEW Hi-POWER MILLING CHUCK

for non-ATC machines

## ISO Taper shank

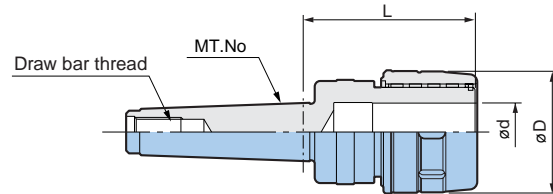


- Model description
- HMC 20 - 30 U**
- Draw bar thread
- NT shank No.
- Inner dia
- New Hi-power Milling Chuck system

Model	NT No.	ød	øD	L	Draw bar thread
<b>HMC20 -30U(M)</b>	NT30	20	52	60	U <sup>1</sup> / <sub>2</sub> -13(M12P1.75)
<b>-40U(M)</b>	NT40				U <sup>5</sup> / <sub>8</sub> -11(M16P2)
<b>HMC32 -40U(M)</b>	NT40	32	70	85	U <sup>5</sup> / <sub>8</sub> -11(M16P2)
<b>-50U(M)</b>	NT50				U1-8(M24P3)
<b>HMC42 -50U(M)</b>	NT50	42	99	85	U1-8(M24P3)
<b>HMC50.8-50U(M)</b>	NT50	50.8	98	90	U1-8(M24P3)

- Please advise the draw bar thread, M or U when ordering.
- Clamping wrench is included.

## Morse taper shank (draw bar type)

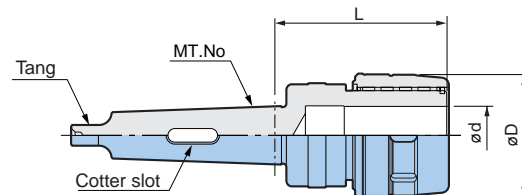


- Model description
- HMC 20 - 3 U**
- Draw bar thread
- MT shank No.
- Inner dia
- New Hi-power Milling Chuck system

Model	MT No.	ød	øD	L	Draw bar thread
<b>HMC20-3U(M)</b>	MT3	20	52	70	U <sup>1</sup> / <sub>2</sub> -13(M12P1.75)
<b>-4U(M)</b>	MT4				U <sup>5</sup> / <sub>8</sub> -11(M16P2)
<b>HMC32-4U(M)</b>	MT4	32	70	100	U <sup>5</sup> / <sub>8</sub> -11(M16P2)

- Please advise the draw bar thread, M or U when ordering.
- Clamping wrench is included.

## Morse taper shank (Tang type)

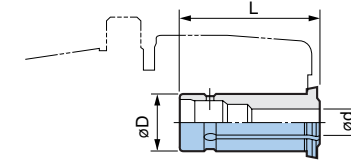


- Model description
- HMC 20 - 3 T**
- Tang type
- MT shank No.
- Inner dia
- New Hi-power Milling Chuck system

Model	MT No.	ød	øD	L
<b>HMC20-3T</b>	MT3	20	52	70
<b>-4T</b>	MT4			
<b>HMC32-4T</b>	MT4	32	70	100
<b>-5T</b>	MT5			

- Please advise the draw bar thread, M or U when ordering.
- Clamping wrench is included.

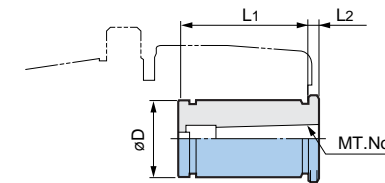
## Straight collet



- Model description
- C 20 - 6**
- Inner dia of collet
- Inner dia of chuck
- Collet

Model	ød	øD	L
<b>C20- 6</b>	6	20	60
<b>- 8</b>	8		
<b>-10</b>	10		
<b>-12</b>	12		
<b>-14</b>	14		
<b>-16</b>	16		
<b>C32- 6</b>	6	32	74
<b>- 8</b>	8		
<b>-10</b>	10		
<b>-12</b>	12		
<b>-14</b>	14		
<b>-16</b>	16		
<b>C42- 6</b>	6	42	89
<b>- 8</b>	8		
<b>-10</b>	10		
<b>-12</b>	12		
<b>-16</b>	16		
<b>-20</b>	20		
<b>-24</b>	24	31	32
<b>-25</b>	25		
<b>-31</b>	31	32	32
<b>-32</b>	32		

## Morse Taper holder

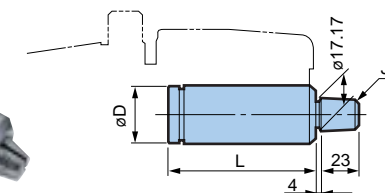


- Model description
- C 20 - MT1**
- Morse taper No.
- Inner dia of chuck
- Collet

Model	MT No.	øD	L1	L2
<b>C20-MT1</b>	MT1	20	57	3
<b>-MT2</b>	MT2		49	23
<b>C32-MT1</b>	MT1	32	56	3.5
<b>-MT2</b>	MT2		67	5
<b>-MT3</b>	MT3		85	
<b>C42-MT1</b>	MT1	42	55.5	4
<b>-MT2</b>	MT2		68	
<b>-MT3</b>	MT3		86	
<b>-MT4</b>	MT4		100	

1. This adaptor can be used with machining center versions also.

## Jacobs Taper adaptor



- Model description
- C 20 - JT6**
- Jacobs taper No.
- Inner dia of chuck
- Collet

Model	øD	L
<b>C20-JT6</b>	20	52
<b>C32-JT6</b>	32	65
<b>C42-JT6</b>	42	79

- Drill chuck is not included.
- This adaptor can be used with machining center versions also.

## Exclusive wrench for New Hi-Power Milling Chuck

HMC for M/C does not include wrench. Wrench must be ordered separately.

### C-spanner



Model	Corresponding HMC chuck model
<b>FK52- 55</b>	BBT/BT30-HMC20
	BT/DV40-HMC20
	BBT50-HMC20N
<b>FK58- 62</b>	BBT30-HMC25
	BT/DV40-HMC25
	BT/DV50-HMC20
	-HMC25
<b>FK68- 75</b>	BBT30-HMC32
	BT/DV40-HMC32
	BBT50-HMC32N
<b>FK80- 90</b>	BT/DV50-HMC32
<b>FK92-100</b>	BT/DV50-HMC42
	BT50-HMC50.8

### MEGA wrench



MEGA wrench includes a non-reversing clutch system with roller bearing and ratchet function which is capable of safely and evenly applying force to the entire nut periphery.

Model	Corresponding HMC chuck model
<b>MGR52</b>	BBT/BT30-HMC20
	BT/DV40-HMC20
	BBT50-HMC20N
<b>MGR60</b>	BT40-HMC20-60
	BT/DV50-HMC20
<b>MGR62</b>	BBT30-HMC25
	BT/DV40-HMC25
	BT/DV50-HMC25
<b>MGR70</b>	BBT30-HMC32
	BT/DV40-HMC32
	BBT50-HMC32N
<b>MGR80</b>	BT/DV50-HMC32
<b>MGR99</b>	BT/DV50-HMC42

