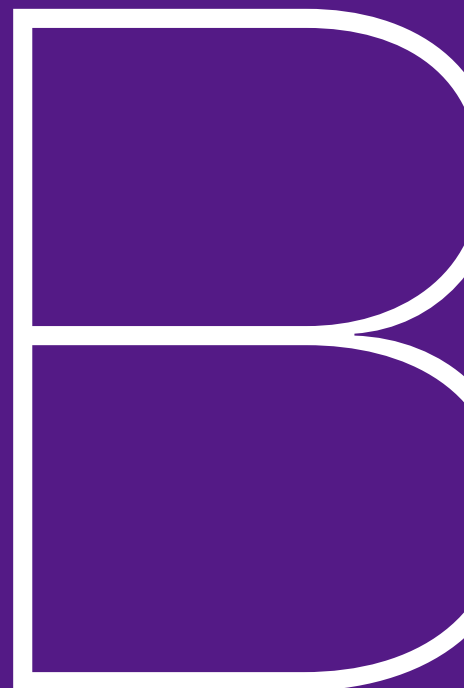


# BDV/DV SHANK

---

|                                |     |
|--------------------------------|-----|
| ■ COLLET CHUCK.....            | B1  |
| ■ MILLING CHUCK .....          | B7  |
| ■ HYDRAULIC CHUCK .....        | B11 |
| ■ CK BORING SYSTEM .....       | B13 |
| ■ TAPPER .....                 | B14 |
| ■ GENERAL TOOLHOLDER .....     | B16 |
| ■ ANGLE HEAD .....             | B19 |
| ■ HIGH-SPEED AIR SPINDLE ..... | B26 |
| ■ SPEED INCREASER .....        | B27 |
| ■ COOLANT FEED .....           | B28 |
| ■ OTHER TOOLS .....            | B29 |



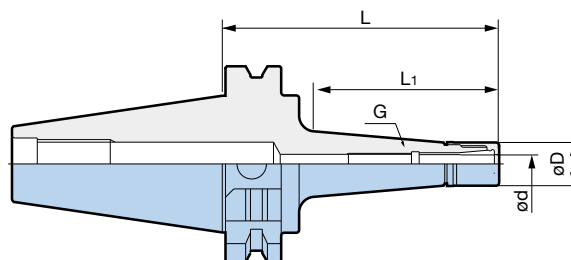
Ultra-slim design with  $\varnothing 10\text{mm}$  nut outer diameter.  
High speed collet chuck with minimized interference.



Center through

Max.  
**40,000min<sup>-1</sup>**

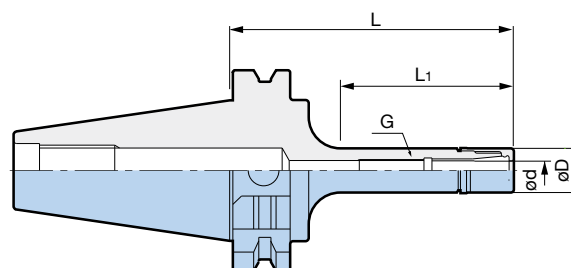
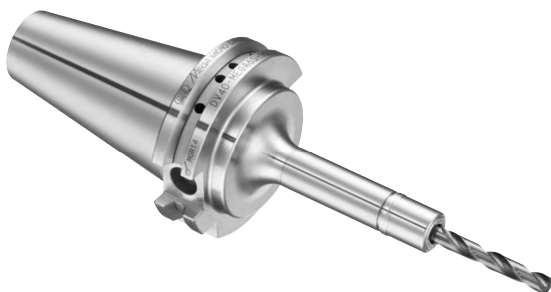
● Models for ultra-small endmilling are newly added!

**[High Rigidity Taper Type]**

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

| BIG-PLUS<br>BDV SHANK Model | DV SHANK Model          | Clamping<br>diameter $\varnothing d$ | $\varnothing D$ | L   | L <sub>1</sub> | G       | Collet Model | Nut Model | Weight<br>(kg) |
|-----------------------------|-------------------------|--------------------------------------|-----------------|-----|----------------|---------|--------------|-----------|----------------|
| —                           | <b>DV30-MEGA6S- 60T</b> | 0.45 - 6.05                          | 14              | 60  | 36             | M7P0.75 | NBC6S-□      | MGN6S     | 0.41           |
| —                           | <b>-MEGA8S- 75T</b>     | 2.95 - 8.05                          | 18              | 75  | 51             | M9P0.75 | NBC8S-□      | MGN8S     | 0.48           |
| <b>BDV40-MEGA3S- 90T</b>    | —                       | 0.45 - 3.25                          | 10              | 90  | 60             | M4P0.7  | NBC3S-□      | MGN3S     | 0.9            |
| <b>-MEGA4S- 90T</b>         | —                       | 0.45 - 4.05                          | 12              | 90  | 60             | M5P0.8  | NBC4S-□      | MGN4S     | 1.0            |
| <b>-MEGA6S- 60T</b>         | —                       | 0.45 - 6.05                          | 14              | 60  | 30             | M7P0.75 | NBC6S-□      | MGN6S     | 0.9            |
| <b>- 90T</b>                | —                       |                                      |                 | 90  | 60             |         |              |           | 1.0            |
| <b>-120T</b>                | —                       |                                      |                 | 120 | 90             |         |              |           | 1.1            |
| <b>-MEGA8S- 90T</b>         | —                       | 2.95 - 8.05                          | 18              | 90  | 60             | M9P0.75 | NBC8S-□      | MGN8S     | 1.0            |

1. Nut is included. Collet and wrench must be ordered separately.
2. Weight includes the nut but not the collet.
3. Please note that the practical spindle speed may be considerably influenced by the machine rigidity and tool balance.  
When using, slowly ramp up to the appropriate speed starting from slow speeds.

**[Straight Type]**

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

| BIG-PLUS<br>BDV SHANK Model | Clamping<br>diameter $\varnothing d$ | $\varnothing D$ | L  | L <sub>1</sub> | G       | Collet Model | Nut Model | Weight<br>(kg) |
|-----------------------------|--------------------------------------|-----------------|----|----------------|---------|--------------|-----------|----------------|
| <b>BDV40-MEGA6S- 90</b>     | 0.45 - 6.05                          | 14              | 90 | 55             | M7P0.75 | NBC6S-□      | MGN6S     | 0.9            |

1. Nut is included. Collet and wrench must be ordered separately.
2. Weight includes the nut but not the collet.
3. Please note that the practical spindle speed may be considerably influenced by the machine rigidity and tool balance.  
When using, slowly ramp up to the appropriate speed starting from slow speeds.

| Standard Accessory                                                                                                                                                                                | Optional Accessories                                                                                                                                                                      |                                                                                                                                                                                            |                                                                                                                                                                                                                                                        |                                                                                                                                                                                               |                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MEGA NUT<br><br>For Spares  | Mega Wrench<br><br> | Micro Collet<br><br> | MEGA MICRO SEAL NUT (for 6S and 8S)<br>MEGA MICRO COOLANT NUT (for 6S)<br><br> | Collet Case<br><br> | Adjusting Screw<br><br> |

Clamping diameter:  $\varnothing 0.25 - \varnothing 25.4$

# MEGA NEW BABY CHUCK

COLLET CHUCK

DUAL CONTACT  
BDV/DV  
SHANK

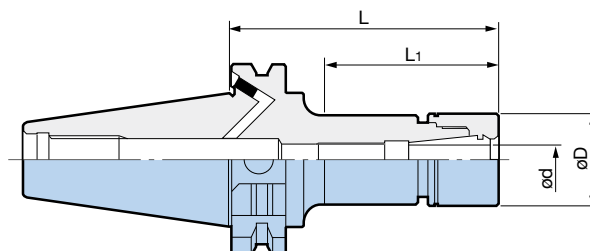
High speed version of NEW BABY CHUCK boasting a history of results.

Makes high speed machining possible in addition to its high accuracy and versatility.



Coolant-through hole

Max.  
35,000min<sup>-1</sup>



B  
COLLET CHUCK

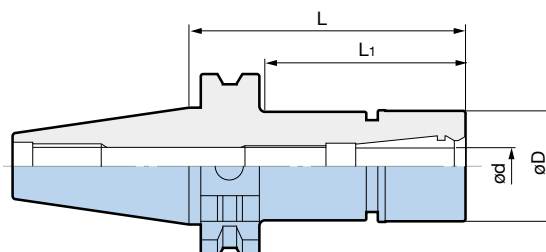
BIG-PLUS (BDV Shank) tools can be used on both BIG-PLUS spindles and conventional DV spindles.

| BIG-PLUS BDV SHANK Model | Clamping diameter $\varnothing d$ | $\varnothing D$ | L   | L <sub>1</sub> | Collet Model | Nut Model | Weight (kg) |
|--------------------------|-----------------------------------|-----------------|-----|----------------|--------------|-----------|-------------|
| BDV40-MEGA 6N- 90        | 0.25 - 6                          | 20              | 90  | 55             | NBC 6-□      | MGN 6     | 1.1         |
| -135                     |                                   |                 | 135 | 100            |              |           | 1.2         |
| -MEGA 8N- 90             | 0.5 - 8                           | 25              | 90  | 57             | NBC 8-□      | MGN 8     | 1.1         |
| -135                     |                                   |                 | 135 | 102            |              |           | 1.3         |
| -MEGA10N- 90             | 1.5 - 10                          | 30              | 90  | 59             | NBC10-□      | MGN10     | 1.2         |
| -135                     |                                   |                 | 135 | 104            |              |           | 1.4         |
| -MEGA13N- 90             | 2.5 - 13                          | 35              | 90  | 61             | NBC13-□      | MGN13     | 1.3         |
| -135                     |                                   |                 | 135 | 106            |              |           | 1.6         |
| -165                     |                                   |                 | 165 | 136            |              |           | 1.8         |
| -MEGA16N- 90             | 2.5 - 16                          | 42              | 90  | 65             | NBC16-□      | MGN16     | 1.5         |
| -135                     |                                   |                 | 135 | 110            |              |           | 1.9         |
| -165                     |                                   |                 | 165 | 140            |              |           | 2.2         |
| -MEGA20N- 60             | 2.5 - 20                          | 46              | 60  | 40             | NBC20-□      | MGN20     | 1.3         |
| - 90                     |                                   |                 | 90  | 70             |              |           | 1.6         |
| -135                     |                                   |                 | 135 | 115            |              |           | 2.0         |
| -165                     |                                   |                 | 165 | 145            |              |           | 2.3         |
| -200                     | 15.5 - 25.4                       | 60              | 200 | 180            | NBC25-□      | MGN25     | 2.6         |
| -MEGA25N- 90             |                                   |                 | 90  | 70             |              |           | 1.8         |
| -120                     |                                   |                 | 120 | 100            |              |           | 2.3         |

- Nut is included. Collet, wrench, and Adjusting Screw must be ordered separately.
- Weight includes the nut but not the collet.
- Through holes are provided, allowing switching between center through and flange through use.
- Please note that the practical spindle speed may be considerably influenced by the machine rigidity and tool balance. When using, slowly ramp up to the appropriate speed starting from slow speeds.



Center through



## DV30 SHANK

Not BIG-PLUS (DUAL CONTACT) specification

| DV SHANK Model   | Clamping diameter $\varnothing d$ | $\varnothing D$ | L  | L <sub>1</sub> | Collet Model | Nut Model | Weight (kg) |
|------------------|-----------------------------------|-----------------|----|----------------|--------------|-----------|-------------|
| DV30-MEGA10N- 75 | 1.5 - 10                          | 30              | 75 | 54             | NBC10-□      | MGN10     | 0.60        |

- Nut is included. Collet, wrench, and Adjusting Screw must be ordered separately.
- Weight includes the nut but not the collet.
- Center through coolant supply is available.
- Please note that the practical spindle speed may be considerably influenced by the machine rigidity and tool balance. When using, slowly ramp up to the appropriate speed starting from slow speeds.

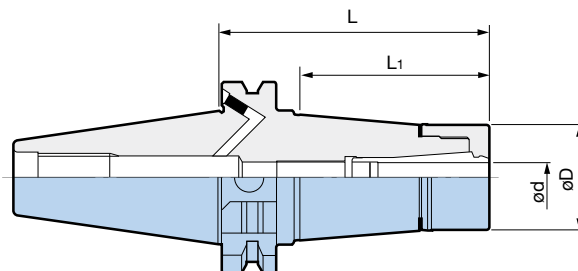
Clamping diameter:  $\varnothing 3 - \varnothing 12$

# COLLET CHUCK MEGA E CHUCK

DUAL CONTACT  
BDV/DV  
SHANK

A high precision, high speed and high rigidity collet chuck especially for endmilling.

- Tapered body enhances damping effect by varying vibration frequency.
- Uses the MEGA E Collet designed for endmilling, delivering optimal clamping performance.

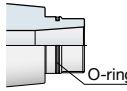


B  
COLLET CHUCK

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

| BIG-PLUS<br>BDV SHANK Model | Clamping<br>diameter $\varnothing d$ | $\varnothing D$ | L   | L <sub>1</sub> | Collet Model | Nut Model | Weight<br>(kg) |
|-----------------------------|--------------------------------------|-----------------|-----|----------------|--------------|-----------|----------------|
| <b>BDV40-MEGA 6E- 90</b>    | 3 - 6                                | 25              | 90  | 60             | MEC 6-□      | MEN 6     | 1.2            |
| <b>-MEGA 8E- 60</b>         | 3 - 8                                | 30              | 60  | 30             | MEC 8-□      | MEN 8     | 1.2            |
| <b>- 90</b>                 |                                      |                 | 90  | 63             |              |           | 1.3            |
| <b>-MEGA 10E- 60</b>        | 3 - 10                               | 35              | 60  | 33             | MEC10-□      | MEN10     | 1.3            |
| <b>- 90</b>                 |                                      |                 | 90  | 64             |              |           | 1.4            |
| <b>-MEGA 13E- 60</b>        | 3 - 12                               | 42              | 60  | 35             | MEC13-□      | MEN13     | 1.5            |
| <b>- 90</b>                 |                                      |                 | 90  | 61             |              |           | 1.7            |
| <b>-120</b>                 |                                      |                 | 120 | 95             |              |           | 1.9            |
| <b>BDV50-MEGA 6E-120</b>    | 3 - 6                                | 25              | 120 | 90             | MEC 6-□      | MEN 6     | 3.3            |
| <b>-MEGA 8E-120</b>         | 3 - 8                                | 30              | 120 | 90             | MEC 8-□      | MEN 8     | 3.4            |
| <b>-MEGA 10E-120</b>        | 3 - 10                               | 35              | 120 | 90             | MEC10-□      | MEN10     | 3.6            |
| <b>-MEGA 13E- 90</b>        | 3 - 12                               | 42              | 90  | 60             | MEC13-□      | MEN13     | 3.6            |
| <b>-120</b>                 |                                      |                 | 120 | 90             |              |           | 3.8            |
| <b>-165</b>                 |                                      |                 | 165 | 137            |              |           | 4.4            |

1. The nut is included but the collet, wrench and Adjusting Screw must be ordered separately.
2. Weight includes the nut but not the collet.
3. Please note that the practical spindle speed may be considerably influenced by the machine rigidity and tool balance.  
When using, slowly ramp up to the appropriate speed starting from slow speeds.
4. Through holes are provided, allowing switching between center through and flange through use.

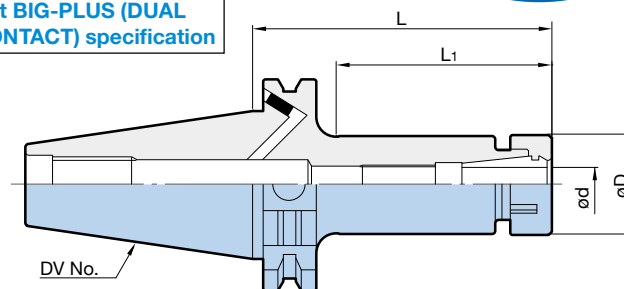
| Standard Accessory                                                                                                                                                                                  |                                                                                                                                                                                                 | Optional Accessories                                                                                                                                                                      |                                                                                                                                                                                             |                                                                                                                                                                                                       |                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MEGA E Nut<br><br>For Spares  | O-ring<br><br>For Spares  | Mega Wrench<br><br> | MEGA E Collet<br><br> | MEGA E PERFECT SEAL<br><br> | Adjusting Screw<br><br> |

A wide-ranging variety with sizes from short through long meets all the needs of high precision machining.

Coolant-through hole



Not BIG-PLUS (DUAL CONTACT) specification



| DV SHANK Model        | Clamping diameter $\varnothing d$ | $\varnothing D$ | L   | L <sub>1</sub> | Collet Model | Nut Model | Weight (kg) |
|-----------------------|-----------------------------------|-----------------|-----|----------------|--------------|-----------|-------------|
| <b>DV40-NBS 6- 60</b> | 0.25 - 6                          | 20              | 60  | 34             | NBC 6-□      | NBN 6     | 0.9         |
| - 90                  |                                   |                 | 90  | 60             |              |           | 1.0         |
| -135                  |                                   |                 | 135 | 105            |              |           | 1.0         |
| <b>-NBS 8- 60</b>     | 0.5 - 8                           | 25              | 60  | 34             | NBC 8-□      | NBN 8     | 0.9         |
| - 90                  |                                   |                 | 90  | 62             |              |           | 1.0         |
| -135                  |                                   |                 | 135 | 107            |              |           | 1.2         |
| <b>-NBS10- 60</b>     | 1.5 - 10                          | 30              | 60  | 34             | NBC10-□      | NBN10     | 1.0         |
| - 90                  |                                   |                 | 90  | 64             |              |           | 1.1         |
| -135                  |                                   |                 | 135 | 104            |              |           | 1.4         |
| <b>-NBS13- 60</b>     | 2.5 - 13                          | 35              | 60  | 37             | NBC13-□      | NBN13     | 1.0         |
| - 90                  |                                   |                 | 90  | 66             |              |           | 1.2         |
| -135                  |                                   |                 | 135 | 106            |              |           | 1.6         |
| <b>-NBS16- 60</b>     | 2.5 - 16                          | 42              | 60  | 38             | NBC16-□      | NBN16     | 1.1         |
| - 90                  |                                   |                 | 90  | 68             |              |           | 1.4         |
| -135                  |                                   |                 | 135 | 113            |              |           | 1.8         |
| <b>-NBS20- 60</b>     | 2.5 - 20                          | 46              | 60  | 40             | NBC20-□      | NBN20     | 1.3         |
| - 90                  |                                   |                 | 90  | 70             |              |           | 1.6         |
| -135                  |                                   |                 | 135 | 115            |              |           | 2.0         |
| -165                  |                                   |                 | 165 | 145            |              |           | 2.3         |
| -200                  |                                   |                 | 200 | 180            |              |           | 2.6         |

1. The nut is included but the collet, wrench and Adjusting Screw must be ordered separately.

3. Weight includes the nut but not the collet.

2. Through holes are provided, allowing switching between center through and flange through use.

| Standard Accessory                                                                                                                                                                                                      | Optional Accessories                                                                                                                                                                                            |                                                                                                                                                                                                       |                                                                                                                                                                                                                   |                                                                                                                                                                                                                     |                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>New Baby Nut</b><br><br>For Spares  <b>G15</b> | <b>New Baby Wrench</b><br><br> <b>G36</b> | <b>Collet</b><br><br> <b>G7</b> | <b>BABY PERFECT SEAL</b><br><br> <b>G15</b> | <b>Adjusting Screw</b><br><br> <b>G23</b> | <b>Tap Adjusting Screw</b><br><br> <b>G23</b> |

Complete contact with the nut and body in conjunction with the BIG-PLUS specifications for double effect.  
High rigidity equal to integration with the machine spindle.

[Jet Through Type]

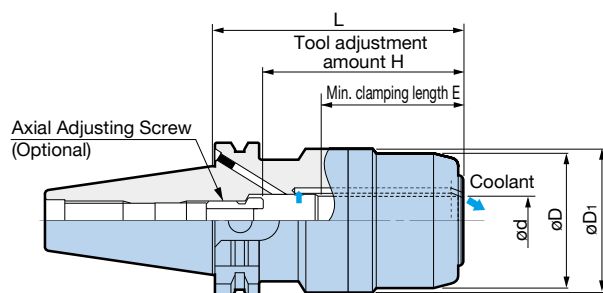
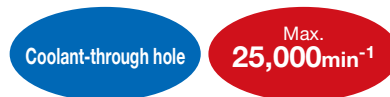


Fig. 1

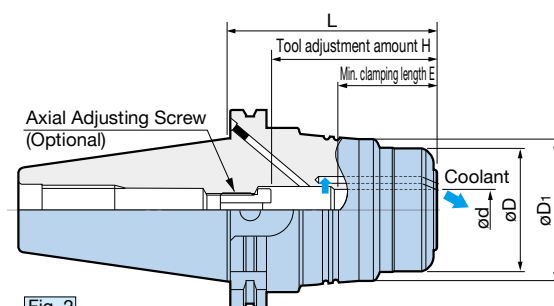


Fig. 2

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

| BIG-PLUS BDV SHANK Model   | Fig. | Clamping diameter $\varnothing d$ | $\varnothing D$ | $\varnothing D_1$ | L     | H        | E  | Mega Wrench | Weight (kg) |
|----------------------------|------|-----------------------------------|-----------------|-------------------|-------|----------|----|-------------|-------------|
| <b>BDV40-MEGA16DS- 90A</b> | 1    | 16                                | 42              | 53                | 92    | 73       | 48 | MGR42L      | 1.8         |
| <b>-MEGA20DS-100A</b>      |      | 20                                | 50              | 55                | 102   | 71 - 81  | 50 | MGR50L      | 1.9         |
| <b>-135A</b>               |      |                                   |                 |                   | 137   |          |    |             | 2.5         |
| <b>-MEGA25DS-100A</b>      |      | 25                                | 62              | 63                | 102   | 73 - 83  | 56 | MGR62L      | 2.4         |
| <b>-135A</b>               |      |                                   |                 |                   | 137   |          |    |             | 3.0         |
| <b>-MEGA32DS-100A</b>      |      | 32                                | 70              | 71                | 102   | 78 - 88  | 60 | MGR70L      | 2.2         |
| <b>-135A</b>               |      |                                   |                 |                   | 137   |          |    |             | 3.0         |
| <b>BDV50-MEGA16DS- 70</b>  | 2    | 16                                | 46              | 55                | 72.5  | 73       | 48 | MGR46L      | 3.5         |
| <b>-MEGA20DS-100</b>       |      | 20                                | 60              | 69                | 102.5 | 71 - 81  | 50 | MGR60L      | 4.9         |
| <b>-135</b>                |      |                                   |                 |                   | 137.5 |          |    |             | 5.7         |
| <b>-MEGA25DS-105</b>       |      | 25                                | 70              | 77                | 107.5 | 78 - 88  | 56 | MGR70L      | 5.4         |
| <b>-135</b>                |      |                                   |                 |                   | 137.5 |          |    |             | 6.3         |
| <b>-MEGA32DS-105</b>       |      | 32                                | 80              | 86                | 107.5 | 80 - 97  | 60 | MGR80L      | 5.7         |
| <b>-135</b>                | 1    |                                   |                 |                   | 137.5 |          |    |             | 6.7         |
| <b>-MEGA42DS-105</b>       |      | 42                                | 99              | 100               | 107   | 90 - 107 |    | MGR99L      | 6.1         |

1. Wrench is not included. Please order separately.
2. Please note that the practical spindle speed may be considerably influenced by the machine rigidity and tool balance.  
When using, slowly ramp up to the appropriate speed starting from slow speeds.
3. Tool adjustment amount "H" indicates the adjustment length with an Adjusting Screw.
4. Through holes are provided, allowing switching between center through and flange through use.

- MEGA16DS 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.
- DS types have jet-through coolant supply, thus tools with oil holes cannot be used.

#### Optional Accessories

Straight Collet



PJC Collet G25  
PSC Collet G26  
C Collet G28

Mega Wrench



G33

Axial Adjusting Screw

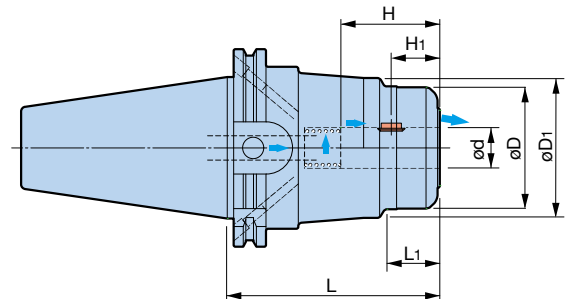


G30

Clamping diameter:  $\phi 20 - \phi 32$ **MEGA PERFECT GRIP** PAT.

A holder equipped with tool Non-Pullout mechanism.  
The unique Key Grip locking mechanism prevents the tool from slipping or pulling out during heavy machining.

Center through

Flood Jet-Through  
CoolantNot BIG-PLUS (DUAL  
CONTACT) specification

## ● Model Description

**DV50** - **MEGA** **20** **DPG** - **105** **ADF**

● DV No.      ● MEGA CHUCK      ● Chuck bore      ● PERFECT GRIP      ● L dimension

| DV SHANK Model                | $\phi d$ | $\phi D$ | $\phi D_1$ | L   | L <sub>1</sub> | H  | H <sub>1</sub> | Mega Wrench | Weight (kg) |
|-------------------------------|----------|----------|------------|-----|----------------|----|----------------|-------------|-------------|
| <b>DV50-MEGA20DPG -105ADF</b> | 20       | 60       | 69         | 105 | 27             | 49 | 24             | MGR60L      | 5.1         |
| <b>-MEGA25DPG -105ADF</b>     | 25       | 70       | 77         |     | 33             | 55 | 23             | MGR70L      | 5.4         |
| <b>-MEGA32DPG -105ADF</b>     | 32       | 80       | 86         |     | 41             | 59 |                | MGR80L      | 5.6         |

1. Key Grip and Spring are included.

2. Wrench is not included. Please order separately.

3. H<sub>1</sub> is the dimension from the center of the Key Grip to the front end of the chuck.

● Key Grips are consumable products. Do not use a damaged Key Grip.

● For coolant through tools, a seal bushing (optional) is required instead of a spring. Please contact us for details.

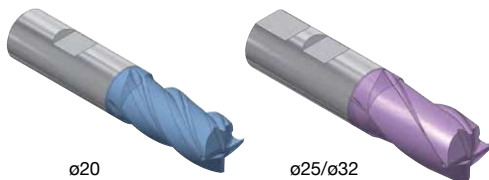
## ■ Standard Accessories

| Chuck size | Key Grip<br> 2 pcs | Spring<br> |
|------------|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| $\phi 20$  | <b>PKG20-2P</b>                                                                                       | <b>PSP1823</b>                                                                                |
| $\phi 25$  | <b>PKG25-2P</b>                                                                                       | <b>PSP2420</b>                                                                                |
| $\phi 32$  | <b>PKG32-2P</b>                                                                                       | <b>PSP3128</b>                                                                                |

1. Key Grips are sold as 2-piece sets.

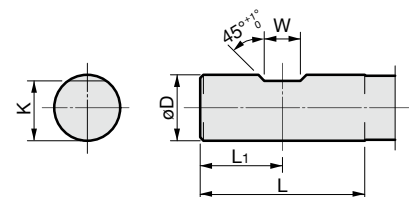
## Cylindrical Shank with Flat Section JIS B 4005 (ISO3338-2)

The following standard shank is required for MEGA Perfect GRIP.



CAUTION

In case you are adding your own flat, the tool projection length in the MEGA Perfect GRIP will be decided by the flat position. Refer to H<sub>1</sub> in the MEGA Perfect GRIP chart, decide the flat position to add, and then cut the cutter at L<sub>1</sub> on cutter shank.



| $\phi D$ |                                                     | L  | L <sub>1</sub> | W       |                                                   | K       |                                                   |
|----------|-----------------------------------------------------|----|----------------|---------|---------------------------------------------------|---------|---------------------------------------------------|
| Nominal  | Tolerance                                           |    |                | Nominal | Tolerance                                         | Nominal | Tolerance                                         |
| 20       | $\begin{smallmatrix} 0 \\ -0.013 \end{smallmatrix}$ | 50 | 25             | 11      | $\begin{smallmatrix} +0.2 \\ 0 \end{smallmatrix}$ | 18.2    | $\begin{smallmatrix} 0 \\ -0.4 \end{smallmatrix}$ |
| 25       |                                                     | 56 | 32             | 12      |                                                   | 23      |                                                   |
| 32       | $\begin{smallmatrix} 0 \\ -0.016 \end{smallmatrix}$ | 60 | 36             | 14      |                                                   | 30      |                                                   |

1. JIS Standards require sizes  $\phi 25$  or higher to be double-flat types. The MEGA Perfect GRIP does not use a rear flat surface, but is capable of clamping double flat shanks.

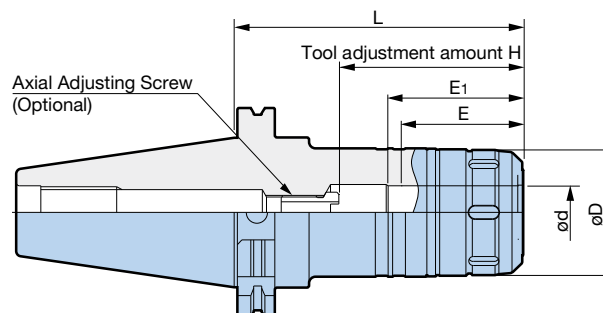
2. JIS B4005 has the same dimensions as International Standard ISO3338-2 and German Standard DIN1835-1.



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



Coolant-through hole



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

| BIG-PLUS<br>BDV SHANK Model | DV SHANK Model         | Clamping<br>diameter $\varnothing D$ | $\varnothing D$ | L   | H        | Min. clamping length |                | Wrench   | MEGA<br>WRENCH<br>Model | Weight<br>(kg) |
|-----------------------------|------------------------|--------------------------------------|-----------------|-----|----------|----------------------|----------------|----------|-------------------------|----------------|
|                             |                        |                                      |                 |     |          | E                    | E <sub>1</sub> |          |                         |                |
| <b>BDV40-HMC20S- 85</b>     | <b>DV40-HMC20S- 85</b> | 20                                   | 50              | 85  | 69 - 79  | 50                   | 56             | FK45-50L | MGR50L                  | 1.6            |
| -105                        | -105                   |                                      |                 | 105 |          |                      |                |          |                         | 1.9            |
| -120                        | -120                   |                                      |                 | 120 |          |                      |                |          |                         | 2.1            |
| <b>-HMC25S- 95</b>          | <b>-HMC25S- 95</b>     | 25                                   | 59              | 95  | 71 - 81  | 56                   | 57             | FK58-62L | MGR59L                  | 2.0            |
| -105                        | -105                   |                                      |                 | 105 |          |                      |                |          |                         | 2.2            |
| <b>-HMC32S- 95</b>          | <b>-HMC32S- 95</b>     |                                      |                 | 95  |          |                      |                |          |                         | 2.1            |
| -105                        | -105                   | 32                                   | 68              | 105 | 79 - 89  | 60                   | 64             | FK68-75L | MGR68L                  | 2.3            |
| -135                        | -135                   |                                      |                 | 135 |          |                      |                |          |                         | 3.0            |
| <b>BDV50-HMC20S-105</b>     | <b>DV50-HMC20S-105</b> | 20                                   | 50              | 105 | 69 - 79  | 50                   | 56             | FK45-50L | MGR50L                  | 3.9            |
| -135                        | -135                   |                                      |                 | 135 |          |                      |                |          |                         | 4.3            |
| <b>-HMC25S-105</b>          | <b>-HMC25S-105</b>     |                                      |                 | 105 | 76 - 86  | 56                   | 57             | FK58-62L | MGR59L                  | 4.2            |
| -135                        | -135                   | 25                                   | 59              | 135 |          |                      |                |          |                         | 4.8            |
| <b>-HMC32S-105</b>          | <b>-HMC32S-105</b>     |                                      |                 | 105 | 88 - 98  | 60                   | 72             | FK68-75L | MGR68L                  | 4.4            |
| -135                        | -135                   |                                      |                 | 135 |          |                      |                |          |                         | 5.2            |
| -165                        | -165                   | 32                                   | 68              | 165 |          |                      |                |          |                         | 6.0            |
| <b>-HMC42S-135</b>          | <b>-HMC42S-135</b>     |                                      |                 | 135 | 93 - 105 | 70                   | 73             | FK80-90L | MGR85L                  | 6.3            |
|                             |                        |                                      |                 |     |          |                      |                |          |                         |                |

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 E<sub>1</sub> or more.

- MEGA WRENCH can also be used to tighten/remove tools.

### Optional Accessories

| Straight Collet                                                                     |            |                                                                                     |     | Wrench                                                                              |                                                                                     | Mega Wrench                                                                         |                                                                                     | Axial Adjusting Screw                                                                |                                                                                       |
|-------------------------------------------------------------------------------------|------------|-------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  | PJC Collet |  | G25 |  |  |  |  |  |  |
|                                                                                     | PSC Collet |  | G26 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |
|                                                                                     | OCA Collet |  | G27 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |
|                                                                                     | C Collet   |  | G28 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |



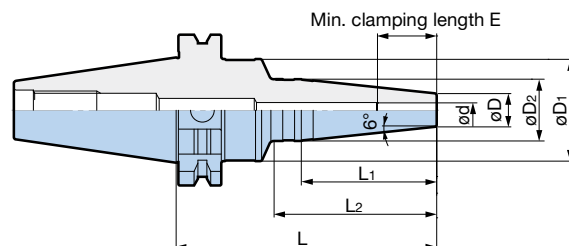
For versatile high-precision machining including molds and automotive components.

- Slim design minimizes workpiece interference, ideal for mold making.



Coolant-through hole

[SUPER SLIM Type PAT.] Clamping diameter:  $\varnothing 4 - \varnothing 12$



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

| BIG-PLUS BDV SHANK Model | Clamping diameter $\varnothing d$ | $\varnothing D$ | $\varnothing D_1$ | $\varnothing D_2$ | L   | L <sub>1</sub> | L <sub>2</sub> | E  | Weight (kg) |
|--------------------------|-----------------------------------|-----------------|-------------------|-------------------|-----|----------------|----------------|----|-------------|
| <b>BDV40-HDC 4S-110</b>  | 4                                 | 14              | 43                | 26                | 110 | 57             | 68             | 19 | 1.2         |
| <b>-HDC 6S-110</b>       | 6                                 |                 |                   |                   |     |                |                | 25 |             |
| <b>-HDC 8S-110</b>       | 8                                 |                 |                   |                   |     |                |                | 31 |             |
| <b>-HDC10S-110</b>       | 10                                | 19              | 44                | 30                |     | 52             | 69             | 33 | 1.3         |
| <b>-HDC12S-110</b>       | 12                                | 21              |                   | 32                |     |                |                | 36 |             |

1. Adjusting Screw cannot be used.

- It is recommended to use a Grip Bar to periodically confirm the gripping force of the Hydraulic Chuck. **G30**

### Caution

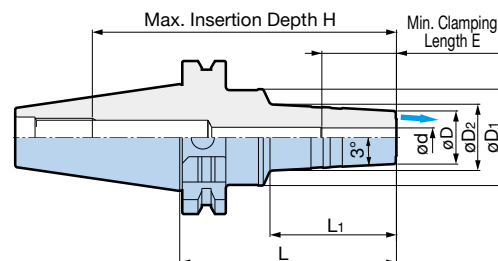
- Use only cutting tools that have a shank tolerance within h6.
- Do not use with cutting tools made with a flat on the shank. (ie: Weldon type shank)

- We do not recommend use with roughing endmills.
- Do not clamp without a tool.
- Always insert the cutting tool into the holder beyond min. clamping length E.

[Jet Through Type PAT.] Clamping diameter:  $\varnothing 4 - \varnothing 12$



Coolant-through hole



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

| BIG-PLUS<br>BDV SHANK Model | Clamping<br>diameter ød | øD | øD <sub>1</sub> | øD <sub>2</sub> | L  | L <sub>1</sub> | H     | E  | Weight<br>(kg) |
|-----------------------------|-------------------------|----|-----------------|-----------------|----|----------------|-------|----|----------------|
| BDV40-HDC 4J- 90            | 4                       | 20 | 38              | 25              | 90 | 50             | (125) | 19 | 1.1            |
| -HDC 6J- 90                 | 6                       |    |                 |                 |    |                |       | 25 |                |
| -HDC 8J- 90                 | 8                       |    |                 |                 |    |                |       | 31 |                |
| -HDC10J- 90                 | 10                      | 24 | 42              | 29              |    | 52             |       | 33 | 1.2            |
| -HDC12J- 90                 | 12                      | 26 | 44              | 31              |    |                |       | 36 |                |

1. Adjusting Screw cannot be used.

2. H dimensions in ( ) are reference length up to the PULLSTUD BOLT.

- It is recommended to use a Grip Bar to periodically confirm the gripping force of the Hydraulic Chuck. **G30**

### Caution

- Use only cutting tools that have a shank tolerance within h6.
- Do not use with cutting tools made with a flat on the shank. (ie: Weldon type shank)

- We do not recommend use with roughing endmills.
- Do not clamp without a tool.
- Always insert the cutting tool into the holder beyond min. clamping length E.

## CK SHANK (DV: DIN69871 A and D Standards)

Coolant-through hole



Not BIG-PLUS (DUAL CONTACT) specification

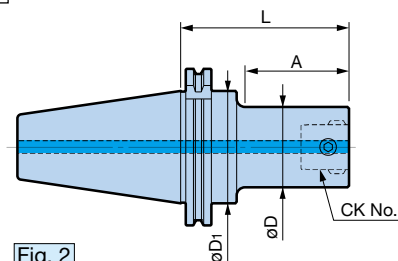


Fig. 2

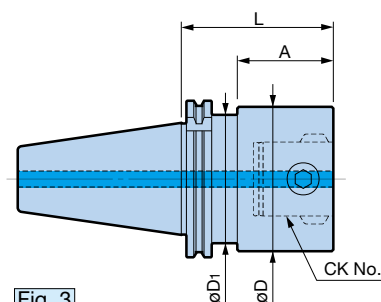


Fig. 3

### Model Description

**DV40** - **CKB1** - **75**

- L dimension
- CK No.
- Shank standard and taper No.

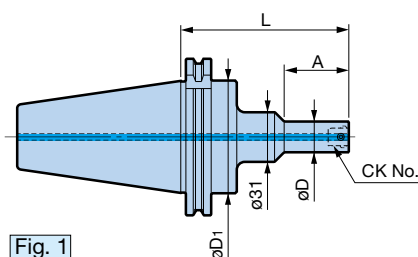


Fig. 1

DV Shank models are mounted on DIN standard spindles.

| DV SHANK Model | Fig. | CK No. | øD <sub>1</sub> | øD | L   | A   | Weight (kg) |
|----------------|------|--------|-----------------|----|-----|-----|-------------|
| DV40-CKB1- 75  | 1    | CK1    | 44.7            | 19 | 75  | 35  | 1.1         |
| -CKB2- 85      | 2    | CK2    |                 | 24 | 85  | 45  | 1.1         |
| -CKB3- 95      |      | CK3    |                 | 31 | 95  | 55  | 1.3         |
| -CKB4- 90      |      | CK4    |                 | 39 | 90  | 54  | 1.4         |
| -CKB5- 80      | 3    | CK5    | 49.6            | 50 | 80  | 60  | 1.5         |
| -CKB6- 65      |      | CK6    |                 | 64 | 65  | 45  | 1.4         |
| DV50-CKB1-105  | 1    | CK1    | 70.1            | 19 | 105 | 39  | 3.0         |
| -CKB2-115      | 2    | CK2    |                 | 24 | 115 | 74  | 3.0         |
| -CKB3-125      |      | CK3    |                 | 31 | 125 | 95  | 3.2         |
| -CKB4-120      |      | CK4    |                 | 39 | 120 | 90  | 3.5         |
| -180           |      |        |                 |    | 180 | 150 | 4.0         |
| -CKB5-105      |      | CK5    |                 | 50 | 105 | 75  | 3.7         |
| -180           |      |        |                 |    | 180 | 150 | 4.8         |
| -225           |      |        |                 |    | 225 | 195 | 5.5         |
| -CKB6- 95      |      | CK6    |                 | 64 | 95  | 59  | 4.1         |
| -170           |      |        |                 |    | 170 | 134 | 6.0         |
| -230           |      |        |                 |    | 230 | 194 | 7.4         |
| -CKB7- 95      | 3    | CK7    | 80              | 90 | 95  | 75  | 5.3         |

1. The L<sub>1</sub> and A diameters in the table are the values when the EWN BORING HEAD is attached.
2. Cutting edges and drive keys are aligned with boring heads mounted.
3. Center through coolant supply is available.
4. Mounting the DV Shank model on an ISO standard spindle may cause interference.

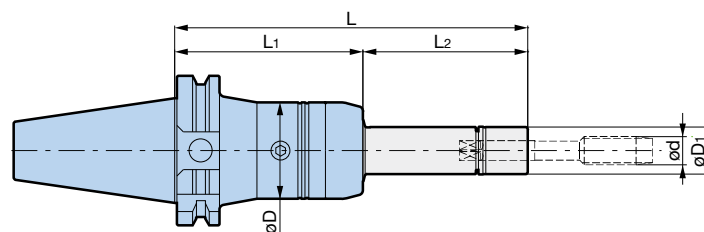
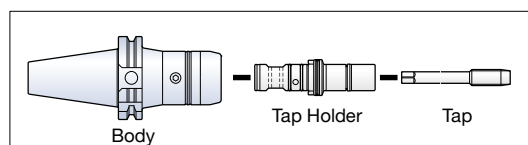
<CAT and ANSI standard shanks are also available upon request.>

Heads **A41**

Improves thread quality and tap life by reducing thrust loads caused by synchronization errors up to 90%.



Coolant-through hole



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

| BIG-PLUS<br>BDV SHANK Model | DV SHANK Model        | Tap Holder Model | Tapping range<br>d                      | øD | øD <sub>1</sub> | L   | L <sub>1</sub> | L <sub>2</sub> | Weight<br>(kg) |
|-----------------------------|-----------------------|------------------|-----------------------------------------|----|-----------------|-----|----------------|----------------|----------------|
| <b>BDV40-MGT 6- 80</b>      | <b>DV40-MGT 6- 80</b> | MGT 6-d- 30      | M2 - M6<br>No.3 - U1/4                  | 36 | 16              | 110 | 80             | 30             | 1.3            |
|                             |                       | - 70             |                                         |    |                 | 150 |                | 70             |                |
|                             |                       | -100             |                                         |    |                 | 180 |                | 100            |                |
| <b>-MGT12- 80</b>           | <b>-MGT12- 80</b>     | MGT12-d- 30      | M6 - M12<br>U1/4 - U7/16<br>P1/8        | 41 | 20 · 30         | 110 | 80             | 30             | 1.3            |
|                             |                       | - 70             |                                         |    |                 | 150 |                | 70             |                |
|                             |                       | -100             |                                         |    |                 | 180 |                | 100            |                |
| <b>-MGT20-105</b>           | <b>-MGT20-105</b>     | MGT20-d- 35      | M12 - M20<br>U1/2 - U3/4<br>P1/4 - P3/8 | 54 | 30              | 140 | 105            | 35             | 1.9            |
|                             |                       | - 85             |                                         |    |                 | 190 |                | 85             |                |
|                             |                       | -115             |                                         |    |                 | 220 |                | 115            |                |
| <b>BDV50-MGT 6- 85</b>      | <b>DV50-MGT 6- 85</b> | MGT 6-d- 30      | M2 - M6<br>No.3 - U1/4                  | 36 | 16              | 115 | 85             | 30             | 3.2            |
|                             |                       | - 70             |                                         |    |                 | 155 |                | 70             |                |
|                             |                       | -100             |                                         |    |                 | 185 |                | 100            |                |
| <b>-MGT12- 85</b>           | <b>-MGT12- 85</b>     | MGT12-d- 30      | M6 - M12<br>U1/4 - U7/16<br>P1/8        | 41 | 20 · 30         | 115 | 85             | 30             | 3.2            |
|                             |                       | - 70             |                                         |    |                 | 155 |                | 70             |                |
|                             |                       | -100             |                                         |    |                 | 185 |                | 100            |                |
| <b>-MGT20-105</b>           | <b>-MGT20-105</b>     | MGT20-d- 35      | M12 - M20<br>U1/2 - U3/4<br>P1/4 - P3/8 | 54 | 30              | 140 | 105            | 35             | 3.8            |
|                             |                       | - 85             |                                         |    |                 | 190 |                | 85             |                |
|                             |                       | -115             |                                         |    |                 | 220 |                | 115            |                |

1. MGT Set Screw is included.

2. Tap holder and wrench are not included. Please order separately.

**Cannot be used with machining center without synchronized tapping function.**

**Caution**

Tap with eccentric thread relief, having no margin on tap periphery, may cause oversize threads.

In such case, tap with con-eccentric thread relief is recommended. **A135**

Tap holders **A136**

### ● Tapping range (DIN/ISO)

| Tap Holder<br>Size | DIN Standard |           |           | ISO Standard |           |
|--------------------|--------------|-----------|-----------|--------------|-----------|
|                    | DIN371       | DIN376    | DIN353    | ISO529       | ISO2284   |
| <b>MGT 6</b>       | M3 - M 6     | M 5 - M 8 |           | M 3 - M5     |           |
| <b>MGT12</b>       | M5 - M10     | M 8 - M12 | 1/8       | M6, M8, M12  | 1/8       |
| <b>MGT20</b>       | M10          | M12 - M20 | 1/4 - 1/2 | M10 - M20    | 1/4 - 3/8 |

Tap holders **A136**

# GENERAL TOOLHOLDER FACE MILL ARBOR TYPE H

DUAL CONTACT  
**BDV/DV**  
SHANK



Center through



Securely supplies coolant/air to the cutting edge

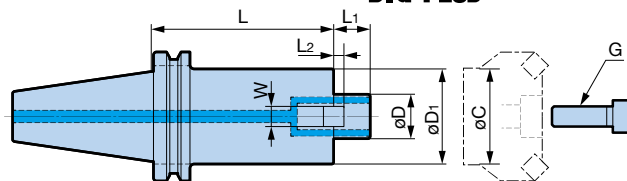
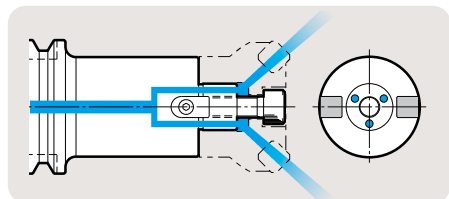


Fig. 1

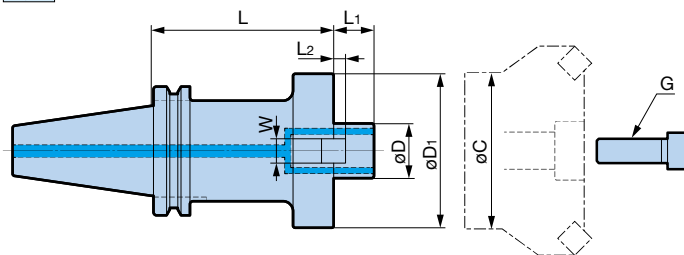


Fig. 2

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

| BIG-PLUS<br>BDV SHANK Model | Fig. | øD | øD <sub>1</sub> | L   | L <sub>1</sub> | L <sub>2</sub> | W  | G                 | Weight (kg) | Min. flange diameter øC |
|-----------------------------|------|----|-----------------|-----|----------------|----------------|----|-------------------|-------------|-------------------------|
| <b>BDV40-FMH16-37- 40</b>   | 1    | 16 | 37              | 40  | 16             | 5              | 8  | M 8               | 1.1         | 28                      |
| <b>-FMH22-47- 45</b>        |      |    |                 | 45  |                |                |    |                   | 1.2         | 38                      |
| <b>- 60</b>                 |      | 22 | 47              | 60  | 18             | 5              | 10 | M10               | 1.4         | 36                      |
| <b>- 90</b>                 |      |    |                 | 90  |                |                |    |                   | 1.8         |                         |
| <b>-150</b>                 |      |    |                 | 150 |                |                |    |                   | 2.5         |                         |
| <b>-60- 50</b>              | 2    | 22 | 60              | 50  | 18             | 5              | 10 | M10               | 1.4         | 38                      |
| <b>- 90</b>                 |      |    |                 | 90  |                |                |    |                   | 2.0         |                         |
| <b>-FMH27-60- 50</b>        |      | 27 | 60              | 50  | 20             | 6              | 12 | M12               | 1.4         | 46                      |
| <b>- 90</b>                 |      |    |                 | 90  |                |                |    |                   | 2.0         |                         |
| <b>-76- 60</b>              |      | 27 | 76              | 60  | 20             | 6              | 12 | M12               | 1.9         | 48                      |
| <b>- 90</b>                 |      |    |                 | 90  |                |                |    |                   | 2.3         |                         |
| <b>-FMH32-96- 60</b>        |      | 32 | 96              | 60  | 22             | 7              | 14 | M16               | 2.1         | 58                      |
| <b>BDV50-FMH16-37-105</b>   | 1    | 16 | 37              | 105 | 16             | 5              | 8  | M 8               | 3.4         | 28                      |
| <b>-FMH22-47- 60</b>        |      |    |                 | 60  |                |                |    |                   | 3.1         | 38                      |
| <b>-105</b>                 |      |    |                 | 105 |                |                |    |                   | 3.7         | 36                      |
| <b>-150</b>                 |      | 22 | 47              | 150 | 18             | 5              | 10 | M10               | 4.3         |                         |
| <b>-200</b>                 |      |    |                 | 200 |                |                |    |                   | 4.9         |                         |
| <b>-250</b>                 |      |    |                 | 250 |                |                |    |                   | 5.6         |                         |
| <b>-60- 60</b>              |      | 22 | 60              | 60  | 18             | 5              | 10 | M10               | 3.5         | 38                      |
| <b>-105</b>                 |      |    |                 | 105 |                |                |    |                   | 4.4         |                         |
| <b>-150</b>                 |      |    |                 | 150 |                |                |    |                   | 5.4         |                         |
| <b>-200</b>                 |      |    |                 | 200 |                |                |    |                   | 6.5         |                         |
| <b>-FMH27-60- 45</b>        |      | 27 | 60              | 45  | 20             | 6              | 12 | M12               | 3.2         | 46                      |
| <b>- 90</b>                 |      |    |                 | 90  |                |                |    |                   | 4.1         |                         |
| <b>-150</b>                 |      |    |                 | 150 |                |                |    |                   | 5.4         |                         |
| <b>-200</b>                 |      |    |                 | 200 |                |                |    |                   | 6.5         |                         |
| <b>-76- 45</b>              |      | 27 | 76              | 45  | 20             | 6              | 12 | M12               | 3.6         | 48                      |
| <b>- 90</b>                 |      |    |                 | 90  |                |                |    |                   | 5.1         |                         |
| <b>-150</b>                 |      |    |                 | 150 |                |                |    |                   | 7.2         |                         |
| <b>-200</b>                 |      |    |                 | 200 |                |                |    |                   | 8.9         |                         |
| <b>-FMH32-96- 50</b>        |      | 32 | 96              | 50  | 22             | 7              | 14 | M16               | 4.1         | 58                      |
| <b>- 90</b>                 |      |    |                 | 90  |                |                |    |                   | 6.2         |                         |
| <b>-150</b>                 |      |    |                 | 150 |                |                |    |                   | 8.4         |                         |
| <b>-200</b>                 |      |    |                 | 200 |                |                |    |                   | 10.4        |                         |
| <b>-FMH40-100- 50</b>       | 2    | 40 | 100             | 50  | 26             | 8.5            | 16 | M20<br>(MBA-M20H) | 4.3         | 70                      |
| <b>- 75</b>                 |      |    |                 | 75  |                |                |    |                   | 5.6         |                         |
| <b>-105</b>                 |      |    |                 | 105 |                |                |    |                   | 6.9         |                         |

- Center through coolant supply only is available.
- The weight does not include the cutter.
- Cutter clamping screw is included.  
If the provided clamping screw is not compatible, separately select one from the clamping screw table on A121.
- When using a cutter without oil holes, an optional clamping screw with a through hole allows coolant supply.
- For the detailed dimensions of clamping screw MBA-M20H, see A121.

# GENERAL TOOLHOLDER FACE MILL ARBOR TYPE H

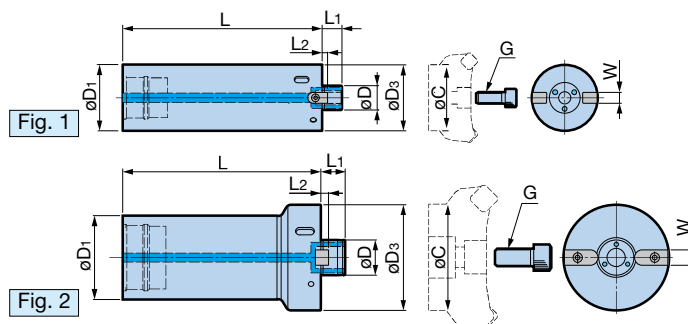
DUAL CONTACT  
BDV/DV  
SHANK

## [Damper Head]



### ● Model Description

|       |   |     |    |    |   |    |   |     |
|-------|---|-----|----|----|---|----|---|-----|
| SDF36 | - | FMH | 22 | DP | - | 47 | - | 180 |
|       |   |     |    |    |   |    |   |     |
|       |   |     |    |    |   |    |   |     |
|       |   |     |    |    |   |    |   |     |
|       |   |     |    |    |   |    |   |     |
|       |   |     |    |    |   |    |   |     |
|       |   |     |    |    |   |    |   |     |
|       |   |     |    |    |   |    |   |     |
|       |   |     |    |    |   |    |   |     |
|       |   |     |    |    |   |    |   |     |



| Model                | Fig. | øD | øD <sub>1</sub> | øD <sub>3</sub> | L   | L <sub>1</sub> | L <sub>2</sub> | W  | G   | Weight (kg) | Wrench Model | Min. flange diameter øC |
|----------------------|------|----|-----------------|-----------------|-----|----------------|----------------|----|-----|-------------|--------------|-------------------------|
| SDF36-FMH22DP-47-180 | 1    | 22 | 47              | 47              | 180 | 18             | 5              | 10 | M10 | 3.0         | FK45-50L     | 36                      |
| -60-180              |      | 22 | 60              | 60              | 180 | 18             | 5              | 10 | M10 | 4.5         | FK58-62L     | 49                      |
| -FMH27DP-60-180      |      | 27 | 60              | 60              | 180 | 20             | 6              | 12 | M12 | 4.5         |              | 46                      |
| SDF57-FMH27DP-76-180 | 1    | 27 | 76              | 76              | 180 | 20             | 6              | 12 | M12 | 8.1         | FK68-75L     | 48                      |
| -FMH32DP-96-180      | 2    | 32 | 76              | 96              | 180 | 22             | 7              | 14 | M16 | 8.7         | FK92-100     | 58                      |

1. Refer to the operation manual regarding the mounting method to the basic holder.
2. The weight does not include the cutter.
3. Hook wrench and cutter clamping screw are included.
4. If the standard clamping screw does not fit the cutter, select the suitable one from the clamping screw table and order it separately. [A121](#)
5. øC indicates the smallest mounting surface diameter of the cutter that can be mounted on the arbor.  
Be careful when using a cutter with the mounting diameter considerably smaller than the cutting diameter, as it may not fit.

# GENERAL TOOLHOLDER SCREW ON HOLDER

DUAL CONTACT  
BDV/DV  
SHANK

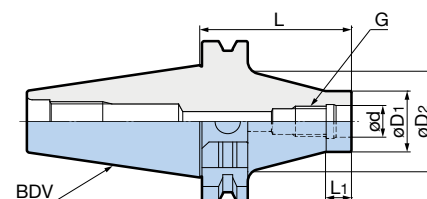
## SCREW-ON HOLDER **NEW**

### ● Base Holders for Screw-On Cutter.



### ● Model Description

|       |   |     |   |    |   |    |
|-------|---|-----|---|----|---|----|
| BDV40 | - | M10 | - | 19 | - | 65 |
|       |   |     |   |    |   |    |
|       |   |     |   |    |   |    |
|       |   |     |   |    |   |    |
|       |   |     |   |    |   |    |
|       |   |     |   |    |   |    |
|       |   |     |   |    |   |    |
|       |   |     |   |    |   |    |
|       |   |     |   |    |   |    |
|       |   |     |   |    |   |    |



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

| BIG-PLUS<br>BDV SHANK Model | ød   | øD <sub>1</sub> | øD <sub>2</sub> | L   | L <sub>1</sub> | G   | Weight (kg) |
|-----------------------------|------|-----------------|-----------------|-----|----------------|-----|-------------|
| BDV40-M10-19- 65            | 10.5 | 19              | 35              | 65  | 10             | M10 | 1.0         |
| -110                        |      |                 |                 | 110 |                |     | 1.2         |
| -M12-24- 60                 | 12.5 | 24              | 40              | 60  |                | M12 | 1.0         |
| -105                        |      |                 |                 | 105 |                |     | 1.3         |
| -M16-29- 55                 | 17   | 29              | 45              | 55  |                | M16 | 1.1         |
| 100                         |      |                 |                 | 100 |                |     | 1.4         |

**NEW BABY CHUCK Type**

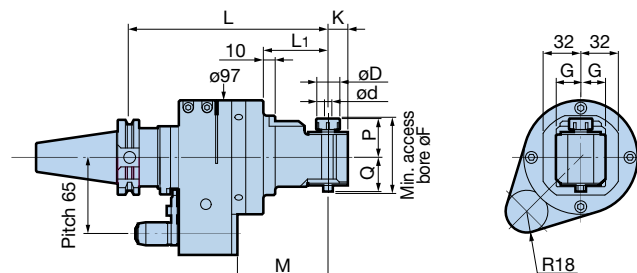
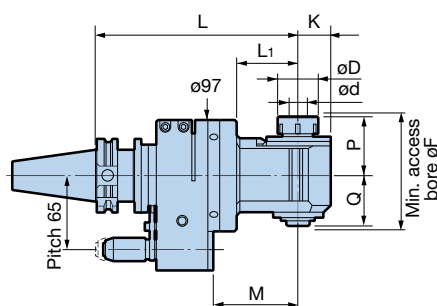
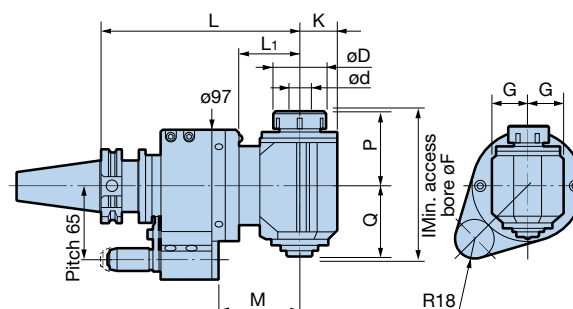
- High runout accuracy is achieved through the adoption of the high-precision New Baby Chuck.

Spindle angle  
90°

## ● Model Description

BDV40 - AG90 / NBS 6 - 180

- L dimension
- Maximum clamping diameter
- NEW BABY CHUCK System
- 90° Head type
- BIG-PLUS DV No.

Fig. 1 Max. 6,000min<sup>-1</sup>Fig. 2 Max. 6,000min<sup>-1</sup>Fig. 3 High Rigidity Type  
Max. 3,000min<sup>-1</sup>

- Tap Collet with tension mechanism can also be used to perform tapping. (NBS10 or larger)

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

| BIG-PLUS<br>BDV SHANK Model | Fig. | Clamping diameter<br>ød | øD | G  | K  | L   | L <sub>1</sub> | M   | P  | Q  | øF  | Collet<br>Model | Speed Ratio<br>Input:Output | Weight<br>(kg) |
|-----------------------------|------|-------------------------|----|----|----|-----|----------------|-----|----|----|-----|-----------------|-----------------------------|----------------|
| BDV40-AG90/NBS 6 -180       | 1    | 0.25 - 6                | 20 | 21 | 17 | 180 | 55             | 77  | 33 | 29 | 67  | NBC 6           | 1:1                         | 5.1            |
| -210                        |      |                         |    |    |    | 210 | 85             | 107 |    |    |     |                 |                             | 5.3            |
| -240                        |      |                         |    |    |    | 240 | 115            | 137 |    |    |     |                 |                             | 5.5            |
| -270                        |      |                         |    |    |    | 270 | 145            | 167 |    |    |     |                 |                             | 5.7            |
| -AG90/NBS10 -180            | 2    | 1.5 - 10                | 30 | 30 | 25 | 180 | 55             | 77  | 45 | 43 | 91  | NBC10           |                             | 5.5            |
| -210                        |      |                         |    |    |    | 210 | 85             | 107 |    |    |     |                 |                             | 5.9            |
| -240                        |      |                         |    |    |    | 240 | 115            | 137 |    |    |     |                 |                             | 6.2            |
| -AG90/NBS13 -180            | 2    | 2.5 - 13                | 35 | 31 | 28 | 180 | 55             | 77  | 52 | 45 | 101 | NBC13           |                             | 5.6            |
| -210                        |      |                         |    |    |    | 210 | 85             | 107 |    |    |     |                 |                             | 6.0            |
| -240                        |      |                         |    |    |    | 240 | 115            | 137 |    |    |     |                 |                             | 6.3            |
| -AG90/NBS20S-175S           | 3    | 2.5 - 20                | 46 | 35 | 33 | 175 | 53             | 72  | 65 | 62 | 132 | NBC20           |                             | 8.0            |

1. The cutting tool rotates in reverse to the machine spindle.
2. Nut and wrench are included. Collet is not included.
3. The angles of the Locating Pin to the drive key groove and direction of cutting edge are freely adjustable.
4. A Stop Block is required when mounting on machines. Please order separately.
5. When supplied through the Stop Block, coolant can be ejected from the housing.
6. Automatic tool change may not be available depending on machine tool models.
7. New Baby Endmill Collets cannot be used.

Collets **G7**Tap Collets **G17**Insertion Length List **B20**Stop Blocks **A170**

The cutting edge angle can be freely adjusted, making it ideal for machining the corners of molds in deep areas.

- The original 1° indexing mechanism allows easy angle adjustment.
- Robust clamping mechanism allows secure endmilling.



Spindle angle  
0° - 90°

## Universal Type



Indexing mechanism in 1° increments

Accurate angle adjustment is possible simply by tightening the angle setting pin.



The spindle angle can be adjusted in the range of 0° to 90°

The 1° angle indexing mechanism allows the angle to be easily set. (Indexing accuracy  $\pm 5'$ )

### Model Description

**BDV40 - AGU / NBS 13 - 280**

- L dimension
- Maximum clamping diameter
- NEW BABY CHUCK System
- Universal Type
- BIG-PLUS DV No.

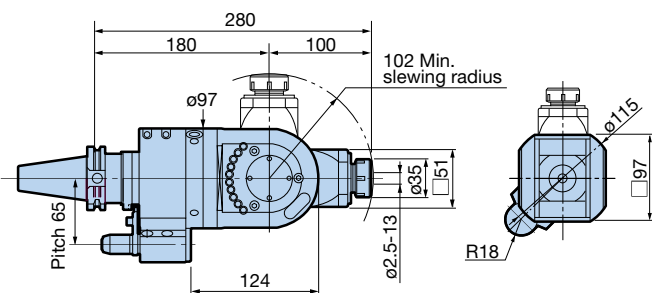


Fig. 1 Max. 6,000min<sup>-1</sup>

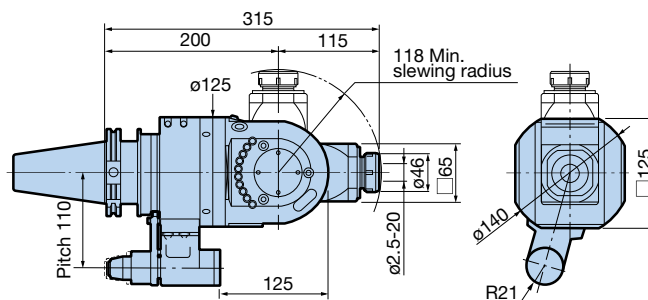


Fig. 2 Max. 4,000min<sup>-1</sup>

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

| BIG-PLUS BDV SHANK Model   | Fig. | Collet Model | Speed Ratio Input:Output | Weight (kg) |
|----------------------------|------|--------------|--------------------------|-------------|
| <b>BDV40-AGU/NBS13-280</b> | 1    | NBC13        | 1:1                      | 9.7         |
| <b>BDV50-AGU/NBS20-315</b> | 2    | NBC20        |                          | 20.8        |

● Tap Collet with tension mechanism can also be used to perform tapping.

1. The cutting tool rotates in reverse to the machine spindle.
2. Nut and wrench are included. Collet is not included.
3. The angles of the Locating Pin to the drive key groove and direction of cutting edge are freely adjustable.
4. A Stop Block is required when mounting on machines. Please order separately.
5. Automatic tool change may not be available depending on machine tool models

Collets **G7**

Tap Collets **G17**

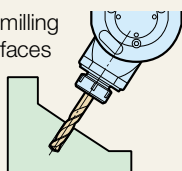
Insertion Length List **B20**

Stop Blocks **A170**

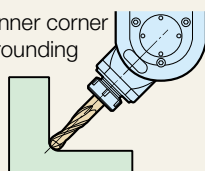


## Machining examples Easy angle setup

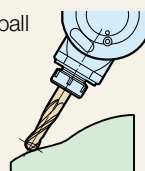
- Drilling or endmilling on angled surfaces



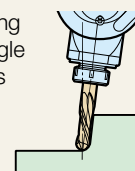
- Inner corner rounding



- Profiling with ball endmill



- Machining draft angle of molds





# AIR TURBINE SPINDLE

DUAL CONTACT  
BDV/DV  
SHANK

The ultra-precision spindle enables challenging micromachining!

Ceramic ball bearing type  
RBX Series

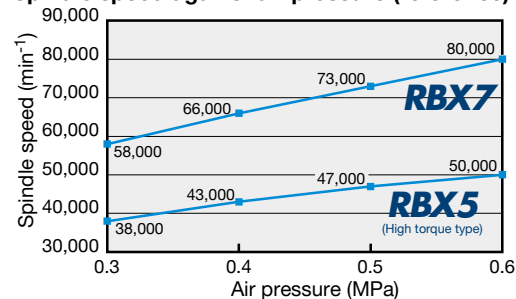
Machine spindle  
rotation zero



Max.  
80,000min<sup>-1</sup>

|                                              | RBX5                       | RBX7            |
|----------------------------------------------|----------------------------|-----------------|
| Operating spindle speed (min <sup>-1</sup> ) | 40,000 - 50,000            | 60,000 - 80,000 |
| Clamping diameter                            | ø0.45 - 4.05mm (MEGA4S)    |                 |
| Spindle nose runout accuracy                 | Within 1 μm                |                 |
| Air pressure                                 | 0.3 - 0.6MPa               |                 |
| Air flow rate                                | 300L/min [ANR] (at 0.6MPa) |                 |

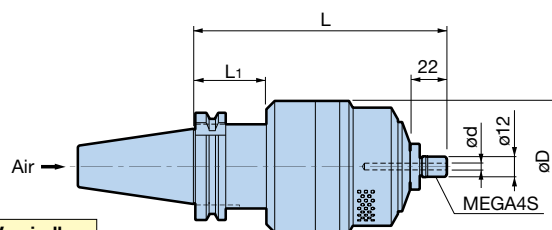
Spindle speed against air pressure (reference)



## [Center Through Type]



ATC compatible



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

| BIG-PLUS BDV SHANK Model | Operating spindle speed (min <sup>-1</sup> ) | Clamping diameter ød | Usable tool diameter | L   | L <sub>1</sub> | øD | Weight (kg) |
|--------------------------|----------------------------------------------|----------------------|----------------------|-----|----------------|----|-------------|
| BDV40-RBX5C-4S-150       | 40,000 - 50,000                              | 0.45 - 4.05          | ø1.5 or smaller      | 150 | 43             | 96 | 4.1         |
| -RBX7C-4S-150            | 60,000 - 80,000                              |                      | ø1.0 or smaller      |     |                | 78 | 3.1         |
| BDV50-RBX5C-4S-145       | 40,000 - 50,000                              | 0.45 - 4.05          | ø1.5 or smaller      | 145 | 38             | 96 | 6.8         |
| -RBX7C-4S-145            | 60,000 - 80,000                              |                      | ø1.0 or smaller      |     |                | 78 | 5.8         |

1. Nut, exclusive wrench (RBX5, 7 → XW27) and Mega Wrench (MGR12) are included.  
Collet is not included. Please order separately.

2. Air filter regulator (XF1) is required. A178

Micro Collets G4

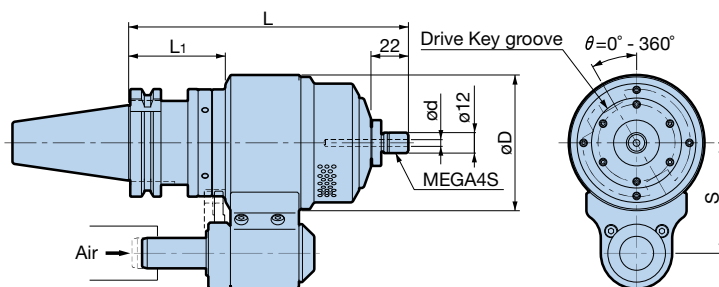


• Clean air is an essential condition for the use of this product.  
Therefore, coolant should never be supplied through the spindle of the machine using the Air Turbine Spindle.

## [Side Through Type]



ATC compatible



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

| BIG-PLUS BDV SHANK Model | Operating spindle speed (min <sup>-1</sup> ) | Usable tool diameter | L   | L <sub>1</sub> | øD  | S  | Weight (kg) |
|--------------------------|----------------------------------------------|----------------------|-----|----------------|-----|----|-------------|
| BDV40-RBX5-4S-165-65     | 40,000 - 50,000                              | ø1.5 or smaller      | 165 | 57             | 96  | 65 | 5.0         |
| -RBX7-4S-165-65          | 60,000 - 80,000                              | ø1.0 or smaller      |     |                | 80  |    | 4.0         |
| BDV50-RBX5-4S-170-80     | 40,000 - 50,000                              | ø1.5 or smaller      | 170 | 62             | 100 | 80 | 9.7         |
| -RBX7-4S-170-80          | 60,000 - 80,000                              | ø1.0 or smaller      |     |                | 100 |    | 8.7         |

1. Nut, exclusive wrench (RBX5, 7 → XW27) and Mega Wrench (MGR12) are included.  
Collet is not included. Please order separately.

2. Air filter regulator (XF1) is required. A178

3. A Stop Block is required when mounting on machines. Please order separately.



Micro Collets G4

Stop Blocks A170

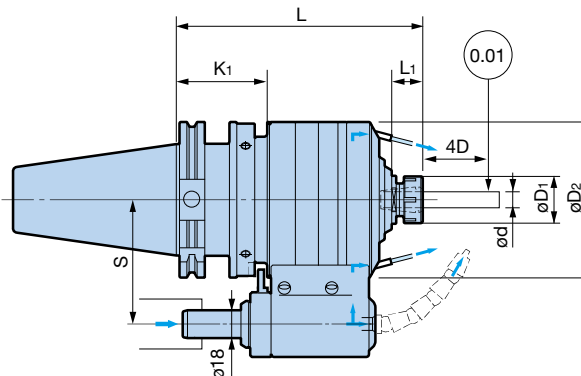
Accelerates the machine spindle. Improves productivity for machines with low spindle speeds.

- BIG's gear drive with a long track record is used for the drive system. High torque and low heat generation are achieved.



Max.  
**20,000min<sup>-1</sup>**

## GTG Type



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

Please contact our agent when using neat oil coolant that may cause fire, or grinding or machining materials that generate powdery chips such as carbide.

| BIG-PLUS<br>BDV SHANK Model | ød       | L   | L <sub>1</sub> | øD <sub>1</sub> | øD <sub>2</sub> | K <sub>1</sub> | S  | Collet<br>Model | Speed<br>ratio | Max.<br>(min <sup>-1</sup> ) | Weight<br>(kg) |
|-----------------------------|----------|-----|----------------|-----------------|-----------------|----------------|----|-----------------|----------------|------------------------------|----------------|
| <b>BDV40-GTG5-10-155</b>    | 1.5 - 10 | 155 | 20             | 30              | 80              | 58             | 65 | NBC10           | 4.67           | 20,000                       | 5.0            |
| <b>BDV50-GTG6-10-163</b>    | 1.5 - 10 | 163 | 20             | 30              | 100             | 63             | 80 | NBC10           | 5.67           | 20,000                       | 9.0            |
| <b>-GTG4-16-182</b>         | 2.5 - 16 | 182 | 25.5           | 42              | 110             | 63             | 80 | NBC16           | 3.80           | 15,000                       | 10.8           |

1. The allowable torque is a calculated value of the drive system, and not the actual torque in cutting.
2. The maximum diameter when using an endmill is ø8 (GTG5, GTG6) and ø12 (GTG4).
3. A Stop Block is required when mounting on machines.
4. For continuous rotation of over 30 minutes, the spindle speed should be set within 80% of the maximum speed.
5. Nut, wrench, and exclusive spanner are included.



Collets **G7** Stop Blocks **A170**

| Body Model     | Included Collet Model (1 pc) |
|----------------|------------------------------|
| <b>GTG5-10</b> | NBC10-10AA                   |
| <b>GTG6-10</b> | NBC10-10AA                   |
| <b>GTG4-16</b> | NBC16-16AA                   |

## GTX Type

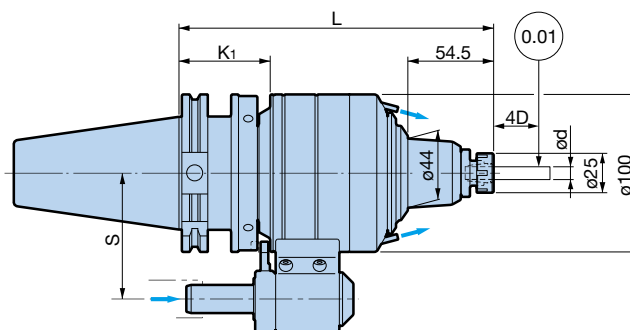
- Bending rigidity is significantly improved.
- Long nose design ideal for mold machining.

Max.  
**24,000min<sup>-1</sup>**



**Ideal for mold machining!**

Speed Ratio: **5.67**



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

| BIG-PLUS<br>BDV SHANK Model | ød      | L   | K <sub>1</sub> | S  | Collet<br>Model | Max. speed<br>(30 min) min <sup>-1</sup> | Continuous<br>speed min <sup>-1</sup> | Weight<br>(kg) |
|-----------------------------|---------|-----|----------------|----|-----------------|------------------------------------------|---------------------------------------|----------------|
| <b>BDV50-GTX6-8-205</b>     | 0.5 - 8 | 205 | 62             | 80 | NBC8            | 24,000                                   | 20,000                                | 9.5            |

1. The allowable torque is a calculated value of the drive system, and not the actual torque in cutting.
2. The maximum clamping diameter when using a drill is ø4mm.
3. A Stop Block is required when mounting on machines.
4. For continuous operation of over 30 minutes, the continuous speed is recommended.
5. Collet is not included. Please order separately.
6. Nut, wrench, and exclusive spanner are included.



Stop Blocks **A170** Collets **G7**

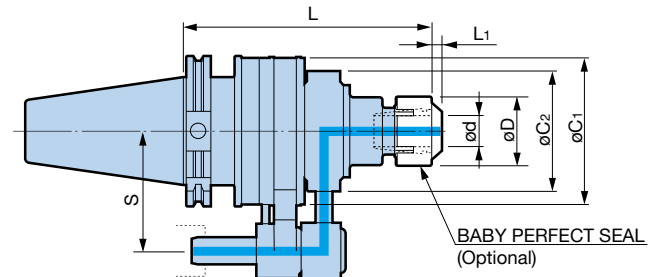
Unique separate sealing structure extends life.

- Independent bearing and sealing sections eliminate infiltration of coolant into bearings.
- The seal replacement system allows maintenance and thus helps reduce costs.

## NEW BABY CHUCK Type



Not BIG-PLUS (DUAL CONTACT) specification



| DV SHANK Model   | Clamping diameter ød | øD | L   | øC <sub>1</sub> | øC <sub>2</sub> | S  | Collet Model | Max. (min <sup>-1</sup> ) | Merit Set | Weight (kg) |
|------------------|----------------------|----|-----|-----------------|-----------------|----|--------------|---------------------------|-----------|-------------|
| DV40-ONBS13N-165 | 3 - 13               | 35 | 165 | 81.6            | 73              | 65 | NBC13        | 10,000                    | MES-40    | 4.0         |
| -ONBS16N-165     | 3 - 16               | 42 |     |                 | 80              |    | NBC16        | 8,000                     | MES-50    | 4.3         |
| -ONBS20N-165     | 3 - 20               | 46 |     |                 |                 |    | NBC20        | 8,000                     |           | 4.3         |
| DV50-ONBS13N-165 | 3 - 13               | 35 | 165 | 99.6            | 80              | 80 | NBC13        | 8,000                     | MES-50    | 7.3         |
| -ONBS16N-165     | 3 - 16               | 42 |     |                 |                 |    | NBC16        |                           |           | 7.3         |
| -ONBS20N-165     | 3 - 20               | 46 |     |                 |                 |    | NBC20        |                           |           | 7.5         |

1. Max. coolant pressure is 2MPa.
2. Wrench, nut (BPS), collet and Adjusting Screw are sold separately.  
Order together with a Baby Perfect Seal of appropriate size.
3. For L<sub>1</sub>, refer to the Baby Perfect Seal **G15**
4. A Stop Block is required when mounting on machines. Please order separately.



Stop Blocks **A170**

Using neat oil coolant carries a risk of fire due to excessive heat generation or ignition of the holder.

### Optional Accessories

Collet



**G7**

BABY PERFECT SEAL



**G15**

Adjusting Screw



**G23**

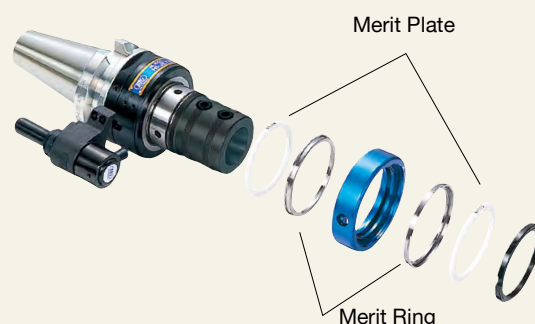
### Maintenance parts for seal Merit Set

If excessive coolant leak occurs while using the Hi-JET holder due to wear of the seal, purchase the seal replacement part "Merit Set".

The model name is indicated in the dimension table for each Hi-JET Holder type.

<Merit Set contents>

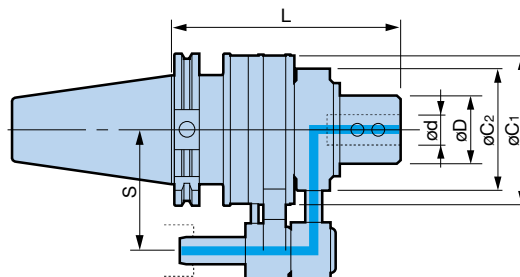
- Merit Ring ● Merit Plate ● O-rings for Merit Case, 2 pcs each



1. Merit Set replacement at BIG is also available. Please feel free to contact us.

**SIDE LOCK TYPE**

- For cylindrical shank oil hole drills.

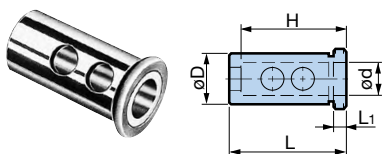
**Not BIG-PLUS (DUAL CONTACT) specification**

| DV SHANK Model  | ød | øD | L   | øC <sub>1</sub> | øC <sub>2</sub> | S    | Max.<br>(min <sup>-1</sup> ) | Merit Set | Weight (kg) |     |
|-----------------|----|----|-----|-----------------|-----------------|------|------------------------------|-----------|-------------|-----|
| DV40-OSL16N-150 | 16 | 48 | 150 | 81.6            | 80              | 65   | 8,000                        | MES-50    | 4.4         |     |
| -OSL20N-150     | 20 |    | 165 |                 | 80              |      |                              |           | 4.3         |     |
| -OSL25N-165     | 25 |    |     |                 | 80              |      |                              |           | 4.4         |     |
| -OSL32N-165     | 32 | 58 | 165 | 99.6            | 98              | 80   | 6,000                        | MES-65    | 5.7         |     |
| DV50-OSL16N-150 | 16 | 48 |     | 150             | 99.6            |      | 80                           | 8,000     | MES-50      | 7.5 |
| -OSL20N-150     | 20 |    |     | 165             |                 |      | 80                           |           |             | 7.4 |
| -OSL25N-165     | 25 |    |     |                 |                 |      | 98                           |           |             | 7.5 |
| -OSL32N-165     | 32 | 58 |     | 129.6           | 121             |      | 80                           | 6,000     | MES-65      | 7.9 |
| -OSL40N-165     | 40 | 64 | 8.0 |                 |                 |      |                              |           |             |     |
| -OSL50N-185     | 50 | 84 | 185 |                 |                 | 11.9 |                              |           |             |     |

1. Max. coolant pressure is 2MPa.

2. A Stop Block is required when mounting on machines. Please order separately.

Using neat oil coolant carries a risk of fire due to excessive heat generation or ignition of the holder.

Stop Blocks **A170**For Side Lock type  
SL Sleeve

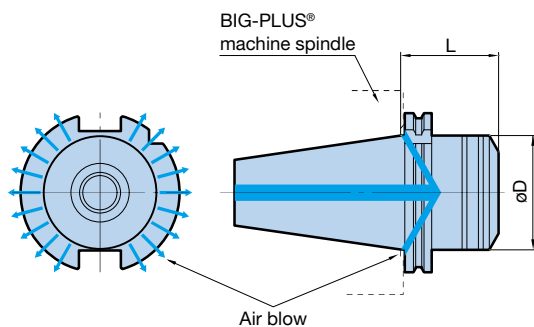
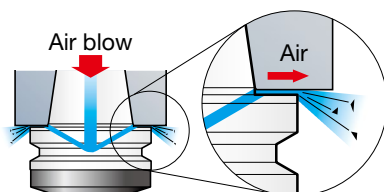
| Model           | ød | øD | L  | L <sub>1</sub> | H  |
|-----------------|----|----|----|----------------|----|
| <b>OSL25-16</b> | 16 | 25 | 62 | 5.5            | 48 |
| <b>-20</b>      | 20 |    |    |                | 50 |
| <b>OSL32-16</b> | 16 | 32 | 66 | 5.5            | 48 |
| <b>-20</b>      | 20 |    |    |                | 50 |
| <b>-25</b>      | 25 |    |    |                | 56 |

| Model           | ød | øD | L  | L <sub>1</sub> | H  |
|-----------------|----|----|----|----------------|----|
| <b>OSL40-16</b> | 16 | 40 | 76 | 5.5            | 48 |
| <b>-20</b>      | 20 |    |    |                | 50 |
| <b>-25</b>      | 25 |    |    |                | 56 |
| <b>-32</b>      | 32 |    |    |                | 60 |

**OTHER TOOLS****BIG-PLUS SPINDLE  
FLANGE FACE CLEANER**

Cleans the spindle flange face of BIG-PLUS machines.

- Removes oil and chips on the spindle flange face.



| Model                | øD | L  |
|----------------------|----|----|
| <b>SDV40-ASC-40T</b> | 45 | 40 |
| <b>SDV50-ASC-60T</b> | 70 | 60 |

1. When the Flange Face Cleaner is mounted on the BIG-PLUS machine tool spindle, a 1mm gap exists between the flanges of the spindle and the cleaner.