



Tooling Systems

HPMC™ Milling Chucks

These new chucks are ideal for holding all round shank cutting tools and extensions on various applications with greater versatility, which is an excellent choice for milling, drilling, reaming, and boring operations.

- New upgrade product line
- Balanced and balanceable with threaded holes in chuck as standard for fine tuning
- Supplied with coolant through stopscrew
- Form B/AD as standard on V-flange tooling

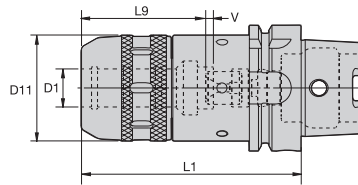
The HPMC milling chuck with its powerful gripping torque provides the maximum performance for tough roughing applications as well as excellent accuracy for finishing applications using the same chuck.



➤ DISTRIBUTED BY:

HSK 63A Shank Tools

Milling Chucks — High Performance



- Heavy and fine milling capabilities.
- Pre-balanced G6.3 @ 15,000 rpm — 6 threaded M6 holes to accept set screws for fine balancing.
- Heavy milling with locknut tightened to face stop, runout $\leq 0,01\text{mm}$ (.0004") 3x D1.
- Fine milling with locknut tightened to face stop and backed off 1/2 turn, runout $\leq 0,005\text{mm}$ (.0002") 3x D1.
- Sub-zero heat treatment for material stability.
- Through-the-toolholder coolant capability using stop screw as sealing device.
- 10mm (3/8") axial adjustment stop screw.

■ HPMC-HSK Form A — Metric

| order number | catalog number | D1 | D11 | L1 | L9 | V | locknut wrench | stop screw | wrench size-stop screw |
|--------------|------------------|----|-----|-----|----|----|----------------|------------|------------------------|
| 3100547 | HSK63AHPMC20110M | 20 | 53 | 110 | 56 | 10 | PSW52M | MCSS16018M | 2.5MM & 5MM |
| 3100548 | HSK63AHPMC32120M | 32 | 70 | 120 | 66 | 10 | PSW68M | MCSS16018M | 2.5MM & 5MM |

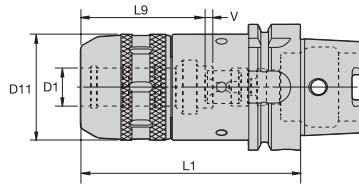
■ HPMC-HSK Form A — Inch

| order number | catalog number | D1 | D11 | L1 | L9 | V | locknut wrench | stop screw | wrench size-stop screw |
|--------------|------------------|-------|------|------|------|-----|----------------|------------|------------------------|
| 3100544 | HSK63AHPMC075433 | 3/4 | 2.09 | 4.33 | 2.20 | .39 | PSW52M | MCSS16018M | 2.5MM & 5MM |
| 3100545 | HSK63AHPMC100472 | 1 | 2.40 | 4.72 | 2.60 | .39 | PSW58M | MCSS16018M | 2.5MM & 5MM |
| 3100546 | HSK63AHPMC125472 | 1 1/4 | 2.76 | 4.72 | 2.56 | .39 | PSW68M | MCSS16018M | 2.5MM & 5MM |

- Milling chuck technical section, see page 814 in the Tooling Systems 7030 Catalog.
- Supplied with locknut and stop screw.
- Locknut wrench not included.
- Optional M6-1,0p fine-balancing screw set is available (order number HPMCBALSCREWSET) and must be ordered separately; see page 740 in the Tooling Systems 7030 Catalog.
- Reduction sleeves are available and must be ordered separately; see page 653 in the Tooling Systems 7030 Catalog.
- HSK coolant unit and wrench are available and must be ordered separately; see page 763 in the Tooling Systems 7030 Catalog.

HSK 100A Shank Tools

Milling Chucks — High Performance



- Heavy and fine milling capabilities.
- Pre-balanced G6.3 @ 15,000 rpm — 6 threaded M6 holes to accept set screws for fine balancing.
- Heavy milling with locknut tightened to face stop, runout $\leq 0,01\text{mm}$ (.0004") 3x D1.
- Fine milling with locknut tightened to face stop and backed off 1/2 turn, runout $\leq 0,005\text{mm}$ (.0002") 3x D1.
- Sub-zero heat treatment for material stability.
- Through-the-toolholder coolant capability using stop screw as sealing device.
- 10mm (3/8") axial adjustment stop screw.

■ HPMC-HSK Form A — Metric

| order number | catalog number | D1 | D11 | L1 | L9 | V | locknut wrench | stop screw | wrench size-stop screw |
|--------------|-------------------|----|-----|-----|----|---------|----------------|------------|------------------------|
| 3100542 | HSK100AHPMC20115M | 20 | 53 | 115 | 54 | 10 3,13 | PSW52M | MCSS16018M | 2.5MM & 5MM |
| 3100543 | HSK100AHPMC32135M | 32 | 70 | 135 | 68 | 10 4,13 | PSW68M | MCSS16018M | 2.5MM & 5MM |

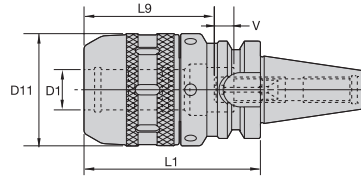
■ HPMC-HSK Form A — Inch

| order number | catalog number | D1 | D11 | L1 | L9 | V | locknut wrench | stop screw | wrench size-stop screw |
|--------------|-------------------|-------|------|------|------|----------|----------------|------------|------------------------|
| 3100539 | HSK100AHPMC075453 | 3/4 | 2.09 | 4.53 | 2.05 | .39 7.00 | PSW52M | MCSS16018M | 2.5MM & 5MM |
| 3100540 | HSK100AHPMC100512 | 1 | 2.40 | 5.12 | 2.56 | .39 8.45 | PSW58M | MCSS16018M | 2.5MM & 5MM |
| 3100541 | HSK100AHPMC125531 | 1 1/4 | 2.76 | 5.32 | 2.68 | .39 9.05 | PSW68M | MCSS16018M | 2.5MM & 5MM |

- Milling chuck technical section, see page 814 in the Tooling Systems 7030 Catalog.
- Supplied with locknut and stop screw.
- Locknut wrench not included.
- Optional M6-1,0p fine-balancing screw set is available (order number HPMCBALSCREWSET) and must be ordered separately; see page 740 in the Tooling Systems 7030 Catalog.
- Reduction sleeves are available and must be ordered separately; see page 653 in the Tooling Systems 7030 Catalog.
- HSK coolant unit and wrench are available and must be ordered separately; see page 763 in the Tooling Systems 7030 Catalog.

BT 30 Shank Tools

Milling Chucks — High Performance



- Heavy and fine milling capabilities.
- Pre-balanced G6.3 @ 20,000 rpm — 6 threaded M6 holes to accept set screws for fine balancing.
- Heavy milling — tighten locknut until O-ring on back face of locknut just touches the flange on the chuck body to achieve runout $\leq 0,01\text{mm}$ (.0004") $3 \times D1$.
- Fine milling — tighten as above, then back the locknut off 1/8–1/4 turn to achieve runout $\leq 0,005\text{mm}$ (.0002") $3 \times D1$.
- Sub-zero heat treatment for material stability.
- Through-the-toolholder coolant capability using stop screw as sealing device — form AD.
- 15mm (19/32") axial adjustment stop screw.

■ HPMC-BT Form AD — Metric

| order number | catalog number | D1 | D11 | L1 | L9 | V | kg | locknut wrench | stop screw | wrench size-stop screw |
|--------------|----------------|----|-----|----|----|----|------|----------------|------------|------------------------|
| 3578486 | BT30HPMC20085M | 20 | 53 | 85 | 55 | 15 | 1,00 | PSW52M | MCSS12030M | 2.5MM & 5MM |

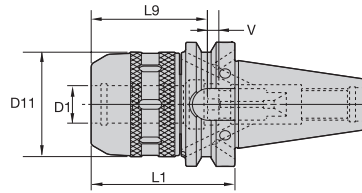
■ HPMC-BT Form AD — Inch

| order number | catalog number | D1 | D11 | L1 | L9 | V | lbs. | locknut wrench | stop screw | wrench size-stop screw |
|--------------|----------------|-----|------|------|------|-----|------|----------------|------------|------------------------|
| 3100411 | BT30HPMC075335 | 3/4 | 2.09 | 3.35 | 2.17 | .59 | 2.50 | PSW52M | MCSS12030M | 2.5MM & 5MM |

- Milling chuck technical section, see page 814 in the Tooling Systems 7030 Catalog.
- Supplied with locknut and stop screw.
- Locknut wrench not included.
- Optional M6~1,0p fine-balancing screw set is available (order number HPMCBALSCREWSET) and must be ordered separately; see page 740 in the Tooling Systems 7030 Catalog.
- Reduction sleeves are available and must be ordered separately; see page 653 in the Tooling Systems 7030 Catalog.
- For retention knobs, see page 764 in the Tooling Systems 7030 Catalog.

BT 40 Shank Tools

Milling Chucks — High Performance



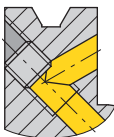
- Heavy and fine milling capabilities.
- Pre-balanced G6.3 @ 20,000 rpm — 6 threaded M6 holes to accept set screws for fine balancing.
- Heavy milling — tighten locknut until O-ring on back face of locknut just touches the flange on the chuck body to achieve runout $\leq 0,01\text{mm}$ (.0004") 3x D1.
- Fine milling — tighten as above, then back the locknut off 1/8–1/4 turn to achieve runout $\leq 0,005\text{mm}$ (.0002") 3x D1.
- Sub-zero heat treatment for material stability.
- Through-the-toolholder coolant capability using stop screw as sealing device — form AD or form B.
- 20mm (3/4") axial adjustment stop screw.

■ HPMC-BT Form B/AD Metric

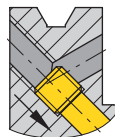
| order number | catalog number | D1 | D11 | L1 | L9 | V | kg | locknut wrench | stop screw | wrench size-stop screw |
|--------------|-----------------|----|-----|-----|----|----|------|----------------|------------|------------------------|
| 3578487 | BT40BHPMC20075M | 20 | 53 | 75 | 47 | 20 | 1,50 | PSW52M | MCSS16040M | 2.5MM & 5MM |
| 3578488 | BT40BHPMC20120M | 20 | 53 | 120 | 50 | 20 | 2,20 | PSW52M | MCSS16040M | 2.5MM & 5MM |
| 3578489 | BT40BHPMC25085M | 25 | 61 | 85 | 55 | 20 | 1,80 | PSW58M | MCSS16040M | 2.5MM & 5MM |
| 3578490 | BT40BHPMC25120M | 25 | 61 | 120 | 55 | 20 | 2,50 | PSW58M | MCSS16040M | 2.5MM & 5MM |
| 3578491 | BT40BHPMC32090M | 32 | 70 | 90 | 58 | 20 | 2,10 | PSW68M | MCSS16040M | 2.5MM & 5MM |
| 3578492 | BT40BHPMC32120M | 32 | 70 | 120 | 58 | 20 | 2,70 | PSW68M | MCSS16040M | 2.5MM & 5MM |

■ HPMC-BT Form B/AD Inch

| order number | catalog number | D1 | D11 | L1 | L9 | V | lbs. | locknut wrench | stop screw | wrench size-stop screw |
|--------------|-----------------|-------|------|------|------|-----|------|----------------|------------|------------------------|
| 3100412 | BT40BHPMC075295 | 3/4 | 2.09 | 2.95 | 1.85 | .79 | 3.30 | PSW52M | MCSS16040M | 2.5MM & 5MM |
| 3100413 | BT40BHPMC075472 | 3/4 | 2.09 | 4.72 | 1.97 | .79 | 4.90 | PSW52M | MCSS16040M | 2.5MM & 5MM |
| 3100414 | BT40BHPMC100335 | 1 | 2.40 | 3.35 | 2.17 | .79 | 4.10 | PSW58M | MCSS16040M | 2.5MM & 5MM |
| 3100415 | BT40BHPMC100472 | 1 | 2.40 | 4.72 | 2.17 | .79 | 5.70 | PSW58M | MCSS16040M | 2.5MM & 5MM |
| 3100416 | BT40BHPMC125354 | 1 1/4 | 2.76 | 3.54 | 2.28 | .79 | 4.50 | PSW68M | MCSS16040M | 2.5MM & 5MM |
| 3100417 | BT40BHPMC125472 | 1 1/4 | 2.76 | 4.72 | 2.28 | .79 | 6.10 | PSW68M | MCSS16040M | 2.5MM & 5MM |



Toolholders are factory set to the form B coolant supply position. When relocating coolant position screws, use of a removable liquid (small screw thread locker) is recommended.

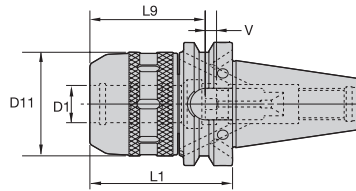


The toolholder can be easily converted to DIN 69871 form AD coolant supply; tightening screws will stop coolant from escaping through the flange.

- Milling chuck technical section, see page 814 in the Tooling Systems 7030 Catalog.
- Supplied with locknut and stop screw.
- Locknut wrench not included.
- Optional M6-1,0p fine-balancing screw set is available (catalog number HPMCBALSCREWSET) and must be ordered separately; see page 740 in the Tooling Systems 7030 Catalog.
- Reduction sleeves are available and must be ordered separately; see page 653 in the Tooling Systems 7030 Catalog.
- For retention knobs, see page 764 in the Tooling Systems 7030 Catalog.

BT 50 Shank Tools

Milling Chucks — High Performance



- Heavy and fine milling capabilities.
- Pre-balanced G6.3 @ 20,000 rpm — 6 threaded M6 holes to accept set screws for fine balancing.
- Heavy milling — tighten locknut until O-ring on back face of locknut just touches the flange on the chuck body to achieve runout $\leq 0,01\text{mm}$ (.0004") 3x D1.
- Fine milling — tighten as above, then back the locknut off 1/8–1/4 turn to achieve runout $\leq 0,005\text{mm}$ (.0002") 3x D1.
- Sub-zero heat treatment for material stability.
- Through-the-toolholder coolant capability using stop screw as sealing device — form AD or form B.
- 20mm (3/4") axial adjustment stop screw.

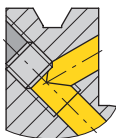
■ HPMC-BT Form B/AD Metric

| order number | catalog number | D1 | D11 | L1 | L9 | V | kg | locknut wrench | stop screw | wrench size-stop screw |
|--------------|-----------------|----|-----|-----|----|----|------|----------------|------------|------------------------|
| 3578563 | BT50BHPMC20105M | 20 | 53 | 105 | 50 | 20 | 4,40 | PSW52M | MCSS16040M | 2.5MM & 5MM |
| 3578564 | BT50BHPMC20165M | 20 | 53 | 165 | 50 | 20 | 5,30 | PSW52M | MCSS16040M | 2.5MM & 5MM |
| 3578565 | BT50BHPMC25105M | 25 | 61 | 105 | 55 | 20 | 4,60 | PSW58M | MCSS16040M | 2.5MM & 5MM |
| 3578566 | BT50BHPMC25165M | 25 | 61 | 165 | 55 | 20 | 5,80 | PSW58M | MCSS16040M | 2.5MM & 5MM |
| 3578567 | BT50BHPMC32105M | 32 | 74 | 105 | 75 | 20 | 4,90 | PSW68M | MCSS16040M | 2.5MM & 5MM |
| 3578568 | BT50BHPMC32165M | 32 | 74 | 165 | 75 | 20 | 6,50 | PSW68M | MCSS16040M | 2.5MM & 5MM |

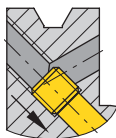
■ HPMC-BT Form B/AD Inch

| order number | catalog number | D1 | D11 | L1 | L9 | V | lbs. | locknut wrench | stop screw | wrench size-stop screw |
|--------------|-----------------|-------|------|------|------|-----|-------|----------------|------------|------------------------|
| 3100418 | BT50BHPMC075413 | 3/4 | 2.09 | 4.13 | 1.93 | .79 | 9.70 | PSW52M | MCSS16040M | 2.5MM & 5MM |
| 3100419 | BT50BHPMC100413 | 1 | 2.40 | 4.13 | 2.17 | .79 | 10.20 | PSW58M | MCSS16040M | 2.5MM & 5MM |
| 3100420 | BT50BHPMC125413 | 1 1/4 | 2.91 | 4.13 | 2.95 | .79 | 11.80 | PSW68M | MCSS16040M | 2.5MM & 5MM |

- Milling chuck technical section, see page 814 in the Tooling Systems 7030 Catalog.
- Supplied with locknut and stop screw.
- Locknut wrench not included.
- Optional M6-1,0p fine-balancing screw set is available (order number HPMCBALSCREWSET) and must be ordered separately; see page 740 in the Tooling Systems 7030 Catalog.
- Reduction sleeves are available and must be ordered separately; see page 653 in the Tooling Systems 7030 Catalog.
- HSK coolant unit and wrench are available and must be ordered separately; see page 763 in the Tooling Systems 7030 Catalog.



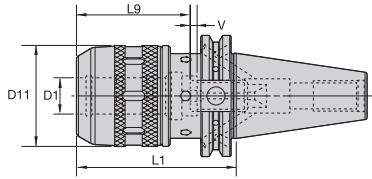
Toolholders are factory set to the form B coolant supply position. When relocating coolant position screws, use of a removable liquid (small screw thread locker) is recommended.



The toolholder can be easily converted to DIN 69871 form AD coolant supply; tightening screws will stop coolant from escaping through the flange.

CV 40 Shank Tools

Milling Chucks — High Performance

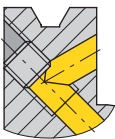


- Heavy and fine milling capabilities.
- 5/8" — 11 UNC drawbar thread.
- Pre-balanced G6.3 @ 20,000 rpm — 6 threaded M6 holes to accept set screws for fine balancing.
- Heavy milling — tighten locknut until o-ring on back face of locknut just touches the flange on the chuck body to achieve runout $\leq 0,01\text{mm}$ (.0004") 3x D1.
- Fine milling — tighten as above, then back the locknut off 1/8–1/4 turn to achieve runout $\leq 0,005\text{mm}$ (.0002") 3x D1.
- Sub-zero heat treatment for material stability.
- Through-the-toolholder coolant capability using stop screw as sealing device — form AD or form B.
- 20mm (3/4") axial adjustment stop screw.

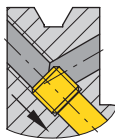
■ HPMC-CV Form B/AD Inch

| order number | catalog number | D1 | D11 | L1 | L9 | V | lbs. | locknut wrench | stop screw | wrench size-stop screw |
|--------------|-----------------|-------|------|------|------|-----|------|----------------|------------|------------------------|
| 3100356 | CV40BHPMC075335 | 3/4 | 2.09 | 3.35 | 4.73 | .79 | 3.40 | PSW52M | MCSS16040M | 2.5MM & 5MM |
| 3100358 | CV40BHPMC075591 | 3/4 | 2.09 | 5.91 | 1.93 | .79 | 5.70 | PSW52M | MCSS16040M | 2.5MM & 5MM |
| 3100359 | CV40BHPMC100374 | 1 | 2.40 | 3.74 | 2.17 | .79 | 4.20 | PSW58M | MCSS16040M | 2.5MM & 5MM |
| 3100360 | CV40BHPMC100591 | 1 | 2.40 | 5.91 | 2.17 | .79 | 6.45 | PSW58M | MCSS16040M | 2.5MM & 5MM |
| 3100362 | CV40BHPMC125472 | 1 1/4 | 2.76 | 4.72 | 2.28 | .79 | 5.65 | PSW68M | MCSS16040M | 2.5MM & 5MM |
| 3100361 | CV40BHPMC125591 | 1 1/4 | 2.76 | 5.91 | 2.28 | .79 | 7.20 | PSW68M | MCSS16040M | 2.5MM & 5MM |

- Milling chuck technical section, see page 814 in the Tooling Systems 7030 Catalog.
- Supplied with locknut and stop screw.
- Locknut wrench not included.
- Optional M6-1,0p fine-balancing screw set is available (order number HPMCBALSCREWSSET) and must be ordered separately; see page 740 in the Tooling Systems 7030 Catalog.
- Reduction sleeves are available and must be ordered separately; see page 653 in the Tooling Systems 7030 Catalog.
- HSK coolant unit and wrench are available and must be ordered separately; see page 763 in the Tooling Systems 7030 Catalog.



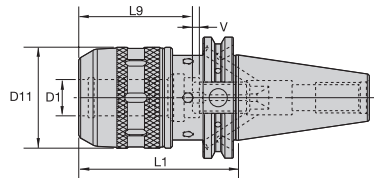
Toolholders are factory set to the form B coolant supply position. When relocating coolant position screws, use of a removable liquid (small screw thread locker) is recommended.



The toolholder can be easily converted to DIN 6987 form AD coolant supply; tightening screws will stop coolant from escaping through the flange.

CV 50 Shank Tools

Milling Chucks — High Performance

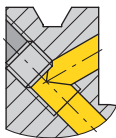


- Heavy and fine milling capabilities.
- 1" — 8 UNC drawbar thread.
- Pre-balanced G6.3 @ 20,000 rpm — 6 threaded M6 holes to accept set screws for fine balancing.
- Heavy milling — tighten locknut until O-ring on back face of locknut just touches the flange on the chuck body to achieve runout $\leq 0,01\text{mm}$ (.0004") 3x D1.
- Fine milling — tighten as above, then back the locknut off 1/8–1/4 turn to achieve runout $\leq 0,005\text{mm}$ (.0002") 3x D1.
- Sub-zero heat treatment for material stability.
- Through-the-toolholder coolant capability using stop screw as sealing device — form AD or form B.
- 20mm (3/4") axial adjustment stop screw.

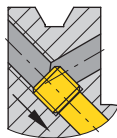
■ HPMC-CV Form B/AD Inch

| order number | catalog number | D1 | D11 | L1 | L9 | V | lbs. | locknut wrench | stop screw | wrench size-stop screw |
|--------------|-----------------|-------|------|------|------|-----|-------|----------------|------------|------------------------|
| 3100403 | CV50BHPMC075354 | 3/4 | 2.09 | 3.54 | 1.93 | .79 | 8.10 | PSW52M | MCSS16040M | 2.5MM & 5MM |
| 3100404 | CV50BHPMC075650 | 3/4 | 2.09 | 6.50 | 1.93 | .79 | 10.50 | PSW52M | MCSS16040M | 2.5MM & 5MM |
| 3100405 | CV50BHPMC100354 | 1 | 2.40 | 3.54 | 2.17 | .79 | 8.50 | PSW58M | MCSS16040M | 2.5MM & 5MM |
| 3100406 | CV50BHPMC100531 | 1 | 2.40 | 5.32 | 2.17 | .79 | 10.50 | PSW58M | MCSS16040M | 2.5MM & 5MM |
| 3100407 | CV50BHPMC100650 | 1 | 2.40 | 6.50 | 2.17 | .79 | 11.85 | PSW58M | MCSS16040M | 2.5MM & 5MM |
| 3100408 | CV50BHPMC125354 | 1 1/4 | 2.76 | 3.54 | 2.28 | .79 | 9.00 | PSW68M | MCSS16040M | 2.5MM & 5MM |
| 3100409 | CV50BHPMC125531 | 1 1/4 | 2.91 | 5.32 | 2.95 | .79 | 11.70 | PSW68M | MCSS16040M | 2.5MM & 5MM |
| 3100410 | CV50BHPMC125650 | 1 1/4 | 2.91 | 6.50 | 2.95 | .79 | 13.50 | PSW68M | MCSS16040M | 2.5MM & 5MM |

- Milling chuck technical section, see page 814 in the Tooling Systems 7030 Catalog.
- Supplied with locknut and stop screw.
- Locknut wrench not included.
- Optional M6–1,0p fine-balancing screw set is available (order number HPMCBALSCREWSET) and must be ordered separately; see page 740 in the Tooling Systems 7030 Catalog.
- Reduction sleeves are available and must be ordered separately; see page 653 in the Tooling Systems 7030 Catalog.
- HSK coolant unit and wrench are available and must be ordered separately; see page 763 in the Tooling Systems 7030 Catalog.



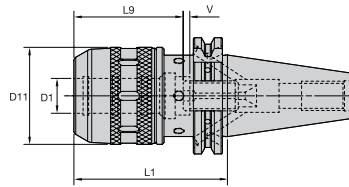
Toolholders are factory set to the form B coolant supply position. When relocating coolant position screws, use of a removable liquid (small screw thread locker) is recommended.



The toolholder can be easily converted to DIN 69871 form AD coolant supply; tightening screws will stop coolant from escaping through the flange.

DV 40 Shank Tools

Milling Chucks — High Performance

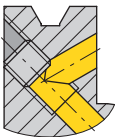


- Heavy and fine milling capabilities.
- Pre-balanced G6.3 @ 20,000 rpm — 6 threaded M6 holes to accept set screws for fine balancing.
- Heavy milling — tighten locknut until O-ring on back face of locknut just touches the flange on the chuck body to achieve runout $\leq 0,01\text{mm}$ (.0004") 3x D1.
- Fine milling — tighten as above, then back the locknut off 1/8–1/4 turn to achieve runout $\leq 0,005\text{mm}$ (.0002") 3x D1.
- Sub-zero heat treatment for material stability.
- Through-the-toolholder coolant capability using stop screw as sealing device — form AD or form B.
- 20mm (3/4") axial adjustment stop screw.

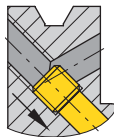
■ HPMC-DV Form B/AD Metric

| order number | catalog number | D1 | D11 | L1 | L9 | V | kg | locknut wrench | stop screw | wrench size-stop screw |
|--------------|-----------------|----|-----|-----|----|----|------|----------------|------------|------------------------|
| 3523084 | DV40BHPMC20085M | 20 | 53 | 85 | 44 | 20 | 1,54 | PSW52M | MCSS16040M | 2.5MM & 5MM |
| 3523085 | DV40BHPMC20150M | 20 | 53 | 150 | 49 | 20 | 2,59 | PSW52M | MCSS16040M | 2.5MM & 5MM |
| 3523086 | DV40BHPMC25095M | 25 | 61 | 95 | 55 | 20 | 1,91 | PSW58M | MCSS16040M | 2.5MM & 5MM |
| 3523087 | DV40BHPMC25150M | 25 | 61 | 150 | 55 | 20 | 2,93 | PSW58M | MCSS16040M | 2.5MM & 5MM |
| 3523088 | DV40BHPMC32120M | 32 | 70 | 120 | 58 | 20 | 2,56 | PSW68M | MCSS16040M | 2.5MM & 5MM |
| 3523089 | DV40BHPMC32150M | 32 | 70 | 150 | 58 | 20 | 3,27 | PSW68M | MCSS16040M | 2.5MM & 5MM |

- Milling chuck technical section, see page 814 in the Tooling Systems 7030 Catalog.
- Supplied with locknut and stop screw.
- Locknut wrench not included.
- Optional M6–1,0p fine-balancing screw set is available (order number HPMCBALSCREWSSET) and must be ordered separately; see page 740 in the Tooling Systems 7030 Catalog.
- Reduction sleeves are available and must be ordered separately; see page 653 in the Tooling Systems 7030 Catalog.
- HSK coolant unit and wrench are available and must be ordered separately; see page 763 in the Tooling Systems 7030 Catalog.



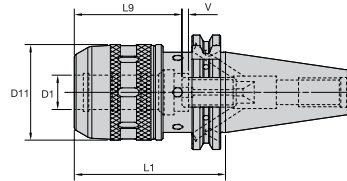
Toolholders are factory set to the form B coolant supply position. When relocating coolant position screws, use of a removable liquid (small screw thread locker) is recommended.



The toolholder can be easily converted to DIN 69871 form AD coolant supply; tightening screws will stop coolant from escaping through the flange.

DV 50 Shank Tools

Milling Chucks — High Performance

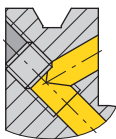


- Heavy and fine milling capabilities.
- Pre-balanced G6.3 @ 20,000 rpm — 6 threaded M6 holes to accept set screws for fine balancing.
- Heavy milling — tighten locknut until O-ring on back face of locknut just touches the flange on the chuck body to achieve runout $\leq 0,01\text{mm}$ (.0004") 3x D1.
- Fine milling — tighten as above, then back the locknut off 1/8–1/4 turn to achieve runout $\leq 0,005\text{mm}$ (.0002") 3x D1.
- Sub-zero heat treatment for material stability.
- Through-the-toolholder coolant capability using stop screw as sealing device — form AD or form B.
- 20mm (3/4") axial adjustment stop screw.

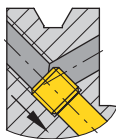
■ HPMC-DV Form B/AD Metric

| order number | catalog number | D1 | D11 | L1 | L9 | V | kg | locknut wrench | stop screw | wrench size-stop screw |
|--------------|-----------------|----|-----|-----|----|----|------|----------------|------------|------------------------|
| 3523090 | DV50BHPMC20090M | 20 | 53 | 90 | 49 | 20 | 3,67 | PSW52M | MCSS16040M | 2.5MM & 5MM |
| 3523091 | DV50BHPMC20165M | 20 | 53 | 165 | 49 | 20 | 4,76 | PSW52M | MCSS16040M | 2.5MM & 5MM |
| 3523092 | DV50BHPMC25090M | 25 | 61 | 90 | 55 | 20 | 3,86 | PSW58M | MCSS16040M | 2.5MM & 5MM |
| 3523093 | DV50BHPMC25165M | 25 | 61 | 165 | 55 | 20 | 5,37 | PSW58M | MCSS16040M | 2.5MM & 5MM |
| 3523094 | DV50BHPMC32090M | 32 | 70 | 90 | 58 | 20 | 4,08 | PSW68M | MCSS16040M | 2.5MM & 5MM |
| 3523095 | DV50BHPMC32165M | 32 | 74 | 165 | 75 | 20 | 6,12 | PSW68M | MCSS16040M | 2.5MM & 5MM |

- Milling chuck technical section, see page 814 in the Tooling Systems 7030 Catalog.
- Supplied with locknut and stop screw.
- Locknut wrench not included.
- Optional M6-1,0p fine-balancing screw set is available (order number HPMCBALSCREWSET) and must be ordered separately; see page 740 in the Tooling Systems 7030 Catalog.
- Reduction sleeves are available and must be ordered separately; see page 653 in the Tooling Systems 7030 Catalog.
- HSK coolant unit and wrench are available and must be ordered separately; see page 763 in the Tooling Systems 7030 Catalog.



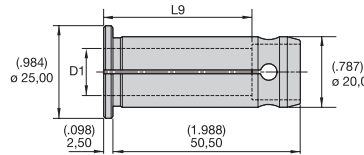
Toolholders are factory set to the form B coolant supply position. When relocating coolant position screws, use of a removable liquid (small screw thread locker) is recommended.



The toolholder can be easily converted to DIN 6987 form AD coolant supply; tightening screws will stop coolant from escaping through the flange.

Collets and Sleeves

20mm SMC Milling Chuck Sleeves

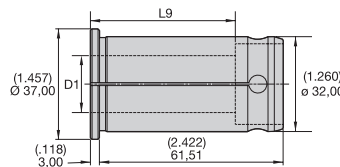


- One-piece design.
- Cutting tool must be cylindrical.
- Sleeve must be inserted completely into the milling chuck until shoulder mates against the chuck front face.
- Cutting tools must be in full contact of the sleeve bore length (L9).
- Cutting tool shank requirement tolerance is h6 and Ra ≥ 0,3 µm (12 µ in) surface finish.
- Metric bores are available.

■ SMC20 Sleeve – Metric – (20mm sleeve with metric bores)

| order number | catalog number | D1 | L9 | sleeve series | sleeve capacity max. mm | sleeve capacity min. mm |
|--------------|----------------|------|----|---------------|-------------------------|-------------------------|
| 3273853 | 20SMC060M | 6,0 | 32 | SM20M | 6 | 5,992 |
| 3273854 | 20SMC080M | 8,0 | 35 | SM20M | 8 | 7,991 |
| 3273855 | 20SMC100M | 10,0 | 36 | SM20M | 10 | 9,991 |
| 3273856 | 20SMC120M | 12,0 | 40 | SM20M | 12 | 11,989 |
| 3273857 | 20SMC160M | 16,0 | 41 | SM20M | 16 | 15,989 |

32mm SMC Milling Chuck Sleeves



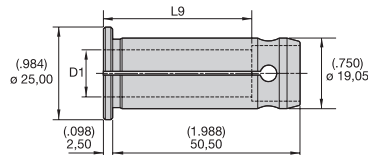
- One-piece design.
- Cutting tool must be cylindrical.
- Sleeve must be inserted completely into the milling chuck until shoulder mates against the chuck front face.
- Cutting tools must be in full contact of the sleeve bore length (L9).
- Cutting tool shank requirement tolerance is h6 and Ra ≥ 0,3 µm (12 µ in) surface finish.
- Metric bores are available.

■ SMC32 Sleeve – Metric – 32mm sleeve with metric bores

| order number | catalog number | D1 | L9 | sleeve series | sleeve capacity max. mm | sleeve capacity min. mm |
|--------------|----------------|------|----|---------------|-------------------------|-------------------------|
| 3273858 | 32SMC060M | 6,0 | 32 | SM32M | 6 | 5,992 |
| 3273859 | 32SMC080M | 8,0 | 35 | SM32M | 8 | 7,991 |
| 3273860 | 32SMC100M | 10,0 | 38 | SM32M | 10 | 9,991 |
| 3273861 | 32SMC120M | 12,0 | 43 | SM32M | 12 | 11,989 |
| 3273862 | 32SMC160M | 16,0 | 48 | SM32M | 16 | 15,989 |
| 3273863 | 32SMC200M | 20,0 | 49 | SM32M | 20 | 19,987 |
| 3273864 | 32SMC250M | 25,0 | 52 | SM32M | 25 | 24,987 |

Collets and Sleeves, continued

3/4" SMC Milling Chuck Sleeves



- One-piece design.
- Cutting tool must be cylindrical.
- Sleeve must be inserted completely into the milling chuck until shoulder mates against the chuck front face.
- Cutting tools must be in full contact of the sleeve bore length (L9).
- Cutting tool shank requirement tolerance is h6 and Ra ≥ 0,3 μm (12 μ in) surface finish.
- Metric bores are available.

■ SMC750 Sleeve – Metric – (3/4" sleeve with metric bores)

| order number | catalog number | D1 | L9 | sleeve series | sleeve capacity max. mm | sleeve capacity min. mm |
|--------------|----------------|------|----|---------------|-------------------------|-------------------------|
| 3101080 | 75SMC060M | 6,0 | 32 | SM750 | 6 | 5,992 |
| 3101081 | 75SMC080M | 8,0 | 35 | SM750 | 8 | 7,991 |
| 3101082 | 75SMC100M | 10,0 | 36 | SM750 | 10 | 9,991 |
| 3101083 | 75SMC120M | 12,0 | 40 | SM750 | 12 | 11,989 |
| 3101084 | 75SMC140M | 14,0 | 41 | SM750 | 14 | 13,989 |
| 3101085 | 75SMC160M | 16,0 | 41 | SM750 | 16 | 15,989 |

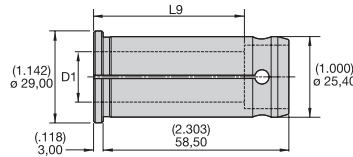
■ SMC750 Sleeve – Inch – (3/4" sleeve with inch bores)

| order number | catalog number | D1 | L9 | sleeve series | sleeve capacity max. inch | sleeve capacity min. inch |
|--------------|----------------|------|-------|---------------|---------------------------|---------------------------|
| 3101010 | 75SMC0125 | 1/8 | .709 | SM750 | .1250 | .1246 |
| 3101073 | 75SMC0188 | 3/16 | .984 | SM750 | .1875 | .1871 |
| 3101012 | 75SMC0250 | 1/4 | 1.260 | SM750 | .2500 | .2496 |
| 3101074 | 75SMC0312 | 5/16 | 1.378 | SM750 | .3125 | .3121 |
| 3101075 | 75SMC0375 | 3/8 | 1.417 | SM750 | .3750 | .3746 |
| 3101076 | 75SMC0438 | 7/16 | 1.575 | SM750 | .4375 | .4371 |
| 3101077 | 75SMC0500 | 1/2 | 1.575 | SM750 | .5000 | .4996 |
| 3101078 | 75SMC0563 | 9/16 | 1.614 | SM750 | .5625 | .5621 |
| 3101079 | 75SMC0625 | 5/8 | 1.614 | SM750 | .6250 | .6246 |

Technical Information

Collets and Sleeves, continued

1" SMC Milling Chuck Sleeves



■ SMC1000 Sleeve – Metric – (1" sleeve with metric bores)

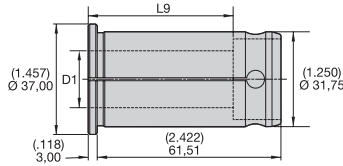
| order number | catalog number | D1 | L9 | sleeve series | sleeve capacity max. mm | sleeve capacity min. mm |
|--------------|----------------|------|----|---------------|-------------------------|-------------------------|
| 3101097 | 10SMC060M | 6,0 | 32 | SM1000 | 6 | 5,992 |
| 3101098 | 10SMC080M | 8,0 | 35 | SM1000 | 8 | 7,991 |
| 3101099 | 10SMC100M | 10,0 | 39 | SM1000 | 10 | 9,991 |
| 3101100 | 10SMC120M | 12,0 | 43 | SM1000 | 12 | 11,989 |
| 3101101 | 10SMC140M | 14,0 | 43 | SM1000 | 14 | 13,989 |
| 3101102 | 10SMC160M | 16,0 | 48 | SM1000 | 16 | 15,989 |
| 3101103 | 10SMC180M | 18,0 | 49 | SM1000 | 18 | 17,989 |
| 3101104 | 10SMC200M | 20,0 | 49 | SM1000 | 20 | 19,987 |

■ SMC1000 Sleeve – Inch – (1" sleeve with inch bores)

| order number | catalog number | D1 | L9 | sleeve series | sleeve capacity max. inch | sleeve capacity min. inch |
|--------------|----------------|------|-------|---------------|---------------------------|---------------------------|
| 3101086 | 10SMC0125 | 1/8 | .709 | SM1000 | .1250 | .1246 |
| 3101087 | 10SMC0188 | 3/16 | .984 | SM1000 | .1875 | .1871 |
| 3101088 | 10SMC0250 | 1/4 | 1.260 | SM1000 | .2500 | .2496 |
| 3101089 | 10SMC0312 | 5/16 | 1.378 | SM1000 | .3125 | .3121 |
| 3101090 | 10SMC0375 | 3/8 | 1.516 | SM1000 | .3750 | .3746 |
| 3101091 | 10SMC0438 | 7/16 | 1.575 | SM1000 | .4375 | .4371 |
| 3101092 | 10SMC0500 | 1/2 | 1.673 | SM1000 | .5000 | .4996 |
| 3101093 | 10SMC0563 | 9/16 | 1.673 | SM1000 | .5625 | .5621 |
| 3101094 | 10SMC0625 | 5/8 | 1.870 | SM1000 | .6250 | .6246 |
| 3101095 | 10SMC0750 | 3/4 | 1.909 | SM1000 | .7500 | .7495 |
| 3101096 | 10SMC0875 | 7/8 | 1.909 | SM1000 | .8750 | .8745 |

Collets and Sleeves, continued

1-1/4" SMC Milling Chuck Sleeves



■ SMC1250 Sleeve – Metric – (1-1/4" sleeve with metric bores)

| order number | catalog number | D1 | L9 | sleeve series | sleeve capacity max. mm | sleeve capacity min. mm |
|--------------|----------------|------|----|---------------|-------------------------|-------------------------|
| 3101117 | 12SMC060M | 6,0 | 32 | SM1250 | 6 | 5,992 |
| 3101118 | 12SMC080M | 8,0 | 35 | SM1250 | 8 | 7,991 |
| 3101119 | 12SMC100M | 10,0 | 38 | SM1250 | 10 | 9,991 |
| 3101120 | 12SMC120M | 12,0 | 43 | SM1250 | 12 | 11,989 |
| 3101121 | 12SMC140M | 14,0 | 45 | SM1250 | 14 | 13,989 |
| 3101122 | 12SMC160M | 16,0 | 48 | SM1250 | 16 | 15,989 |
| 3101123 | 12SMC180M | 18,0 | 48 | SM1250 | 18 | 17,989 |
| 3101124 | 12SMC200M | 20,0 | 49 | SM1250 | 20 | 19,987 |
| 3101125 | 12SMC220M | 22,0 | 50 | SM1250 | 22 | 21,987 |
| 3101126 | 12SMC250M | 25,0 | 52 | SM1250 | 25 | 24,987 |

Technical Information

Application:

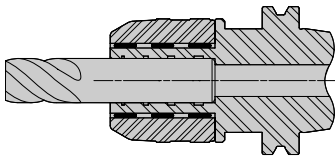
This chuck is ideal for holding all round shank cutting tools and extensions on various applications with greater versatility, which is an excellent choice for endmills, reamers, indexable cutters, drills, straight shank extensions and boring systems. The HPMC milling chuck with its powerful gripping torque provides the maximum performance for tough roughing/high metal removal applications as well as giving first-rate accuracy for finishing applications using the same chuck.

These toolholders are able to use through coolant with supplied backup screws. Threaded holes in the chucks accept set screws for fine balancing where applicable for finishing operations and reducing sleeves enable the same holder to be converted to smaller gripping sizes.



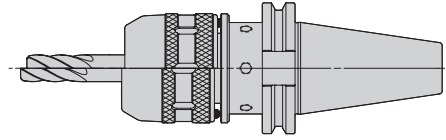
Design:

The system is comprised of an inner chuck body, needle roller bearing assembly and a thick-walled outer locknut. The inner chuck body, with radial and axial grooves in the inside bore, acts as a master collet and compress around the cutting tool to provide a very strong grip. The chuck bore is compressed by the pressure of roller bearings that are tracked up a slow taper (approximately 4 degrees). The roller bearings are held in a retainer, 4 per window to maximize contact, and are at an angle that matches the chuck taper at a slight skew. The locknut bearing retainer, and its wall thickness is greater than that of the chuck body nose, as the locknut is rotated clockwise, the roller bearings track in a helical movement and gradually climb up the shallow taper. There are no threads in the system (locknut or chuck). As the two tapers are forced together, a tremendously high, uniform force is created, squeezing the chuck body inward and conforming it to the cutting tool shank. Radial grooves assist the internal diameter to collapse



inward and evenly, which improve gripping torque, accuracy, and greatly prevents fretting. Axial grooves minimize the slippage due to oil residue left on the cutting tool shanks by enabling the contamination to drain into the grooves. This force continues until the O-ring in the back face of the locknut just touches the face of the chuck's body. This is the maximum gripping torque position. No torque wrench is needed. The shallow contact angles produce a self-locking effect, so the chuck will not release during operation. The extremely high grip force of the HPMC chuck enhances the chuck's ability to transmit energy created during the machining process to the machine tool. Vibration, deflection, and run-out are minimized. There is no axial drawback of the cutting tool shank as the locknut is tightened. This is an advantage over collet chucks during presetting because they do draw back the cutting tool shank when tightened.

Heavy milling position (O-ring just touching against chuck face).



Best accuracy position (O-ring just touching against chuck face, and then backed off 1/8 to 1/4 turn).

The toolholder provides 5–10% more gripping torque for “Heavy” milling as well as being versatility in being able to do “Finishing” work using the same chuck.

The key here is “Maximum Flexibility” for most applications. To get the maximum accuracy out of the HPMC milling chuck, tighten the locknut so that the O-ring in the back face of the locknut just touches the flange of the chuck body and then back off 1/8 to 1/4 a turn.

Stop screws, for length adjustment, or coolant feed are included in all HPMC milling chucks. These screws are designed with a cone face and reversible flat face with an O-ring for coolant sealing options.

The HPMC milling chucks are subjected to sub-zero treatment, which helps stabilize the material and prevents pitting on the bearing contact surface, thus ensuring longer trouble-free tool life.

Cutting tool requirements:

The outside diameter of the cutting tool shank and the inside diameter of the HPMC milling chuck must be wiped with a clean dry cloth before assembly. Any contamination will increase run-out and reduce gripping force.

Carefully monitor the cutting tools used in these chucks so they do not exceed the h6 (nominal to -.0005”) on the cutting tool shank diameter. Use tools as close to nominal as possible. Cutting tool shank roundness should be within 0,003 mm (.0001”). Undersize tools cause excessive stress and may cause chuck failure.

Best performance from the chuck is attained when the cutting tool shank is round, without flats. Cutting tools with small flats may be held, but run-out will increase. Whistle and flatted cutting tool shanks are recommended to be used in conjunction with reducing sleeves. For best performance, keep cutting tool shank flats to a minimum.

The milling chuck should never be tightened without a cutting tool inside the bore. High gripping forces will cause permanent ID deformation.

Minimum length of engagement is 2x the diameter of the cutting tool shanks. Short holding length may result in breakage of the cutting tool and chuck. This could also result in bodily harm to the machine operator if the cutting tool should dislodge from the chuck during use.

Maintenance Operations:

Only maintenance required is grease on the needle roller bearings.

1. Tighten the locknut clockwise to obtain clearance from the retaining ring.
2. Remove the retaining ring from the chuck.
3. Unlock the locknut counter clockwise, and lift the nut assembly from the chuck.
4. Wipe off old grease from the milling chuck and all other components.
5. Liberally re-coat the needle bearings in the locknut with a good quality water-resistant grease.
6. Re-grease OD of the Milling chuck where locknut is housed.
7. Reinstall locknut on Milling chuck body and tighten to give clearance to re-insert the retaining ring.
8. Tighten and loosen the locknut several times. Recheck the retaining ring for correct fitting.
9. Wipe any access grease.

HPMC™ Milling Chucks

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To find out more or to request a copy of our Machine Utilization Strategy, contact your Kennametal Distributor. To download the latest copy of our Tooling Systems 7030 Catalog, visit www.kennametal.com.

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