



小直径内孔刀具

TINY^{INI}MTURN

Tungaloy Report No. 402-C

扩充带冷却孔的 SH725 材质整体硬质合金 镗刀







TINY^{INI}TURN



整体硬质合金镗刀系列

< ϕ 0.6 mm

SH725

新

JB**

带冷却液孔



TB**

无冷却液孔



整体硬质合金镗杆 - CBN
< ϕ 2.8 mm

JBTR**



P.13

可转位类型

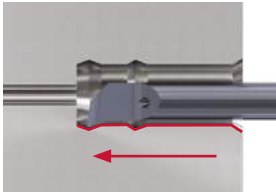
< ϕ 5 mm

A/E-SEXPR**
A/E-SEZPR**



P.25

10 种几何形状，涵盖多种加工类型

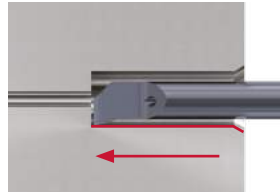


镗孔、仿形、倒角

JBTR/L; TBTR/L****

DMIN = 0.6 mm

P.12 - P.14

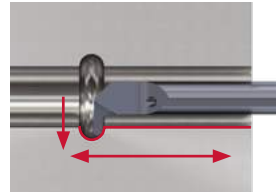


镗孔、倒角

JBPR; TBPR****

DMIN = 2.8 mm

P.15

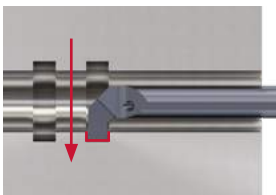


仿形

JBRR; TBRR****

DMIN = 5 mm

P.16

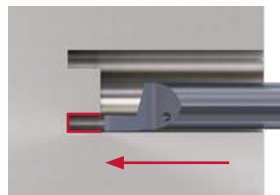


内孔切槽

JBGR/L; TBGR****

DMIN = 2 mm

P.17 - P.18

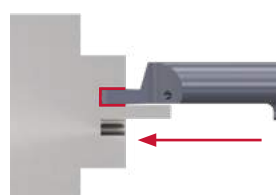


内端面切槽

JBFR/L; TBFR****

DMIN = 6 mm

P.19

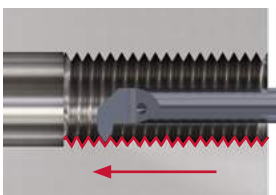


轴类端面切槽

JBSR; TBSR****

DMIN = 6 mm

P.20

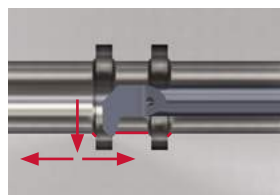


内螺纹加工

JBIR; TBIR****

DMIN = 4 mm

P.21

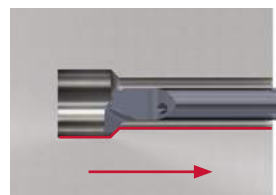


倒角

JBCR; TBCR****

DMIN = 5 mm

P.22

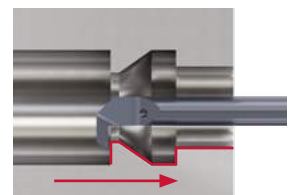


背镗，倒角

JBUR; TBUR****

DMIN = 5 mm

P.23



背镗

JBBR; TBBR****

DMIN = 3 mm

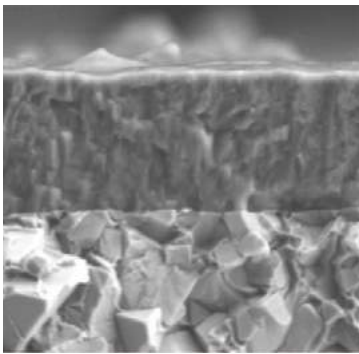
P.24

■ 扩充 SH725 材质的整体硬质合金镗刀产品系列

- 出色的抗磨损和抗崩性能，使加工更稳定并有效延长刀具寿命
- 带冷却孔的整硬刀杆



SH725



PVD 涂层材质 SH725

(Ti,Al)N 涂层与专用于小零件加工的坚硬硬质合金基体相结合，可提供出色的涂层附着力和刀刃锋利度。

卓越的抗磨损和抗熔敷性能

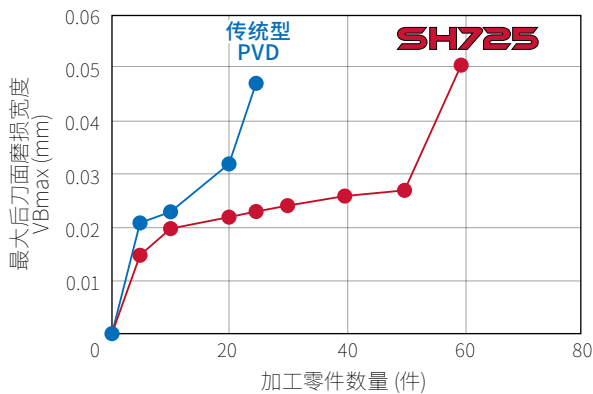
切削刃光滑的涂层表面可防止涂层脱落，其惊人的耐磨性使刀具寿命比现有材质更长。

良好的抗塑性形变能力

坚硬的硬质合金基体可提供稳定的刀具，延长刀具寿命。

■ 切削性能

M SUS316L / X2CrNiMo17-12-2



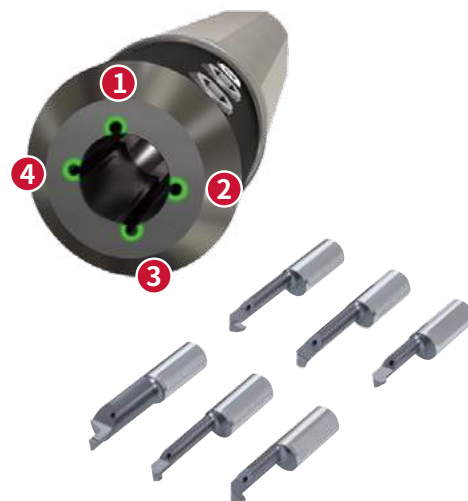
| 加工 50 件后 | 加工 25 件后 |
|--------------|---------------------|
| | |
| SH725 | 传统型 PVD |
| 型号 : | : TBTR07210015-D060 |
| 材质 : | : SH725 |
| 切削速度 : | : Vc = 60 m/min |
| 进给 : | : f = 0.02 mm/rev |
| 切削深度 : | : ap = 0.5 mm |
| 冷却方式 : | : 湿式 |

SH725 具有出色的耐磨性。

TINY^{MINI}TURN

■ 新套筒带有 4 个冷却孔，可实现最佳性能

- 适用于所有镗孔操作的最佳套筒。
带四个冷却孔的套筒可用于所有 TinyMini-Turn 刀具
- 4 股冷却液直喷切削点，改善排屑效果
- 充足的冷却液供应可消除刀具或工件上的切屑缠绕，实现长时间无故障无人操作
- 显著延长工具寿命



■ 完美的排屑性能

内部冷却套筒



出色的排屑性能



- 无切屑缠绕
- 不停机
- 无停机时间

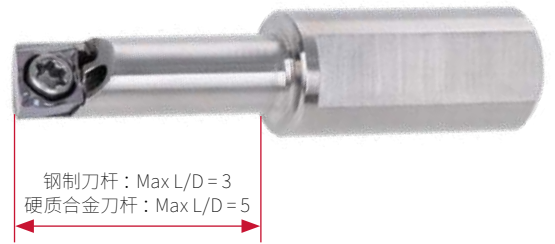
传统型 (外部冷却)



- 切屑缠绕
- 增加机床停机时间

■ 适用于微型镗孔应用的新经济型可转位解决方案

- 适用于小至 $\varnothing 5$ mm 的镗孔加工
- 有多种断屑槽和材质可供选择
- 独特的断屑槽可提供出色的切屑控制
- 内冷刀具能显著提高排屑效果
- 长悬伸的硬质合金刀杆



| 工件材料 | PMS | PMNS | PMS | SH | N |
|-------------------|-------------------------|---|--------------------------------|-----------------|----------|
| 断屑槽 | JS | W08 | J08 | 无 | 无 |
| 图 | | | | | |
| 适用材质 EPG*04... | SH7025 / SH725 SH730 | SH7025 / SH725 SH730 / GT9530 NS9530 / TH10 | SH7025 / SH725 SH730 / J740 | BX310* / BX470* | DX140 |
| 适用材质 EPG*03... | SH7025 / SH725 SH730 | SH7025 / SH725 SH730 / TH10 | - | BX310* / BX470* | - |
| 断屑槽适用范围 | | | | - | - |

* 型号：1QP-EPGW...

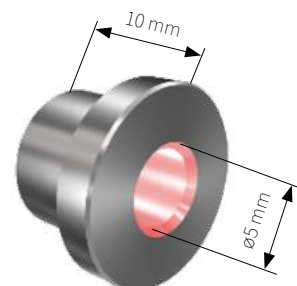
■ 切削性能

P S45C / C45

| | 新型可转位刀具 | 传统型 |
|------|---|--------------------|
| 刀具 | <p>刀具：A07050-SEXPR03-3 刀片：EPGT040101F-JS SH725</p> | <p>整硬刀杆：传统 PVD</p> |
| 断屑槽 | | |
| 表面质量 | | |

切削速度 : $V_c = 80$ m/min
进给 : $f = 0.03$ mm/rev
切削深度 : $a_p = 0.3$ mm
冷却方式 : 湿式

由于刀具稳定, 切屑形成和排出完美, 因此切屑控制和表面光洁度极佳。



TINY^{MINI}TURN

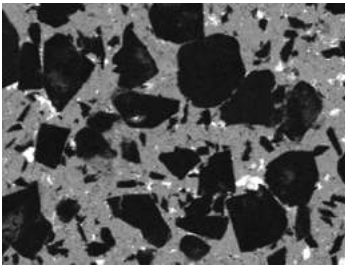
TinyMini-Turn CBN，孔径小至 2.8 mm

- 提供三种最小孔径 (DMIN): 2.8、4 和 5 mm
- 提供 2xD 和 3xD 刀长度
- 内部冷却



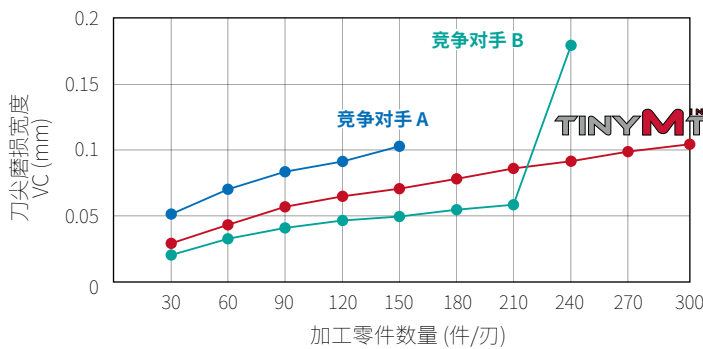
无涂层 CBN 材质

BX310



由于采用了耐磨性极高的钛陶瓷粘结剂，BX310 可在难以高速切削的小直径镗孔加工中提供较长和可预测的刀具寿命。

切削性能



H

刀片
套筒
工件材料
切削速度
转数
进给
切削深度
冷却液

: JBTR04060010-D028ST BX310
: JBBS19-4-L100C
: SCM420 (60-62HRC)
: $V_c = 28 \text{ m/min}$
: $n = 3,000 \text{ min}^{-1}$
: $f = 0.02 \text{ mm/rev}$
: $a_p = 0.01 \text{ mm}$
: 湿式

TinyMini-Turn CBN 实现了长且可预测的刀具寿命

标准切削条件

用于整硬镗刀

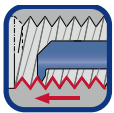


镗孔、仿形、倒角、背镗

| ISO | 工件材料 | 材质 | 切削速度 Vc (m/min) | 进给 f (mm/rev) |
|----------|--|-------|--------------------|------------------|
| P | 低碳钢 S15C, S25C, 等 C15E, C15E4, 等 | SH725 | 40 - 140 | 0.01 - 0.08 |
| | 碳钢、合金钢 S55C, SCM440, 等 C55, 42CrMo4, 等 | SH725 | 40 - 140 | 0.01 - 0.08 |
| | 预硬化钢 NAK80, PX5, 等 | SH725 | 40 - 140 | 0.01 - 0.08 |
| M | 不锈钢 SUS304, SUS316, 等 X5CrNi18-9, X5CrNiMo17-12-3, 等 | SH725 | 40 - 140 | 0.01 - 0.08 |
| K | 灰口铸铁 FC250, FCD300, 等 GG25, 250, GG30, 300, 等 | SH725 | 30 - 100 | 0.01 - 0.08 |
| | 球墨铸铁 FC450, FCD600, 等 GG60, 600-3, 等 | SH725 | 30 - 100 | 0.01 - 0.08 |
| N | 铝合金、铜合金 Si < 12% | SH725 | 90 - 200 | 0.01 - 0.08 |
| S | 钛合金 Ti-6Al-4V, 等 | SH725 | 30 - 100 | 0.01 - 0.08 |
| | 耐热合金 Inconel718, 等 | SH725 | 30 - 100 | 0.01 - 0.08 |

| ISO | 工件材料 | 硬度 | 材质 | 切削速度 Vc (m/min) | 进给 f (mm/rev) |
|----------|------|-------------|-------|--------------------|------------------|
| H | 淬火钢 | 55 - 65 HRC | BX310 | 15 - 100 | 0.01 - 0.1* |

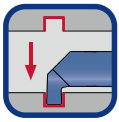
* 根据下图中列出的刀尖圆角半径 (RE) 设置 D.O.C. 和进给。



螺纹 (公制螺纹)

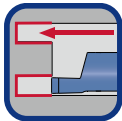
| ISO | 工件材料 | 材质 | 切削速度 Vc (m/min) | 走刀次数 螺距 (mm) | | | | |
|----------|--|-------|--------------------|-----------------|--------|---------|---------|---------|
| | | | | 0.5 | 0.75 | 1 | 1.25 | 1.5 |
| P | 低碳钢 S15C, S25C, 等 C15E, C15E4, 等 | SH725 | 40 - 140 | 6 - 8 | 8 - 10 | 10 - 12 | 12 - 15 | 15 - 18 |
| | 碳钢、合金钢 S55C, SCM440, 等 C55, 42CrMo4, 等 | SH725 | 40 - 140 | 6 - 8 | 8 - 10 | 10 - 12 | 12 - 15 | 15 - 18 |
| | 预硬化钢 NAK80, PX5, 等 | SH725 | 40 - 140 | 6 - 8 | 8 - 10 | 10 - 12 | 12 - 15 | 15 - 18 |
| M | 不锈钢 SUS304, SUS316, 等 X5CrNi18-9, X5CrNiMo17-12-3, 等 | SH725 | 40 - 140 | 8 | 10 | 12 | 15 | 18 |
| K | 灰口铸铁 FC250, FCD300, 等 GG25, 250, GG30, 300, 等 | SH725 | 30 - 100 | 7 | 9 | 12 | 14 | 17 |
| | 球墨铸铁 FC450, FCD600, 等 GG60, 600-3, 等 | SH725 | 30 - 100 | 7 | 9 | 12 | 14 | 17 |
| N | 铝合金、铜合金 Si < 12% | SH725 | 90 - 200 | 6 | 8 | 10 | 12 | 15 |

TINY^{MINI}TURN



内孔切槽

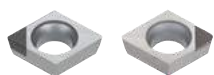
| ISO | 工件材料 | 材质 | 切削速度 Vc (m/min) | 进给 f (mm/rev) |
|----------|--|-------|--------------------|------------------|
| P | 低碳钢 S15C, S25C, 等 C15E, C15E4, 等 | SH725 | 40 - 140 | 0.01 - 0.03 |
| | 碳钢、合金钢 S55C, SCM440, 等 C55, 42CrMo4, 等 | SH725 | 40 - 140 | 0.01 - 0.03 |
| | 预硬化钢 NAK80, PX5, 等 | SH725 | 40 - 140 | 0.01 - 0.03 |
| M | 不锈钢 SUS304, SUS316, 等 X5CrNi18-9, X5CrNiMo17-12-3, 等 | SH725 | 40 - 140 | 0.01 - 0.03 |
| K | 灰口铸铁 FC250, FCD300, 等 GG25, 250, GG30, 300, 等 | SH725 | 30 - 100 | 0.01 - 0.03 |
| | 球墨铸铁 FC450, FCD600, 等 GGG60, 600-3, 等 | SH725 | 30 - 100 | 0.01 - 0.03 |
| N | 铝合金、铜合金 Si < 12% | SH725 | 90 - 200 | 0.01 - 0.03 |
| S | 钛合金 Ti-6Al-4V, 等 | SH725 | 30 - 100 | 0.01 - 0.03 |
| | 耐热合金 Inconel718, 等 | SH725 | 30 - 100 | 0.01 - 0.03 |



端面槽加工

| ISO | 工件材料 | 材质 | 切削速度 Vc (m/min) | 进给 f (mm/rev) |
|----------|--|-------|--------------------|------------------|
| P | 低碳钢 S15C, S25C, 等 C15E, C15E4, 等 | SH725 | 40 - 140 | 0.01 - 0.05 |
| | 碳钢、合金钢 S55C, SCM440, 等 C55, 42CrMo4, 等 | SH725 | 40 - 140 | 0.01 - 0.05 |
| | 预硬化钢 NAK80, PX5, 等 | SH725 | 40 - 140 | 0.01 - 0.05 |
| M | 不锈钢 SUS304, SUS316, 等 X5CrNi18-9, X5CrNiMo17-12-3, 等 | SH725 | 40 - 140 | 0.01 - 0.05 |
| K | 灰口铸铁 FC250, FCD300, 等 GG25, 250, GG30, 300, 等 | SH725 | 30 - 100 | 0.01 - 0.05 |
| | 球墨铸铁 FC450, FCD600, 等 GGG60, 600-3, 等 | SH725 | 30 - 100 | 0.01 - 0.05 |
| N | 铝合金、铜合金 Si < 12% | SH725 | 90 - 200 | 0.01 - 0.05 |
| S | 钛合金 Ti-6Al-4V, 等 | SH725 | 30 - 100 | 0.01 - 0.05 |
| | 耐热合金 Inconel718, 等 | SH725 | 30 - 100 | 0.01 - 0.05 |

TINY^{INI}TURN

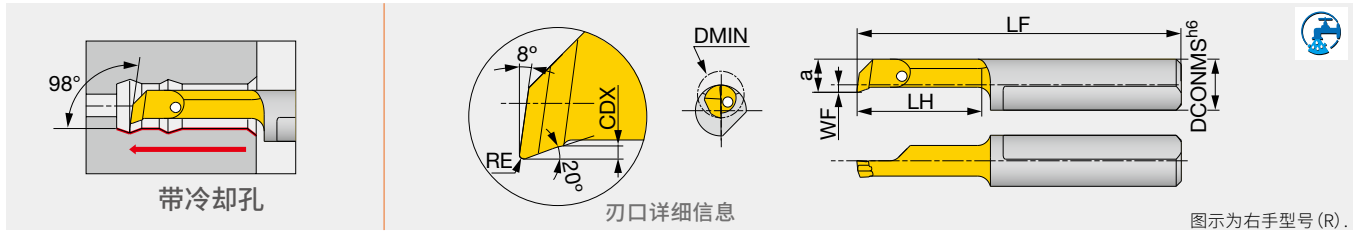


用于新型可转位镗杆 (EPG*04 / EPG*03 刀片)

| ISO | 工件材料 | 材质 | 切削速度 Vc (m/min) |
|-------------|---|--------|--------------------|
| P | 低碳钢 S15C, S25C, 等 C15E, C15E4, 等 碳钢 S45C, S55C, 等 C45, C55, 等 合金钢 SCM440, SCr420, 等 42CrMo4, 20Cr4, 等 | SH7025 | 10 - 200 |
| | | SH725 | 10 - 200 |
| | | SH730 | 10 - 150 |
| | | J740 | 10 - 100 |
| | | NS9530 | 150 - 300 |
| | | GT9530 | 150 - 300 |
| M | 不锈钢 SUS304, SUS316, 等 X5CrNi18-9, X5CrNiMo17-12-3, 等 | SH7025 | 10 - 200 |
| | | SH725 | 10 - 200 |
| | | SH730 | 10 - 150 |
| K | 灰铸铁 FC250, GG25, 250, 等 | TH10 | 30 - 100 |
| N | 铝合金 Si < 12% | TH10 | > 100 |
| | | DX140 | > 500 |
| | 铝合金 Si > 12% | TH10 | > 100 |
| | | DX140 | > 400 |
| | 铜合金 | TH10 | > 100 |
| | | DX140 | > 500 |
| H | 硬材料 | BX310 | 30 - 150 |
| 粉末金属 | 烧结粉末金属 | BX470 | 100 - 300 |

JBTR/L

用于镗孔、仿形和倒角的内冷整硬镗刀



图示为右手型号 (R)

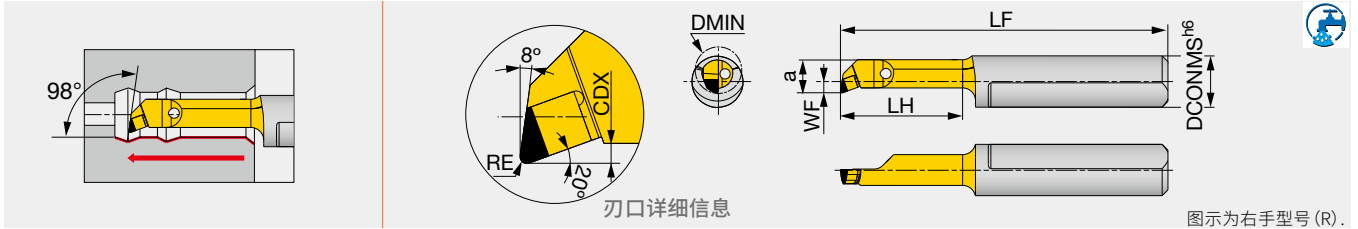
| 型号 | SH725 | SH730 | DMIN | DCONMS | WF | a | LF | LH | CDX | RE ^{+0.05} ₀ |
|---------------------|-------|-------|------|--------|------|-----|------|-----|------|----------------------------------|
| JBTR04020004-D006 | ● | ● | 0.6 | 4 | -1.5 | 0.5 | 18.5 | 2 | 0.08 | 0.04 |
| JBTR04030004-D006 | ● | ● | 0.6 | 4 | -1.5 | 0.5 | 19.5 | 3 | 0.08 | 0.04 |
| JBTR04045005-D010 | ● | ● | 1 | 4 | -1.1 | 0.9 | 21 | 4.5 | 0.1 | 0.05 |
| JBTR04065005-D010 | ● | ● | 1 | 4 | -1.1 | 0.9 | 23 | 6.5 | 0.1 | 0.05 |
| JBTR04040005-D020 | ● | ● | 2 | 4 | -0.3 | 1.7 | 20.5 | 4 | 0.1 | 0.05 |
| JBTR04090005-D020 | ● | ● | 2 | 4 | -0.3 | 1.7 | 25.5 | 9 | 0.1 | 0.05 |
| JBTR04140005-D020 | ● | ● | 2 | 4 | -0.3 | 1.7 | 30.5 | 14 | 0.1 | 0.05 |
| JBTR/L04090010-D028 | ● | ● | 2.8 | 4 | 0.9 | 2.6 | 25.5 | 9 | 0.2 | 0.1 |
| JBTR/L04150010-D028 | ● | ● | 2.8 | 4 | 0.9 | 2.6 | 31.5 | 15 | 0.2 | 0.1 |
| JBTR/L04190010-D028 | ● | ● | 2.8 | 4 | 0.9 | 2.6 | 35.5 | 19 | 0.2 | 0.1 |
| JBTR/L04090010-D040 | ● | ● | 4 | 4 | 1.5 | 3.5 | 25.5 | 9 | 0.3 | 0.1 |
| JBTR/L04150010-D040 | ● | ● | 4 | 4 | 1.5 | 3.5 | 31.5 | 15 | 0.3 | 0.1 |
| JBTR/L04190010-D040 | ● | ● | 4 | 4 | 1.5 | 3.5 | 35.5 | 19 | 0.3 | 0.1 |
| JBTR04230010-D040 | ● | ● | 4 | 4 | 1.5 | 3.5 | 39.5 | 23 | 0.3 | 0.1 |
| JBTR04270010-D040 | ● | ● | 4 | 4 | 1.5 | 3.5 | 43.5 | 27 | 0.3 | 0.1 |
| JBTR/L07090015-D050 | ● | ● | 5 | 7 | 0.9 | 4.4 | 25 | 9 | 0.5 | 0.15 |
| JBTR/L07140015-D050 | ● | ● | 5 | 7 | 0.9 | 4.4 | 30 | 14 | 0.5 | 0.15 |
| JBTR/L07190015-D050 | ● | ● | 5 | 7 | 0.9 | 4.4 | 35 | 19 | 0.5 | 0.15 |
| JBTR/L07240015-D050 | ● | ● | 5 | 7 | 0.9 | 4.4 | 40 | 24 | 0.5 | 0.15 |
| JBTR07290015-D050 | ● | ● | 5 | 7 | 0.9 | 4.4 | 45 | 29 | 0.5 | 0.15 |
| JBTL07290015-D050 | | ● | 5 | 7 | 0.9 | 4.4 | 45 | 29 | 0.5 | 0.15 |
| JBTR07340015-D050 | ● | ● | 5 | 7 | 0.9 | 4.4 | 50 | 34 | 0.5 | 0.15 |
| JBTL07340015-D050 | ● | | 5 | 7 | 0.9 | 4.4 | 50 | 34 | 0.5 | 0.15 |
| JBTR/L07140015-D060 | ● | ● | 6 | 7 | 1.8 | 5.3 | 30 | 14 | 0.5 | 0.15 |
| JBTR/L07210015-D060 | ● | ● | 6 | 7 | 1.8 | 5.3 | 37 | 21 | 0.5 | 0.15 |
| JBTR/L07240015-D060 | ● | ● | 6 | 7 | 1.8 | 5.3 | 40 | 24 | 0.5 | 0.15 |
| JBTR/L07290015-D060 | ● | ● | 6 | 7 | 1.8 | 5.3 | 45 | 29 | 0.5 | 0.15 |
| JBTR07340015-D060 | ● | ● | 6 | 7 | 1.8 | 5.3 | 50 | 34 | 0.5 | 0.15 |
| JBTR07410015-D060 | ● | ● | 6 | 7 | 1.8 | 5.3 | 57 | 41 | 0.5 | 0.15 |
| JBTR/L07190015-D068 | ● | ● | 6.8 | 7 | 2.8 | 6.3 | 35 | 19 | 0.6 | 0.15 |
| JBTR07240015-D068 | ● | ● | 6.8 | 7 | 2.8 | 6.3 | 40 | 24 | 0.6 | 0.15 |
| JBTR/L07290015-D068 | ● | ● | 6.8 | 7 | 2.8 | 6.3 | 45 | 29 | 0.6 | 0.15 |
| JBTR/L07340015-D070 | ● | ● | 7 | 7 | 2.8 | 6.3 | 50 | 34 | 0.6 | 0.15 |
| JBTR07390015-D070 | ● | ● | 7 | 7 | 2.8 | 6.3 | 55 | 39 | 0.6 | 0.15 |
| JBTR07440015-D070 | ● | ● | 7 | 7 | 2.8 | 6.3 | 60 | 44 | 0.6 | 0.15 |
| JBTR07490015-D070 | ● | ● | 7 | 7 | 2.8 | 6.3 | 65 | 49 | 0.6 | 0.15 |

● : 新
● : 阵容

| 应用 | 型号 | 材质 | 内冷 | 圆柱柄 | | 刀宽 | 最小镗孔直径 DMIN (mm) | | | | | | | | | | |
|----------|-----|------|----|-----|----|----|------------------|---|---|---|---|----|----|----|----|--|----|
| | | | | ø4 | ø7 | | 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 15 | | |
| 镗孔、仿形、倒角 | JBT | 硬质合金 | ○ | ○ | ○ | - | ø0.6 | | | | | | | | | | ø7 |

JBTR

内冷CBN镗刀, 用于镗孔、仿形和倒角加工



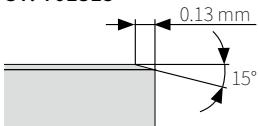
图示为右手型号 (R).

| 型号 | BX310 | DMIN | DCONMS | WF | a | LF | LH | CDX | RE ^{+0.05} ₀ |
|---------------------|-------|------|--------|-----|------|------|-----|-----|----------------------------------|
| JBTR04060010-D028ST | ● | 2.8 | 4 | 0.9 | 2.6 | 22 | 6 | 0.3 | 0.1 |
| JBTR04095010-D028ST | ● | 2.8 | 4 | 0.9 | 2.6 | 25.5 | 9.5 | 0.3 | 0.1 |
| JBTR04070015-D040ST | ● | 4 | 4 | 1.5 | 3.5 | 23 | 7 | 0.5 | 0.15 |
| JBTR04110015-D040ST | ● | 4 | 4 | 1.5 | 3.5 | 27 | 11 | 0.5 | 0.15 |
| JBTR07090020-D050ST | ● | 5 | 7 | 0.6 | 4.15 | 25 | 9 | 0.4 | 0.2 |
| JBTR07140020-D050ST | ● | 5 | 7 | 0.6 | 4.15 | 30 | 14 | 0.4 | 0.2 |

● : 新

刃口处理

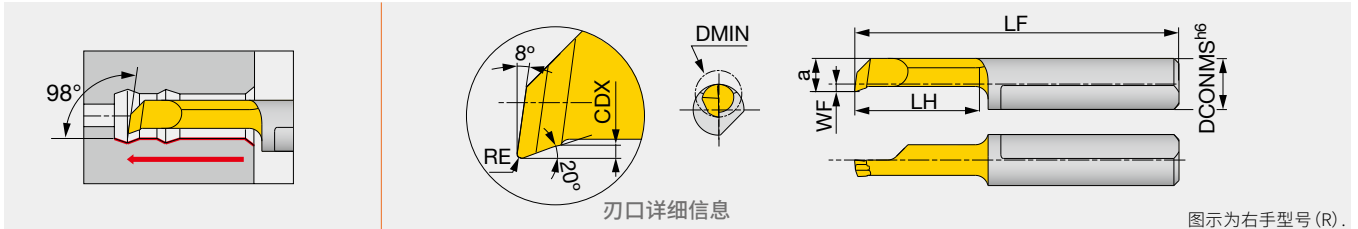
ST: T01315



| 应用 | 型号 | 材质 | 内冷 | 圆柱柄 | | 刀宽 | 最小镗孔直径 DMIN (mm) | | | | | | | | | | |
|--------------|-----|------|----|-----|----|----|------------------|----|---|---|---|----|----|----|----|--|--|
| | | | | ø4 | ø7 | | 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 15 | | |
| 镗孔、仿形、倒角 | JBT | 硬质合金 | ○ | ○ | ○ | - | ø2.8 | ø5 | | | | | | | | | |

TBTR/L

用于镗孔、仿形和倒角的整硬镗刀



图示为右手型号 (R).

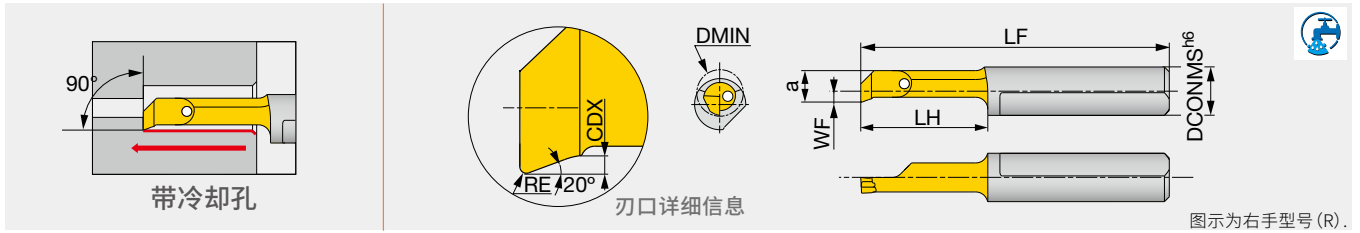
| 型号 | SH725 | DMIN | DCONMS | WF | a | LF | LH | CDX | RE ^{+0.05} |
|---------------------|-------|------|--------|------|-----|------|-----|-----|---------------------|
| TBTR04045005-D010 | ● | 1 | 4 | -1.1 | 0.9 | 21 | 4.5 | 0.1 | 0.05 |
| TBTR04065005-D010 | ● | 1 | 4 | -1.1 | 0.9 | 23 | 6.5 | 0.1 | 0.05 |
| TBTR04040005-D020 | ● | 2 | 4 | -0.3 | 1.7 | 20.5 | 4 | 0.1 | 0.05 |
| TBTR04090005-D020 | ● | 2 | 4 | -0.3 | 1.7 | 25.5 | 9 | 0.1 | 0.05 |
| TBTR04140005-D020 | ● | 2 | 4 | -0.3 | 1.7 | 30.5 | 14 | 0.1 | 0.05 |
| TBTR/L04090010-D028 | ● | 2.8 | 4 | 0.9 | 2.6 | 25.5 | 9 | 0.2 | 0.1 |
| TBTR04150010-D028 | ● | 2.8 | 4 | 0.9 | 2.6 | 31.5 | 15 | 0.2 | 0.1 |
| TBTR04190010-D028 | ● | 2.8 | 4 | 0.9 | 2.6 | 35.5 | 19 | 0.2 | 0.1 |
| TBTR04090010-D040 | ● | 4 | 4 | 1.5 | 3.5 | 25.5 | 9 | 0.3 | 0.1 |
| TBTR04150010-D040 | ● | 4 | 4 | 1.5 | 3.5 | 31.5 | 15 | 0.3 | 0.1 |
| TBTR04190010-D040 | ● | 4 | 4 | 1.5 | 3.5 | 35.5 | 19 | 0.3 | 0.1 |
| TBTR04230010-D040 | ● | 4 | 4 | 1.5 | 3.5 | 39.5 | 23 | 0.3 | 0.1 |
| TBTR04270010-D040 | ● | 4 | 4 | 1.5 | 3.5 | 43.5 | 27 | 0.3 | 0.1 |
| TBTR07090015-D050 | ● | 5 | 7 | 0.9 | 4.4 | 25 | 9 | 0.5 | 0.15 |
| TBTR07140015-D050 | ● | 5 | 7 | 0.9 | 4.4 | 30 | 14 | 0.5 | 0.15 |
| TBTR07190015-D050 | ● | 5 | 7 | 0.9 | 4.4 | 35 | 19 | 0.5 | 0.15 |
| TBTR07240015-D050 | ● | 5 | 7 | 0.9 | 4.4 | 40 | 24 | 0.5 | 0.15 |
| TBTR07290015-D050 | ● | 5 | 7 | 0.9 | 4.4 | 45 | 29 | 0.5 | 0.15 |
| TBTR07340015-D050 | ● | 5 | 7 | 0.9 | 4.4 | 50 | 34 | 0.5 | 0.15 |
| TBTR07140015-D060 | ● | 6 | 7 | 1.8 | 5.3 | 30 | 14 | 0.5 | 0.15 |
| TBTR/L07210015-D060 | ● | 6 | 7 | 1.8 | 5.3 | 37 | 21 | 0.5 | 0.15 |
| TBTR07240015-D060 | ● | 6 | 7 | 1.8 | 5.3 | 40 | 24 | 0.5 | 0.15 |
| TBTR07290015-D060 | ● | 6 | 7 | 1.8 | 5.3 | 45 | 29 | 0.5 | 0.15 |
| TBTR07340015-D060 | ● | 6 | 7 | 1.8 | 5.3 | 50 | 34 | 0.5 | 0.15 |
| TBTR07410015-D060 | ● | 6 | 7 | 1.8 | 5.3 | 57 | 41 | 0.5 | 0.15 |
| TBTR07190015-D068 | ● | 6.8 | 7 | 2.8 | 6.3 | 35 | 19 | 0.6 | 0.15 |
| TBTR07240015-D068 | ● | 6.8 | 7 | 2.8 | 6.3 | 40 | 24 | 0.6 | 0.15 |
| TBTR07290015-D068 | ● | 6.8 | 7 | 2.8 | 6.3 | 45 | 29 | 0.6 | 0.15 |
| TBTR07340015-D070 | ● | 7 | 7 | 2.8 | 6.3 | 50 | 34 | 0.6 | 0.15 |
| TBTR07390015-D070 | ● | 7 | 7 | 2.8 | 6.3 | 55 | 39 | 0.6 | 0.15 |
| TBTR07440015-D070 | ● | 7 | 7 | 2.8 | 6.3 | 60 | 44 | 0.6 | 0.15 |
| TBTR07490015-D070 | ● | 7 | 7 | 2.8 | 6.3 | 65 | 49 | 0.6 | 0.15 |

●: 新

| 应用 | 型号 | 材质 | 内冷 | 圆柱柄 | | 刀宽 | 最小镗孔直径 DMIN (mm) | | | | | | | | | | |
|----|-----|------|----|-----|----|----|------------------|----|---|---|---|----|----|----|----|--|--|
| | | | | ø4 | ø7 | | 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 15 | | |
| | TBT | 硬质合金 | - | ○ | ○ | - | ø1 | ø7 | | | | | | | | | |

JBPR

用于镗孔和倒角的内冷整硬镗刀



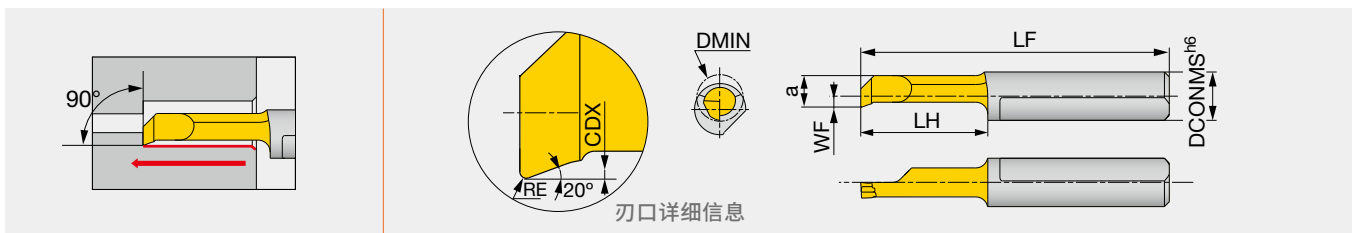
图示为右手型号 (R).

| 型号 | SH725 | SH730 | DMIN | DCONMS | WF | a | LF | LH | CDX | RE ^{+0.05} ₀ |
|-------------------|-------|-------|------|--------|-----|-----|------|----|-----|----------------------------------|
| JBPR04090010-D028 | ● | ● | 2.8 | 4 | 0.9 | 2.6 | 25.5 | 9 | 0.2 | 0.1 |
| JBPR04150010-D028 | ● | ● | 2.8 | 4 | 0.9 | 2.6 | 31.5 | 15 | 0.2 | 0.1 |
| JBPR04090010-D040 | ● | ● | 4 | 4 | 1.5 | 3.5 | 25.5 | 9 | 0.3 | 0.1 |
| JBPR04150010-D040 | ● | ● | 4 | 4 | 1.5 | 3.5 | 31.5 | 15 | 0.3 | 0.1 |
| JBPR07140015-D050 | ● | ● | 5 | 7 | 0.9 | 4.4 | 30 | 14 | 0.5 | 0.15 |
| JBPR07190015-D050 | ● | ● | 5 | 7 | 0.9 | 4.4 | 35 | 19 | 0.5 | 0.15 |

● : 新
● : 阵容

TBPR

用于镗孔和倒角的整硬镗刀



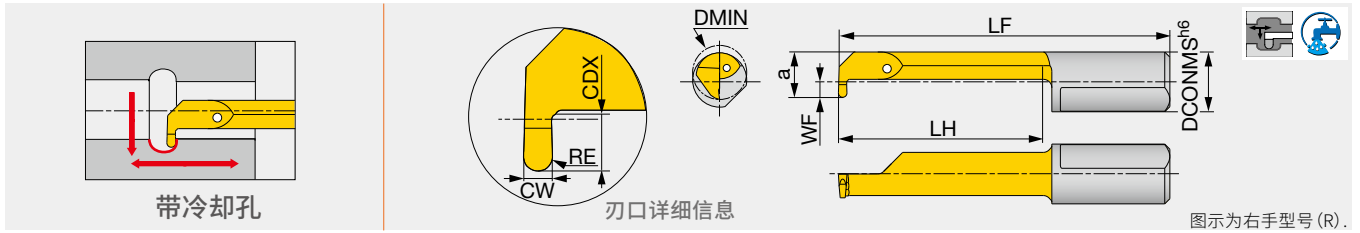
| 型号 | SH725 | DMIN | DCONMS | WF | a | LF | LH | CDX | RE ^{+0.05} ₀ |
|-------------------|-------|------|--------|-----|-----|------|----|-----|----------------------------------|
| TBPR04090010-D028 | ● | 2.8 | 4 | 0.9 | 2.6 | 25.5 | 9 | 0.2 | 0.1 |
| TBPR04150010-D040 | ● | 4 | 4 | 1.5 | 3.5 | 31.5 | 15 | 0.3 | 0.1 |
| TBPR07140015-D050 | ● | 5 | 7 | 0.9 | 4.4 | 30 | 14 | 0.5 | 0.15 |
| TBPR07190015-D050 | ● | 5 | 7 | 0.9 | 4.4 | 35 | 19 | 0.5 | 0.15 |

● : 新

| 应用 | 型号 | 材质 | 内冷 | 圆柱柄 | | 刀宽 | 最小镗孔直径 DMIN (mm) | | | | | | | | | |
|---------------|-----|------|----|-----|----|----|------------------|----|---|---|---|----|----|----|----|--|
| | | | | ø4 | ø7 | | 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 15 | |
| 镗孔、仿形孔、倒角 | JBP | 硬质合金 | ○ | ○ | ○ | - | ø2.8 | ø5 | | | | | | | | |
| | TBP | 硬质合金 | - | ○ | ○ | - | ø2.8 | ø5 | | | | | | | | |

JBRR

内冷整硬镗刀, 用于镗孔和仿形切削 (全R型)



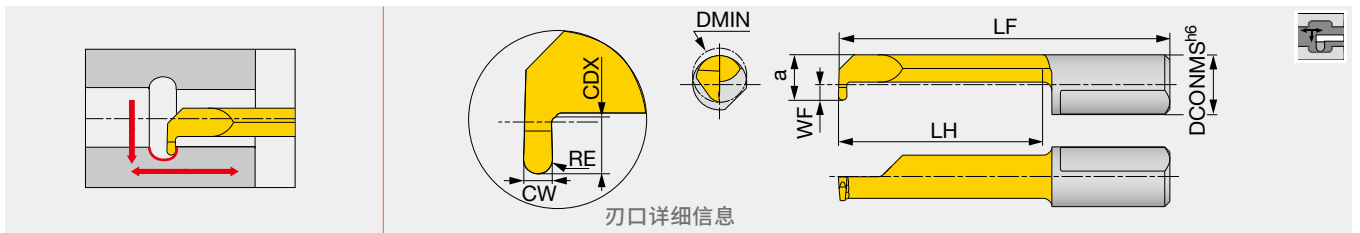
图示为右手型号 (R).

| 型号 | SH725 | SH730 | CW $^{+0.05}_0$ | DMIN | DCONMS | WF | a | LF | LH | CDX | RE |
|-------------------|-------|-------|-----------------|------|--------|-----|-----|----|----|-----|-----|
| JBRR07190050-D050 | ● | ● | 1 | 5 | 7 | 0.9 | 4.4 | 35 | 19 | 1 | 0.5 |
| JBRR07240050-D060 | ● | ● | 1 | 6 | 7 | 1.8 | 5.3 | 40 | 24 | 1.8 | 0.5 |
| JBRR07290050-D068 | ● | ● | 1 | 6.8 | 7 | 2.8 | 6.3 | 45 | 29 | 2.5 | 0.5 |

● : 新
● : 阵容

TBRR

整硬镗刀, 用于镗孔和仿形切削 (全R型)



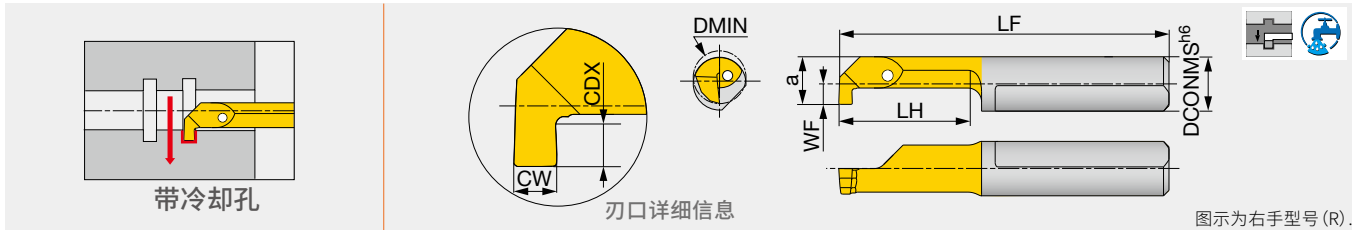
| 型号 | SH725 | CW $^{+0.05}_0$ | DMIN | DCONMS | WF | a | LF | LH | CDX | RE |
|-------------------|-------|-----------------|------|--------|-----|-----|----|----|-----|-----|
| TBRR07190050-D050 | ● | 1 | 5 | 7 | 0.9 | 4.4 | 35 | 19 | 1 | 0.5 |
| TBRR07240050-D060 | ● | 1 | 6 | 7 | 1.8 | 5.3 | 40 | 24 | 1.8 | 0.5 |
| TBRR07290050-D068 | ● | 1 | 6.8 | 7 | 2.8 | 6.3 | 45 | 29 | 2.5 | 0.5 |

● : 新

| 应用 | 型号 | 材质 | 内冷 | 圆柱柄 | | 刀宽 | 最小镗孔直径 DMIN (mm) | | | | | | | | | |
|----|-----|------|----|-----|----|----|---|---|---|---|---|----|----|----|----|--|
| | | | | ø4 | ø7 | | 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 15 | |
| | JBR | 硬质合金 | ○ | - | ○ | - | ø5 ø6.8 | | | | | | | | | |
| | TBR | 硬质合金 | - | - | ○ | 1 | ø5 ø6.8 | | | | | | | | | |

JBGR/L

内冷整硬镗刀, 用于切内孔槽



图示为右手型号 (R).

| 型号 | SH725 | SH730 | CW ^{+0.05} ₀ | DMIN | DCONMS | WF | a | LF | LH | CDX |
|---------------------|-------|-------|----------------------------------|------|--------|------|-----|------|----|-----|
| JBGR04050050-D020 | ● | ● | 0.5 | 2 | 4 | -0.2 | 1.8 | 21 | 5 | 0.4 |
| JBGR04100050-D020 | ● | ● | 0.5 | 2 | 4 | -0.2 | 1.8 | 26 | 10 | 0.4 |
| JBGR04050070-D030 | ● | ● | 0.7 | 3 | 4 | 0.7 | 2.7 | 21 | 5 | 0.6 |
| JBGR04100070-D030 | ● | ● | 0.7 | 3 | 4 | 0.7 | 2.7 | 26 | 10 | 0.6 |
| JBGR04090100-D040 | ● | ● | 1 | 4 | 4 | 1.5 | 3.5 | 25.5 | 9 | 0.8 |
| JBGR04150100-D040 | ● | ● | 1 | 4 | 4 | 1.5 | 3.5 | 31.5 | 15 | 0.8 |
| JBGR07090100-D050 | ● | ● | 1 | 5 | 7 | 0.9 | 4.4 | 25 | 9 | 1 |
| JBGR07140100-D050 | ● | ● | 1 | 5 | 7 | 0.9 | 4.4 | 30 | 14 | 1 |
| JBGR07090150-D050 | ● | ● | 1.5 | 5 | 7 | 0.9 | 4.4 | 25 | 9 | 1 |
| JBGR07140150-D050 | ● | ● | 1.5 | 5 | 7 | 0.9 | 4.4 | 30 | 14 | 1 |
| JBGR07090200-D050 | ● | ● | 2 | 5 | 7 | 0.9 | 4.4 | 25 | 9 | 1 |
| JBGR07190200-D050 | ● | ● | 2 | 5 | 7 | 0.9 | 4.4 | 35 | 19 | 1 |
| JBGR/L07090100-D060 | ● | ● | 1 | 6 | 7 | 1.8 | 5.3 | 25 | 9 | 1.8 |
| JBGR07140100-D060 | ● | ● | 1 | 6 | 7 | 1.8 | 5.3 | 30 | 14 | 1.8 |
| JBGR07210100-D060 | ● | ● | 1 | 6 | 7 | 1.8 | 5.3 | 37 | 21 | 1.8 |
| JBGR07290100-D060 | ● | ● | 1 | 6 | 7 | 1.8 | 5.3 | 45 | 29 | 1.8 |
| JBGR/L07090150-D060 | ● | ● | 1.5 | 6 | 7 | 1.8 | 5.3 | 25 | 9 | 1.8 |
| JBGR07140150-D060 | ● | ● | 1.5 | 6 | 7 | 1.8 | 5.3 | 30 | 14 | 1.8 |
| JBGR07210150-D060 | ● | ● | 1.5 | 6 | 7 | 1.8 | 5.3 | 37 | 21 | 1.8 |
| JBGR07240150-D060 | ● | ● | 1.5 | 6 | 7 | 1.8 | 5.3 | 40 | 24 | 1.8 |
| JBGR07290150-D060 | ● | ● | 1.5 | 6 | 7 | 1.8 | 5.3 | 45 | 29 | 1.8 |
| JBGR07090200-D060 | ● | ● | 2 | 6 | 7 | 1.8 | 5.3 | 25 | 9 | 1.8 |
| JBGR07140200-D060 | ● | ● | 2 | 6 | 7 | 1.8 | 5.3 | 30 | 14 | 1.8 |
| JBGR07210200-D060 | ● | ● | 2 | 6 | 7 | 1.8 | 5.3 | 37 | 21 | 1.8 |
| JBGR07240200-D060 | ● | ● | 2 | 6 | 7 | 1.8 | 5.3 | 40 | 24 | 1.8 |
| JBGR07290200-D060 | ● | ● | 2 | 6 | 7 | 1.8 | 5.3 | 45 | 29 | 1.8 |
| JBGR07090100-D068 | ● | ● | 1 | 6.8 | 7 | 2.7 | 6.2 | 25 | 9 | 2.5 |
| JBGR07140100-D068 | ● | ● | 1 | 6.8 | 7 | 2.7 | 6.2 | 30 | 14 | 2.5 |
| JBGR07210100-D068 | ● | ● | 1 | 6.8 | 7 | 2.7 | 6.2 | 37 | 21 | 2.5 |
| JBGR07090150-D068 | ● | ● | 1.5 | 6.8 | 7 | 2.7 | 6.2 | 25 | 9 | 2.5 |
| JBGR07140150-D068 | ● | ● | 1.5 | 6.8 | 7 | 2.7 | 6.2 | 30 | 14 | 2.5 |
| JBGR07210150-D068 | ● | ● | 1.5 | 6.8 | 7 | 2.7 | 6.2 | 37 | 21 | 2.5 |
| JBGR07290150-D068 | ● | ● | 1.5 | 6.8 | 7 | 2.7 | 6.2 | 45 | 29 | 2.5 |
| JBGR07090200-D068 | ● | ● | 2 | 6.8 | 7 | 2.7 | 6.2 | 25 | 9 | 2.5 |
| JBGR/L07140200-D068 | ● | ● | 2 | 6.8 | 7 | 2.7 | 6.2 | 30 | 14 | 2.5 |
| JBGR07210200-D068 | ● | ● | 2 | 6.8 | 7 | 2.7 | 6.2 | 37 | 21 | 2.5 |
| JBGR07250200-D068 | ● | ● | 2 | 6.8 | 7 | 2.7 | 6.2 | 40 | 25 | 2.5 |
| JBGR07290200-D068 | ● | ● | 2 | 6.8 | 7 | 2.7 | 6.2 | 45 | 29 | 2.5 |

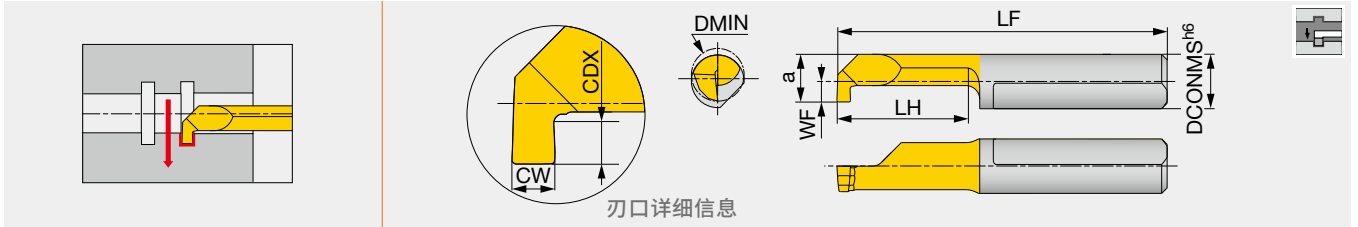
刀尖圆弧: 小于 0.1 mm

● : 新
● : 阵容

| 应用 | 型号 | 材质 | 内冷 | 圆柱柄 | | 刀宽 | 最小镗孔直径 DMIN (mm) | | | | | | | | | | | | | | |
|------|-----|------|----|-----|----|----|------------------|------|---|---|---|----|----|----|----|--|--|--|--|--|--|
| | | | | ø4 | ø7 | | 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 15 | | | | | | |
| 内孔切槽 | JBG | 硬质合金 | ○ | ○ | ○ | - | ø0.5 | ø6.8 | | | | | | | | | | | | | |

TBGR

整硬镗刀，用于切内孔槽



| 型号 | SH725 | CW ^{+0.05} ₀ | DMIN | DCONMS | WF | a | LF | LH | CDX |
|-------------------|-------|----------------------------------|------|--------|------|-----|------|----|-----|
| TBGR04100050-D020 | ● | 0.5 | 2 | 4 | -0.2 | 1.8 | 26 | 10 | 0.4 |
| TBGR04090100-D040 | ● | 1 | 4 | 4 | 1.5 | 3.5 | 25.5 | 9 | 0.8 |
| TBGR04150100-D040 | ● | 1 | 4 | 4 | 1.5 | 3.5 | 31.5 | 15 | 0.8 |
| TBGR07090200-D050 | ● | 2 | 5 | 7 | 0.9 | 4.4 | 25 | 9 | 1 |
| TBGR07090100-D060 | ● | 1 | 6 | 7 | 1.8 | 5.3 | 25 | 9 | 1.8 |
| TBGR07140100-D060 | ● | 1 | 6 | 7 | 1.8 | 5.3 | 30 | 14 | 1.8 |
| TBGR07090150-D060 | ● | 1.5 | 6 | 7 | 1.8 | 5.3 | 25 | 9 | 1.8 |
| TBGR07090200-D060 | ● | 2 | 6 | 7 | 1.8 | 5.3 | 25 | 9 | 1.8 |
| TBGR07140200-D060 | ● | 2 | 6 | 7 | 1.8 | 5.3 | 30 | 14 | 1.8 |
| TBGR07090100-D068 | ● | 1 | 6.8 | 7 | 2.7 | 6.2 | 25 | 9 | 2.5 |
| TBGR07090150-D068 | ● | 1.5 | 6.8 | 7 | 2.7 | 6.2 | 25 | 9 | 2.5 |
| TBGR07140150-D068 | ● | 1.5 | 6.8 | 7 | 2.7 | 6.2 | 30 | 14 | 2.5 |
| TBGR07090200-D068 | ● | 2 | 6.8 | 7 | 2.7 | 6.2 | 25 | 9 | 2.5 |
| TBGR07140200-D068 | ● | 2 | 6.8 | 7 | 2.7 | 6.2 | 30 | 14 | 2.5 |
| TBGR07210200-D068 | ● | 2 | 6.8 | 7 | 2.7 | 6.2 | 37 | 21 | 2.5 |
| TBGR07290200-D068 | ● | 2 | 6.8 | 7 | 2.7 | 6.2 | 45 | 29 | 2.5 |

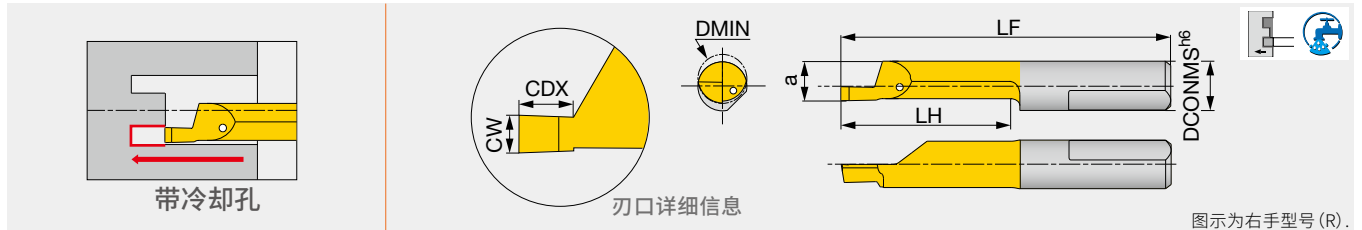
刀尖圆弧：小于 0.1 mm

●：新

| 应用 | 型号 | 材质 | 内冷 | 圆柱柄 | | 刀宽 | 最小镗孔直径 DMIN (mm) | | | | | | | | | | |
|------|-----|------|----|-----|----|---------|------------------|---|---|---|---|----|----|----|----|--|------|
| | | | | ø4 | ø7 | | 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 15 | | |
| 内孔切槽 | TBG | 硬质合金 | - | ○ | ○ | 0.5 - 2 | ø2 | | | | | | | | | | ø6.8 |

JBFR/L

内冷整硬镗刀, 用于切端面槽



图示为右手型号 (R).

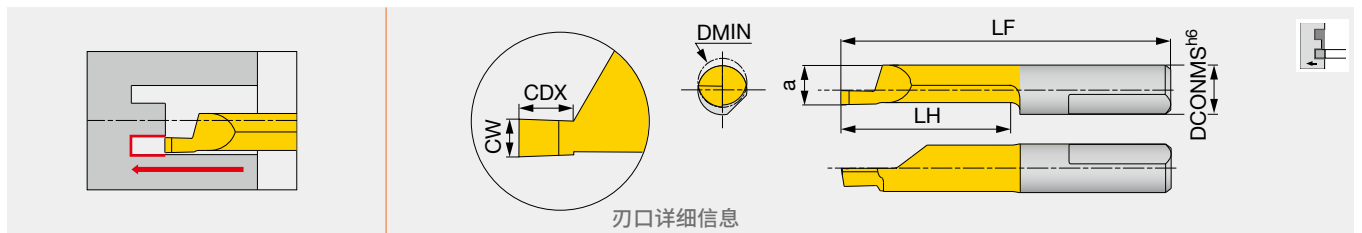
| 型号 | SH725 | SH730 | CW ^{+0.05} | DMIN | DCONMS | a | LF | LH | CDX |
|---------------------|-------|-------|---------------------|------|--------|-----|----|----|-----|
| JBFR07110100-D060 | ● | ● | 1 | 6 | 7 | 5.2 | 27 | 10 | 1.5 |
| JBFR07110150-D060 | ● | ● | 1.5 | 6 | 7 | 5.2 | 27 | 10 | 2 |
| JBFR07110200-D060 | ● | ● | 2 | 6 | 7 | 5.2 | 27 | 10 | 3 |
| JBFR07110100-D080 | ● | ● | 1 | 8 | 7 | 5.9 | 27 | 11 | 1.5 |
| JBFR07110150-D080 | ● | ● | 1.5 | 8 | 7 | 5.9 | 27 | 11 | 2.5 |
| JBFR07110200-D080 | ● | ● | 2 | 8 | 7 | 5.9 | 27 | 11 | 3 |
| JBFR07110250-D080 | ● | ● | 2.5 | 8 | 7 | 5.9 | 27 | 11 | 3.5 |
| JBFR07110300-D080 | ● | ● | 3 | 8 | 7 | 5.9 | 27 | 11 | 3.5 |
| JBFR/L07210150-D080 | ● | ● | 1.5 | 8 | 7 | 5.9 | 36 | 21 | 2.5 |
| JBFR07210200-D080 | ● | ● | 2 | 8 | 7 | 5.9 | 36 | 21 | 3 |
| JBFR07210250-D080 | ● | ● | 2.5 | 8 | 7 | 5.9 | 36 | 21 | 3.5 |
| JBFR07210300-D080 | ● | ● | 3 | 8 | 7 | 5.9 | 36 | 21 | 3.5 |
| JBFR/L07300200-D080 | ● | ● | 2 | 8 | 7 | 5.9 | 46 | 30 | 3 |
| JBFR07300300-D080 | ● | ● | 3 | 8 | 7 | 5.9 | 46 | 30 | 3.5 |
| JBFR07200200-D080 | ● | ● | 2 | 8 | 7 | 5.9 | 36 | 20 | 3 |
| JBFR07200250-D150 | ● | ● | 2.5 | 15 | 7 | 5.9 | 36 | 20 | 20 |
| JBFR07200300-D150 | ● | ● | 3 | 15 | 7 | 5.9 | 36 | 20 | 20 |
| JBFR07300300-D150 | ● | ● | 3 | 15 | 7 | 5.9 | 46 | 30 | 30 |

刀尖圆弧: 小于 0.1 mm

●: 新
●: 阵容

TBFR

内冷整硬镗刀, 用于切端面槽



| 型号 | SH725 | CW ^{+0.05} | DMIN | DCONMS | a | LF | LH | CDX |
|-------------------|-------|---------------------|------|--------|-----|----|----|-----|
| TBFR07110100-D060 | ● | 1 | 6 | 7 | 5.2 | 27 | 10 | 1.5 |
| TBFR07110200-D060 | ● | 2 | 6 | 7 | 5.2 | 27 | 10 | 3 |
| TBFR07110100-D080 | ● | 1 | 8 | 7 | 5.9 | 27 | 11 | 1.5 |
| TBFR07110250-D080 | ● | 2.5 | 8 | 7 | 5.9 | 27 | 11 | 3.5 |
| TBFR07300300-D080 | ● | 3 | 8 | 7 | 5.9 | 46 | 30 | 3.5 |
| TBFR07200250-D150 | ● | 2.5 | 15 | 7 | 5.9 | 36 | 20 | 20 |
| TBFR07200300-D150 | ● | 3 | 15 | 7 | 5.9 | 36 | 20 | 20 |
| TBFR07300300-D150 | ● | 3 | 15 | 7 | 5.9 | 46 | 30 | 30 |

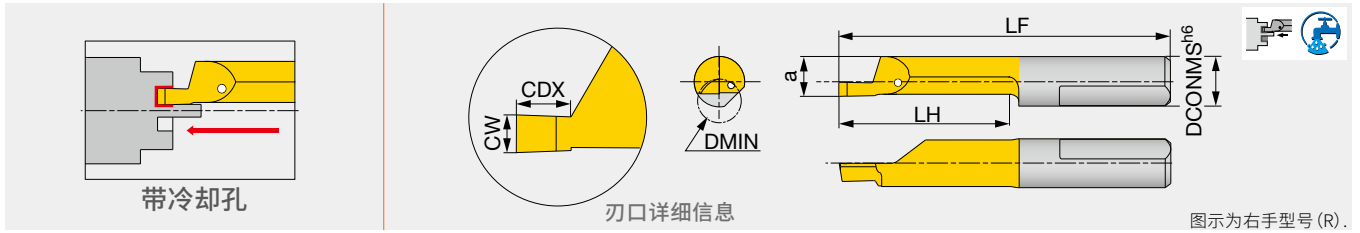
刀尖圆弧: 小于 0.1 mm

●: 新

| 应用 | 型号 | 材质 | 内冷 | 圆柱柄 | | 刀宽 | 最小镗孔直径 DMIN (mm) | | | | | | | | | | |
|-------|-----|------|----|-----|----|-----|------------------|---|---|----|---|----|-----|----|----|--|--|
| | | | | ø4 | ø7 | | 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 15 | | |
| 端面槽加工 | JBF | 硬质合金 | ○ | - | ○ | - | | | | ø6 | | | ø15 | | | | |
| | TBF | 硬质合金 | - | - | ○ | 1-3 | | | | ø6 | | | ø15 | | | | |

JBSR

内冷整硬镗刀, 用于切端面槽 (用于轴加工)



图示为右手型号 (R).

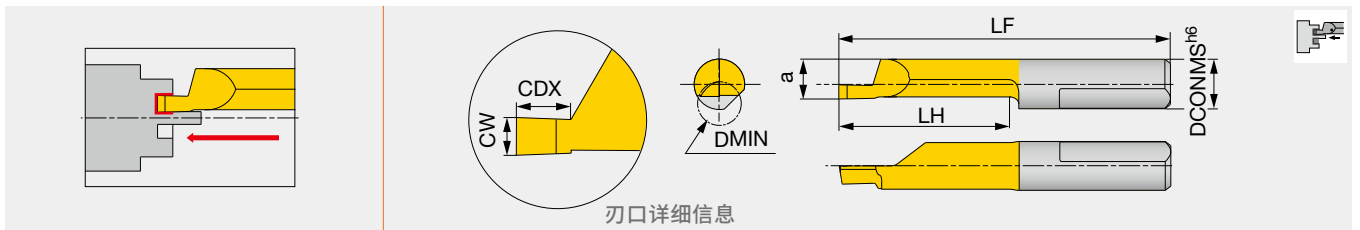
| 型号 | SH725 | SH730 | CW ^{+0.05} ₀ | DMIN | DCONMS | a | LF | LH | CDX |
|-------------------|-------|-------|----------------------------------|------|--------|-----|----|----|-----|
| JBSR07200200-D060 | ● | ● | 2 | 6 | 7 | 5.2 | 36 | 20 | 4 |

刀尖圆弧: 小于 0.1 mm

●: 新
●: 阵容

TBSR

整硬镗刀, 用于切端面槽 (用于轴加工)



| 型号 | SH725 | CW ^{+0.05} ₀ | DMIN | DCONMS | a | LF | LH | CDX |
|-------------------|-------|----------------------------------|------|--------|-----|----|----|-----|
| TBSR07200200-D060 | ● | 2 | 6 | 7 | 5.2 | 36 | 20 | 4 |

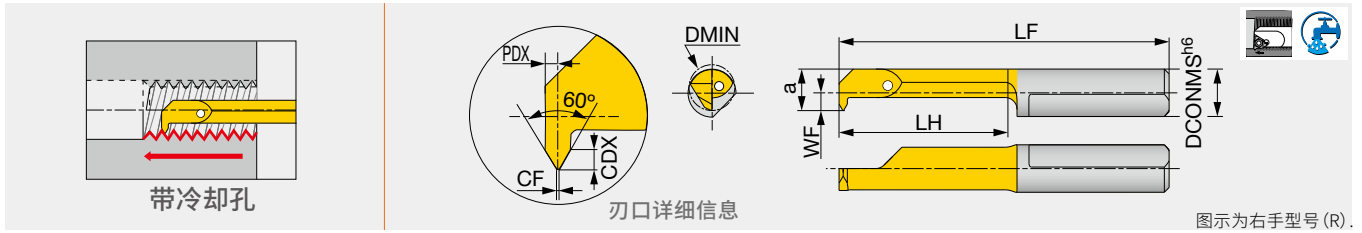
刀尖圆弧: 小于 0.1 mm

●: 新

| 应用 | 型号 | 材质 | 内冷 | 圆柱柄 | | 刀宽 | 最小镗孔直径 DMIN (mm) | | | | | | | | | | |
|----------------------|-----|------|----|-----|----|----|------------------|---|---|---|---|----|----|----|----|--|--|
| | | | | ø4 | ø7 | | 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 15 | | |
| 端面槽加工 (用于轴加工) | JBS | 硬质合金 | ○ | - | ○ | - | ø6 | | | | | | | | | | |
| | TBS | 硬质合金 | - | - | ○ | 2 | ø6 | | | | | | | | | | |

JBIR

内冷整硬镗刀, 用于螺纹加工 (公制)



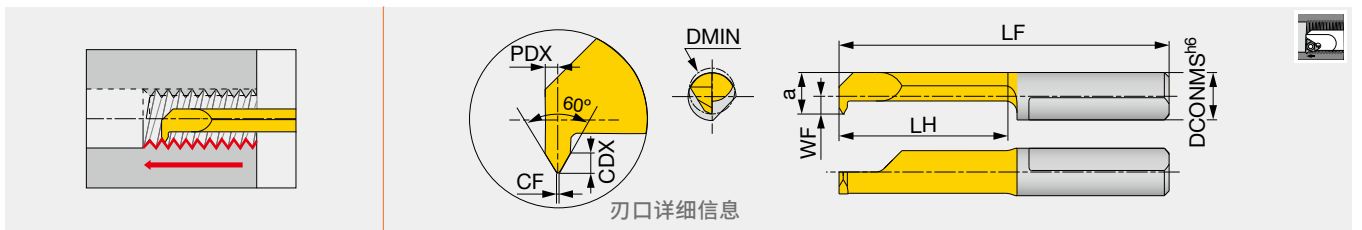
图示为右手型号 (R).

| 型号 | SH725 | SH730 | 螺距 | DMIN | CF _{0.02} | DCONMS | WF | a | LF | LH | CDX | PDX |
|-------------------|-------|-------|------|------|--------------------|--------|-----|-----|----|----|-----|------|
| JBIR04140050-D040 | ● | ● | 0.5 | 4 | 0.06 | 4 | 1.5 | 3.5 | 30 | 14 | 0.3 | 0.35 |
| JBIR07140050-D050 | ● | ● | 0.5 | 5 | 0.06 | 7 | 0.9 | 4.4 | 30 | 14 | 0.3 | 0.35 |
| JBIR07140075-D050 | ● | ● | 0.75 | 5 | 0.09 | 7 | 0.9 | 4.4 | 30 | 14 | 0.4 | 0.45 |
| JBIR07140100-D048 | ● | ● | 1 | 4.8 | 0.12 | 7 | 0.9 | 4.4 | 30 | 14 | 0.6 | 0.55 |
| JBIR07140100-D060 | ● | ● | 1 | 6 | 0.12 | 7 | 1.8 | 5.3 | 30 | 14 | 0.6 | 0.55 |
| JBIR07140125-D060 | ● | ● | 1.25 | 6 | 0.15 | 7 | 1.8 | 5.3 | 30 | 14 | 0.7 | 0.65 |
| JBIR07140150-D060 | ● | ● | 1.5 | 6 | 0.18 | 7 | 1.8 | 5.3 | 30 | 14 | 0.8 | 0.75 |
| JBIR07140150-D070 | ● | ● | 1.5 | 7 | 0.18 | 7 | 2.8 | 6.3 | 30 | 14 | 0.8 | 0.75 |

● : 新
● : 阵容

TBIR

整硬镗刀, 用于螺纹加工 (公制)



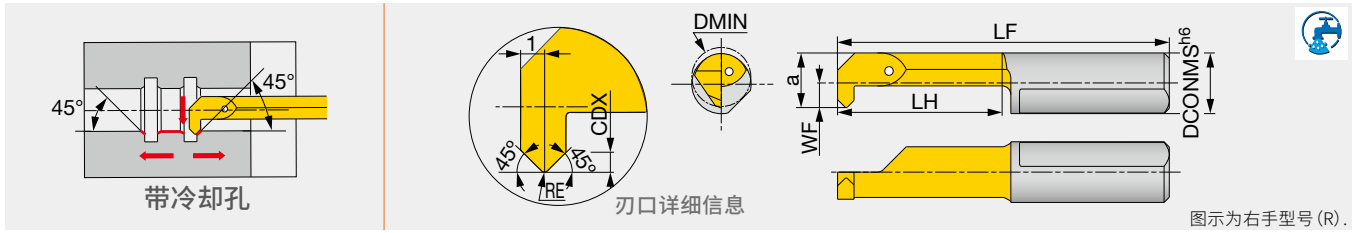
| 型号 | SH725 | 螺距 | DMIN | CF _{0.02} | DCONMS | WF | a | LF | LH | CDX | PDX |
|-------------------|-------|------|------|--------------------|--------|-----|-----|----|----|-----|------|
| TBIR04140050-D040 | ● | 0.5 | 4 | 0.06 | 4 | 1.5 | 3.5 | 30 | 14 | 0.3 | 0.35 |
| TBIR07140050-D050 | ● | 0.5 | 5 | 0.06 | 7 | 0.9 | 4.4 | 30 | 14 | 0.3 | 0.35 |
| TBIR07140075-D050 | ● | 0.75 | 5 | 0.09 | 7 | 0.9 | 4.4 | 30 | 14 | 0.4 | 0.45 |
| TBIR07140100-D048 | ● | 1 | 4.8 | 0.12 | 7 | 0.9 | 4.4 | 30 | 14 | 0.6 | 0.55 |
| TBIR07140100-D060 | ● | 1 | 6 | 0.12 | 7 | 1.8 | 5.3 | 30 | 14 | 0.6 | 0.55 |
| TBIR07140150-D060 | ● | 1.5 | 6 | 0.18 | 7 | 1.8 | 5.3 | 30 | 14 | 0.8 | 0.75 |

● : 新

| 应用 | 型号 | 材质 | 内冷 | 圆柱柄 | | 刀宽 | 最小镗孔直径 DMIN (mm) | | | | | | | | | |
|-----------------|------|------|----|-----|----|----|------------------|---|----|---|---|----|----|----|----|--|
| | | | | ø4 | ø7 | | 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 15 | |
| 螺纹加工 (公制螺纹) | JBIR | 硬质合金 | ○ | ○ | ○ | - | ø4 | | ø7 | | | | | | | |
| | TBIR | 硬质合金 | - | ○ | ○ | - | ø4 | | ø6 | | | | | | | |

JBCR

内冷整硬镗刀, 用于镗孔和 45° 倒角加工

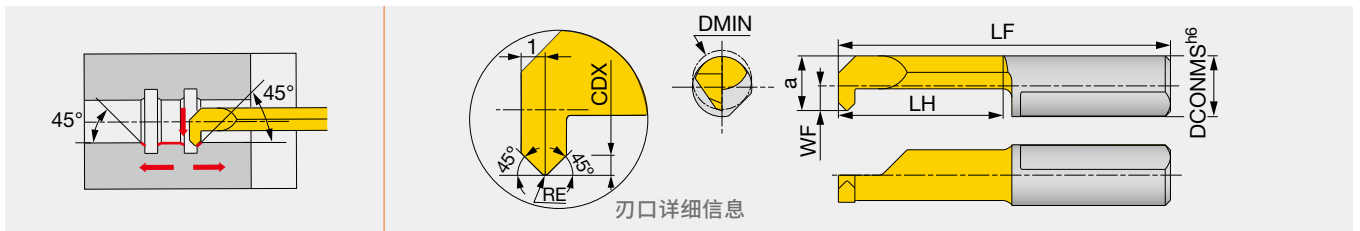


| 型号 | SH725 | SH730 | DMIN | DCONMS | WF | a | LF | LH | CDX | RE ± 0.05 |
|-------------------|-------|-------|------|--------|-----|-----|----|----|-----|---------------|
| JBCR07140020-D050 | ● | ● | 5 | 7 | 0.9 | 4.4 | 30 | 14 | 0.7 | 0.2 |
| JBCR07190020-D050 | ● | ● | 5 | 7 | 0.9 | 4.4 | 35 | 19 | 0.7 | 0.2 |
| JBCR07190020-D068 | ● | ● | 6.8 | 7 | 2.8 | 6.3 | 35 | 19 | 0.7 | 0.2 |

● : 新
● : 阵容

TBCR

整硬镗刀, 用于镗孔和 45° 倒角加工



| 型号 | SH725 | DMIN | DCONMS | WF | a | LF | LH | CDX | RE $+0.05$ ₀ |
|-------------------|-------|------|--------|-----|-----|----|----|-----|-------------------------|
| TBCR07140020-D050 | ● | 5 | 7 | 0.9 | 4.4 | 30 | 14 | 0.7 | 0.2 |
| TBCR07190020-D068 | ● | 6.8 | 7 | 2.8 | 6.3 | 35 | 19 | 0.7 | 0.2 |

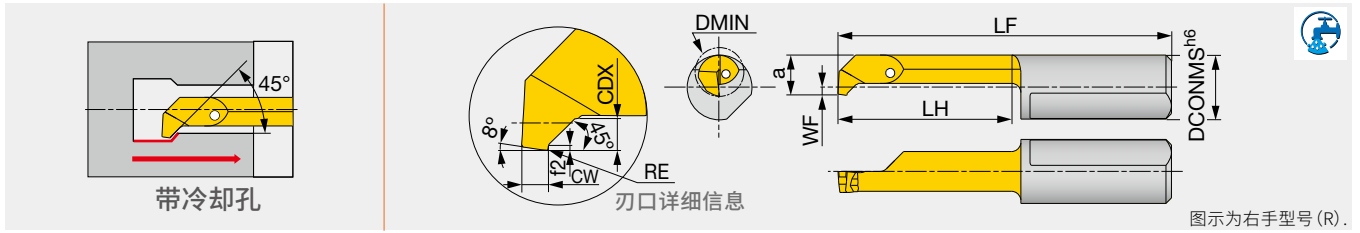
● : 新

| 应用 | 型号 | 材质 | 内冷 | 圆柱柄 | | 刀宽 | 最小镗孔直径 DMIN (mm) | | | | | | | | | | |
|----|-----|------|----|-----|----|----|---|---|---|---|---|----|----|----|----|--|--|
| | | | | ø4 | ø7 | | 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 15 | | |
| | JBC | 硬质合金 | ○ | - | ○ | - | ø5 ø6.8 | | | | | | | | | | |
| | TBC | 硬质合金 | - | - | ○ | - | ø5 ø6.8 | | | | | | | | | | |

TINYMINI-TURN

JBUR

内冷整硬镗刀, 用于反向镗孔和倒角加工



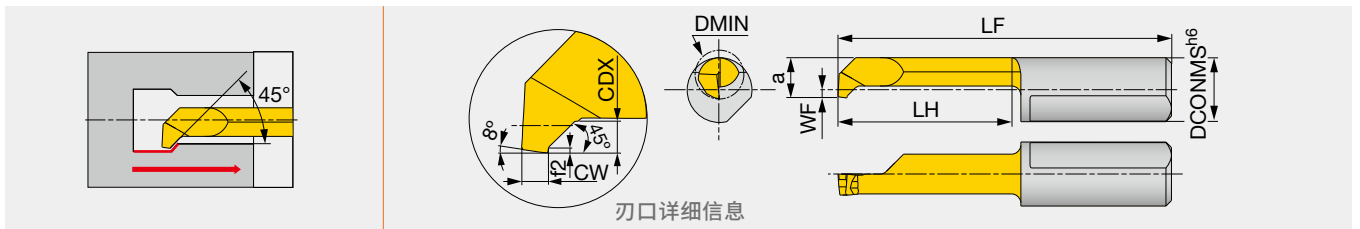
图示为右手型号 (R).

| 型号 | SH725 | SH730 | DMIN | DCONMS | WF | a | LF | LH | f2 | CDX | CW ^{+0.05} | RE |
|-------------------|-------|-------|------|--------|-----|-----|----|----|-----|-----|---------------------|-----|
| JBUR07140010-D050 | ● | ● | 5 | 7 | 0.9 | 4.4 | 30 | 14 | 0.2 | 1 | 1 | 0.1 |
| JBUR07190010-D050 | ● | ● | 5 | 7 | 0.9 | 4.4 | 35 | 19 | 0.2 | 1 | 1 | 0.1 |

● : 新
● : 阵容

TBUR

整硬镗刀, 用于反向镗孔和倒角加工



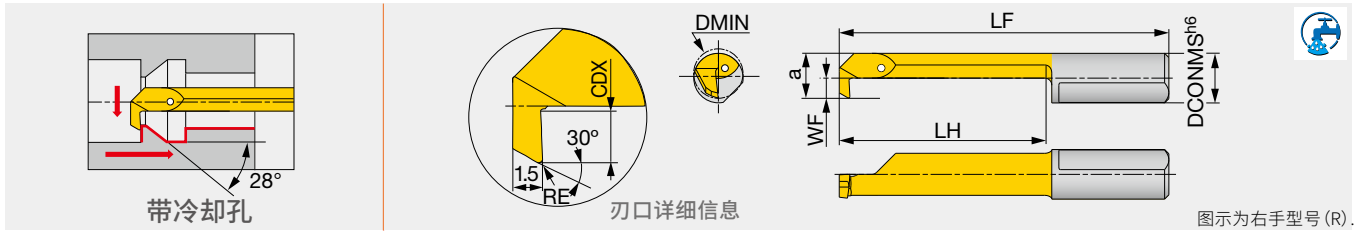
| 型号 | SH725 | DMIN | DCONMS | WF | a | LF | LH | f2 | CDX | CW ^{+0.05} |
|-------------------|-------|------|--------|-----|-----|----|----|-----|-----|---------------------|
| TBUR07140010-D050 | ● | 5 | 7 | 0.9 | 4.4 | 30 | 14 | 0.2 | 1 | 1 |
| TBUR07190010-D050 | ● | 5 | 7 | 0.9 | 4.4 | 35 | 19 | 0.2 | 1 | 1 |

● : 新

| 应用 | 型号 | 材质 | 内冷 | 圆柱柄 | | 刀宽 | 最小镗孔直径 DMIN (mm) | | | | | | | | | | |
|-----------|-----|------|----|-----|----|----|------------------|---|---|---|---|----|----|----|----|--|--|
| | | | | ø4 | ø7 | | 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 15 | | |
| 反镗 & 倒角加工 | JBU | 硬质合金 | ○ | - | ○ | - | ø5 | | | | | | | | | | |
| | TBU | 硬质合金 | - | - | ○ | - | ø5 | | | | | | | | | | |

JBBR

内冷整硬镗刀, 用于反向镗孔和倒角加工



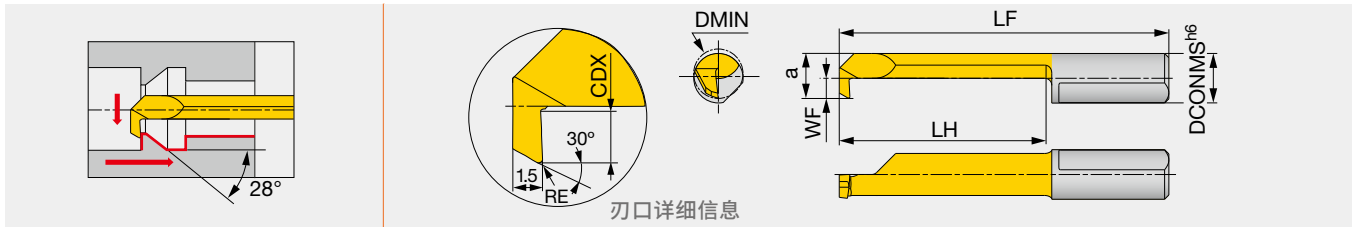
图示为右手型号 (R).

| 型号 | SH725 | SH730 | DMIN | DCONMS | WF | a | LF | LH | CDX | RE ^{+0.05} |
|-------------------|-------|-------|------|--------|-----|-----|----|----|-----|---------------------|
| JBBR04140020-D030 | ● | ● | 3 | 4 | 0.6 | 2.6 | 30 | 14 | 0.5 | 0.2 |
| JBBR04190020-D030 | ● | ● | 3 | 4 | 0.6 | 2.6 | 35 | 19 | 0.5 | 0.2 |
| JBBR04140015-D040 | ● | ● | 4 | 4 | 1.5 | 3.5 | 30 | 14 | 0.8 | 0.15 |
| JBBR04240015-D040 | ● | ● | 4 | 4 | 1.5 | 3.5 | 40 | 24 | 0.8 | 0.15 |
| JBBR07190020-D050 | ● | ● | 5 | 7 | 0.9 | 4.4 | 35 | 19 | 1 | 0.2 |
| JBBR07290020-D050 | ● | ● | 5 | 7 | 0.9 | 4.4 | 45 | 29 | 1 | 0.2 |
| JBBR07190020-D060 | ● | ● | 6 | 7 | 1.8 | 5.3 | 35 | 19 | 1.8 | 0.2 |
| JBBR07290020-D060 | ● | ● | 6 | 7 | 1.8 | 5.3 | 45 | 29 | 1.8 | 0.2 |
| JBBR07190020-D070 | ● | ● | 7 | 7 | 2.8 | 6.3 | 35 | 19 | 2.5 | 0.2 |
| JBBR07290020-D070 | ● | ● | 7 | 7 | 2.8 | 6.3 | 45 | 29 | 2.5 | 0.2 |

● : 新
● : 阵容

TBBR

整硬镗刀, 用于反向镗孔和倒角加工



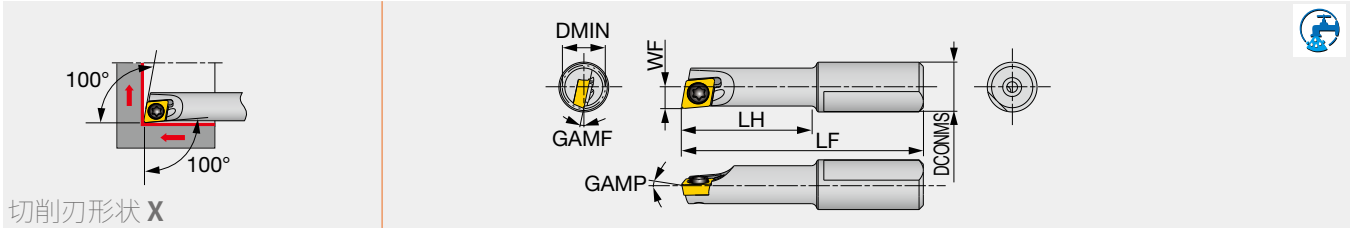
| 型号 | SH725 | DMIN | DCONMS | WF | a | LF | LH | CDX | RE ^{+0.05} |
|-------------------|-------|------|--------|-----|-----|----|----|-----|---------------------|
| TBBR04140020-D030 | ● | 3 | 4 | 0.6 | 2.6 | 30 | 14 | 0.5 | 0.2 |
| TBBR04140015-D040 | ● | 4 | 4 | 1.5 | 3.5 | 30 | 14 | 0.8 | 0.15 |
| TBBR07190020-D050 | ● | 5 | 7 | 0.9 | 4.4 | 35 | 19 | 1 | 0.2 |

● : 新

| 应用 | 型号 | 材质 | 内冷 | 圆柱柄 | | 刀宽 | 最小镗孔直径 DMIN (mm) | | | | | | | | | |
|----|-----|------|----|-----|----|----|------------------|----|---|---|---|----|----|----|----|--|
| | | | | ø4 | ø7 | | 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 15 | |
| 背控 | JBB | 硬质合金 | ○ | ○ | ○ | - | ø3 | ø7 | | | | | | | | |
| | TBB | 硬质合金 | - | ○ | ○ | - | ø3 | ø5 | | | | | | | | |

A/E-SEXPR

螺钉锁紧式镗刀，用于正角 75° 菱形刀片



切削刃形状 X

| 型号 | 材质 | DMIN | DCONMS | WF | LF | LH | GAMP | GAMF | RE** | 刀片 | 扭矩 * |
|------------------|------|------|--------|-----|----|----|------|------|------|-------------|------|
| A07050-SEXPR03-3 | 钢 | 5 | 7 | 2.5 | 31 | 15 | 0° | -13° | 0.2 | EPGT03X1... | 0.6 |
| A07060-SEXPR04-3 | 钢 | 6 | 7 | 3.1 | 34 | 18 | 0° | -12° | 0.2 | EPGT0401... | 0.6 |
| E07050-SEXPR03-4 | 硬质合金 | 5 | 7 | 2.5 | 37 | 20 | 0° | -13° | 0.2 | EPGT03X1... | 0.6 |
| E07050-SEXPR03-5 | 硬质合金 | 5 | 7 | 2.5 | 42 | 25 | 0° | -13° | 0.2 | EPGT03X1... | 0.6 |
| E07060-SEXPR04-5 | 硬质合金 | 6 | 7 | 3.1 | 46 | 30 | 0° | -12° | 0.2 | EPGT0401... | 0.6 |

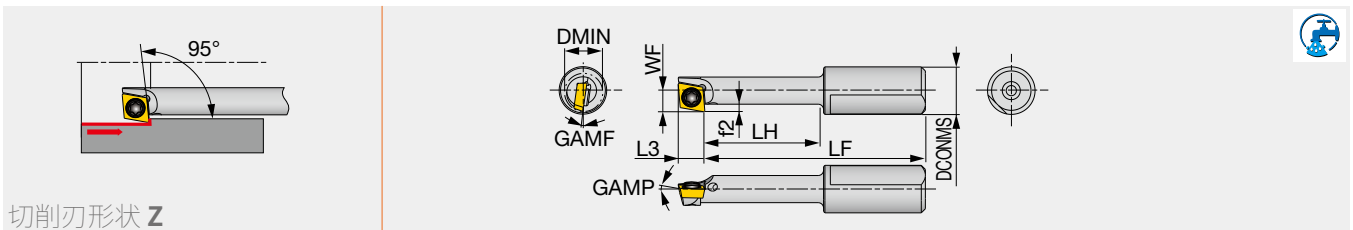
* 扭矩：推荐锁紧扭矩 (N m)

**RE: 标准刀尖圆弧半径

注：右手刀杆 (SEXPR**) 配左手刀片 (L)。

A/E-SEZPR

螺钉锁紧式镗刀，用于正角 75° 菱形刀片



切削刃形状 Z

| 型号 | 材质 | DMIN | DCONMS | WF | LF | LH | f2 | L3 | GAMP | GAMF | RE** | 刀片 | 扭矩 * |
|------------------|------|------|--------|-----|------|------|-----|-----|------|------|------|-------------|------|
| A07055-SEZPR03-3 | 钢 | 5.5 | 7 | 3.2 | 32.5 | 16.5 | 1.2 | 3.9 | 0° | -8° | 0.2 | EPGT03X1... | 0.6 |
| E07055-SEZPR03-5 | 硬质合金 | 5.5 | 7 | 3.2 | 44.7 | 27.5 | 1.2 | 3.9 | 0° | -8° | 0.2 | EPGT03X1... | 0.6 |

* 扭矩：推荐锁紧扭矩 (N m)

**RE: 标准刀尖圆弧半径

注：使用右手刀杆 (SEZPR**) 和右手刀片 (R)

备件



| 型号 | 锁紧螺钉 | 扳手 |
|----------------|----------|------|
| A/E070**03-... | CSTA-1.6 | T-6F |
| A/E070**04-... | CSTB-2 | T-6F |

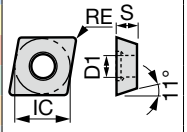
| 应用 | 型号 | 圆柱柄 | | 最小镗孔直径 DMIN (mm) | | | | | | |
|--------------|-------|-----|----|------------------|---|---|------|----|----|--|
| | | ø7 | 内冷 | 0 | 2 | 4 | 6 | 8 | 10 | |
| 镗孔 & 内孔端 | SEXPR | ○ | ○ | | | | ø5 | ø6 | | |
| 背镗 | SEZPR | ○ | ○ | | | | ø5.5 | | | |

刀片 正角型

●: 连续切削
●: 轻断续切削
✳: 强断续切削

EP
菱形, 75°
带孔
11°正前角

| | P 钢 | M 不锈钢 | K 铸铁 | N 非铁金属 | S 耐热合金 | H 硬材料 | | | | | | | | | | | | | | | |
|---|-----|-------|------|--------|--------|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |



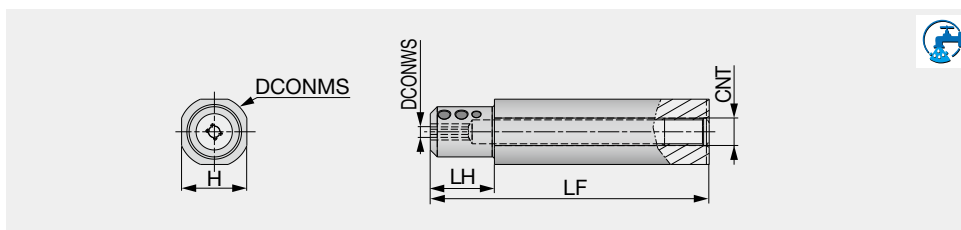
| 应用 | 断屑槽 | 型号 | 涂层 | | | | 金属陶瓷涂层 | 金属陶瓷 | 无涂层 | 尺寸 (mm) | | | |
|-----------------|-----|------------------------------|--------|-------|-------|---------------|--------|--------|------|---------|------|------|-----|
| | | | SH7025 | SH725 | SH730 | GH110 J740 | GT9530 | NS9530 | TH10 | RE | IC | S | D1 |
| (内孔精加工 锋利加工) | | W08 EPGT03X100FR-W08 | ● | ● | | | | | | 0.03 | 3.57 | 1.39 | 1.9 |
| | | EPGT03X100FL-W08 | ● | | | | | | | 0.03 | 3.57 | 1.39 | 1.9 |
| | | EPGT03X101FR-W08 | ● | ● | | | | | | 0.1 | 3.57 | 1.39 | 1.9 |
| | | EPGT03X101FL-W08 | ● | | | | | | | 0.1 | 3.57 | 1.39 | 1.9 |
| | | EPGT03X102FR/L-W08 | ● | ● | | | | | | 0.2 | 3.57 | 1.39 | 1.9 |
| | | EPGT03X104FR/L-W08 | ● | ● | | | | | | 0.4 | 3.57 | 1.39 | 1.9 |
| | | EPGT040100FR-W08 | ● | ● | | | | | | 0.03 | 3.97 | 1.59 | 2.3 |
| | | EPGT040100FL-W08 | ● | | | | | | | 0.03 | 3.97 | 1.59 | 2.3 |
| | | EPGT040101FR-W08 | ● | ● | | | | | | 0.1 | 3.97 | 1.59 | 2.3 |
| | | EPGT040101FL-W08 | ● | | | | | | | 0.1 | 3.97 | 1.59 | 2.3 |
| | | EPGT040102FR/L-W08 | ● | ● | | | | | | 0.2 | 3.97 | 1.59 | 2.3 |
| | | EPGT040104FR/L-W08 | ● | ● | | | | | | 0.4 | 3.97 | 1.59 | 2.3 |
| 内孔精加工 | | W08 EPGT03X100R/L-W08 | | ● | | | | | 0.03 | 3.57 | 1.39 | 1.9 | |
| | | EPGT03X101R/L-W08 | | ● | | | | | 0.1 | 3.57 | 1.39 | 1.9 | |
| | | EPGT03X102R/L-W08 | | ● | | | | | | 0.2 | 3.57 | 1.39 | 1.9 |
| | | EPGT03X104R/L-W08 | | ● | | | | | | 0.4 | 3.57 | 1.39 | 1.9 |
| | | EPGT040100R-W08 | | ● | | | | | | 0.03 | 3.97 | 1.59 | 2.3 |
| | | EPGT040100L-W08 | | ● | ● | | | ● | ● | 0.03 | 3.97 | 1.59 | 2.3 |
| | | EPGT040101R/L-W08 | | ● | | | | | | 0.1 | 3.97 | 1.59 | 2.3 |
| | | EPGT040102R-W08 | | ● | ● | | | ● | ● | 0.2 | 3.97 | 1.59 | 2.3 |
| | | EPGT040102L-W08 | | ● | ● | | ● | ● | ● | 0.2 | 3.97 | 1.59 | 2.3 |
| | | EPGT040104R-W08 | | ● | ● | | | ● | ● | 0.4 | 3.97 | 1.59 | 2.3 |
| EPGT040104L-W08 | | ● | ● | | ● | ● | ● | 0.4 | 3.97 | 1.59 | 2.3 | | |
| (内孔精加工 锋利加工) | | JS EPGT03X101F-JS | ● | ● | | | | | <0.1 | 3.57 | 1.39 | 1.9 | |
| | | EPGT03X102F-JS | ● | ● | | | | | <0.2 | 3.57 | 1.39 | 1.9 | |
| | | EPGT03X104F-JS | ● | ● | | | | | | <0.4 | 3.57 | 1.39 | 1.9 |
| | | EPGT040101F-JS | ● | ● | | | | | | <0.1 | 3.97 | 1.59 | 2.3 |
| | | EPGT040102F-JS | ● | ● | | | | | | <0.2 | 3.97 | 1.59 | 2.3 |
| | | EPGT040104F-JS | ● | ● | | | | | | <0.4 | 3.97 | 1.59 | 2.3 |
| 内孔精加工 | | JS EPGT03X101-JS | | ● | | | | | <0.1 | 3.57 | 1.39 | 1.9 | |
| | | EPGT03X102-JS | | ● | | | | | <0.2 | 3.57 | 1.39 | 1.9 | |
| | | EPGT03X104-JS | | ● | | | | | | <0.4 | 3.57 | 1.39 | 1.9 |
| | | EPGT040101-JS | | ● | | | | | | <0.1 | 3.97 | 1.59 | 2.3 |
| | | EPGT040102-JS | | ● | | | | | | <0.2 | 3.97 | 1.59 | 2.3 |
| | | EPGT040104-JS | | ● | | | | | | <0.4 | 3.97 | 1.59 | 2.3 |
| (内孔精加工 锋利加工) | | J08 EPGT040100FL-J08 | | ● | | | | | 0.03 | 3.97 | 1.59 | 2.3 | |
| | | EPGT040102FL-J08 | ● | ● | | | | | 0.2 | 3.97 | 1.59 | 2.3 | |
| | | EPGT040104FL-J08 | ● | ● | | | | | 0.4 | 3.97 | 1.59 | 2.3 | |
| 内孔精加工 | | J08 EPGT040100L-J08 | | ● | ● | | | | 0.03 | 3.97 | 1.59 | 2.3 | |
| | | EPGT040102L-J08 | | ● | ● | | | | 0.2 | 3.97 | 1.59 | 2.3 | |
| | | EPGT040104L-J08 | | ● | ● | | | | 0.4 | 3.97 | 1.59 | 2.3 | |

带有 "<" 的刀尖半径 (RE) 值表示刀尖半径为负公差

●: 新
●: 阵容

JBBS-4N

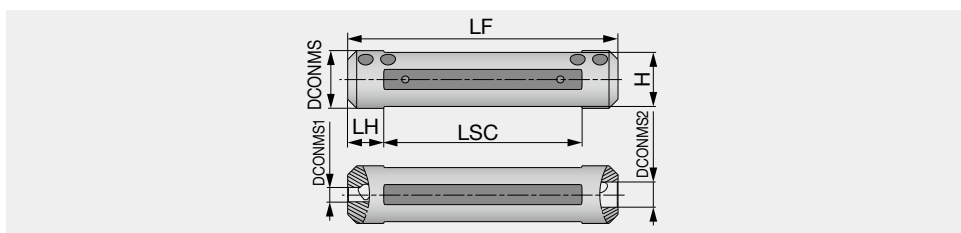
带有4个冷却孔的内冷套筒



| 型号 | DCONMS | DCONWS | LF | LH | H | CNT |
|--------------------|--------|--------|-----|----|-------|--------|
| JBBS12-4-L80C-4N | 12 | 4 | 80 | 10 | 10.3 | Rc1/16 |
| JBBS127-4-L80C-4N | 12.7 | 4 | 80 | 10 | 11.6 | Rc1/16 |
| JBBS14-4-L80C-4N | 14 | 4 | 80 | 10 | 12 | Rc1/8 |
| JBBS159-4-L100C-4N | 15.875 | 4 | 100 | 10 | 14.58 | Rc1/8 |
| JBBS159-7-L100C-4N | 15.875 | 7 | 100 | 10 | 14.58 | Rc1/8 |
| JBBS16-4-L100C-4N | 16 | 4 | 100 | 10 | 15 | Rc1/8 |
| JBBS16-7-L100C-4N | 16 | 7 | 100 | 10 | 15 | Rc1/8 |
| JBBS19-4-L100C-4N | 19.05 | 4 | 100 | 20 | 17.2 | Rc1/8 |
| JBBS19-7-L100C-4N | 19.05 | 7 | 100 | 20 | 17.2 | Rc1/8 |
| JBBS20-4-L100C-4N | 20 | 4 | 100 | 20 | 18 | Rc1/8 |
| JBBS20-7-L100C-4N | 20 | 7 | 100 | 20 | 18 | Rc1/8 |
| JBBS22-4-L100C-4N | 22 | 4 | 100 | 20 | 20 | Rc1/8 |
| JBBS22-7-L100C-4N | 22 | 7 | 100 | 20 | 20 | Rc1/8 |
| JBBS25-4-L100C-4N | 25 | 4 | 100 | 23 | 23 | Rc1/8 |
| JBBS25-7-L100C-4N | 25 | 7 | 100 | 23 | 23 | Rc1/8 |
| JBBS254-4-L100C-4N | 25.4 | 4 | 100 | 23 | 23.4 | Rc1/8 |
| JBBS254-7-L100C-4N | 25.4 | 7 | 100 | 23 | 23.4 | Rc1/8 |

JBBS

外冷用套筒刀杆

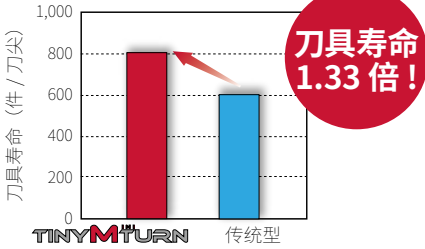
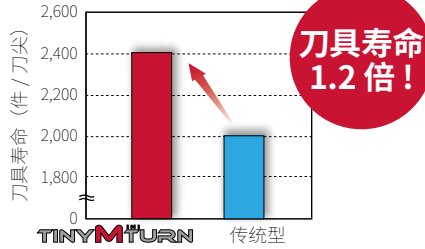
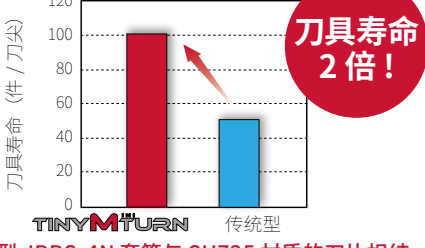
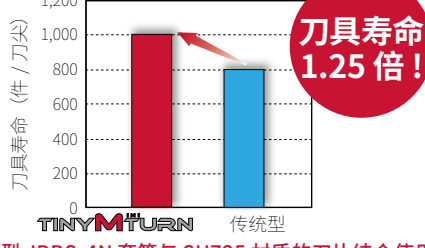


| 型号 | DCONMS | DCONWS1 | DCONWS2 | LF | LH | LSC | H |
|-------------|--------|---------|---------|------|----|------|------|
| JBBS12-4-4 | 12 | 4 | 4 | 75 | 10 | 55 | 10.3 |
| JBBS127-4-4 | 12.7 | 4 | 4 | 76.2 | 10 | 56.2 | 11.6 |
| JBBS14-4-4 | 14 | 4 | 4 | 75 | 10 | 55 | 12 |
| JBBS159-4-7 | 15.875 | 4 | 7 | 76.2 | 10 | 56.2 | 14 |
| JBBS16-4-7 | 16 | 4 | 7 | 75 | 10 | 55 | 15 |
| JBBS19-4-7 | 19.05 | 4 | 7 | 89 | 10 | 69 | 17.2 |
| JBBS20-4-7 | 20 | 4 | 7 | 90 | 10 | 70 | 18 |
| JBBS22-4-7 | 22 | 4 | 7 | 90 | 10 | 70 | 20 |
| JBBS25-4-7 | 25 | 4 | 7 | 100 | 10 | 80 | 23 |
| JBBS254-4-7 | 25.4 | 4 | 7 | 90 | 10 | 70 | 23.4 |

备件

| 型号 | 锁紧螺钉 | 扳手 |
|---|-------------|-------|
| JBBS**4-L***C-4N, JBBS127-4-4, JBBS**4-7 | SSHM5-6PF-S | P-2.5 |
| JBBS**7-L***C-4N, JBBS12-4-4, JBBS14-4-4 | SSHM5-4PF-S | P-2.5 |

实际案例

| 工件类型 | | 套筒 | 电机部件 |
|--------|--------------|---|--|
| 套筒/刀杆 | | JBBS16-4-7 | JBBS25-4-7 / A07050-SEXPR03-3 |
| 刀片 | | TBTR04090010-D028 | EPGT03X102F-JS |
| 材质 | | SH725 | SH725 |
| 工件材料 | | SUS303 / X10CrNiS18-9 | SUM24L / 11SMnPb28 |
| 切削条件 | | | |
| 切削速度 | : Vc (m/min) | 61 | 120 |
| 进给 | : f (mm/rev) | 0.02 | 0.02 |
| 切深 | : ap (mm) | 0.5 | 0.1 |
| 加工方式 | | 内孔车削 | 内孔车削 |
| 冷却方式 | | 湿式 (外冷) | 湿式 (外冷) |
| 结果 | |  <p>TinyMini-Turn SH725 具有高附着力和出色的耐磨性，刀具寿命是同类产品的 1.33 倍。</p> |  <p>与竞争对手的整硬刀杆相比，SH725 材质与 JS 几何结构相结合，大大提高了切屑控制能力，刀具寿命延长了 1.2 倍。</p> |
| 工件类型 | | 槽型相结合 | 堵头 |
| Sleeve | | JBBS16-7-L100C-4N | JBBS25-7-L100C-4N |
| 刀片 | | TBTR07140015-D060 | TBTR07190020-D050 |
| 材质 | | SH725 | SH725 |
| 工件材料 | | SUS316 / X5CrNiMo17-12-3 | SUS304 / X5CrNi18-9 |
| 切削条件 | | | |
| 切削速度 | : Vc (m/min) | 60 | 90 |
| 进给 | : f (mm/rev) | 0.06 | 0.05 |
| 切深 | : ap (mm) | 0.15 | 0.1 |
| 加工方式 | | 内孔车削 | 背镗 |
| 冷却方式 | | 湿式 (内冷) | 湿式 (内冷) |
| 结果 | |  <p>新型 JBBS-4N 套筒与 SH725 材质的刀片相结合，可通过四股冷却液喷流消除切屑缠绕现象，同时实现双倍刀具寿命。</p> |  <p>新型 JBBS-4N 套筒与 SH725 材质的刀片结合使用，在反镗孔应用中消除了切屑缠绕现象，这得益于其四股冷却液喷流，同时刀具寿命达到 1.25 倍。</p> |

| 工件类型 | 齿轮头 | 齿轮部件 | |
|--------|---|--|---------|
| Sleeve | JBBS16-7-L100C-4N | JBBS20-7-L100C-4N | |
| 刀片 | TBFR07110250-D080 | TBGR07140200-D060 | |
| 材质 | SH725 SUS316L | SH725 SUJ2 / 100Cr6 | |
| 工件材料 |  M |  P | |
| 切削条件 | 切削速度 : Vc (m/min) | 80 | 152 |
| | 进给 : f (mm/rev) | 0.02 | 0.1 |
| | Grooving depth (mm) | 3 | 1 |
| | 加工方式 | 端面切槽 | 内孔切槽 |
| | 冷却方式 | 湿式 (内冷) | 湿式 (内冷) |
| 结果 |  <p>新型 JBBS-4N 套筒与 SH725 材质的刀片相结合, 在端面切槽应用中消除了切屑缠绕现象, 这得益于其四股冷却液喷流, 同时刀具寿命达到 1.5 倍。</p> |  <p>新型 JBBS-4N 套筒与 SH725 材质的刀片相结合, 可通过其四股冷却液喷流消除切屑缠绕现象, 同时刀具寿命达到 1.5 倍。</p> | |
| 工件类型 | 止推垫圈 | 阀门 | |
| 套筒/刀杆 | JBBS16-7-L100C-4N / A07050-SEXPR03-3 | JBBS19-7-L100C-4N / E07060-SEXPR04-5 | |
| 刀片 | EPGT03X104R-W08 | 1QP-EPGW040102 | |
| 材质 | SH725 S15C / C15 | BX310 SCM415H | |
| 工件材料 |  P |  H | |
| 切削条件 | 切削速度 : Vc (m/min) | 113 | 60 |
| | 进给 : f (mm/rev) | 0.05 | 0.03 |
| | 切深 : ap (mm) | 0.3 | 0.05 |
| | 加工方式 | 内孔车削 | 内孔车削 |
| | 冷却方式 | 湿式 (内冷) | 湿式 (内冷) |
| 结果 |  <p>新型 JBBS-4N 套筒与 W08 槽型和 SH725 材质的刀片相结合, 四股冷却液喷流消除了切屑缠绕现象, 同时刀具寿命延长了 1.5 倍。</p> |  <p>新型 JBBS-4N 套筒与 BX310 材质的刀片相结合, 由于其四股冷却液喷流, 消除了切屑缠绕现象, 同时实现了双倍的刀具寿命。</p> | |