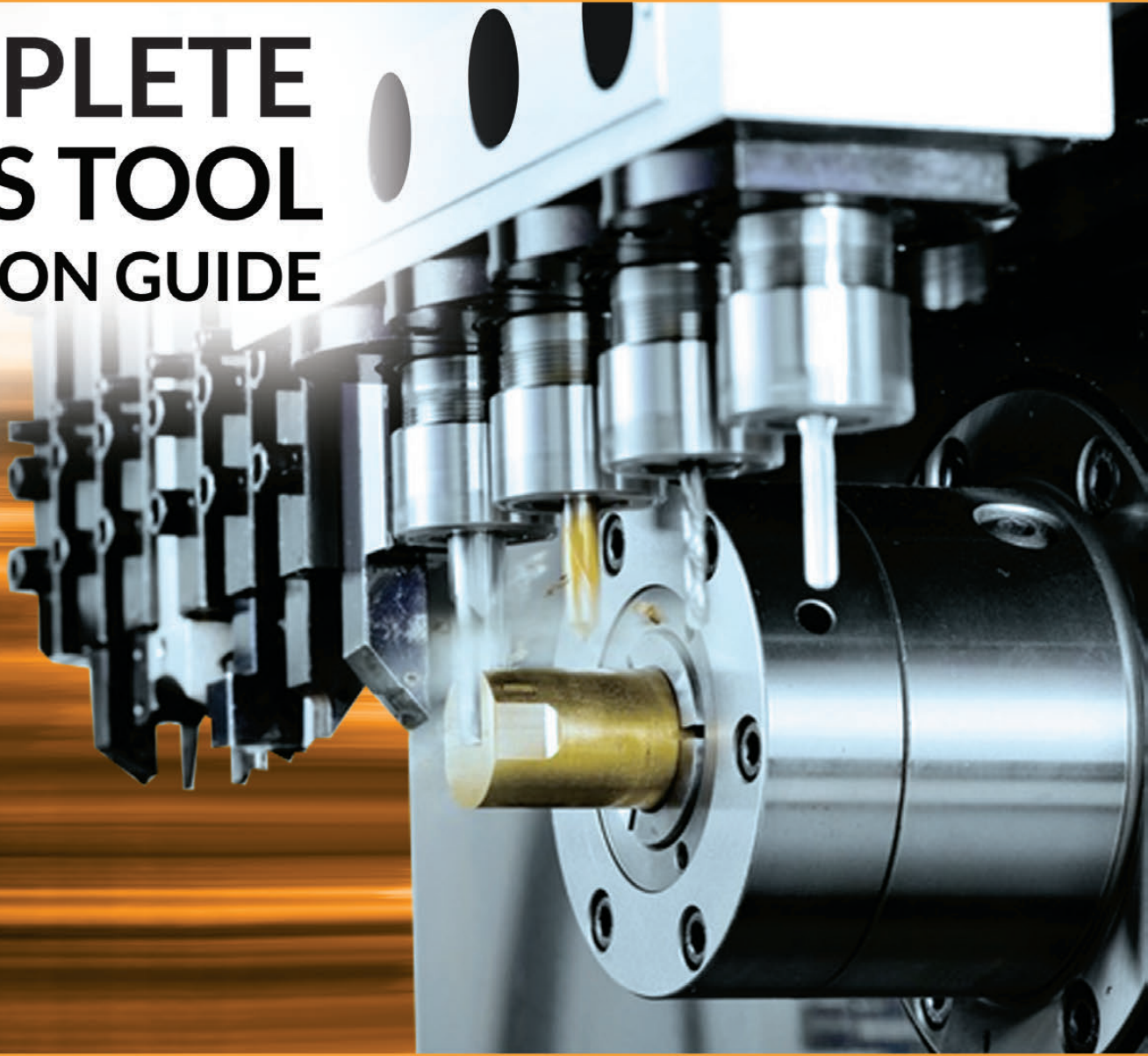


KOMA

COMPLETE SWISS TOOL SELECTION GUIDE



ABOUT

KOMA PRECISION

For over thirty years Koma Precision has been the foremost source for the finest the world has to offer in machine tool Productivity Innovation.

With over 30,000 rotary table installations, Koma is the largest distributor of Tsudakoma NC rotary tables and indexers in the world. With over 12,000 angle heads and live tools installed, Koma is the world's largest supplier for Alberti - the originator and the foremost innovator of productivity tooling.

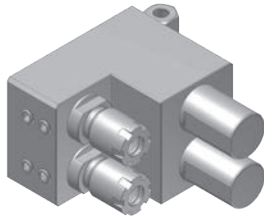


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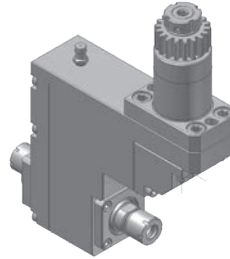
CITIZEN SWISS TOOLING

A20VII TOOLING FOR GANG TOOL POST



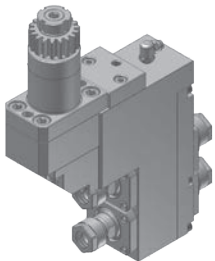
CTA162000
2 tool deep hole drill holder

TOOL SHANK Ø25.4mm
TOOL CLAMPING ER16M
DRILLING DEPTH(MAX) 95mm
MACHINE A20/A32



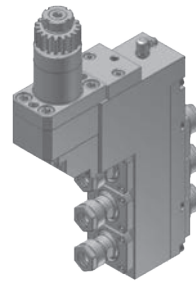
CTA511000
1 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER11M
CITIZEN ITEM NO. BSE1007



CTA541200
2 spindle drilling/milling unit

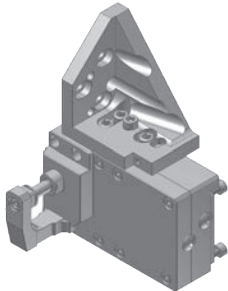
RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER11A
CITIZEN ITEM NO. BSE2007



CTA541300
3 spindle drilling/milling unit

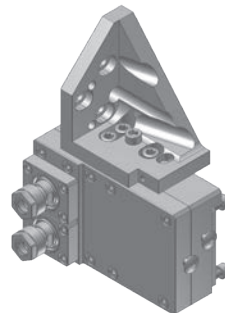
RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING:
Front Side: ER16
Back Side: ER11A
CITIZEN ITEM NO. BSE507

B12 TOOLING FOR GANG TOOL POST



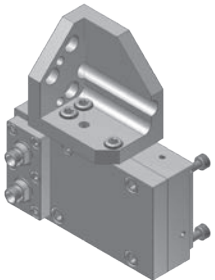
CTB801000
Gear hobbing unit

RATIO 2 : 1
RPM(MAX) 7000
CUTTER OD(MAX) Ø30.0mm
CUTTER SHANK Ø8.0mm



CTB812000
2 spindle cross drilling/milling unit

RATIO 2 : 1
RPM(MAX) 7000
TOOL CLAMPING ER11A



CTB882000
2 spindle cross drilling/milling unit

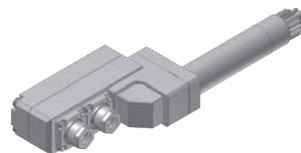
RATIO 2 : 1
RPM(MAX) 7000
TOOL CLAMPING ER8
CITIZEN ITEM NO. B12431B

C16/M12/M16 TOOLING FOR GANG TOOL POST



CTC161100
Cross drilling/milling unit

RATIO 1 : 1
RPM(MAX) 8000
TOOL CLAMPING ER11A
CITIZEN ITEM NO. GSC607

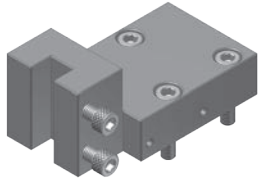


CTC441200
2 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER11A

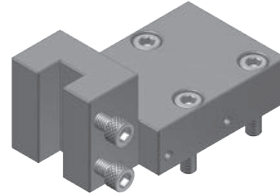
CITIZEN SWISS TOOLING

M16 TOOLING FOR TURRET TOOL POST



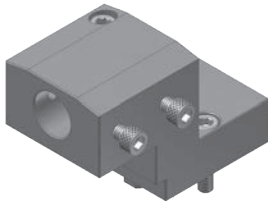
CTM1601101100
Turning bite holder

BITE HOLDER SHANK 10x10mm
CITIZEN ITEM NO. VTF110



CTM1602101100
Turning bite holder

BITE HOLDER SHANK
10x10mm
CITIZEN ITEM NO. VTF1310



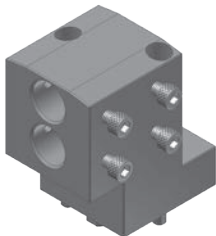
CTM1603192100
1 tool boring bar holder

BORING BAR SHANK
Ø19.05mm
CITIZEN ITEM NO. VDF201



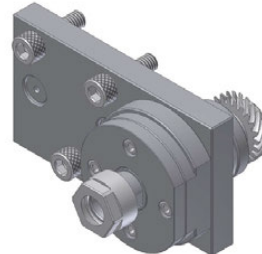
CTM1603192100-1
1 tool boring bar holder

BORING BAR SHANK
Ø19.05mm
CITIZEN ITEM NO. VDF501



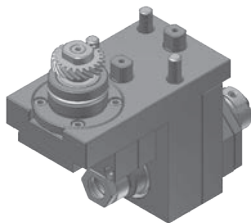
CTM1603192200
2 tool boring bar holder

BORING BAR SHANK
Ø19.05mm
CITIZEN ITEM NO. VDF401



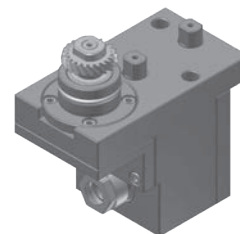
CTM1605111100-1
Cross drilling/milling unit

RATIO: 1/1
RPM: 6,000
TOOL CLAMPING: ER11A
MACHINE: M12/M16
CITIZEN ITEM NO. MSC107BT



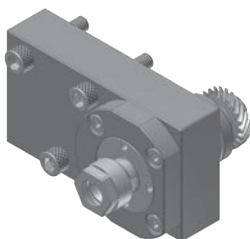
CTM1603112100
1 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER11A
CITIZEN ITEM NO. MST306



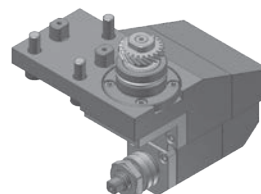
CTM1604112100
1 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER11A
CITIZEN ITEM NO. MSE106



CTM1605111100
Cross drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER11A
CITIZEN ITEM NO. MSC106

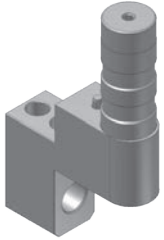


CTM1606122100
Slotting unit

RATIO 1 : 1
RPM(MAX) 4000
SAW OD(MAX) Ø45mm
SA ARBOR SHANK Ø12.7mm
CITIZEN ITEM NO. MSS345

CITIZEN SWISS TOOLING

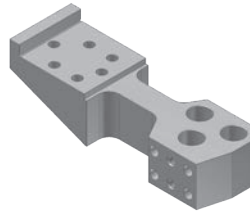
L16/L20 TOOLING FOR GANG TOOL POST



CTL101190 / CTL101191

1 tool sleeve holder

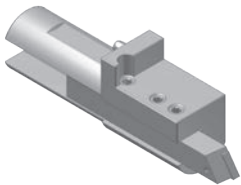
TOOL SHANK \varnothing 32mm
DRILL SLEEVE SHANK
CTL101190: \varnothing 19.05mm
CTL101191: \varnothing 20.0mm
CITIZEN ITEM NO. GDF506



CTL103001

3 tool sleeve holder

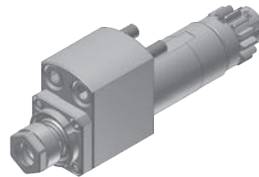
DRILL SLEEVE SHANK \varnothing 19.05mm
CITIZEN ITEM NO. GDF607



CTL2012100

Turning tool holder

TOOL SHANK \varnothing 32mm
BITE HOLDER SHANK 12x12mm



CTL111000

Cross drilling/milling unit

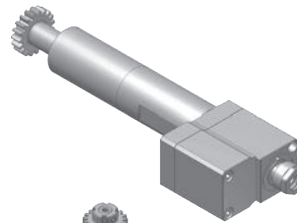
RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER11A
CITIZEN ITEM NO. GSC907



CTL161000

Cross drilling/milling unit

RATIO 1 : 1
RPM(MAX) 8000
TOOL CLAMPING ER16A
CITIZEN ITEM NO. GSC510



CTL161100

Cross drilling/milling unit

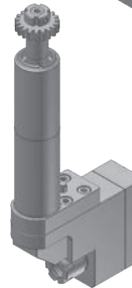
RATIO 1 : 3
RPM(MAX) 15000
TOOL CLAMPING ER11A
CITIZEN ITEM NO. GSC510-3X



CTL411000

1 spindle drilling/milling unit

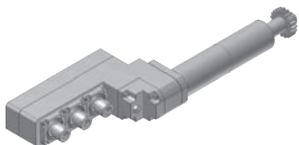
RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER11M
CITIZEN ITEM NO. GSE107



CTL461000

1 spindle drilling/milling unit

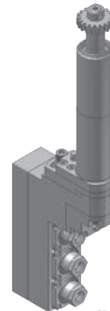
RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER16M



CTL441300

3 spindle drilling/milling unit

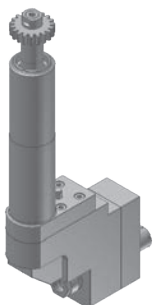
RATIO 1 : 1
RPM(MAX) 8000
TOOL CLAMPING ER11M



CTL491300

3 spindle drilling/milling unit

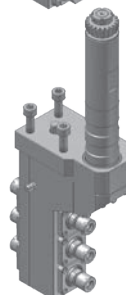
RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER11A
ANGLE ADJUSTMENT $\pm 15^\circ$
CITIZEN ITEM NO. GSA107



CTL511000

1 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING
Front side : ER11A
Back side : ER11M



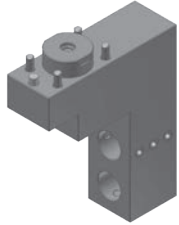
CTL513000-1

3 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 5000
TOOL CLAMPING ER11M
CITIZEN ITEM NO. GSE1307

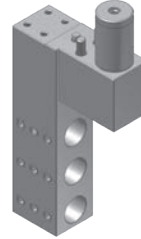
CITIZEN SWISS TOOLING

L20E/L20X TOOLING FOR GANG TOOL POST



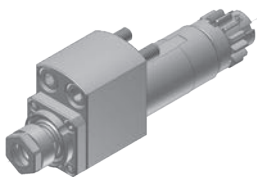
CTL140200-1
2 tool sleeve holder

TOOL SHANK Ø31mm
DRILL SLEEVE SHANK Ø19.05mm
CITIZEN ITEM NO. GDF508



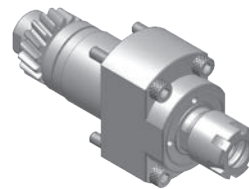
CTL140300-3
3 tool sleeve holder

TOOL SHANK Ø25mm
DRILL SLEEVE SHANK Ø19.05mm
CITIZEN ITEM NO. GDF507



CTL111000
Cross drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER11A
CITIZEN ITEM NO. GSC907



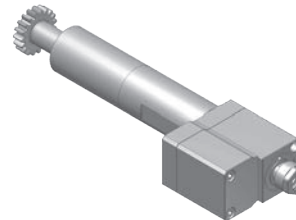
CTL861000
Cross drilling/milling unit

RATIO 1 : 1
RPM(MAX) 8000
TOOL CLAMPING ER16M
CITIZEN ITEM NO. GSC1210



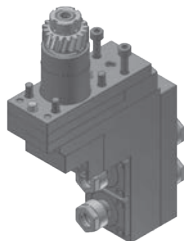
CTL161000
Cross drilling/milling unit

RATIO 1 : 1
RPM(MAX) 8000
TOOL CLAMPING ER16A
CITIZEN ITEM NO. GSC510



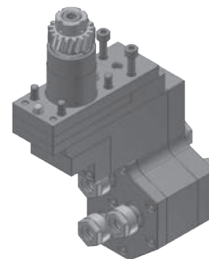
CTL161100
Cross drilling/milling unit

RATIO 1 : 3
RPM(MAX) 15000
TOOL CLAMPING ER11A
CITIZEN ITEM NO. GSC510-3X



CTL541200
2 spindle drilling/milling unit

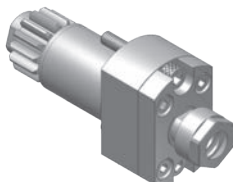
RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER11A
CITIZEN ITEM NO. GSE3107



CTL541300-2
3 spindle drilling/milling unit

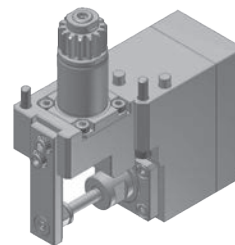
RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER11A
CITIZEN ITEM NO. GSE3207

L20E/L20X TOOLING FOR BACK TOOL POST



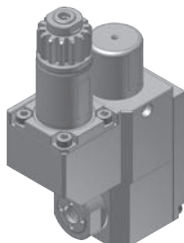
CTL711000
Drilling/milling unit

RATIO 1 : 1
RPM(MAX) 8000
TOOL CLAMPING ER11A
CITIZEN ITEM NO. GSE3507



CTL731000
Slotting unit

RATIO 1 : 1
RPM(MAX) 4000
SAW OD(MAX) Ø35mm
SAW ARBOR SHANK Ø6.0mm
CITIZEN ITEM NO. GSS1330

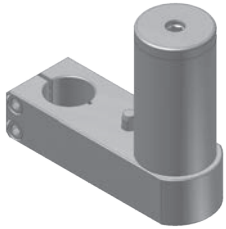


CTL761100E
Cross drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER11
MACHINE L20E
CITIZEN ITEM NO. GSS1330

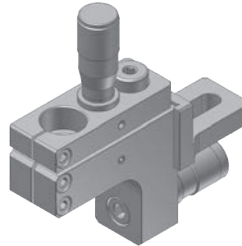
CITIZEN SWISS TOOLING

L20/L32 AIR TOOL AIR TOOL HOLDER



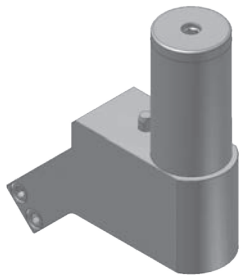
CTL401000
Air tool holder

TOOL SHANK Ø32.0mm
AIR TOOL SHANK
Ø19.05/20.0mm



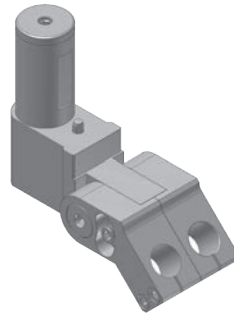
CTL601000
Air tool holder

TOOL SHANK
Ø19.05/20.0/25.4mm
AIR TOOL SHANK
Ø19.05/20.0mm



CTL4014500
Air tool holder

TOOL SHANK Ø32.0mm
AIR TOOL SHANK Ø19.05mm
TILT ANGLE 45°
MACHINE L32



CTL4101200
Air tool holder

TOOL SHANK Ø32.0mm
AIR TOOL SHANK Ø12.0mm
TILT ANGLE 45°
ANGLE ADJUSTMENT ±20°

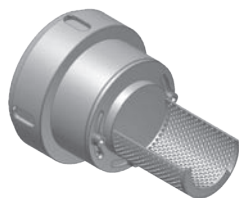
M32



CTM3204161100-1
Cross drilling/milling unit

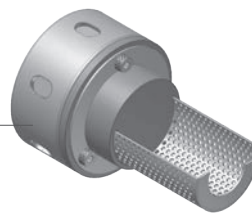
RATIO: 2/1
RPM: 10,000
TOOL CLAMPING: ER16A
CITIZEN ITEM NO.: KSC110(2x)

PART CATCHER



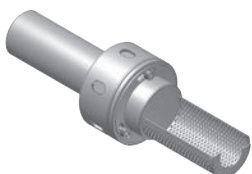
CTA900000
PART CATCHER

MACHINE / A32



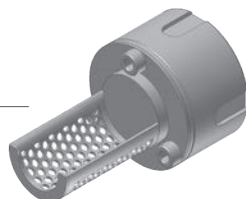
CTA900000-1
PART CATCHER

MACHINE / A20



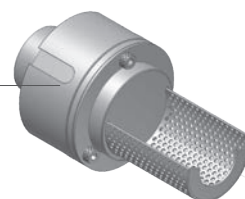
CTL900000
PART CATCHER

MACHINE / L20



CTC900000
PART CATCHER

MACHINE / C16

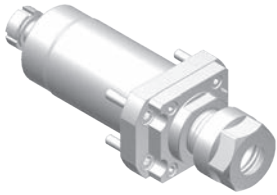


CTE900000
PART CATCHER

MACHINE / L20E

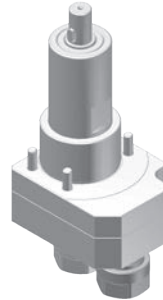
GANESH SWISS TOOLING

CB25M/CB32M/CB36M TOOLING FOR CROSS TOOL POST



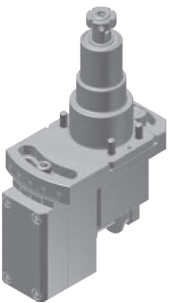
CCB121000
Cross drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER20A



CCB162000
2 spindle cross drilling/milling unit

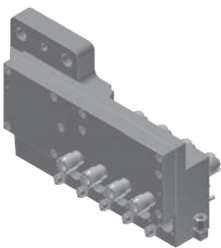
RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER16A



CCB130100
Gear hobbing unit

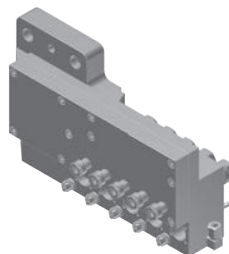
RATIO 1 : 1
RPM(MAX) 6000
CUTTER SHANK Ø10mm
CUTTER OD(MAX) Ø30mm
CUTTER LENGTH 20mm
ANGLE ADJUSTMENT ±20°

CB25M/CB32M/CB36M TOOLING FOR FRONT WORKING TOOL POST



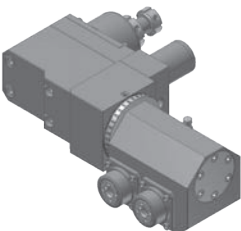
CCB562400
Front working tool base
(4 Live tool + 5 Fixed tool)

RATIO 1 : 2
RPM(MAX) 6000
TOOL CLAMPING
Front side : ER20M
Back side : ER16M
DRILL SLEEVE FOR FIXED TOOL PORT :
KDA2502060A (Single)
KDA2502100A (Double)
TOOL PORT / FIXED TOOL : T21~T25
LIVE TOOL : T26~T29



CCB566500
Front working tool base
(5 Live tool + 5 Fixed tool)

RATIO 1 : 2
RPM(MAX) 6000
TOOL CLAMPING
Front side : ER16A
Back side : ER11A
DRILL SLEEVE FOR FIXED TOOL PORT :
KDA2502060A (Single)
KDA2502100A (Double)
TOOL PORT / FIXED TOOL : T21~T25
LIVE TOOL : T26~T30

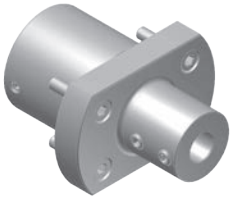


CCB491200
2 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER11
ANGLE ADJUSTMENT ±180°
REMARK Only available for 3 Live tool + 5 Fixed
tool base

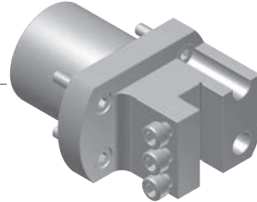
GANESH SWISS TOOLING

CB25M/CB32M/CB36M TOOLING FOR BACK TOOL POST



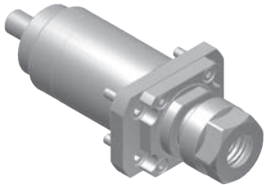
CCB601120
Boring bar sleeve

TOOL SHANK Ø42.0mm
BORING BAR SHANK Ø12.0mm



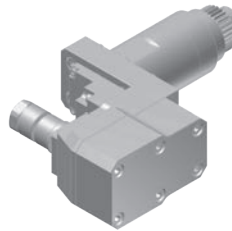
CCB611120
Turning tool holder

TOOL SHANK Ø42.0mm
BITE HOLDER SHANK 12x12mm



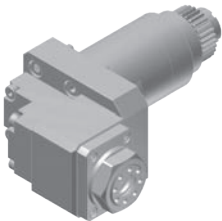
CCB721000
Drilling/milling unit

RATIO 1:1
RPM(MAX) 6000
TOOL CLAMPING ER20A



CCB730000
Slotting unit

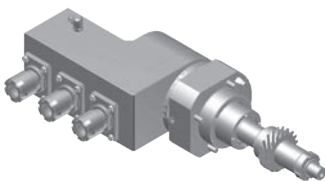
RATIO 1:0.75
RPM(MAX) 3000
SAW OD(MAX) Ø45mm
SAW ARBOR SHANK Ø12.7mm



CCB761000
Cross drilling/milling unit

RATIO 1:1
RPM(MAX) 3000
TOOL CLAMPING ER16

CY2-52MB TOOLING FOR BACK WORKING TOOL POST

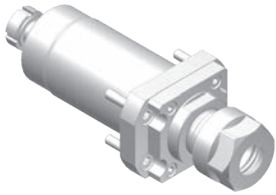


CCY496300
3 spindle drilling/milling unit

RATIO 1:1
RPM(MAX) 6000
TOOL CLAMPING ER16M
ANGLE ADJUSTMENT ±90°

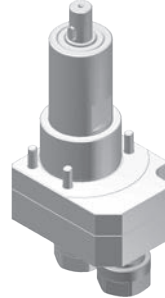
GANESH SWISS TOOLING

NCY25M/NCY32M/NCY36M TOOLING FOR CROSS TOOL POST



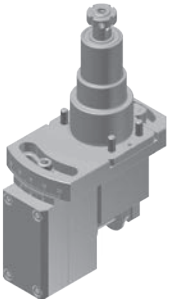
CCB121000
Cross drilling/milling unit

RATIO 1: 1
RPM(MAX) 6000
TOOL CLAMPING ER20A



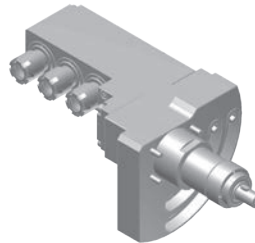
CCB162000
2 spindle cross drilling/ milling unit

RATIO 1: 1
RPM(MAX) 6000
TOOL CLAMPING ER16A



CCB130100
Gear hobbing unit

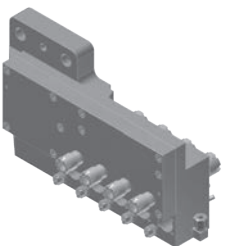
RATIO 1: 1
RPM(MAX) 6000
CUTTER SHANK Ø10mm
CUTTER OD(MAX) Ø30mm
CUTTER LENGTH 20mm
ANGLE ADJUSTMENT ±20°



CCY463000
3 spindle drilling/milling unit

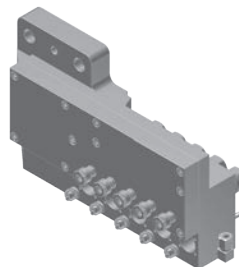
RATIO 1: 1
RPM(MAX) 3000
TOOL CLAMPING ER16M
ANGLE ADJUSTMENT 0~90°

NCY25M/NCY32M/NCY36M TOOLING FOR FRONT WORKING TOOL POST



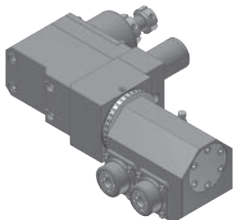
CCB562400
Front working tool base
(4 Live tool + 5 Fixed tool)

RATIO 1: 2
RPM(MAX) 6000
TOOL CLAMPING
Front side : ER20M
Back side : ER16M
DRILL SLEEVE FOR FIXED TOOL PORT :
KDA2502060A (Single)
KDA2502100A (Double)
TOOL PORT / FIXED TOOL : T21~T25
LIVE TOOL : T26~T29



CCB566500
Front working tool base
(5 Live tool + 5 Fixed tool)

RATIO 1: 2
RPM(MAX) 6000
TOOL CLAMPING
Front side : ER16A
Back side : ER11A
DRILL SLEEVE FOR FIXED TOOL PORT :
KDA2502060A (Single)
KDA2502100A (Double)
TOOL PORT / FIXED TOOL : T21~T25
LIVE TOOL : T26~T30

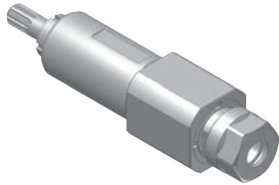


CCB491200
2 spindle drilling/milling unit

RATIO 1: 1
RPM(MAX) 6000
TOOL CLAMPING ER11
ANGLE ADJUSTMENT ±180°
REMARK Only available for 3 Live tool + 5
Fixed tool base

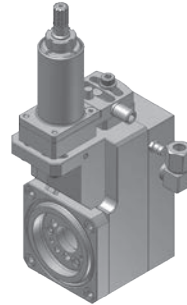
HANWHA SWISS TOOLING

XD20/XD26 TOOLING FOR GANG TOOL POST



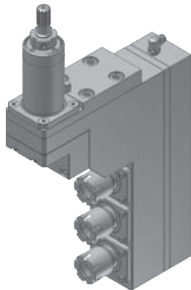
HWX246100
Cross drilling/milling unit

RATIO: 1:1
RPM(MAX): 8000
TOOL CLAMPING: ER16A



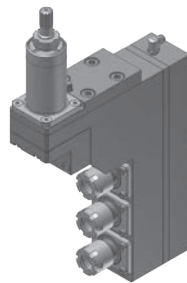
HWX260100
Thread whirling unit

RATIO: 1:1
RPM(MAX): 6000
THREAD(MAX): M12
HELIX ANGLE: $\pm 15^\circ$



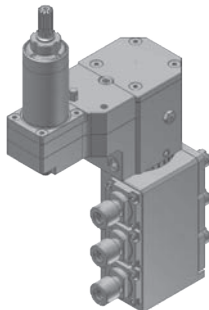
HWX446300
3 spindle drilling/milling unit

RATIO: 1:1
RPM(MAX): 6000
TOOL CLAMPING: ER16M



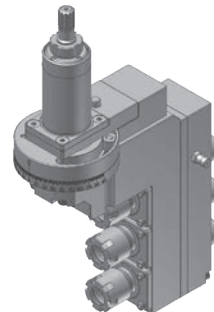
HWX546300
3 spindle drilling/milling unit

RATIO: 1:1
RPM(MAX): 6000
TOOL CLAMPING:
Front side: ER16M
Back side : ER11M



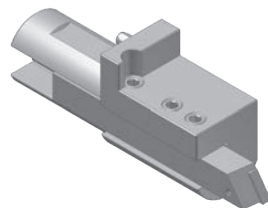
HWX591300
3 spindle drilling/milling unit

RATIO: 1:1
RPM(MAX): 8000
TOOL CLAMPING:
Front side: ER11M
Back side : ER8M
ANGLE ADJUSTMENT: $\pm 180^\circ$



HWX596300
3 spindle drilling/milling unit

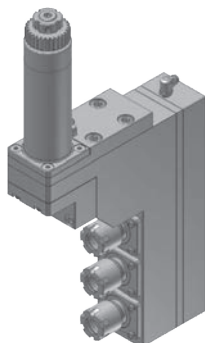
RATIO: 1:1
RPM(MAX): 8000
TOOL CLAMPING:
Front side: ER16M
Back side : ER11M
ANGLE ADJUSTMENT: $\pm 90^\circ$



HWX2012100
Turning tool holder

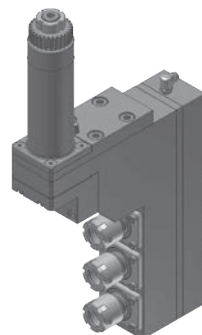
TOOL SHANK: $\varnothing 30\text{mm}$
BITE HOLDER SHANK: 12x12mm

XD32/XD35/XD38 TOOLING FOR GANG TOOL POST



HWX446300-1
3 spindle drilling/milling unit

RATIO: 1:1
RPM(MAX): 6000
TOOL CLAMPING: ER16M

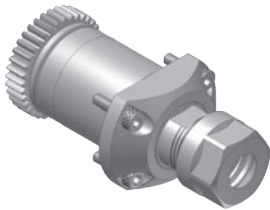


HWX546300-1
3 spindle drilling/milling unit

RATIO: 1:1
RPM(MAX): 6000
TOOL CLAMPING:
Front side: ER16M
Back side : ER11M

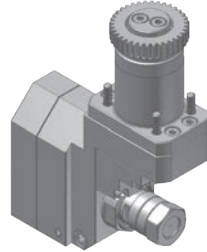
HANWHA SWISS TOOLING

XD20/XD26 TOOLING FOR BACK TOOL POST



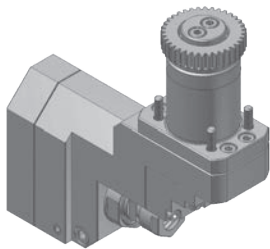
HWX746100
Drilling/milling unit

RATIO: 1:1
RPM(MAX): 8000
TOOL CLAMPING: ER16A



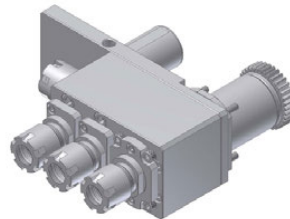
HWX730100
Slotting unit

RATIO: 1:0.55
RPM(MAX): 4000
SAW OD(MAX): Ø50mm
SAW ARBOR SHANK:
Ø5.0/6.0/8.0/10.0/12.7/13.0mm



HWX731100-1
Slotting unit

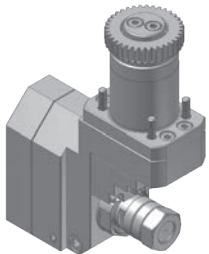
RATIO: 1:0.55
RPM(MAX): 4000
TOOL CLAMPING: ER11A



HWX746400
Cross drilling/milling and
Face drilling/milling unit for
sub spindle

RATIO: 1:1
RPM(MAX): 6000
TOOL CLAMPING: ER16M

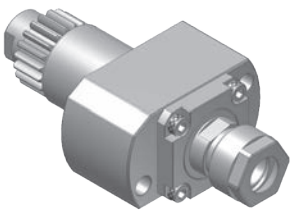
XD32H / XD38H TOOLING FOR BACK TOOL POST



HWX736100
Slotting unit

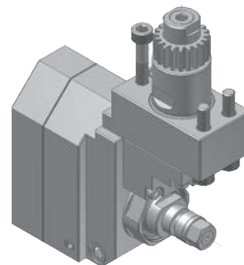
RATIO: 1:0.77
RPM(MAX): 4,000
TOOL CLAMPING: ER-16A
CENTER ADJUSTMENT: ±1 mm

XD12H TOOLING FOR BACK TOOL POST



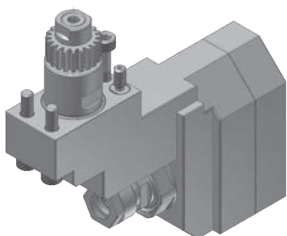
HWX741100
Drilling/milling unit

RATIO: 1:1
RPM(MAX): 6000
TOOL CLAMPING: ER11A



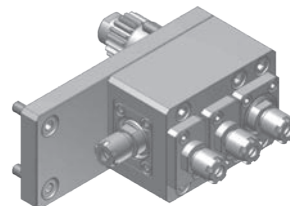
HWX731000
Slotting unit

RATIO: 1:0.55
RPM(MAX): 4000
SAW OD(MAX): Ø50
SAW ARBOR SHANK: Ø5.0/6.0/8.0/
12.7 mm



HWX731100
Slotting unit

RATIO: 1:0.55
RPM(MAX): 4000
TOOL CLAMPING: ER11A

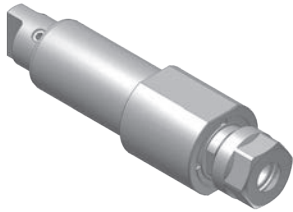


HWX748400
Cross drilling/milling unit and
face drilling/milling unit

RATIO: 1:1
RPM(MAX): 8000
TOOL CLAMPING: ER8M

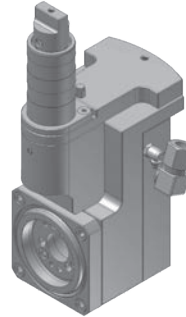
NEXTURN SWISS TOOLING

SA20D/SA32D TOOLING FOR GANG TOOL POST



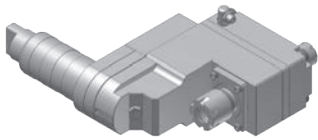
NTA246100
Cross drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER16A



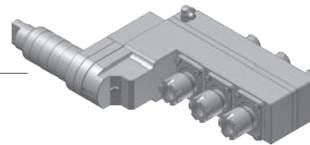
NTA260100
Thread whirling unit

RATIO 1 : 1
RPM(MAX) 6000
THREAD(MAX) M12
HELIX ANGLE $\pm 20^\circ$



NTA566100
1 spindle drilling/milling unit

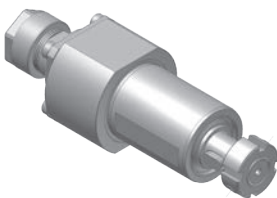
RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING
Front side : ER16
Back side : ER11M



NTA566300
3 spindle drilling/milling unit

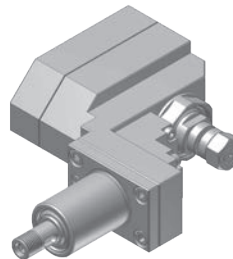
RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING
Front side : ER16M
Back side : ER11M

SA20D TOOLING FOR BACK TOOL POST



NTA741100
Drilling/milling unit

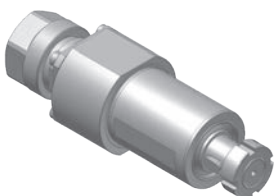
RATIO 1 : 1
RPM(MAX) 8000
TOOL CLAMPING ER11A



NTA730100-20
Slotting unit

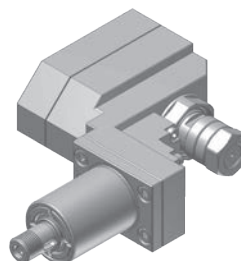
RATIO 1 : 0.55
RPM(MAX) 4000
SAW OD(MAX) $\varnothing 50$
SAW ARBOR SHANK $\varnothing 8.0$

SA32D TOOLING FOR BACK TOOL POST



NTA746100
Drilling/milling unit

RATIO 1 : 1
RPM(MAX) 8000
TOOL CLAMPING ER16A

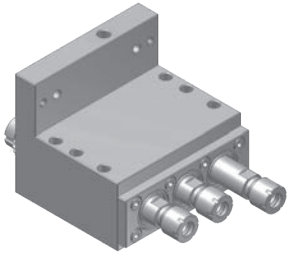


NTA730100-32
Slotting unit

RATIO 1 : 0.55
RPM(MAX) 4000
SAW OD(MAX) $\varnothing 50$
SAW ARBOR SHANK $\varnothing 12.0$
12.7 13.0

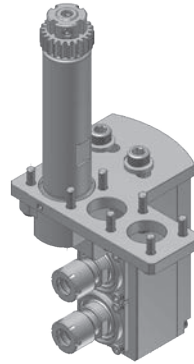
NOMURA SWISS TOOLING

NN16SB6 TOOLING FOR GANG TOOL POST



NUB261100
3 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER11M



NUN412000
2 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER11M
ANGLE ADJUSTMENT $\pm 10^\circ$

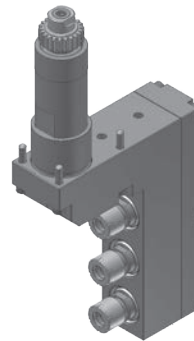
NN16UB/NN20UB TOOLING FOR GANG TOOL POST



NUU266100
Cross drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER16M

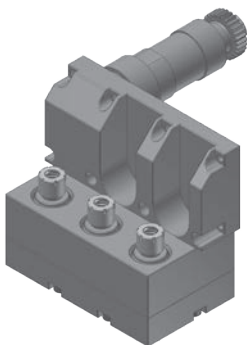
NN20UB8 TOOLING FOR GANG TOOL POST



NUN441300-1
3 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 3000
TOOL CLAMPING ER11M

NN32YB2 TOOLING FOR GANG TOOL POST

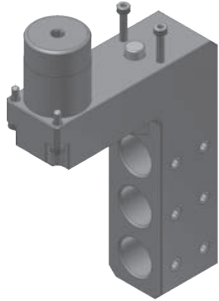


NUN441300
3 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER11M

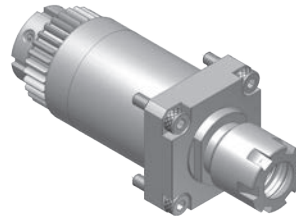
STAR SWISS TOOLING

TOOLING FOR GANG TOOL POST (SHANK Ø34mm)



STR140300
3 tool sleeve holder

TOOL SHANK Ø34mm
DRILL SLEEVE SHANK Ø22 mm
Mounted on T3500
MACHINE: SR20R / SR32J



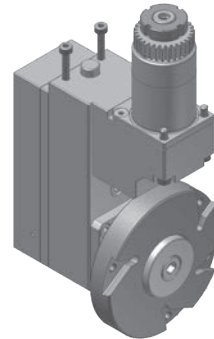
STR161000
Cross drilling/milling unit

RATIO 1:1
RPM(MAX) 8000
TOOL CLAMPING ER16M
STAR ITEM NO. 331-50
MACHINE: SR20R / SR32J



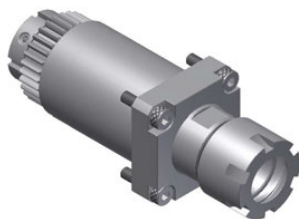
STR161100
Cross drilling/milling unit

RATIO 3:1
RPM(MAX) 18000
TOOL CLAMPING ER11A
MACHINE: SR20R / SR32J



STR150100
Polygon unit

RATIO 1:1
RPM(MAX) 3000
CUTTER OD(MAX) Ø95 mm
MACHINE: SR20R / SR32J



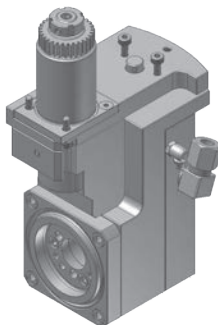
STR162100
Cross drilling/milling unit

RATIO 1:1
RPM(MAX) 8000
TOOL CLAMPING ER20M
MACHINE: SR20R / SR32J



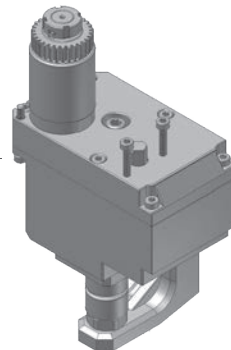
STR166100
Cross drilling/milling unit

RATIO 1:1
RPM(MAX) 8000
TOOL CLAMPING ER16M
STAR ITEM NO. 571-55
MACHINE: SR20R / SR32J



STR260100
Thread whirling unit

RATIO 1:1
RPM(MAX) 6000
THREAD(MAX) M12
HELIX ANGLE ±20°
MACHINE: SR20R

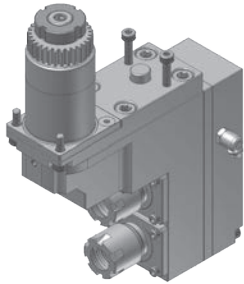


STR301000
Slotting unit

RATIO 1:0.374
RPM(MAX) 4000
SAW OD(MAX) Ø70 mm
SAW ARBOR SHANK Ø12.7 mm
MACHINE: SR20R

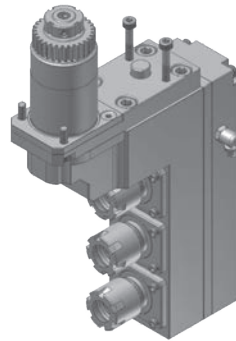
STAR SWISS TOOLING

TOOLING FOR GANG TOOL POST (SHANK Ø34mm)



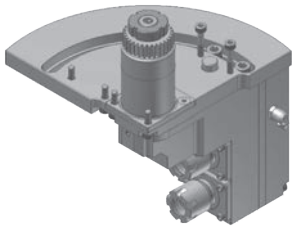
STR446200
2 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER16M
STAR ITEM NO. 541-51
MACHINE: SR20R



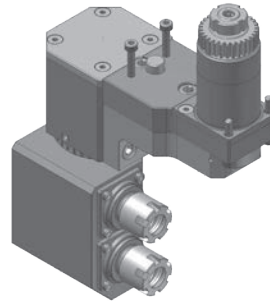
STR446300 / STR446300-1
3 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER16M
STAR ITEM NO. STR446300 : 661-51
MACHINE: SR20R / SR32J



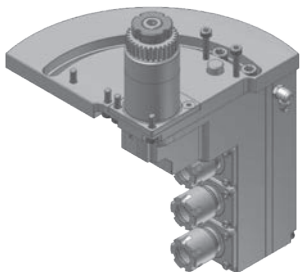
STR496200
2 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER16M
ANGLE ADJUSTMENT 0~90°
MACHINE: SR20R



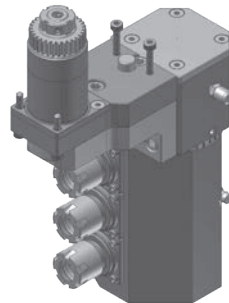
STR496200-2
2 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER16M
ANGLE ADJUSTMENT ±180°
MACHINE: SR32J



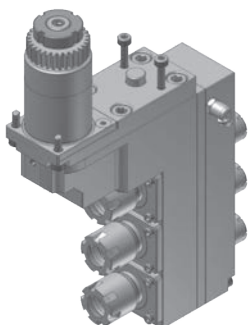
STR496300
3 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER16M
ANGLE ADJUSTMENT 0~90°
MACHINE: SR20R



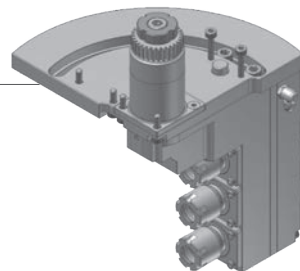
STR496300-2
3 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER16M
ANGLE ADJUSTMENT ±180°
MACHINE: SR20R



STR546300 / STR546300-1
3 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING
Front side : ER16M
Back side : ER11M
STAR ITEM NO. STR546300-1 : 671-59
MACHINE: SR20R

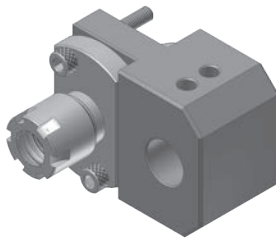


STR596300
3 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING
Front Side: ER16M
Back Side: ER11
ANGLE ADJUSTMENT 0~90°
MACHINE: SR20R

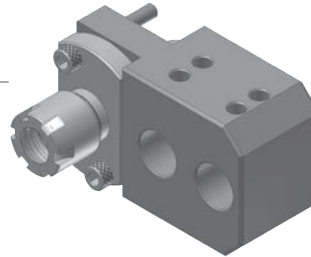
STAR SWISS TOOLING

TOOLING FOR BACK TOOL POST (SHANK Ø16/Ø22mm)



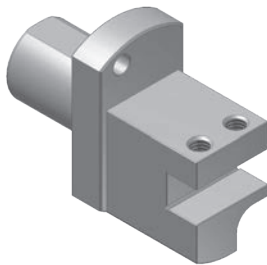
STJ640100
Extension tool holder

TOOL SHANK Ø22.0mm
TOOL CLAMPING ER16M
DRILL SLEEVE SHANK Ø16.0mm
MACHINE SR20J



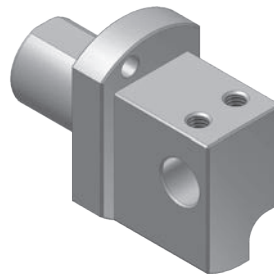
STJ640200
Extension tool holder

TOOL SHANK Ø22.0mm
TOOL CLAMPING ER16M
DRILL SLEEVE SHANK Ø16.0mm
MACHINE SR32J / JN



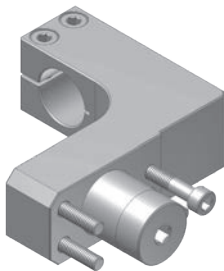
KDA22010SG
Turning tool holder

TOOL SHANK Ø22.0mm
BITE HOLDER SHANK 10x10mm
MACHINE: SR20R / SR20J / SR32J



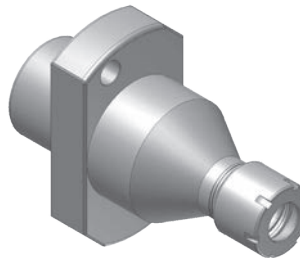
STR620100
Turning tool holder

TOOL SHANK Ø22.0mm
BITE HOLDER SHANK Ø12.0mm
MACHINE: SR20R / SR20J / SR32J



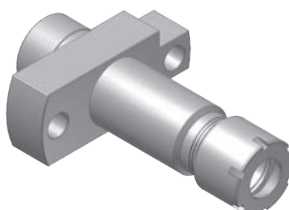
STR601000
Air tool holder

TOOL SHANK Ø22.0mm
AIR TOOL SHANK Ø20.0mm
MACHINE: SR20R



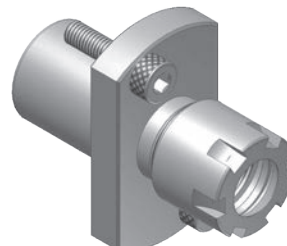
STR641100
Drill sleeve

TOOL SHANK Ø22.0mm
TOOL CLAMPING ER11M
MACHINE: SR20J



STR641100J
Drill sleeve

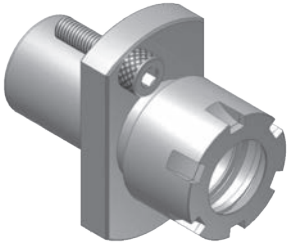
TOOL SHANK Ø16.0mm
TOOL CLAMPING ER11M
MACHINE SR10J



STR646100
Drill sleeve

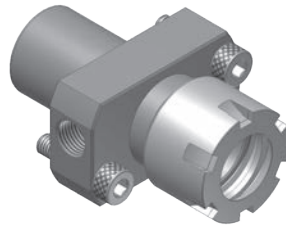
TOOL SHANK Ø22.0mm
TOOL CLAMPING ER16M
MACHINE: SR20R / SR32J

TOOLING FOR BACK TOOL POST (SHANK Ø22mm)



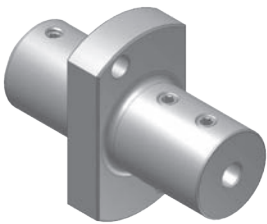
STR642100
Drill sleeve

TOOL SHANK Ø22.0mm
TOOL CLAMPING ER20M
MACHINE: SR20R / SR32J



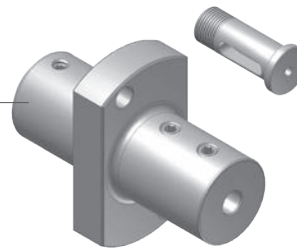
STR642100-1
Drill sleeve (Internal coolant type)

TOOL SHANK Ø22.0mm
TOOL CLAMPING ER20M
MACHINE: SR20R



KSR22000
Boring bar sleeve

TOOL SHANK Ø22.0mm
BORING BAR SHANK
Ø3.0/4.0/5.0/6.0/8.0/10.0/12.0/16.0mm
MACHINE: SR20R

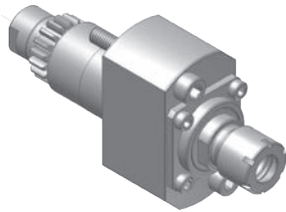


KSR22120
Boring bar sleeve (Bushing type)

TOOL SHANK Ø22.0mm
BUSHING OD Ø12.0mm
BUSHING ID (BORING BAR SHANK) /
Ø3.0/4.0/5.0/ 6.0/8.0/9.0/10.0mm
MACHINE: SR20R

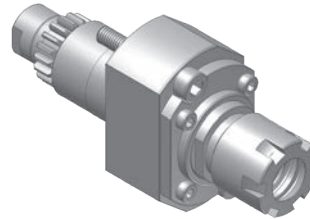
STAR SWISS TOOLING

TOOLING FOR BACK TOOL POST (SHANK Ø22mm)



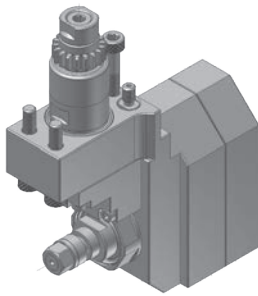
STR711000
Drilling/milling unit

RATIO 1:1
RPM(MAX) 6000
TOOL CLAMPING ER11M
STAR ITEM NO. 541-61
MACHINE: SR20R



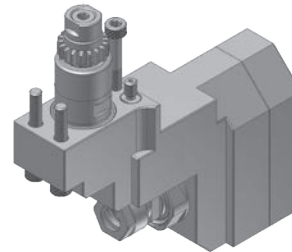
STR761000
Drilling/milling unit

RATIO 1:1
RPM(MAX) 6000
TOOL CLAMPING ER16M
STAR ITEM NO. 571-61
MACHINE: SR20R



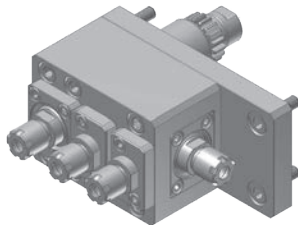
STR731000
Slotting unit

RATIO 1:0.55
RPM(MAX) 4000
SAW OD(MAX) Ø50
SAW ARBOR SHANK
Ø5.0/6.0/8.0/12.7/13.0mm
MACHINE: SR10J / SR20R



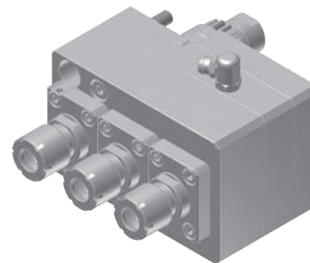
STR731100
Slotting unit

RATIO 1:0.55
RPM(MAX) 4000
TOOL CLAMPING ER11A
MACHINE: SR10J / SR20R



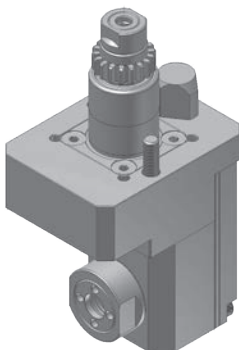
STR714000
Cross drilling/milling and
face drilling/milling unit

RATIO 1:1
RPM(MAX) 6000
TOOL CLAMPING ER8M
MACHINE: SR10J



STR741300
3 spindle drilling/milling unit

RATIO 1:1
RPM(MAX) 8000
TOOL CLAMPING ER11M
MACHINE NEW TYPE SR20RIII
SR20J with PIN HOLE
(FANUC 31i VERSION)

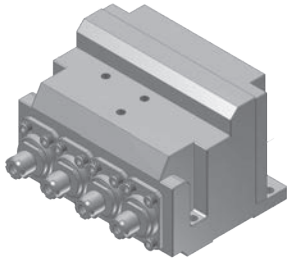


**STR811000-10J/
STR811000-20R**
Cross drilling/milling unit

RATIO 1:1
RPM(MAX) 6000
TOOL CLAMPING ER11
MACHINE: SR 10J / SR20R

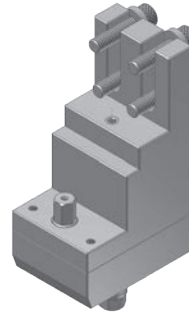
STAR SWISS TOOLING

TOOLING FOR GANG TOOL POST SB16 / SB20



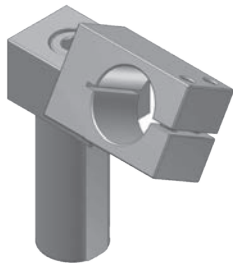
STB268400
4 spindle cross drilling/milling unit

RATIO 1:1.5
RPM(MAX) 3000
TOOL CLAMPING ER8M
MACHINE: SB 16/20



STB301000
Slotting unit

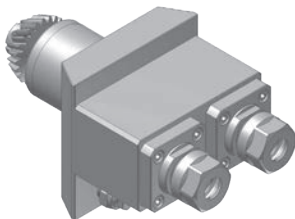
RATIO 1:0.392
RPM(MAX) 4000
SAW OD(MAX) Ø30
SAW ARBOR SHANK Ø6.0mm
MACHINE: SB20C



STB401000
Air tool holder

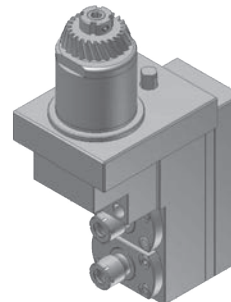
TOOL SHANK Ø22.0mm
AIR TOOL SHANK Ø23.0mm
MACHINE: SB16R / SB20R

TOOLING FOR TURRET TOOL POST (SHANK Ø44mm)



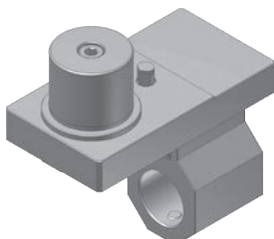
STV161200
2 spindle cross drilling/milling unit

RATIO 1:1
RPM(MAX) 6000
TOOL CLAMPING ER16A
STAR ITEM NO. 421-51
MACHINE: SV20 / SV32



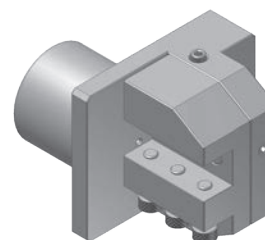
STV512000
2 spindle drilling/milling unit

RATIO 1:1.16
RPM(MAX) 6000
TOOL CLAMPING ER11M
STAR ITEM NO. 421-59
MACHINE: SV20 / SV32



STV140100
1 station boring bar holder

TOOL SHANK Ø44.0mm
BORING BAR SHANK Ø32.0mm
MACHINE: SV20 / SV32 (Mounted on
Turret)

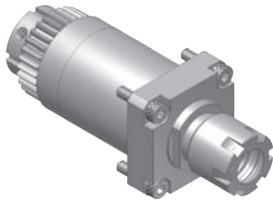


STV901000
Turning bite holder

TOOL SHANK Ø44.0mm
BITE HOLDER SHANK 16x16mm
CENTER ADJUSTMENT ±1mm
MACHINE: SV32J

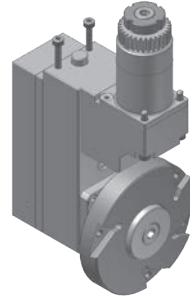
SWISTEK SWISS TOOLING

JSL20RB/JSL20RBY TOOLING FOR GANG TOOL POST (SHANK : Ø34mm)



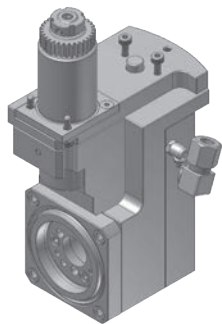
JSR161000
Cross drilling/milling unit

RATIO 1 : 1
RPM(MAX) 8000
TOOL CLAMPING ER16M



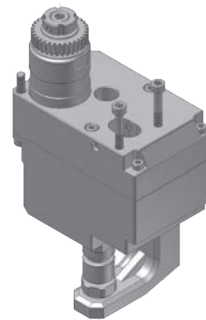
JSR150100
Polygon unit

RATIO 1 : 1
RPM(MAX) 3000
CUTTER OD(MAX) Ø95mm



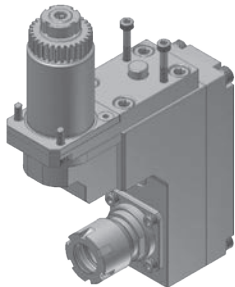
JSR260100
Thread whirling unit

RATIO 1 : 1
RPM(MAX) 6000
THREAD(MAX) M12
HELIX ANGLE ±15°



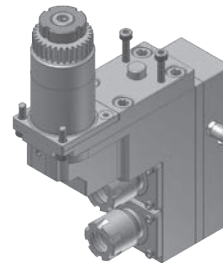
JSR301000
Slotting unit

RATIO 1 : 0.374
RPM(MAX) 4000
SAW OD(MAX) Ø70mm
SAW ARBOR SHANK Ø12.7mm



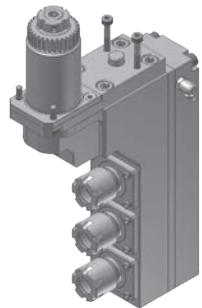
JSR442100
1 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER20M



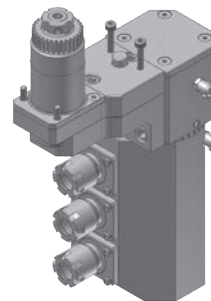
JSR446200
2 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER16M



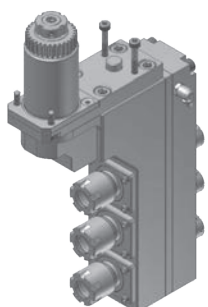
JSR446300-1
3 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER16M



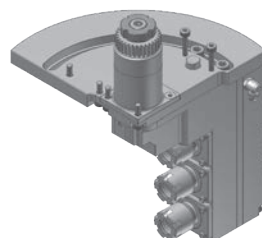
JSR496300-2
3 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER16M
ANGLE ADJUSTMENT ±180°



JSR546300-1
3 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING
Front side : ER16M
Back side : ER11M

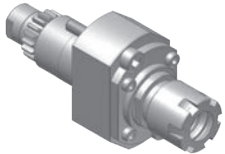


JSR596300-1
3 spindle drilling/milling unit

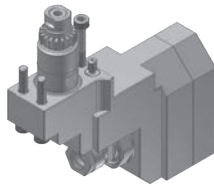
RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING
Front side : ER16M
Back side : ER11M
ANGLE ADJUSTMENT 0~90°

SWISTEK SWISS TOOLING

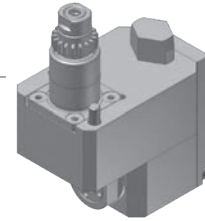
JSL20RB/JSL20RBY TOOLING FOR BACK TOOL POST (SHANK Ø22mm)



JSR761000
Drilling/milling unit
RATIO 1:1
RPM(MAX) 6000
TOOL CLAMPING ER16M

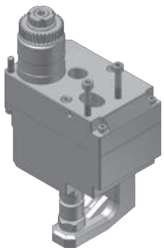


JSR731100
Slotting unit
RATIO 1:0.55
RPM(MAX) 4000
TOOL CLAMPING ER11A
CENTER ADJUSTMENT ±1mm

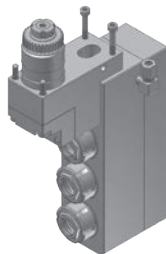


JSR861100
Cross drilling/milling unit
RATIO 1:1
RPM(MAX) 6000
TOOL CLAMPING ER11

JSL26AB/JSL32AB/JSL42AB TOOLING FOR GANG TOOL POST (SHANK : Ø36mm)



JSL301000
Slotting unit
RATIO 1:0.36
RPM(MAX) 3000
SAW OD(MAX) Ø70mm
SAW ARBOR SHANK Ø12.7mm

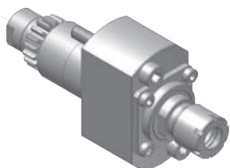


JSL523000
3 spindle drilling/milling unit
RATIO 1:1
RPM(MAX) 6000
TOOL CLAMPING
Front side : ER20
Back side : ER11M

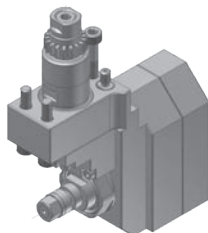


JSL806000
Thread whirling unit
RATIO 1:1
RPM(MAX) 6000
THREAD(MAX) M12
HELIX ANGLE ±15°

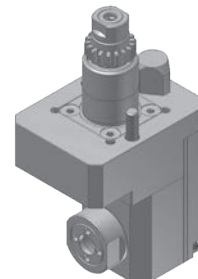
TOOLING FOR BACK TOOL POST (SHANK Ø22mm)



STR711000
Drilling/milling unit
RATIO 1:1
RPM(MAX) 6000
TOOL CLAMPING ER11M
STAR ITEM NO. 541-61



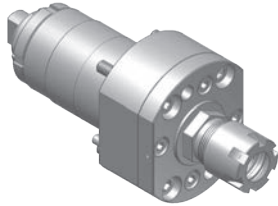
STR731000
Slotting unit
RATIO 1:0.55
RPM(MAX) 4000
SAW OD(MAX) Ø50
SAW ARBOR SHANK
Ø5.0/6.0/8.0/12.7/13.0mm



**STR811000-10J/
STR811000-20R**
Cross drilling/milling unit
RATIO 1:1
RPM(MAX) 6000
TOOL CLAMPING ER11

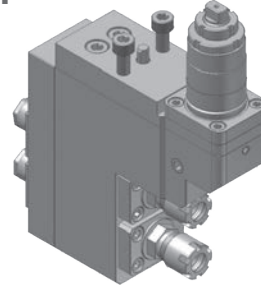
TORNOS SWISS TOOLING

GAMMA20 TOOLING FOR GANG TOOL POST



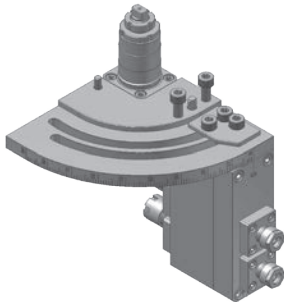
TSS161000
Cross drilling/milling unit

RATIO 1 : 1
RPM(MAX) 8000
TOOL CLAMPING ER16M



TSS562000
2 spindle drilling/milling unit

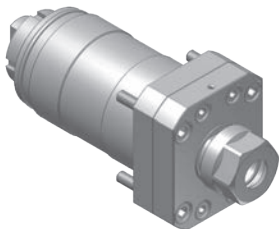
RATIO 1 : 1
RPM(MAX) 8000
TOOL CLAMPING
Front side : ER16M
Back side : ER11A



TSS562100
2 spindle drilling/milling unit

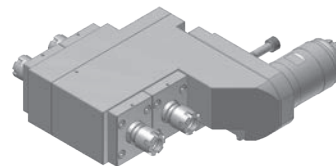
RATIO 1 : 1
RPM(MAX) 8000
TOOL CLAMPING
Front side : ER16M
Back side : ER11A
ANGLE ADJUSTMENT 0~90°

DELTA38 TOOLING FOR GANG TOOL POST



TSB246100
Cross drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER16A
TSUGAMI ITEM NO. 3268-T051

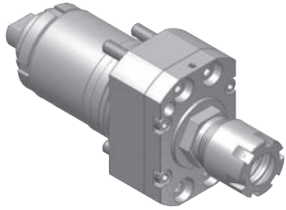


TSB546200
2 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER16M
TSUGAMI ITEM NO. 3282-Y901

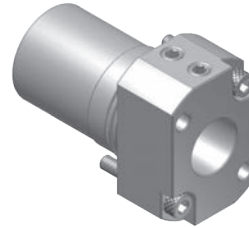
TORNOS SWISS TOOLING

GAMMA20 TOOLING FOR BACK TOOL POST



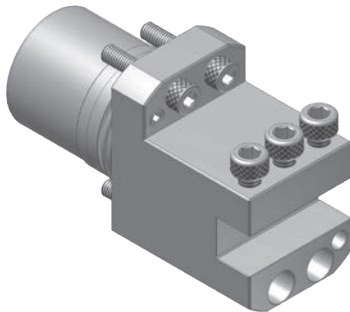
TSS761000
Drilling/milling unit

RATIO 1:1
RPM(MAX) 8000
TOOL CLAMPING ER16M



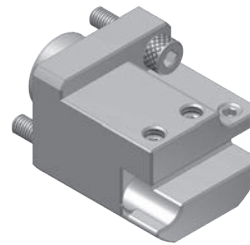
TSS601000
Tool adaptor

TOOL SHANK Ø35.0mm
SLEEVE SHANK Ø20.0mm



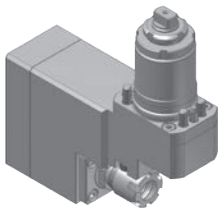
TSS620100
Turning tool holder

TOOL SHANK Ø35.0mm
BITE HOLDER SHANK 12x12mm



TSS620100-1
Turning tool holder

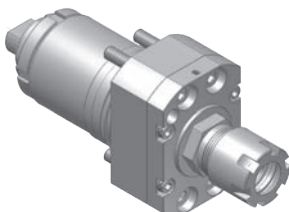
TOOL SHANK Ø35.0mm
BITE HOLDER SHANK 10x10mm



TSS861000
Slotting(Cross drilling/milling) unit

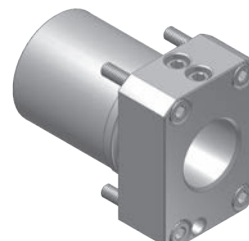
RATIO 1:1
RPM(MAX) 6000
TOOL CLAMPING ER16M

DELTA38 TOOLING FOR BACK TOOL POST



TSB746100
Drilling/milling unit

RATIO 1:1
RPM(MAX) 6000
TOOL CLAMPING ER16A
TSUGAMI ITEM NO. 3282-Y041

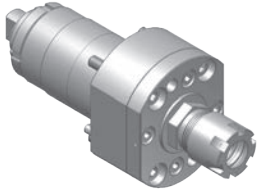


TSB640100
Tool adaptor

TOOL SHANK Ø42.0mm
SLEEVE SHANK Ø25.0mm
TSUGAMI ITEM NO. 3282-Y211

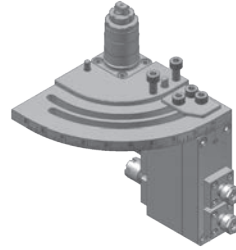
TSUGAMI SWISS TOOLING

S205/S206 TOOLING FOR GANG TOOL POST



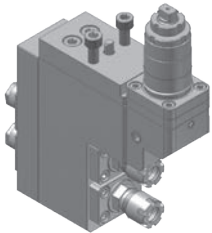
TSS161000
Cross drilling/milling unit

RATIO 1 : 1
RPM(MAX) 8000
TOOL CLAMPING ER16M



TSS562100
2 spindle drilling/milling unit

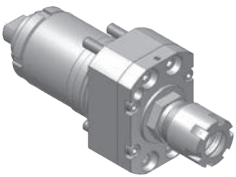
RATIO 1 : 1
RPM(MAX) 8000
TOOL CLAMPING
Front side : ER16M
Back side : ER11A
ANGLE ADJUSTMENT 0~90°



TSS562000
2 spindle drilling/milling unit

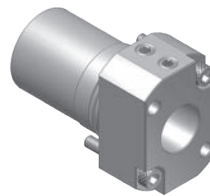
RATIO 1 : 1
RPM(MAX) 8000
TOOL CLAMPING
Front side : ER16M
Back side : ER11A

S205/S206 TOOLING FOR BACK TOOL POST



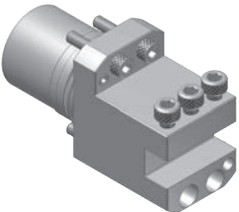
TSS761000
Drilling/milling unit

RATIO 1 : 1
RPM(MAX) 8000
TOOL CLAMPING ER16M



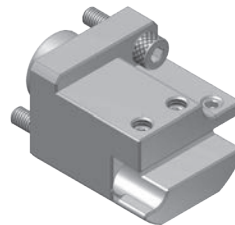
TSS601000
Tool adaptor

TOOL SHANK Ø35.0mm
SLEEVE SHANK Ø20.0mm



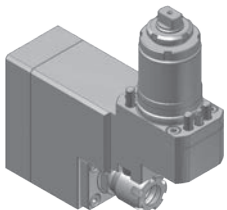
TSS620100
Turning tool holder

TOOL SHANK Ø35.0mm
BITE HOLDER SHANK
12x12mm



TSS620100-1
Turning tool holder

TOOL SHANK Ø20.0mm
BITE HOLDER SHANK 10x10mm



TSS861000
Slotting(Cross drilling/milling) unit

RATIO / 1 : 1
RPM(MAX) / 6000
TOOL CLAMPING / ER16M

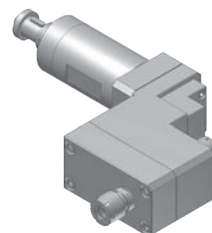
BO266/BO326 TOOLING FOR SUB SPINDLE



TSB866100
Cross drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER16M
TSUGAMI ITEM NO. 3290-Y041

BO26V TOOLING FOR GANG TOOL POST

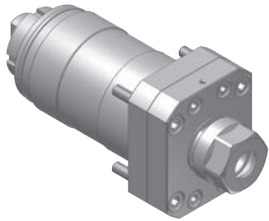


TSB511000
1 spindle drilling/milling unit

RATIO 1 : 1
RPM(MAX) 6000
TOOL CLAMPING ER16A

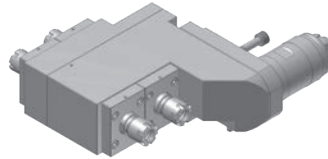
TSUGAMI SWISS TOOLING

BO385 TOOLING FOR GANG TOOL POST



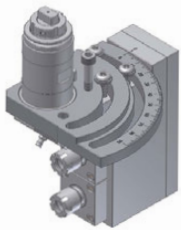
TSB246100
Cross drilling/milling unit

RATIO 1:1
RPM(MAX) 6000
TOOL CLAMPING ER16A
TSUGAMI ITEM NO. 3268-T051



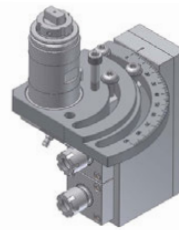
TSB546200
2 spindle drilling/milling unit

RATIO 1:1
RPM(MAX) 6000
TOOL CLAMPING ER16M
TSUGAMI ITEM NO. 3282-Y901



TSB496200
2 spindle drilling/milling unit

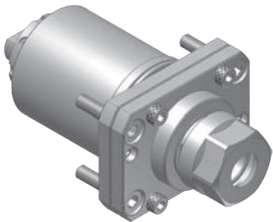
RATIO 1:1
RPM(MAX) 6000
TOOL CLAMPING ER16M
ANGLE ADJUSTMENT 0~90°



TSB596200
2 spindle drilling/milling unit

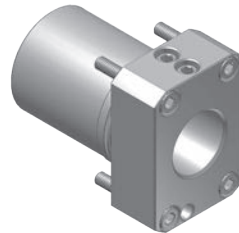
RATIO 1:1
RPM(MAX) 6000
TOOL CLAMPING ER16M
ANGLE ADJUSTMENT 0~90°
TSUGAMI ITEM NO. 3282-Y921

BO385 TOOLING FOR BACK TOOL POST



TSB746100
Drilling/milling unit

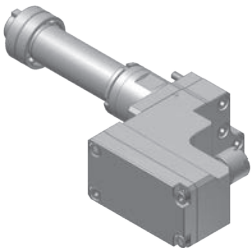
RATIO 1:1
RPM(MAX) 6000
TOOL CLAMPING ER16A
TSUGAMI ITEM NO. 3282-Y041



TSB640100
Tool adaptor

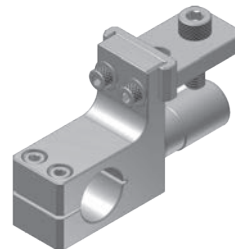
TOOL SHANK Ø42.0mm
SLEEVE SHANK Ø25.0mm
TSUGAMI ITEM NO. 3282-Y211

B0125/B0205 TOOLING FOR GANG TOOL POST



TSB411000
1 spindle drilling/milling unit

RATIO 1:1
RPM(MAX) 6000
TOOL CLAMPING ER16A



TSB601000
Air tool holder

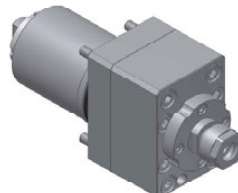
TOOL SHANK Ø20.0mm
AIR TOOL SHANK Ø22.8mm
AIR TOOL Straight spindle NR303

BO266 / BO326 / BO385 TOOLING



TSB241100
Cross drilling/milling unit

RATIO 1:2
RPM(MAX) 12,000
TOOL CLAMPING ER11A

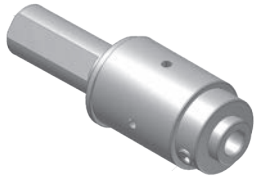


TSB741100
Drilling/milling unit, sub

RATIO 1:2
RPM(MAX) 12,000
TOOL CLAMPING ER11A

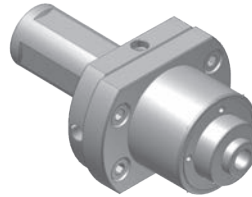
TOOLS

BROACHING HOLDER



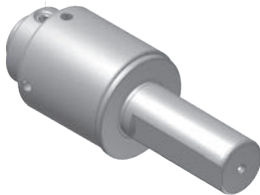
PT111600
BROACHING HOLDER

TOOL SHANK/Ø14 / Ø16mm
BROACHING TOOL SHANK / Ø8mm
BROACHING DEPTH/13mm



PT312500
BROACHING HOLDER

TOOL SHANK/ Ø25mm
BROACHING TOOL SHANK / Ø8mm
BROACHING DEPTH / 55mm



PT411600
BROACHING HOLDER

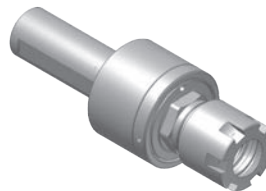
TOOL SHANK/Ø14 / Ø16mm
BROACHING TOOL SHANK / Ø8mm
BROACHING DEPTH / 13mm

FLOATING REAMER HOLDER



GP1116000
FLOATING REAMER HOLDER

TOOL SHANK / Ø16mm
TOOL CLAMPING / ER11M



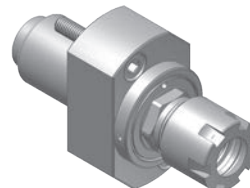
GP6116000
FLOATING REAMER HOLDER

TOOL SHANK / Ø16mm
TOOL CLAMPING / ER16M



GP2125000
FLOATING REAMER HOLDER

TOOL SHANK / Ø25mm
TOOL CLAMPING / ER20

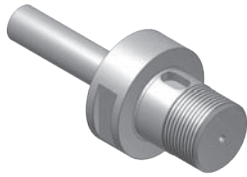


GP6122000
FLOATING REAMER HOLDER

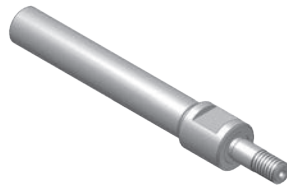
TOOL SHANK / Ø22mm
TOOL CLAMPING / ER16M
MACHINE/STAR SR20R / SR20J

TOOLS

SAW ARBOR

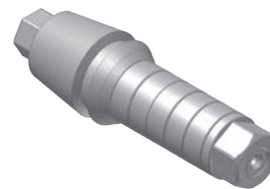


ITEM NO.	TOOL SHANK	SAW ARBOR SHANK
I920254100A	Ø20mm	Ø25.4mm
I913254100A	Ø13mm	Ø25.4mm



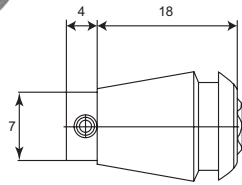
ITEM NO.	TOOL SHANK	SAW ARBOR SHANK
I907050060	Ø7mm	Ø5mm
I907060060	Ø7mm	Ø6mm
I910060090	Ø10mm	Ø6mm
I910127070	Ø10mm	Ø12.7mm

ITEM NO.	TOOL CLAMPING	SAW ARBOR SHANK
I91606065	ER16	Ø6mm
I91106065	ER11	Ø6mm



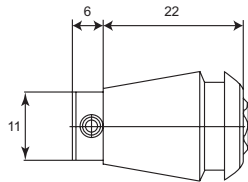
TOOLS

TAPPING COLLET



TP11000 TAPPING COLLET (ER11)

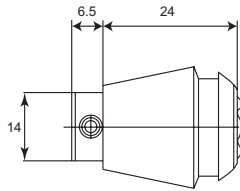
ITEM NO.	STANDARD	TAP SPEC
TP1102000	ISO	NO.4
TP1102500	ISO	M1.0 ~ M2.0
	DIN	M1.0 ~ M1.8
TP1102800	ISO	M2.2 ~ M2.5
	DIN	M2.0 ~ M2.6
TP1103000	JIS	M1.0 ~ M2.6
TP1103150	ISO	M3.0
TP1103500	DIN	M3.0



TP16000 TAPPING COLLET (ER16)

ITEM NO.	STANDARD	TAP SPEC
TP1602000	ISO	NO.4
TP1602500	ISO	M1.0 ~ M2.0
	DIN	M1.0 ~ M1.8
TP1602800	ISO	M2.2 ~ M2.5
	DIN	M2.0 ~ M2.6
	JIS	M1.0 ~ M2.6
	ISO	M3.0
	DIN	M3.0
	ISO	M3.5
TP1604000	ISO	M4.0
	DIN	M3.5
	JIS	M3.0 ~ M3.5
TP1604500	ISO	M4.5
	DIN	M4.0
TP1605000	ISO	M5.0
	JIS	M4.0 ~ M4.5
TP1605500	JIS	M5.0
TP1606000	DIN	M4.5 ~ M8.0
	JIS	M6.0
TP1606200	JIS	M7.0 ~ M8.0
TP1606300	ISO	M6.0

TOOLS

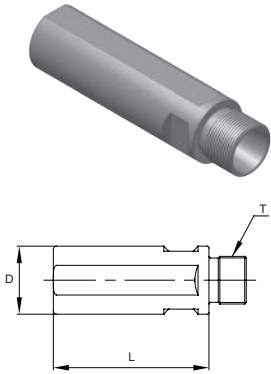


TP20000 TAPPING COLLET (ER20)

ITEM NO.	STANDARD	TAP SPEC
TP2002500	ISO	M1.0-M2.0
	DIN	M1.0-M1.8
TP2002800	ISO	M2.2-M2.5
	DIN	M2.0-M2.6
TP2003000	JIS	M1.0-M2.6
TP2003150	ISO	M3.0
TP2003500	DIN	M3.0
TP2003550	ISO	M3.5
TP2004000	ISO	M4.0
	DIN	M3.5
	JIS	M3.0-M3.5
TP2004500	ISO	M4.5
	DIN	M4.0
TP2005000	ISO	M5.0
	JIS	M4.0 ~ M4.5
TP2005500	JIS	M5.0
TP2006000	DIN	M4.5 ~ M8.0
	JIS	M6.0
TP2006200	JIS	M7.0 ~ M8.0
TP2006300	ISO	M6.0
TP2007000	DIN	M9.0 ~ M10
	JIS	M9.0 ~ M10
TP2007100	ISO	M7.0
TP2008000	ISO	M8.0
	DIN	M11.0
	JIS	M11.0

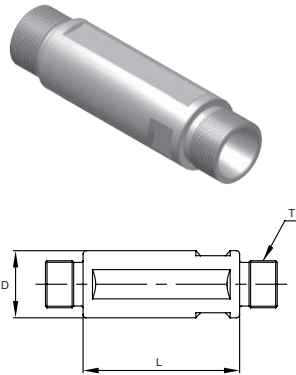
TOOLS

DRILL SLEEVE(SINGLE ENDED)



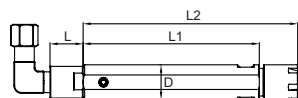
ITEM NO.	D	L	T	ITEM NO.	D	L	T	ITEM NO.	D	L	T
KDA10011050A	10.0	50	11	KDA16011050M	16.0	50	11	KDA22016117MC	22.0	117	16
KDA12011100A	12.0	100	11	KDA16011100M	16.0	100	11	KDA32025060UM	32.0	60	25
KDA14011050A	14.0	50	11	KDA10016060M	10.0	60	16				
KDA20011050A	20.0	50	11	KDA12016100M	12.0	100	16				
KDA20011070A	20.0	70	11	KDA16016100M	16.0	100	16				
KDA25016100A	25.0	100	16	KDA19516045M	19.05	45	16				
KDA25020060A	25.0	60	20	KDA19516100M	19.05	100	16				
KDA25020100A	25.0	100	20	KDA20016050M	20.0	50	16				
KDA25420150A	25.4	150	20	KDA20016070M	20.0	70	16				
				KDA22016100M	22.0	100	16				
				KDA23016075M	23.0	75	16				
				KDA25016050M	25.0	50	16				
				KDA25016080M	25.0	80	16				
				KDA22020110M	22.0	110	20				
				KDA25020050M	25.0	50	20				

DRILL SLEEVE (DOUBLE ENDED)



ITEM NO.	D	L	T	ITEM NO.	D	L	T
KDB20011033A	20.0	33	11	KDB17011090M	17.0	90	11
KDB20011050A	20.0	50	11	KDB19511060M	19.05	60	11
KDB20011070A	20.0	70	11	KDB22011075M	22.0	75	11
KDB20011078A	20.0	78	11	KDB19516060M	19.05	60	16
KDB25020045A	25.0	45	20	KDB20016050M	20.0	50	16
KDB25020075A	25.0	75	20	KDB20016070M	20.0	70	16
				KDB22016060M	22.0	60	16
				KDB22016075M	22.0	75	16
				KDB22016090M	22.0	90	16
				KDB23016060M	23.0	60	16
				KDB25016040M	25.0	40	16
				KDB25016075M	25.0	75	16
				KDB25416055M	25.4	55	16
				KDB25416070M	25.4	70	16
				KDB32020080M	32.0	80	20

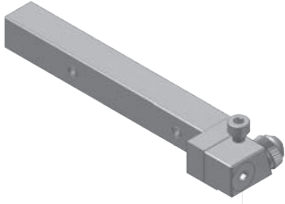
DRILL SLEEVE (COOLANT THRU TYPE)



ITEM NO.	TOOL CLAMPING	L	L1	L2	D
TL632211700	ER16-M	22	117	143	22
TL632205500	(coolant through type)	22	55	81	22

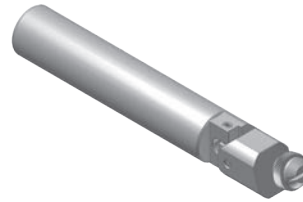
TOOLS

KNURLING HOLDER



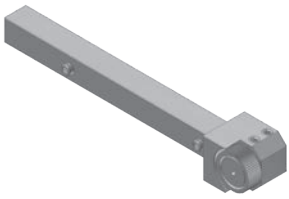
KC1R11260300

TOOL SHANK 10/12/16/20mm
KNURLING TOOL DIMENSION /
10: 11x3x6mm
12: 11x3x6mm
16: 15x4x9mm
20: 20x5x11mm



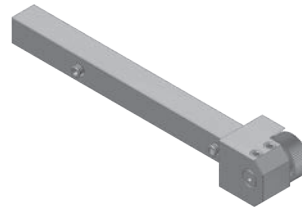
KC2R21660300

TOOL SHANK / Ø16mm
KNURLING TOOL DIMENSION /
11x3x6mm



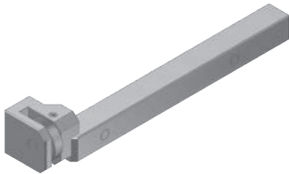
KK1L11060600

TOOL SHANK /10/12/16/20mm
KNURLING TOOL DIMENSION /
10: 15x6x6/11mm
12: 15x6x6/11mm
16: 15x6x6/11mm
20: 20x6x8/13mm



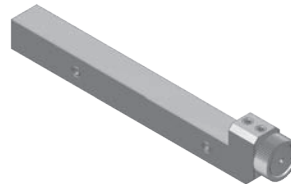
KK1R11060600

TOOL SHANK /10/12/16/20mm
KNURLING TOOL DIMENSION /
10: 15x6x6/11mm
12: 15x6x6/11mm
16: 15x6x6/11mm
20: 20x6x8/13mm



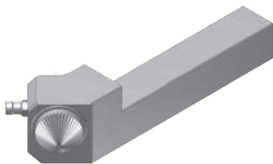
KK1R31040400

TOOL SHANK /10/12/16mm
KNURLING TOOL DIMENSION /
15x4x4mm



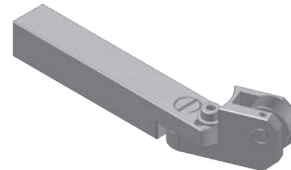
KK1R31260600

TOOL SHANK /12mm
KNURLING TOOL DIMENSION /
15x6x6/11mm



KK1R32081400

TOOL SHANK /20mm
KNURLING TOOL DIMENSION /
22x8x46mm



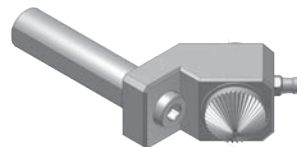
KK1R41660800

TOOL SHANK /16mm
KNURLING TOOL DIMENSION /
20x6x8mm



KK2R21660600

TOOL SHANK / Ø16mm
KNURLING TOOL DIMENSION /
15x6x6/11mm



KK2R31681400

TOOL SHANK / Ø16mm
KNURLING TOOL DIMENSION /
22x8x46mm

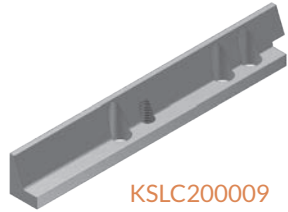


KK2R32060600

TOOL SHANK / Ø20mm
KNURLING TOOL DIMENSION /
15x6x6/11mm

TOOLS

FIXTURE



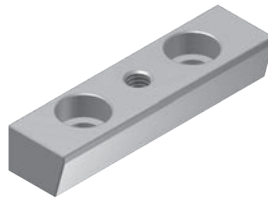
KSLC200009
CITIZEN L20



KSLC32007
CITIZEN L25/L32



KSC300007
TSUGAMI BO18



KTC300008
TSUGAMI NP17



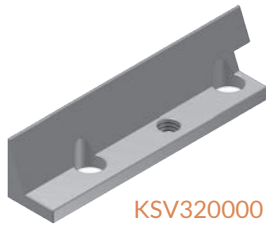
KTC206000
KTC206001
TSUGAMI S206



KSR2000080
KSR2000081
STAR SR20R



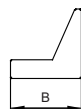
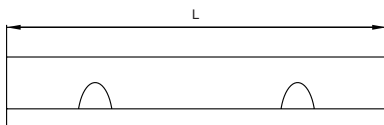
KSR2000082
STAR SR20JC



KSV320000 STAR
SV32



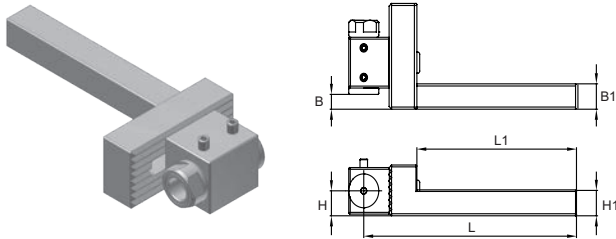
KSV320001 STAR
SV32



ITEM NO.	LENGTH(L)	HEIGHT(B)	THICKNESS
KSR2000080	75	14	3.5
KSR2000081	65	14	3.5
KSR2000082	75	13	6.5
KSV320000	70	14	3.5
KSV320001	80	14	3.5
KSLC20009	115	11	4.5
KSLC32007	115	12.5	4
KTC300007	60	18	6
KTC300008	58	15.6	11
KTC206000	70	15	10
KTC206001	70	12	10

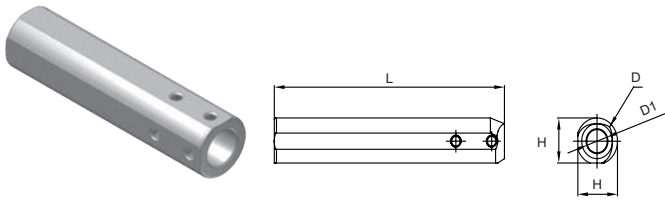
TOOLS

ADJUSTABLE BORING BAR SLEEVE



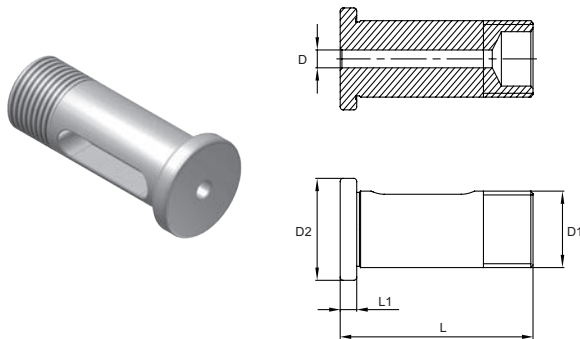
ITEM NO.	L	L1	H	H1	B	B1
ATE140000	113.3	85	12	12	4~23	12

BORING BAR SLEEVE



ITEM NO.	L	D	D1
TE1905120N	100	19.05	12
TE2000120N	80	20	12
TE2200120N	100	22	12
TE2300120N	80	23	12
TE2500120N	120	25	12
TE2540120N	120	25.4	12

BORING BAR SLEEVE BUSHING



ITEM NO.	L	L1	D	D1	D2
TE1203	35	3	3	12	16
TE1204	35	3	4	12	16
TE1205	35	3	5	12	16
TE1206	35	3	6	12	16
TE1208	35	3	8	12	16
TE1209	35	3	9	12	16
TE1210	35	3	10	12	16

