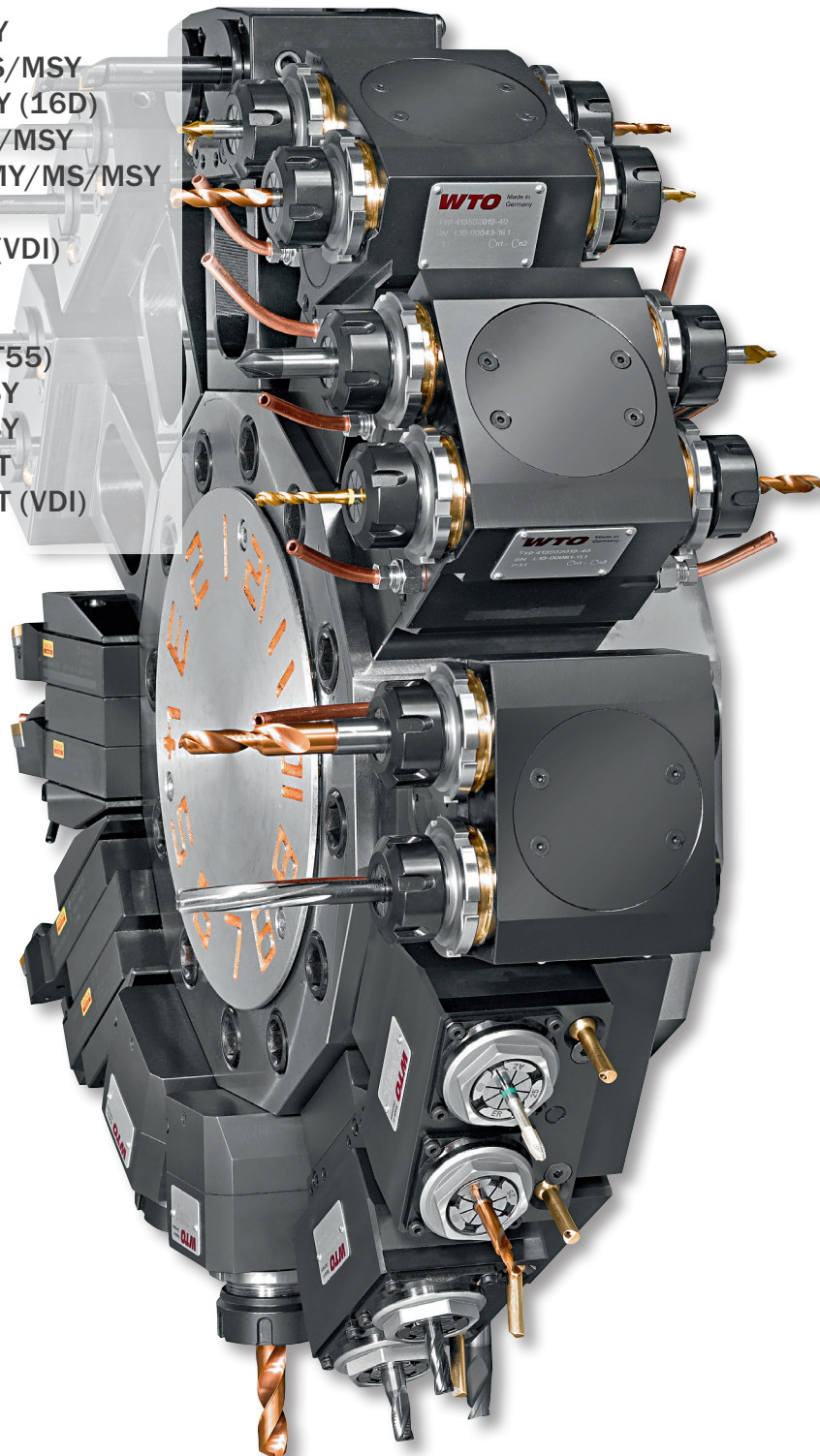


Tool Holder Program

- QT 250 (US specification)
- QT/QTS 100 M/MY/MS/MSY
- QT/QTS 200, 250 M/MY/MS/MSY
- QT 200, 250 M/MY/MS/MSY (16D)
- QT/QTS 300-400 M/MY/MS/MSY
- QTC/QTE/QTU 100-350 M/MY/MS/MSY
- QT/QTN 100 MS/MSY (VDI)
- QT/QTN 200, 250 MS/MSY (VDI)
- QT/QTN 300-450 MSY (VDI)
- QT-Ez 8-12 M/MY/MSY
- QT-Ez 8-12 M/MY/MSY (BMT55)
- Hyper Quadrex 100, 150 MSY
- Hyper Quadrex 200, 250 MSY
- Integrex i-250, 350, 450H ST
- Integrex i-250, 350, 450H ST (VDI)



Mazak



QuickFlex®

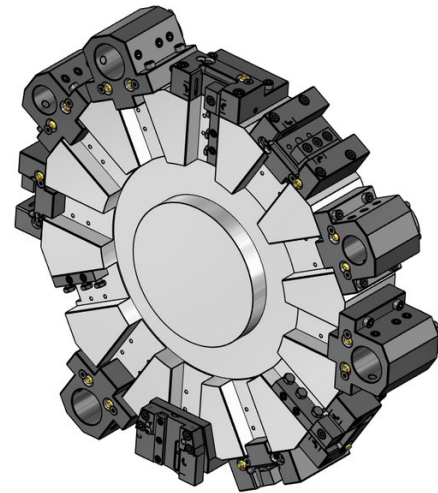
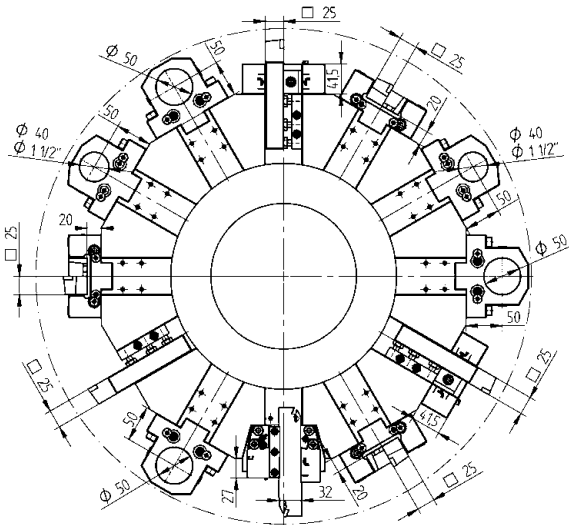
The new quick change system for high performance and precision.

Minimal investment, maximal expandability.



QT 250 (US specification)	Page	4 - 4
QT/QTS 100 M/MY/MS/MSY	Page	5 - 7
QT/QTS 200, 250 M/MY/MS/MSY	Page	8 - 11
QT 200, 250 M/MY/MS/MSY (16D)	Page	12 - 14
QT/QTS 300-400 M/MY/MS/MSY	Page	15 - 16
QTC/QTE/QTU 100-350 M/MY/MS/MSY	Page	17 - 20
QT/QTN 100 MS/MSY (VDI)	Page	21 - 24
QT/QTN 200, 250 MS/MSY (VDI)	Page	25 - 27
QT/QTN 300-450 MSY (VDI)	Page	28 - 30
QT-Ez 8-12 M/MY/MSY	Page	31 - 34
QT-Ez 8-12 M/MY/MSY (BMT55)	Page	35 - 37
Hyper Quadrex 100, 150 MSY	Page	38 - 41
Hyper Quadrex 200, 250 MSY	Page	42 - 45
Integrex i-250, 350, 450H ST	Page	46 - 46
Integrex i-250, 350, 450H ST (VDI)	Page	47 - 49
Reduction sleeves	Page	50 - 51
Collets	Page	52 - 54

EC = External coolant supply
HP-IC = High pressure internal coolant supply through cutting tool
IC 80 bar = Internal and external coolant supply
 Max. coolant pressure = 80 bar
IC 30 bar = Internal and external coolant supply
 Max. coolant pressure = 30 bar
 Only use filtered coolant fluid (max. particle size = 50 µm)
 Do not run without coolant
 Do not use for machining abrasive materials such as cast iron, etc.



Static Toolholders - Standard Program

Static Toolholders - Enhanced Program



OD cutting holder, HP-IC
25 48-100839-HP IC 80 bar



Face cutting holder, HP-IC
25 48-100861-HP IC 80 bar



Combination toolholder
Ø 40 48-112681 IC 80 bar
Ø 1 1/2" 48-77481 IC 80 bar



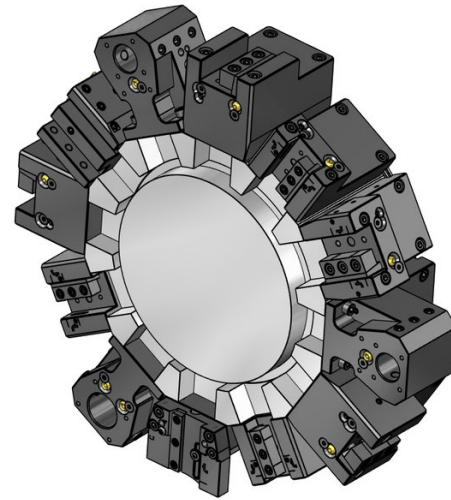
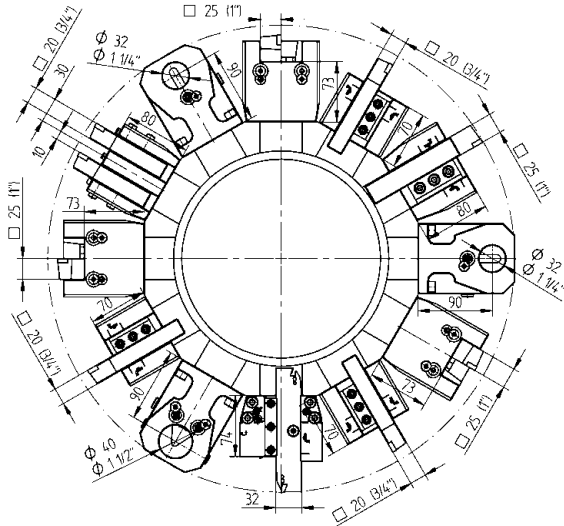
Combination toolholder
Ø 50 48-112682 IC 80 bar



Cut-off holder, adjustable
SH 32 48-100556



Cut-off holder, adjustable, HP-IC
SH 32 48-102272R IC 80 bar
SH 32 48-102272L IC 80 bar



Static Toolholders - Standard Program

Static Toolholders - Enhanced Program



OD cutting holder, HP-IC

20	48-107026-HP	IC 80 bar
25	48-91361-HP	IC 80 bar
3/4"	48-107027-HP	IC 80 bar
1"	48-91362-HP	IC 80 bar



OD cutting holder, both sides, HP-IC

25	48-106347-HP	IC 80 bar
1"	48-106477-HP	IC 80 bar



Face cutting holder

25	48-91363
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Face cutting holder

1"	48-91364
-----------	----------



Face cutting holder, both sides

25	48-107240
1"	48-107331



Combination toolholder, universal, LF=90

Ø 32	48-106763	IC 80 bar
	241132016 ER25	
	241132020 ER32	
Ø 40	48-107209	IC 80 bar
	241140020 ER32	
Ø 1 1/4"	48-106764	IC 80 bar
	2411125020 ER32	
Ø 1 1/2"	48-107210	IC 80 bar
	2411150020 ER32	



Plug

48-106936



OD cutting holder, double, Y axis

20 (3/4")	48-106582
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OD cutting holder, both sides, double, Y axis

20 (3/4")	48-106575
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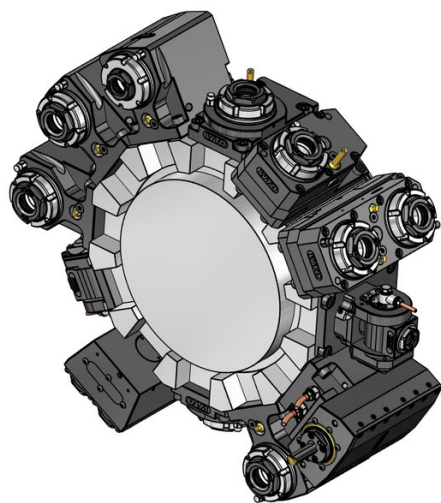
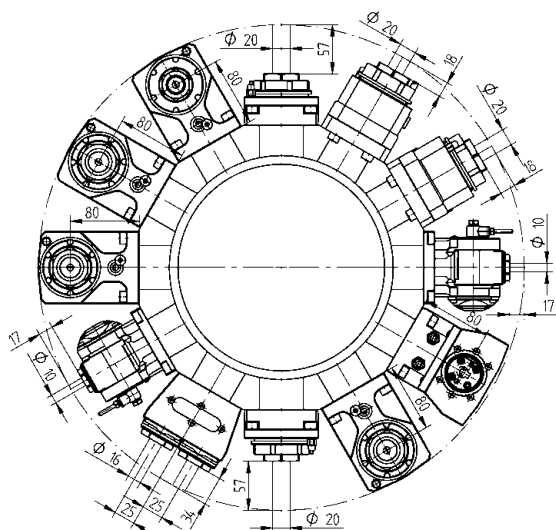
Cut-off holder, adjustable

SH 32	48-112064
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Cut-off holder, adjustable, HP-IC

SH 32	48-112062R	IC 80 bar
SH 32	48-112062L	IC 80 bar



Driven Toolholders - QuickFlex®

Driven Toolholders - Enhanced Program



Straight drill/milling unit

- ER-32 QF** 420132012-68 1:1 EC
0067732000
- ER-32 QF** 420132013-68 1:1 IC 80 bar
0067732000



Straight drill/milling unit (12000 RPM)

- ER-32 QF** 420132016-68 1:1 EC
0067732000
- ER-32 QF** 420132017-68 1:1 IC 80 bar
0067732000



Right angle drill/milling unit

- ER-32 QF** 420532012-68 1:1 EC
0067732000
- ER-32 QF** 420532013-68 1:1 IC 80 bar
0067732000



Right angle drill/milling unit (12000 RPM)

- ER-32 QF** 420532020-68 1:1 EC
0067732000
- ER-32 QF** 420532021-68 1:1 IC 80 bar
0067732000



Straight offset drill/milling unit

- ER-32 QF** 420132018-68 1:1 EC
0067732000
- ER-32 QF** 420132019-68 1:1 IC 80 bar
0067732000

- ER-25 QF** 420125010-68 1:2 EC
0067725001

- ER-25 QF** 420125011-68 1:2 IC 80 bar
0067725001

- ER-32 QF** 420132020-68 2:1 EC
0067732000

- ER-32 QF** 420132021-68 2:1 IC 80 bar
0067732000



Straight offset drill/milling unit (12000 RPM)

- ER-32 QF** 420132022-68 1:1 EC
0067732000

- ER-32 QF** 420132023-68 1:1 IC 80 bar
0067732000



Straight offset drill/milling unit, both sides

- ER-32 QF** 423002010-68 1:1 EC
0067732000

- ER-32 QF** 423002011-68 1:1 IC 80 bar
0067732000



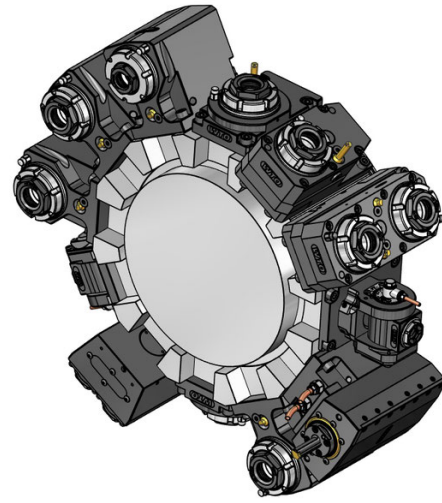
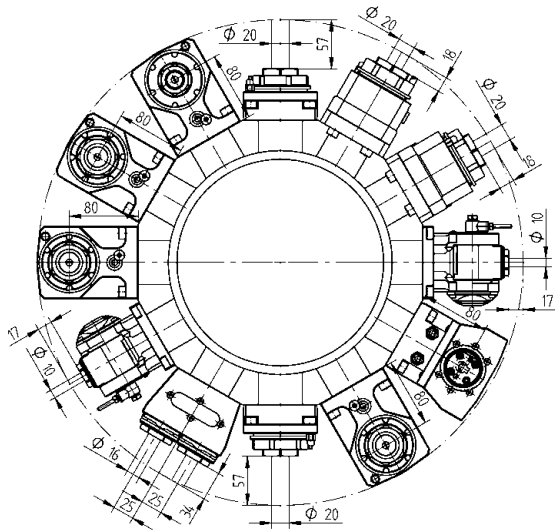
Right angle drill/milling unit

- ER-25 QF** 420525010-68 1:2 EC
0067725001

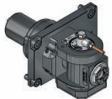
- ER-25 QF** 420525011-68 1:2 IC 80 bar
0067725001

- ER-32 QF** 420532014-68 2:1 EC
0067732000

- ER-32 QF** 420532015-68 2:1 IC 80 bar
0067732000



Driven Toolholders - Enhanced Program



Adjustable angle drill/milling unit

ER 16	411010002-68	1:1	EC
	00675000913		
ER 16	411010003-68	1:1	IC 80 bar
	00675000913		
ER 11	411007002-68	1:2	EC
	00675000914		
ER 11	411007003-68	1:2	IC 80 bar
	00675000914		



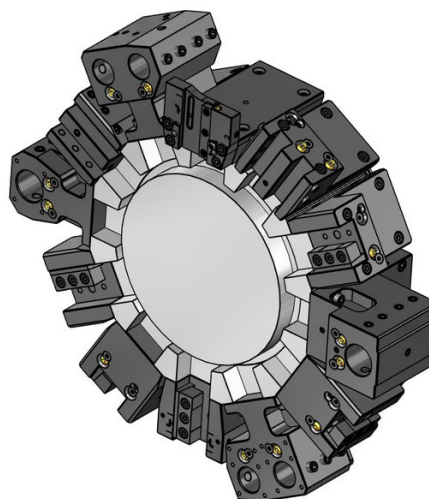
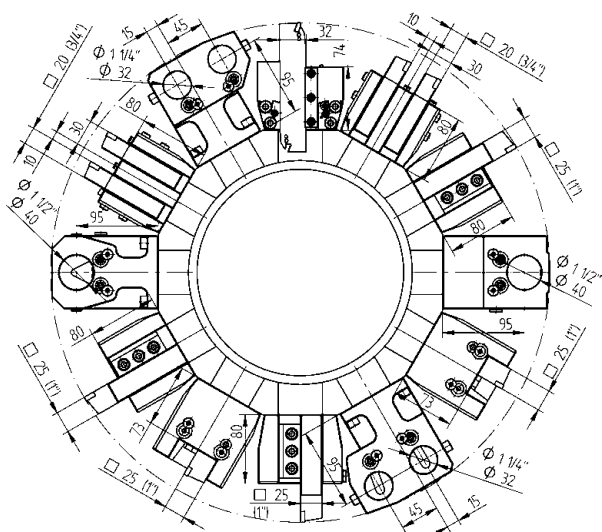
Straight drill/milling unit, double, Y axis

ER 25	413002008-68	1:1	EC
	00675000932		
ER 25	413002009-68	1:1	IC 80 bar
	00675000932		



Broaching unit for ID and OD

TN765050	414532000-68	1:1	EC
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Static Toolholders - Standard Program

Static Toolholders - Enhanced Program

- 


OD cutting holder, HP-IC

20	48-107026-HP	IC 80 bar
25	48-91361-HP	IC 80 bar
3/4"	48-107027-HP	IC 80 bar
1"	48-91362-HP	IC 80 bar
- 

OD cutting holder, both sides, HP-IC

25	48-106347-HP	IC 80 bar
1"	48-106477-HP	IC 80 bar
- 

Face cutting holder

25	48-91363	
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- 


Face cutting holder

1"	48-91364	
----	----------	--
- 

Face cutting holder, both sides

25	48-107240	
1"	48-107331	
- 

Combination toolholder, universal, LF=95

Ø 40	48-107211	IC 80 bar
	 241140020	ER32
Ø 1 1/2"	48-107212	IC 80 bar
	 2411150020	ER32
- 

Combination toolholder, both sides

Ø 40	48-106346	IC 80 bar
Ø 1 1/2"	48-106571	IC 80 bar
- 

Plug

48-106936		
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- 

OD cutting holder, double, Y axis

20 (3/4")	48-106582	
-----------	-----------	--
- 

OD cutting holder, both sides, double, Y axis

20 (3/4")	48-106575	
-----------	-----------	--
- 

Cut-off holder, adjustable

SH 32	48-112064	
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- 

Cut-off holder, adjustable, HP-IC

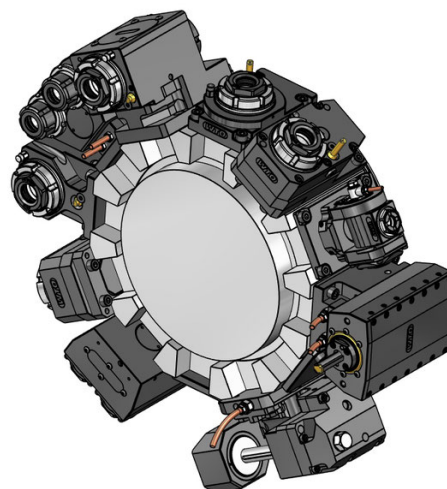
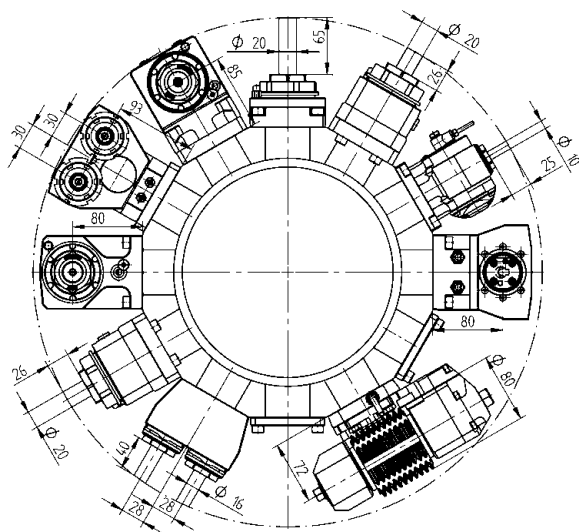
SH 32	48-112062R	IC 80 bar
SH 32	48-112062L	IC 80 bar
- 

Combination toolholder, universal, double, Y axis

Ø 32	48-106578	
	 241132016	ER25
	 241132020	ER32
Ø 1 1/4"	48-106579	
	 2411125020	ER32
- 

Combination toolholder, both sides, double, Y axis

Ø 32	48-106584	IC 80 bar
Ø 1 1/4"	48-106595	IC 80 bar



Driven Toolholders - QuickFlex®

Driven Toolholders - QuickFlex®



Straight drill/milling unit

ER-32 QF 420132012-68 1:1 EC
0067732000

ER-32 QF 420132013-68 1:1 IC 80 bar
0067732000



Straight drill/milling unit (12000 RPM)

ER-32 QF 420132016-68 1:1 EC
0067732000

ER-32 QF 420132017-68 1:1 IC 80 bar
0067732000



Right angle drill/milling unit

ER-32 QF 420532012-68 1:1 EC
0067732000

ER-32 QF 420532013-68 1:1 IC 80 bar
0067732000



Right angle drill/milling unit (12000 RPM)

ER-32 QF 420532020-68 1:1 EC
0067732000

ER-32 QF 420532021-68 1:1 IC 80 bar
0067732000



Right angle drill/milling unit, sub spindle

ER-32 QF 420532024-68 1:1 EC
0067732000

ER-32 QF 420532025-68 1:1 IC 80 bar
0067732000



Right angle drill/milling unit, sub spindle (12000 RPM)

ER-32 QF 420532022-68 1:1 EC
0067732000

ER-32 QF 420532023-68 1:1 IC 80 bar
0067732000



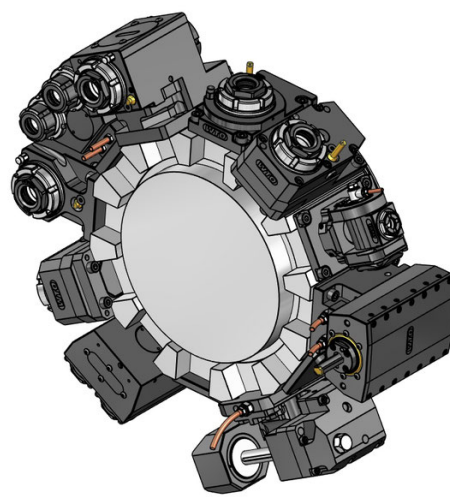
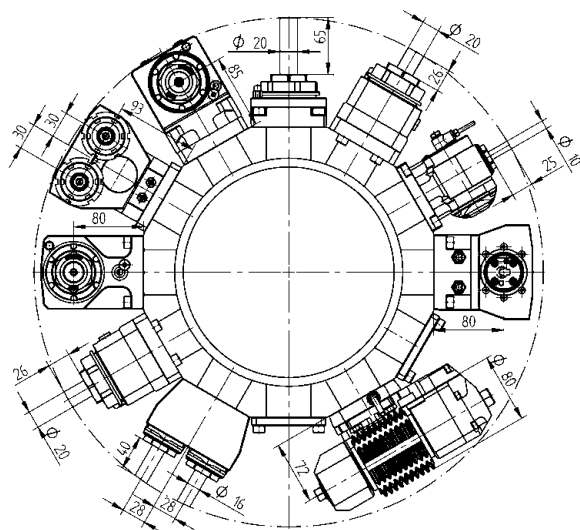
Right angle drill/milling unit, both sides

ER-32 QF 420532026-68 1:1 EC
0067732000



Right angle drill/milling unit, both sides (12000 RPM)

ER-32 QF 420532019-68 1:1 EC
0067732000



Driven Toolholders - Enhanced Program

Driven Toolholders - Enhanced Program



Straight offset drill/milling unit

ER-32 QF	420132018-68	1:1	EC
	0067732000		
ER-32 QF	420132019-68	1:1	IC 80 bar
	0067732000		
ER-25 QF	420125010-68	1:2	EC
	0067725001		
ER-25 QF	420125011-68	1:2	IC 80 bar
	0067725001		
ER-32 QF	420132020-68	2:1	EC
	0067732000		
ER-32 QF	420132021-68	2:1	IC 80 bar
	0067732000		



Straight offset drill/milling unit (12000 RPM)

ER-32 QF	420132022-68	1:1	EC
	0067732000		
ER-32 QF	420132023-68	1:1	IC 80 bar
	0067732000		



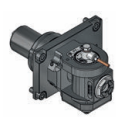
Straight offset drill/milling unit, both sides

ER-32 QF	423002010-68	1:1	EC
	0067732000		
ER-32 QF	423002011-68	1:1	IC 80 bar
	0067732000		



Right angle drill/milling unit

ER-25 QF	420525010-68	1:2	EC
	0067725001		
ER-25 QF	420525011-68	1:2	IC 80 bar
	0067725001		
ER-32 QF	420532014-68	2:1	EC
	0067732000		
ER-32 QF	420532015-68	2:1	IC 80 bar
	0067732000		



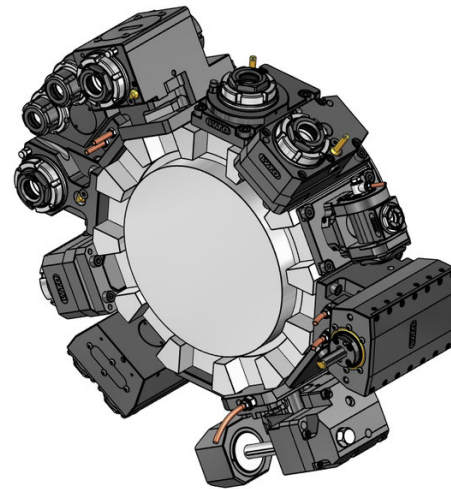
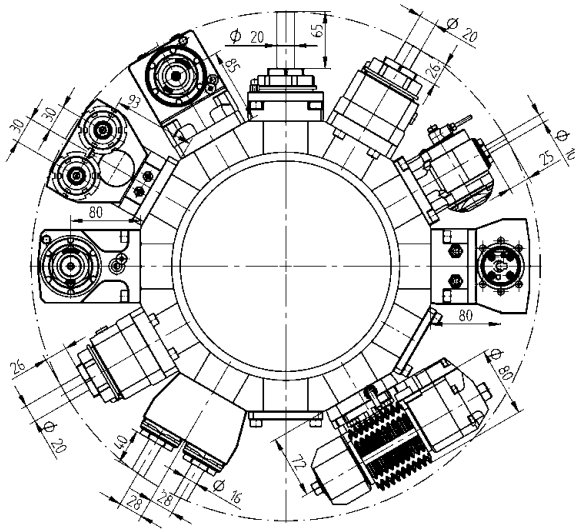
Adjustable angle drill/milling unit

ER 16	411010002-68	1:1	EC
	00675000913		
ER 16	411010003-68	1:1	IC 80 bar
	00675000913		
ER 11	411007002-68	1:2	EC
	00675000914		
ER 11	411007003-68	1:2	IC 80 bar
	00675000914		



Gear hobbing unit

Type 16-1	411500007-68	1:1	EC
	00675000926		
	160016161 Ø 16		
	160022161 Ø 22		
	160027161 Ø 27		
	160015161 Ø 5/8"		
	160019161 Ø 3/4"		
	160025161 Ø 1"		
	160031161 Ø 1 1/4"		
	110587		
Type 16-1	411500008-68	2:1	EC
	00675000926		
	160016161 Ø 16		
	160022161 Ø 22		
	160027161 Ø 27		
	160015161 Ø 5/8"		
	160019161 Ø 3/4"		
	160025161 Ø 1"		
	160031161 Ø 1 1/4"		
	110587		



Driven Toolholders - Enhanced Program



Straight drill/milling unit, double, Y axis

ER 25	413002008-68	1:1	EC
	00675000932		
ER 25	413002009-68	1:1	IC 80 bar
	00675000932		



2-spindle - Right angle drill/milling unit, Y axis

ER 25	413502005-68	1:1	EC
	00675000915		
ER 25	413502006-68	1:1	IC 80 bar
	00675000915		



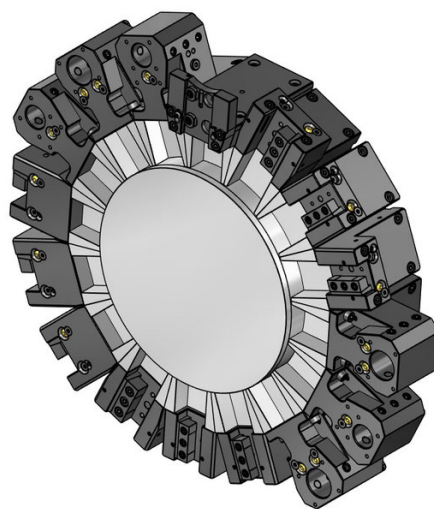
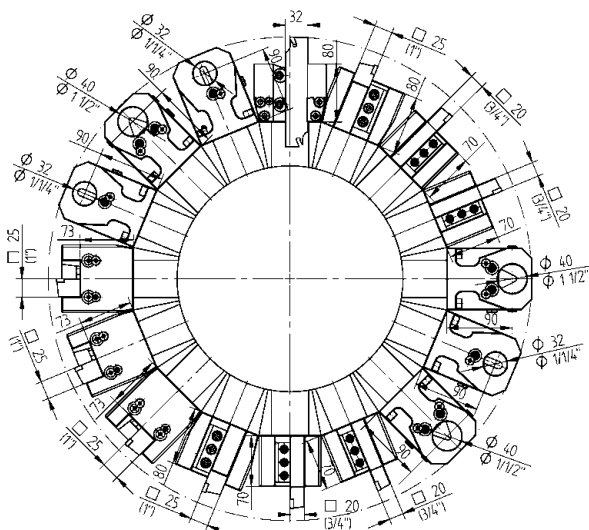
2-spindle - Right angle drill/milling unit, both sides, Y axis

ER 25	413502007-68	1:1	EC
	00675000915		



Broaching unit for ID and OD

TN765050	414532000-68	1:1	EC
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Static Toolholders - Standard Program

Static Toolholders - Enhanced Program



OD cutting holder, HP-IC

20	48-107026-HP	IC 80 bar
25	48-91361-HP	IC 80 bar
3/4"	48-107027-HP	IC 80 bar
1"	48-91362-HP	IC 80 bar



OD cutting holder, both sides, HP-IC

25	48-106347-HP	IC 80 bar
1"	48-106477-HP	IC 80 bar



Face cutting holder

25	48-91363
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Combination toolholder, universal, LF=90

Ø 32	48-106763	IC 80 bar
	241132016 ER25	
	241132020 ER32	
Ø 40	48-107209	IC 80 bar
	241140020 ER32	
Ø 1 1/4"	48-106764	IC 80 bar
	2411125020 ER32	
Ø 1 1/2"	48-107210	IC 80 bar
	2411150020 ER32	



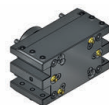
Plug

48-106936



OD cutting holder, double, Y axis

20 (3/4")	48-106582
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OD cutting holder, both sides, double, Y axis

20 (3/4")	48-106575
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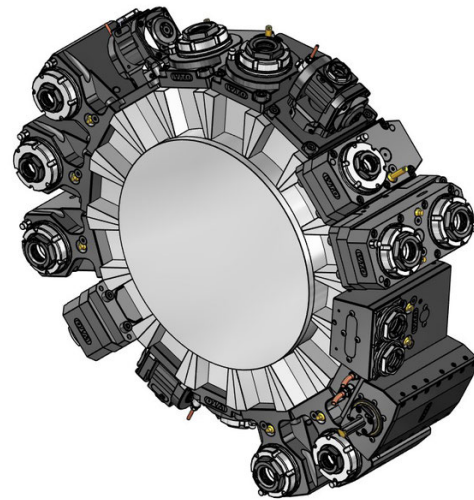
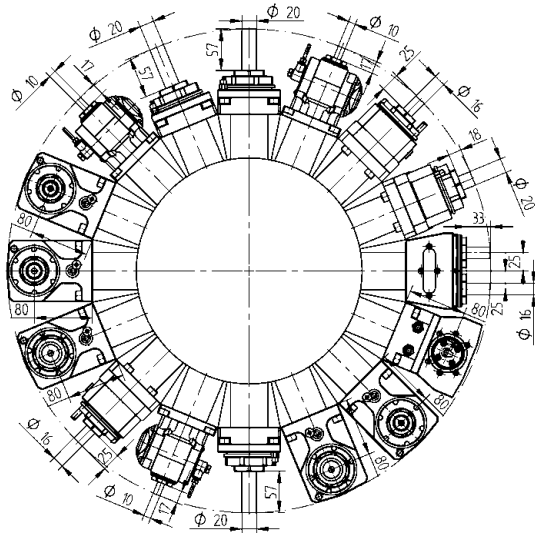
Cut-off holder, adjustable

SH 32	48-112064
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Cut-off holder, adjustable, HP-IC

SH 32	48-112062R	IC 80 bar
SH 32	48-112062L	IC 80 bar



Driven Toolholders - QuickFlex®

Driven Toolholders - Enhanced Program



Straight drill/milling unit

- ER-32 QF 420132012-68 1:1 EC
0067732000
- ER-32 QF 420132013-68 1:1 IC 80 bar
0067732000



Straight drill/milling unit (12000 RPM)

- ER-32 QF 420132016-68 1:1 EC
0067732000
- ER-32 QF 420132017-68 1:1 IC 80 bar
0067732000



Right angle drill/milling unit

- ER-32 QF 420532012-68 1:1 EC
0067732000
- ER-32 QF 420532013-68 1:1 IC 80 bar
0067732000



Right angle drill/milling unit (12000 RPM)

- ER-32 QF 420532020-68 1:1 EC
0067732000
- ER-32 QF 420532021-68 1:1 IC 80 bar
0067732000



Straight offset drill/milling unit

- ER-32 QF 420132018-68 1:1 EC
0067732000
- ER-32 QF 420132019-68 1:1 IC 80 bar
0067732000
- ER-25 QF 420125010-68 1:2 EC
0067725001
- ER-25 QF 420125011-68 1:2 IC 80 bar
0067725001
- ER-32 QF 420132020-68 2:1 EC
0067732000
- ER-32 QF 420132021-68 2:1 IC 80 bar
0067732000



Straight offset drill/milling unit (12000 RPM)

- ER-32 QF 420132022-68 1:1 EC
0067732000
- ER-32 QF 420132023-68 1:1 IC 80 bar
0067732000



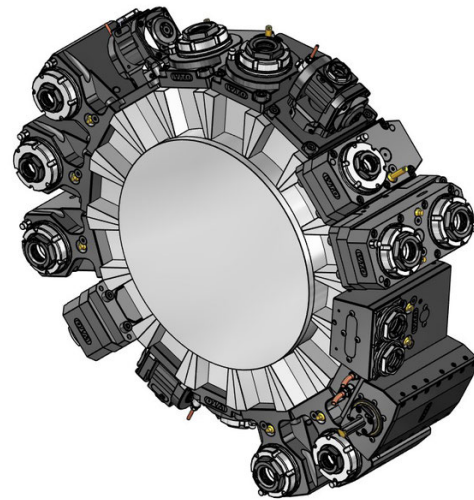
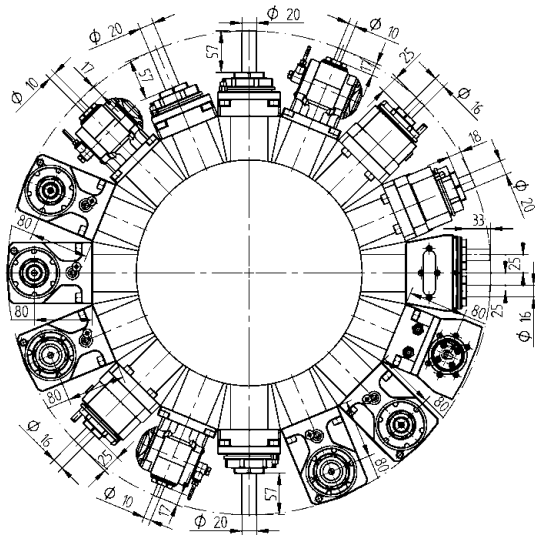
Straight offset drill/milling unit, both sides

- ER-32 QF 423002010-68 1:1 EC
0067732000
- ER-32 QF 423002011-68 1:1 IC 80 bar
0067732000



Right angle drill/milling unit

- ER-25 QF 420525010-68 1:2 EC
0067725001
- ER-25 QF 420525011-68 1:2 IC 80 bar
0067725001
- ER-32 QF 420532014-68 2:1 EC
0067732000
- ER-32 QF 420532015-68 2:1 IC 80 bar
0067732000



Driven Toolholders - Enhanced Program



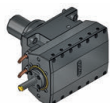
Adjustable angle drill/milling unit

ER 16	411010002-68	1:1	EC
	00675000913		
ER 16	411010003-68	1:1	IC 80 bar
	00675000913		
ER 11	411007002-68	1:2	EC
	00675000914		
ER 11	411007003-68	1:2	IC 80 bar
	00675000914		



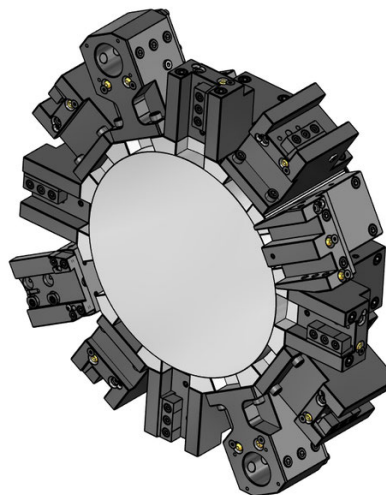
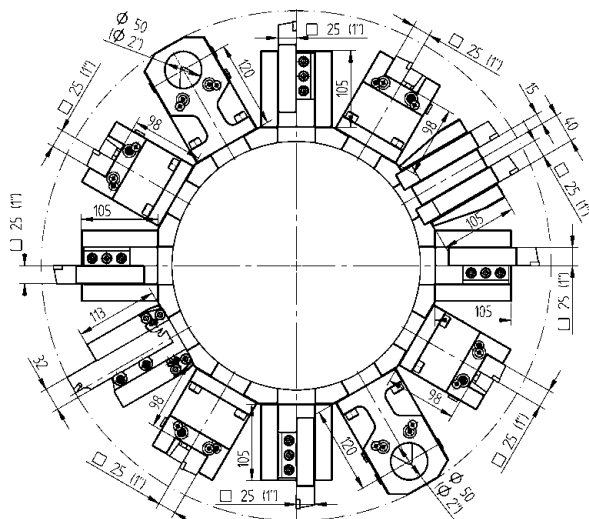
Straight drill/milling unit, double, Y axis

ER 25	413002008-68	1:1	EC
	00675000932		
ER 25	413002009-68	1:1	IC 80 bar
	00675000932		



Broaching unit for ID and OD

TN765050	414532000-68	1:1	EC
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Static Toolholders - Standard Program

Static Toolholders - Enhanced Program



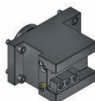
OD cutting holder, HP-IC

25 48-93004-HP IC 80 bar
1" 48-93005-HP IC 80 bar



OD cutting holder, both sides, HP-IC

25 48-109600-HP IC 80 bar
1" 48-109601-HP IC 80 bar



Face cutting holder

25 48-93006
1" 48-93007




Combination toolholder

Ø 50 48-93008 IC 80 bar
Ø 2" 48-93009 IC 80 bar



Combination toolholder, both sides

Ø 40 48-109611 IC 80 bar
 241140026 ER40
Ø 1 1/2" 48-109612 IC 80 bar



OD cutting holder, double, Y axis

25(1") 48-109633



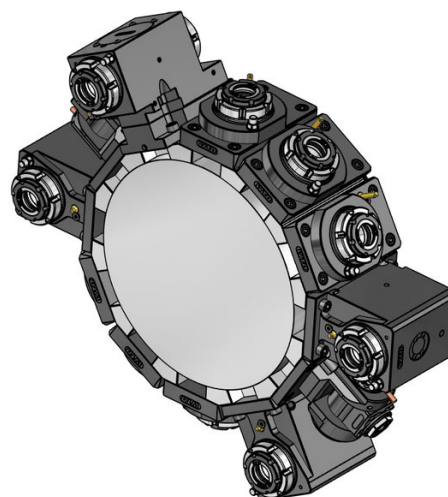
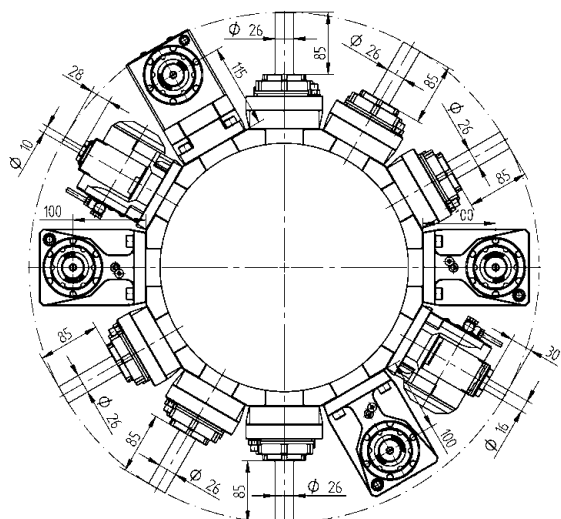
Cut-off holder, adjustable

SH 32 48-93039



Cut-off holder, adjustable, HP-IC

SH 32 48-99401R IC 80 bar
 343-810100R12
SH 32 48-99401L IC 80 bar
 343-810100L12



Driven Toolholders - QuickFlex®

Driven Toolholders - Enhanced Program



Straight drill/milling unit

- ER-40 QF** 420140010-80 1:1 EC
0067740000
- ER-40 QF** 420140011-80 1:1 IC 80 bar
0067740000



Straight drill/milling unit (10000 RPM)

- ER-40 QF** 420140012-80 1:1 EC
0067740000
- ER-40 QF** 420140013-80 1:1 IC 80 bar
0067740000



Right angle drill/milling unit

- ER-40 QF** 420540010-80 1:1 EC
0067740000
- ER-40 QF** 420540011-80 1:1 IC 80 bar
0067740000



Right angle drill/milling unit (10000 RPM)

- ER-40 QF** 420540014-80 1:1 EC
0067740000
- ER-40 QF** 420540015-80 1:1 IC 80 bar
0067740000



Right angle drill/milling unit, sub spindle (10000 RPM)

- ER-40 QF** 420540016-80 1:1 EC
0067740000
- ER-40 QF** 420540017-80 1:1 IC 80 bar
0067740000



Right angle drill/milling unit, both sides (10000 RPM)

- ER-40 QF** 420540018-80 1:1 EC
0067740000



Right angle drill/milling unit

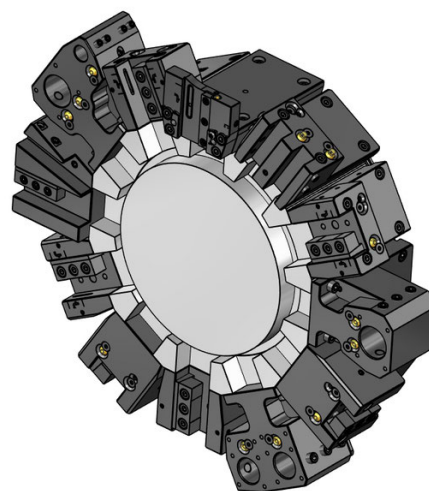
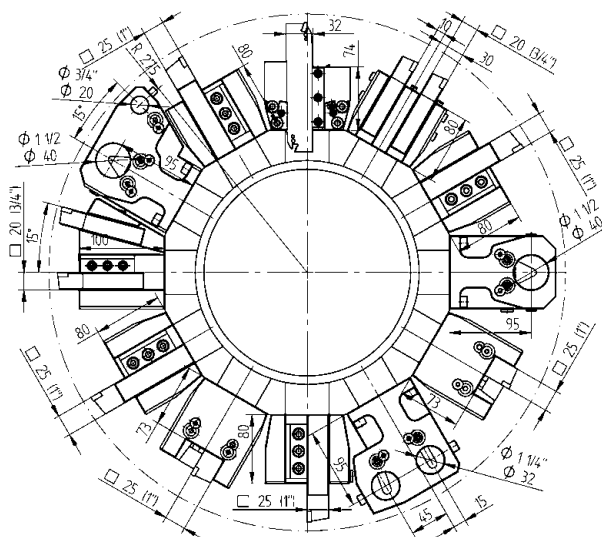
- ER-32 QF** 420532010-80 1:2 EC
0067732001
- ER-32 QF** 420532011-80 1:2 IC 80 bar
0067732001

- ER-40 QF** 420540012-80 2:1 EC
0067740000
- ER-40 QF** 420540013-80 2:1 IC 80 bar
0067740000



Adjustable angle drill/milling unit

- ER 25** 411016000-80 1:1 EC
00675000934
- ER 25** 411016001-80 1:1 IC 80 bar
00675000934
- ER 16** 411010001-80 1:2 EC
00675000936
- ER 16** 411010002-80 1:2 IC 80 bar
00675000936



Static Toolholders - Standard Program

Static Toolholders - Enhanced Program



OD cutting holder, HP-IC

20	48-107026-HP	IC 80 bar
25	48-91361-HP	IC 80 bar
3/4"	48-107027-HP	IC 80 bar
1"	48-91362-HP	IC 80 bar



OD cutting holder, both sides, HP-IC

25	48-106347-HP	IC 80 bar
1"	48-106477-HP	IC 80 bar



Face cutting holder

25	48-91363
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Face cutting holder

1"	48-91364
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Face cutting holder, both sides

25	48-107240
1"	48-107331



Combination toolholder, universal, LF=95

Ø 40	48-107211	IC 80 bar
	241140020 ER32	
Ø 1 1/2"	48-107212	IC 80 bar
	2411150020 ER32	



Combination toolholder, both sides

Ø 40	48-106346	IC 80 bar
Ø 1 1/2"	48-106571	IC 80 bar



Plug

48-106936



OD cutting holder, double, 24 station

20	48-111240
3/4"	48-111241



OD cutting holder, double, Y axis

20 (3/4")	48-106582
------------------	-----------



OD cutting holder, both sides, double, Y axis

20 (3/4")	48-106575
------------------	-----------



Cut-off holder, adjustable

SH 32	48-112064
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Cut-off holder, adjustable, HP-IC

SH 32	48-112062R	IC 80 bar
SH 32	48-112062L	IC 80 bar



Combination toolholder, universal, double, 24 station

Ø40/20	48-111242	IC 80 bar
Ø1½"/¾"	48-111243	IC 80 bar



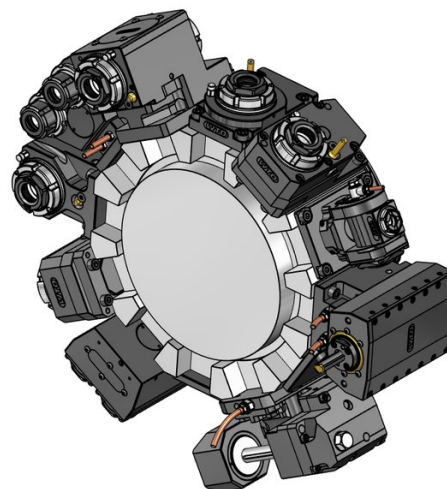
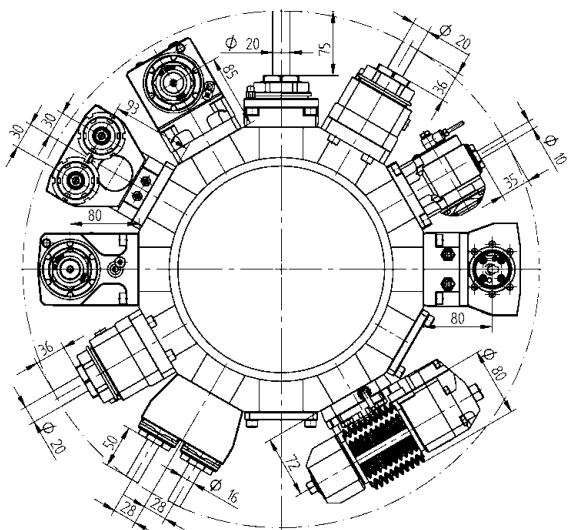
Combination toolholder, universal, double, Y axis

Ø 32	48-106578
	241132016 ER25
	241132020 ER32
Ø 1 1/4"	48-106579
	2411125020 ER32



Combination toolholder, both sides, double, Y axis

Ø 32	48-106584	IC 80 bar
Ø 1 1/4"	48-106595	IC 80 bar



Driven Toolholders - QuickFlex®

Driven Toolholders - QuickFlex®



Straight drill/milling unit

ER-32 QF 420132012-68 1:1 EC
0067732000

ER-32 QF 420132013-68 1:1 IC 80 bar
0067732000



Straight drill/milling unit (12000 RPM)

ER-32 QF 420132016-68 1:1 EC
0067732000

ER-32 QF 420132017-68 1:1 IC 80 bar
0067732000



Right angle drill/milling unit

ER-32 QF 420532012-68 1:1 EC
0067732000

ER-32 QF 420532013-68 1:1 IC 80 bar
0067732000



Right angle drill/milling unit (12000 RPM)

ER-32 QF 420532020-68 1:1 EC
0067732000

ER-32 QF 420532021-68 1:1 IC 80 bar
0067732000



Right angle drill/milling unit, sub spindle

ER-32 QF 420532024-68 1:1 EC
0067732000

ER-32 QF 420532025-68 1:1 IC 80 bar
0067732000



Right angle drill/milling unit, sub spindle (12000 RPM)

ER-32 QF 420532022-68 1:1 EC
0067732000

ER-32 QF 420532023-68 1:1 IC 80 bar
0067732000



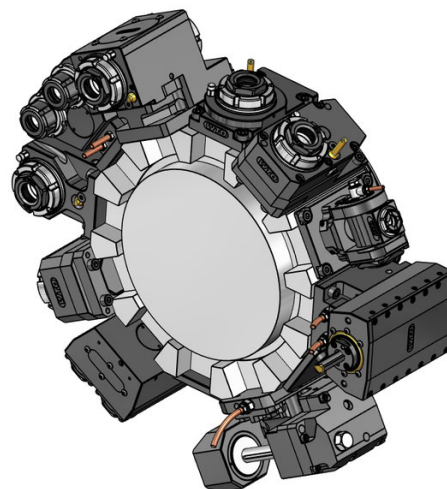
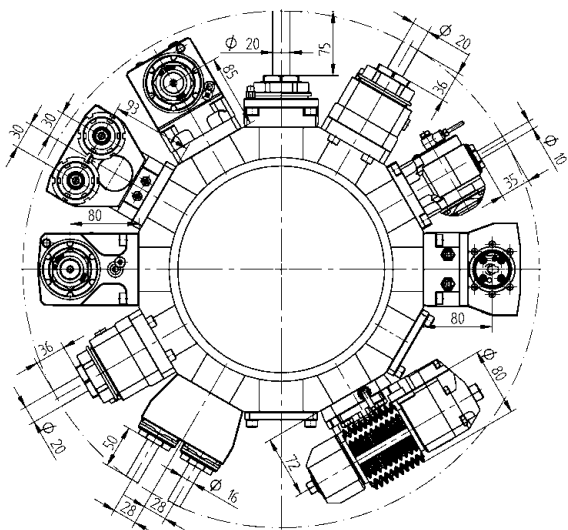
Right angle drill/milling unit, both sides

ER-32 QF 420532026-68 1:1 EC
0067732000



Right angle drill/milling unit, both sides (12000 RPM)

ER-32 QF 420532019-68 1:1 EC
0067732000



Driven Toolholders - Enhanced Program



Straight offset drill/milling unit

ER-32 QF	420132018-68	1:1	EC
	0067732000		
ER-32 QF	420132019-68	1:1	IC 80 bar
	0067732000		
ER-25 QF	420125010-68	1:2	EC
	0067725001		
ER-25 QF	420125011-68	1:2	IC 80 bar
	0067725001		
ER-32 QF	420132020-68	2:1	EC
	0067732000		
ER-32 QF	420132021-68	2:1	IC 80 bar
	0067732000		



Straight offset drill/milling unit (12000 RPM)

ER-32 QF	420132022-68	1:1	EC
	0067732000		
ER-32 QF	420132023-68	1:1	IC 80 bar
	0067732000		



Straight offset drill/milling unit, both sides

ER-32 QF	423002010-68	1:1	EC
	0067732000		
ER-32 QF	423002011-68	1:1	IC 80 bar
	0067732000		



Right angle drill/milling unit

ER-25 QF	420525010-68	1:2	EC
	0067725001		
ER-25 QF	420525011-68	1:2	IC 80 bar
	0067725001		
ER-32 QF	420532014-68	2:1	EC
	0067732000		
ER-32 QF	420532015-68	2:1	IC 80 bar
	0067732000		

Driven Toolholders - Enhanced Program



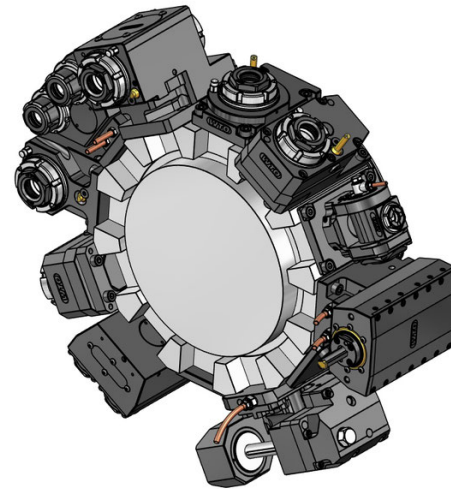
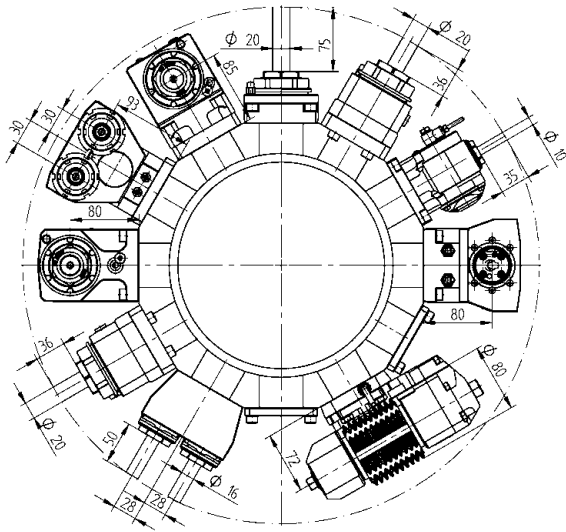
Adjustable angle drill/milling unit

ER 16	411010002-68	1:1	EC
	00675000913		
ER 16	411010003-68	1:1	IC 80 bar
	00675000913		
ER 11	411007002-68	1:2	EC
	00675000914		
ER 11	411007003-68	1:2	IC 80 bar
	00675000914		



Gear hobbing unit

Type 16-1	411500007-68	1:1	EC
	00675000926		
	160016161 Ø 16		
	160022161 Ø 22		
	160027161 Ø 27		
	160015161 Ø 5/8"		
	160019161 Ø 3/4"		
	160025161 Ø 1"		
	160031161 Ø 1 1/4"		
	110587		
Type 16-1	411500008-68	2:1	EC
	00675000926		
	160016161 Ø 16		
	160022161 Ø 22		
	160027161 Ø 27		
	160015161 Ø 5/8"		
	160019161 Ø 3/4"		
	160025161 Ø 1"		
	160031161 Ø 1 1/4"		
	110587		



Driven Toolholders - Enhanced Program



Straight drill/milling unit, double, Y axis

- | | | | |
|--------------|--------------|-----|-----------|
| ER 25 | 413002008-68 | 1:1 | EC |
| | 00675000932 | | |
| ER 25 | 413002009-68 | 1:1 | IC 80 bar |
| | 00675000932 | | |



2-spindle - Right angle drill/milling unit, Y axis

- | | | | |
|--------------|--------------|-----|-----------|
| ER 25 | 413502005-68 | 1:1 | EC |
| | 00675000915 | | |
| ER 25 | 413502006-68 | 1:1 | IC 80 bar |
| | 00675000915 | | |



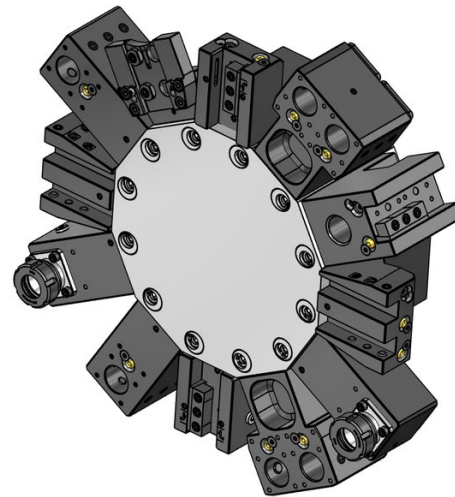
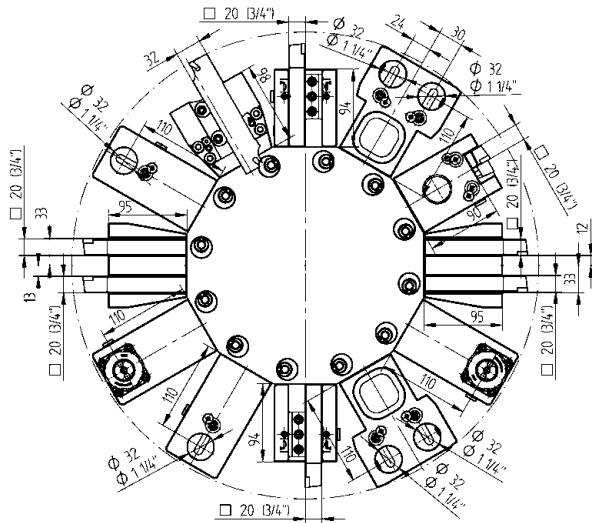
2-spindle - Right angle drill/milling unit, both sides, Y axis

- | | | | |
|--------------|--------------|-----|----|
| ER 25 | 413502007-68 | 1:1 | EC |
| | 00675000915 | | |



Broaching unit for ID and OD

- | | | | |
|-----------------|--------------|-----|----|
| TN765050 | 414532000-68 | 1:1 | EC |
|-----------------|--------------|-----|----|



Static Toolholders - Standard Program

Static Toolholders - Standard Program



OD cutting holder
 3/4" 48-82172



OD cutting holder, HP-IC
 20 48-82510-HP IC 80 bar
 3/4" 48-82172-HP IC 80 bar



OD cutting holder, both sides, HP-IC
 20 48-82511-HP IC 80 bar
 3/4" 48-82174-HP IC 80 bar



Face cutting holder
 20 48-84000
 3/4" 48-83999



Universal square toolholder
 20 48-85368
 3/4" 48-85370



Combination toolholder, universal
 Ø 32 48-82367
 241132016 ER25
 241132020 ER32
 Ø 1 1/4" 48-82368
 2411125020 ER32



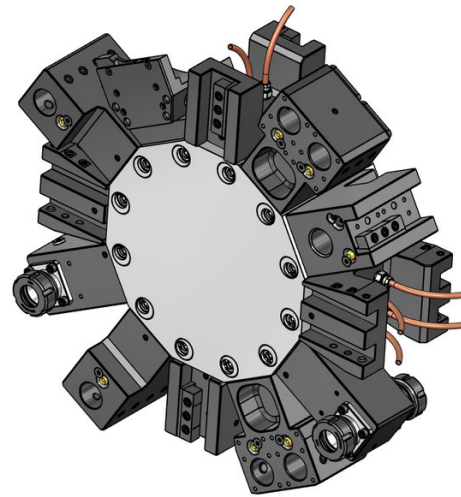
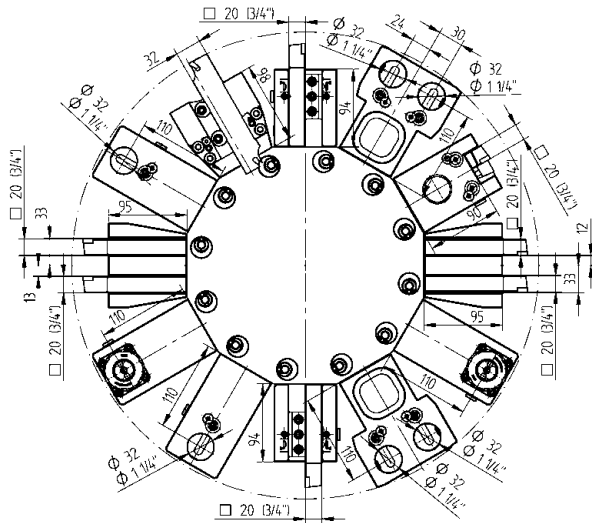
Combination toolholder, both sides
 Ø 32 48-82849
 Ø 1 1/4" 48-82809



Collet face drill holder
 ER 32 48-83726
 107532000



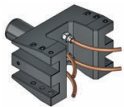
Collet face drill holder, both sides
 ER 32 48-83727
 107532000



Static Toolholders - Enhanced Program



OD cutting holder, double, Y axis
 20 (3/4") 48-84958



OD cutting holder, both sides, double, Y axis
 20 (3/4") 48-84959



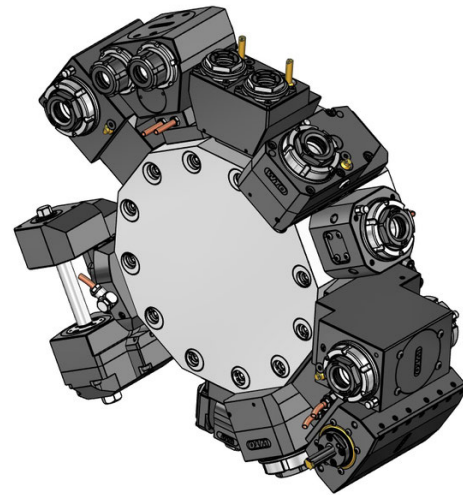
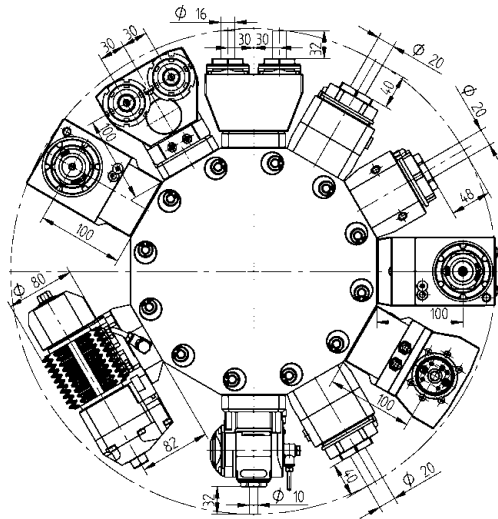
Cut-off holder, adjustable
 SH 32 48-99064 EC



Cut-off holder, adjustable, HP-IC
 SH 32 48-99474R IC 80 bar
 343-810100R13
 SH 32 48-99474L IC 80 bar
 343-810100L13



Combination toolholder, universal, double, Y axis
 Ø 32 48-84960
 241132016 ER25
 241132020 ER32
 Ø 1 1/4" 48-84961
 241125020 ER32

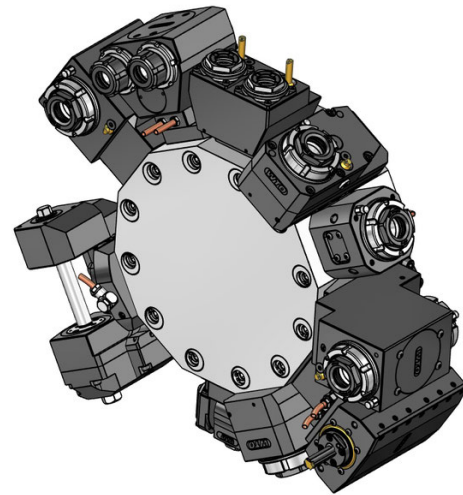
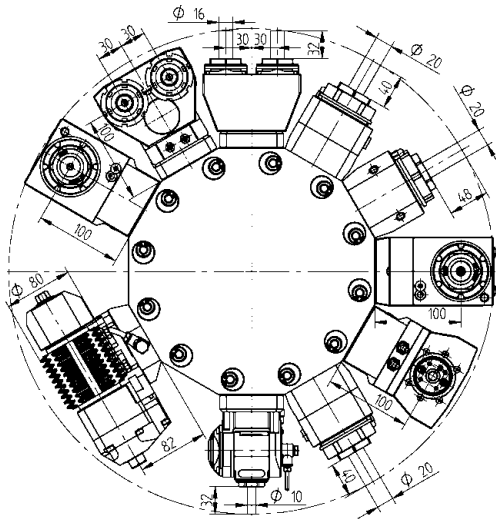


Driven Toolholders - QuickFlex®

	Straight drill/milling unit			
	ER-32 QF 420132040-40	1:1	EC	
	0067732000			
	ER-32 QF 420132041-40	1:1	IC 80 bar	
	0067732000			
	Straight offset drill/milling unit			
	ER-32 QF 420132028-40	1:1	EC	
	0067732000			
	ER-32 QF 420132029-40	1:1	IC 80 bar	
	0067732000			
	Right angle drill/milling unit			
	ER-32 QF 420532066-40	1:1	EC	
	0067732000			
	ER-32 QF 420532067-40	1:1	IC 80 bar	
	0067732000			
	Right angle drill/milling unit, sub spindle			
	ER-32 QF 420532068-40	1:1	EC	
	0067732000			
	ER-32 QF 420532069-40	1:1	IC 80 bar	
	0067732000			
	Right angle drill/milling unit, both sides			
	ER-32 QF 420532070-40	1:1	EC	
	0067732000			

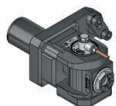
Driven Toolholders - Enhanced Program

	Straight offset drill/milling unit			
	ER-25 QF 420125020-40	1:2	EC	
	0067725001			
	ER-25 QF 420125021-40	1:2	IC 80 bar	
	0067725001			
	ER-32 QF 420132048-40	2:1	EC	
	0067732000			
	ER-32 QF 420132049-40	2:1	IC 80 bar	
	0067732000			
	Straight offset drill/milling unit, both sides			
	ER-32 QF 423002014-40	1:1	EC	
	0067732000			
	ER-32 QF 423002015-40	1:1	IC 80 bar	
	0067732000			
	Right angle drill/milling unit			
	ER-25 QF 420525030-40	1:2	EC	
	0067725001			
	ER-25 QF 420525031-40	1:2	IC 80 bar	
	0067725001			
	ER-32 QF 420532085-40	2:1	EC	
	0067732000			
	ER-32 QF 420532086-40	2:1	IC 80 bar	
	0067732000			
	ER 16 410810000-40	1:3	EC	
	00675000841			
	ER 16 410810001-40	1:3	IC 80 bar	
	00675000841			



Driven Toolholders - Enhanced Program

Driven Toolholders - Enhanced Program



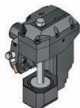
Adjustable angle drill/milling unit

ER 16	411010005-40	1:1	EC
	00675000902		
ER 16	411010053-40	1:1	IC 80 bar
	00675000902		
ER 11	411007005-40	1:2	EC
	00675000914		
ER 11	411007006-40	1:2	IC 80 bar
	00675000914		



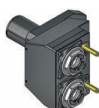
Broaching unit for ID and OD

TN765050	414532009-40	1:1	EC
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Gear hobbing unit

Type 16-1	411500029-40	2:1	EC
	00675000926		
	160016161 Ø 16		
	160022161 Ø 22		
	160027161 Ø 27		
	160015161 Ø 5/8"		
	160019161 Ø 3/4"		
	160025161 Ø 1"		
	160031161 Ø 1 1/4"		
	110587		



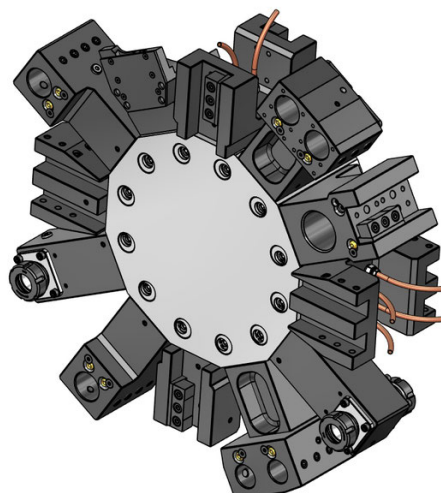
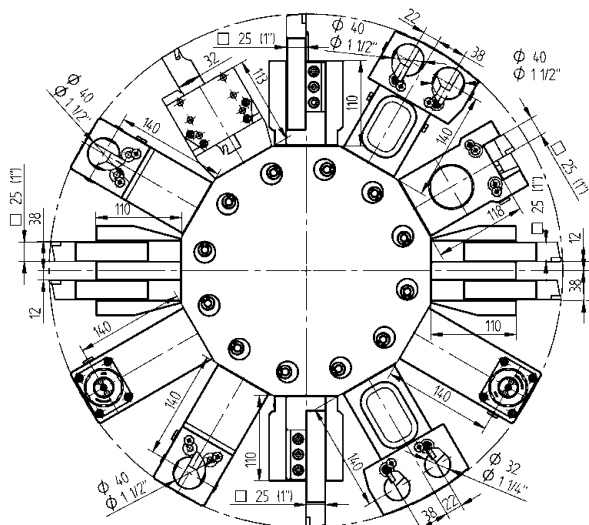
Straight drill/milling unit, double, Y axis

ER 25	413002020-40	1:1.5	EC
	00675000930		
ER 25	413002021-40	1:1.5	IC 80 bar
	00675000930		




2-spindle - Right angle drill/milling unit, Y axis


ER 25	413502010-40	1:1	EC
	00675000915		
ER 25	413502011-40	1:1	IC 80 bar
	00675000915		





Static Toolholders - Standard Program


Static Toolholders - Enhanced Program




- 


OD cutting holder, HP-IC
 25 48-82507-HP IC 80 bar
 1" 48-82509-HP IC 80 bar
- 



OD cutting holder, both sides, HP-IC
 25 48-82508-HP IC 80 bar
 1" 48-82162-HP IC 80 bar
- 


Face cutting holder
 25 48-83885
 1" 48-83997
- 


Universal square toolholder
 25 48-81932
 1" 48-84602
- 

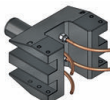
Combination toolholder, universal
 Ø 40 48-82363
  241140020 ER32
 Ø 1 1/2" 48-82365
  241150020 ER32
- 


Combination toolholder, both sides
 Ø 40 48-82848
 Ø 1 1/2" 48-82808
- 


Collet face drill holder
 ER 32 48-83504
  107532000
- 


Collet face drill holder, both sides
 ER 32 48-83512
  107532000


- 

OD cutting holder, double, Y axis
 25(1") 48-84944
- 

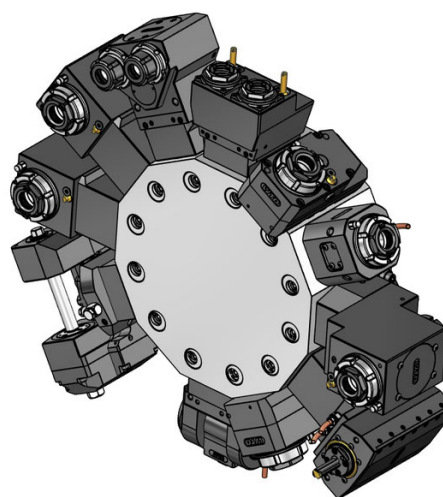
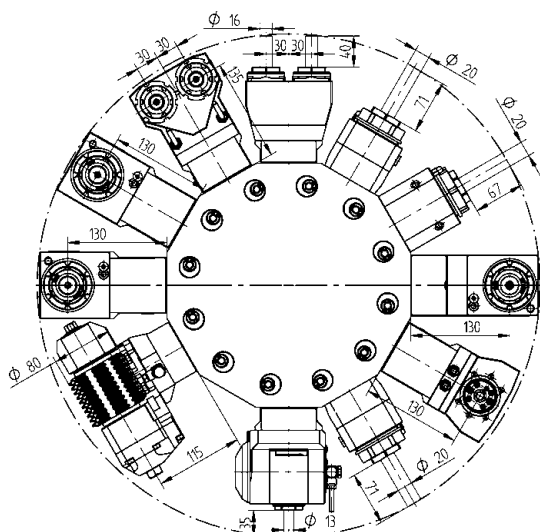
OD cutting holder, both sides, double, Y axis
 25(1") 48-84945
- 

Cut-off holder, adjustable
 SH 32 48-99067
- 

Cut-off holder, adjustable, HP-IC
 SH 32 48-102264R IC 80 bar
 SH 32 48-102264L IC 80 bar
- 

Combination toolholder, universal, double, Y axis
 Ø 40 48-84946
 Ø 1 1/2" 48-84947
- 

Combination toolholder, both sides, double, Y axis
 Ø 32 48-84948
 Ø 1 1/4" 48-84949



Driven Toolholders - QuickFlex®

Driven Toolholders - Enhanced Program

- 


Straight drill/milling unit
ER-32 QF 420132018-40 1:1 EC
 0067732000
ER-32 QF 420132019-40 1:1 IC 80 bar
 0067732000
- 


Straight offset drill/milling unit
ER-32 QF 420132020-40 1:1 EC
 0067732000
ER-32 QF 420132021-40 1:1 IC 80 bar
 0067732000
- 


Right angle drill/milling unit
ER-32 QF 420532049-40 1:1 EC
 0067732000
ER-32 QF 420532050-40 1:1 IC 80 bar
 0067732000
- 


Right angle drill/milling unit, sub spindle
ER-32 QF 420532051-40 1:1 EC
 0067732000
ER-32 QF 420532052-40 1:1 IC 80 bar
 0067732000
- 


Right angle drill/milling unit, both sides
ER-32 QF 420532053-40 1:1 EC
 0067732000

- 

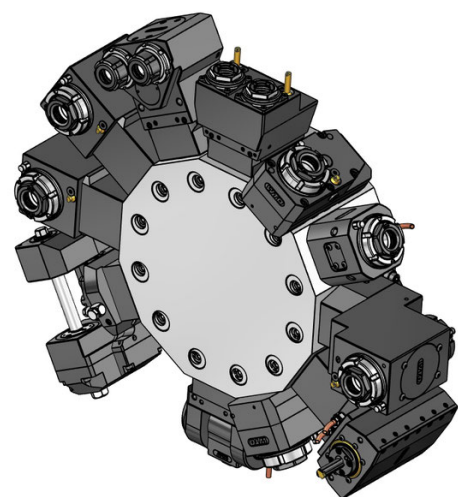
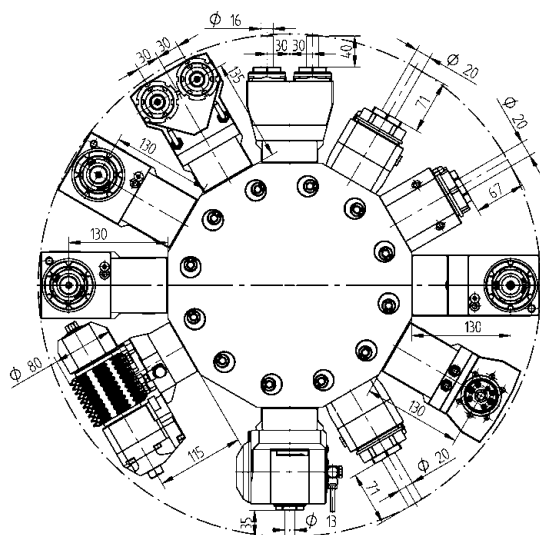
Straight offset drill/milling unit
ER-25 QF 420125018-40 1:2 EC
 0067725001
ER-25 QF 420125019-40 1:2 IC 80 bar
 0067725001
- 

Straight offset drill/milling unit, both sides
ER-32 QF 423002012-40 1:1 EC
 0067732000
ER-32 QF 423002013-40 1:1 IC 80 bar
 0067732000
- 

Right angle drill/milling unit
ER-25 QF 420525028-40 1:2 EC
 0067725001
ER-25 QF 420525029-40 1:2 IC 80 bar
 0067725001
- 

Right angle drill/milling unit
ER-32 QF 420532054-40 2:1 EC
 0067732000
ER-32 QF 420532055-40 2:1 IC 80 bar
 0067732000
- 

Adjustable angle drill/milling unit
ER 20 411013012-40 1:1 EC
 00675000928
ER 20 411013025-40 1:1 IC 80 bar
 00675000928
ER 16 411010016-40 1:2 EC
 00675000936
ER 16 411010017-40 1:2 IC 80 bar
 00675000936



Driven Toolholders - Enhanced Program



Gear hobbing unit

Type 16-1 411500042-40 1:1 EC

- 00675000926
- 160016161 Ø 16
- 160022161 Ø 22
- 160027161 Ø 27
- 160015161 Ø 5/8"
- 160019161 Ø 3/4"
- 160025161 Ø 1"
- 160031161 Ø 1 1/4"



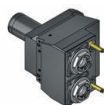
110587

Type 16-1 411500032-40 2:1 EC

- 00675000926
- 160016161 Ø 16
- 160022161 Ø 22
- 160027161 Ø 27
- 160015161 Ø 5/8"
- 160019161 Ø 3/4"
- 160025161 Ø 1"
- 160031161 Ø 1 1/4"



110587



Straight drill/milling unit, double, Y axis

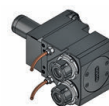
ER 25 413002024-40 1:1.5 EC

- 00675000930

ER 25 413002025-40 1:1.5 IC 80 bar

- 00675000930

Driven Toolholders - Enhanced Program



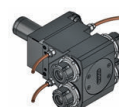
2-spindle - Right angle drill/milling unit, Y axis

ER 25 413502014-40 1:1 EC

- 00675000915

ER 25 413502015-40 1:1 IC 80 bar

- 00675000915



2-spindle - Right angle drill/milling unit, both sides, Y axis

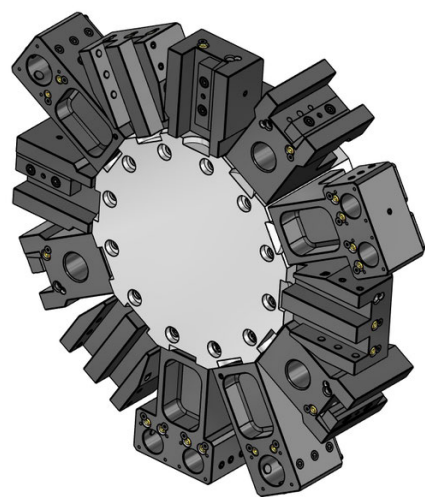
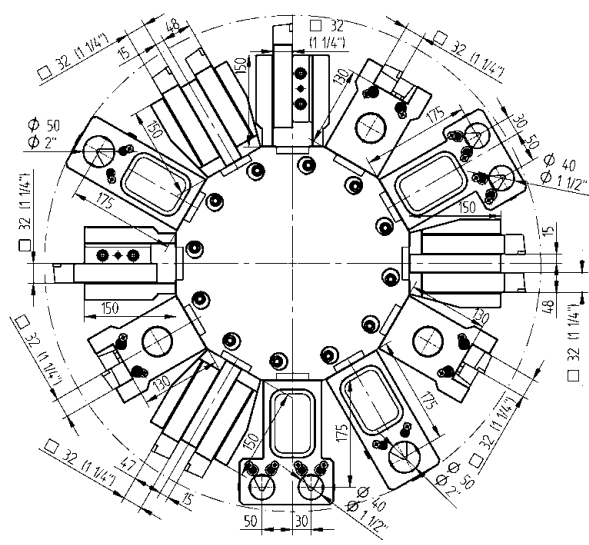
ER 25 413502019-40 1:1 EC

- 00675000915





Broaching unit for ID and OD


TN765050 414532008-40 1:1 EC




Static Toolholders - Standard Program

- 


OD cutting holder
 32 48-81921
 1 1/4" 48-84560
- 


OD cutting holder, HP-IC
 25 48-109222-HP IC 80 bar
 1" 48-109223-HP IC 80 bar
- 


Face cutting holder
 32 48-81923
 1 1/4" 48-84559
- 

Combination toolholder, universal
 Ø 50 48-81924
 Ø 2" 48-84530


Static Toolholders - Enhanced Program

- 

OD cutting holder, double, Y axis
 32 (1 1/4") 48-85286
- 

OD cutting holder, double, Y axis, sub spindle
 32 (1 1/4") 48-95077
- 

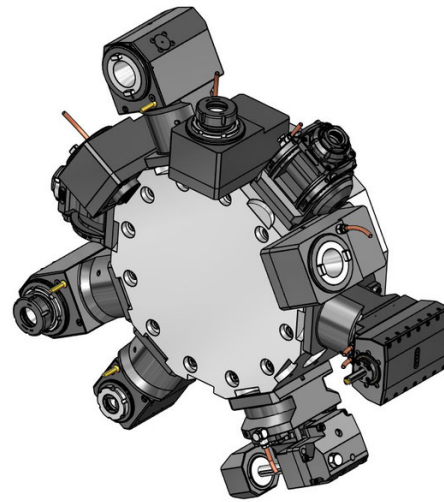
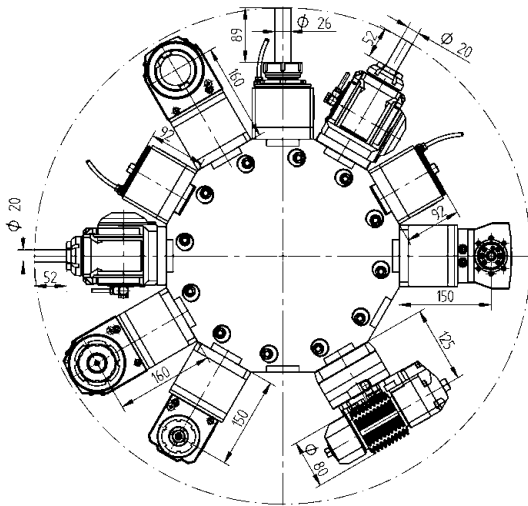
Cut-off holder, adjustable
 SH 32 48-100356
- 

Cut-off holder, adjustable, long, HP-IC
 SH 32 48-100318R IC 80 bar
 343-810100R30
 SH 32 48-100318L IC 80 bar
 343-810100L30
- 

Combination toolholder, universal, double, Y axis
 Ø 40 48-85287
 241140020 ER32
 241140026 ER40
 Ø 1 1/2" 48-85288
 2411150020 ER32
- 

Boring bar holder, with slot
 Ø 50 48-110846
- 

Boring bar holder, blank
 48-99905

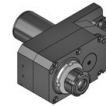


Driven Toolholders - Performance Series

Driven Toolholders - Enhanced Program



- Straight offset drill/milling unit**
- | | | | |
|--------------|--------------|-----|-----------|
| ER 40 | 410126070-50 | 1:1 | EC |
| | 00675000941 | | |
| ER 40 | 410126071-50 | 1:1 | IC 80 bar |
| | 00675000941 | | |



- Straight offset drill/milling unit**
- | | | | |
|--------------|--------------|-----|-----------|
| ER 25 | 410116038-50 | 1:2 | EC |
| | 00675000720 | | |
| ER 25 | 410116037-50 | 1:2 | IC 80 bar |
| | 00675000720 | | |



- Straight offset drill/milling unit taper ISO/BT/CAT 40**
- | | | |
|--------------|-----|----|
| 410140001-50 | 1:1 | EC |
|--------------|-----|----|



- Right angle drill/milling unit**
- | | | | |
|--------------|--------------|-----|-----------|
| ER 40 | 410526074-50 | 2:1 | EC |
| | 00675000744 | | |
| ER 40 | 410526082-50 | 2:1 | IC 80 bar |
| | 00675000744 | | |



- Right angle drill/milling unit**
- | | | | |
|--------------|--------------|-----|-----------|
| ER 40 | 410526078-50 | 1:1 | EC |
| | 00675000744 | | |
| ER 40 | 410526063-50 | 1:1 | IC 80 bar |
| | 00675000744 | | |



- Adjustable angle drill/milling unit**
- | | | | |
|-----------------|--------------|-----|-----------|
| ER-32 QF | 421032010-50 | 1:1 | EC |
| | 00675000976 | | |
| ER-32 QF | 421032011-50 | 1:1 | IC 80 bar |
| | 00675000976 | | |



- Right angle drill/milling unit taper ISO/BT/CAT 40**
- | | | |
|--------------|-----|----|
| 410540001-50 | 1:1 | EC |
|--------------|-----|----|



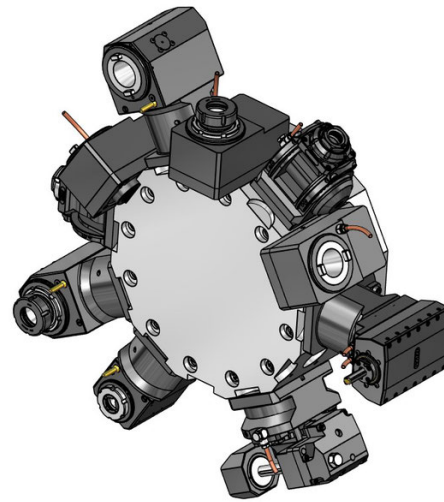
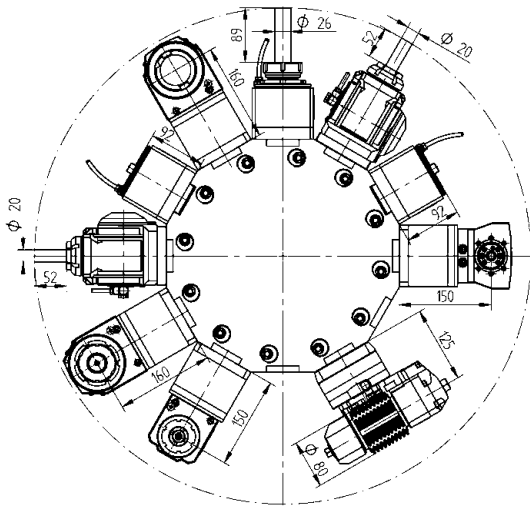
- Adjustable angle drill/milling unit, long**
- | | | | |
|-----------------|--------------|-----|-----------|
| ER-32 QF | 421032012-50 | 1:1 | EC |
| | 00675000976 | | |
| ER-32 QF | 421032013-50 | 1:1 | IC 80 bar |
| | 00675000976 | | |



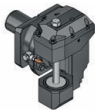
- Right angle drill/milling unit, sub spindle**
- | | | | |
|--------------|--------------|-----|-----------|
| ER 40 | 410526091-50 | 1:1 | EC |
| | 00675000744 | | |
| ER 40 | 410526092-50 | 1:1 | IC 80 bar |
| | 00675000744 | | |












- Offset slitting saw unit**
- | | | | |
|------------------|--------------------|-----|----|
| Type 19-2 | 411500012-50 | 3:1 | EC |
| | 00675000259 | | |
| | 160022192 Ø 22 | | |
| | 160027192 Ø 27 | | |
| | 160032192 Ø 32 | | |
| | 160040192 Ø 40 | | |
| | 160023192 Ø 7/8" | | |
| | 160025192 Ø 1" | | |
| | 160031192 Ø 1 1/4" | | |
| | 160038192 Ø 1 1/2" | | |



Driven Toolholders - Enhanced Program

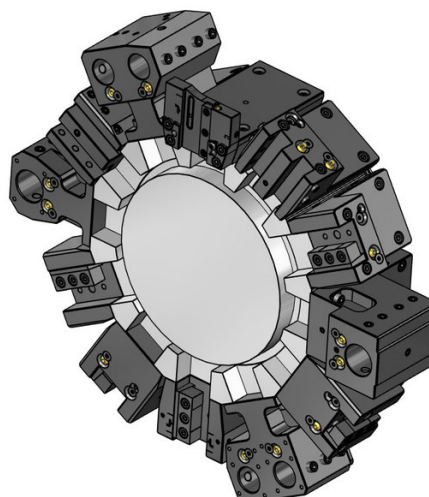
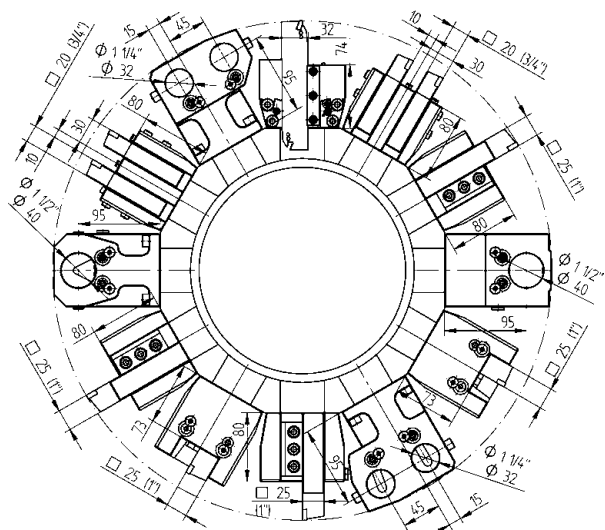
**Gear hobbing unit**

Type 16-1 411500017-50 1:1 EC

-  00675000954
-  160016161 $\text{\O} 16$
-  160022161 $\text{\O} 22$
-  160027161 $\text{\O} 27$
-  160015161 $\text{\O} 5/8"$
-  160019161 $\text{\O} 3/4"$
-  160025161 $\text{\O} 1"$
-  160031161 $\text{\O} 1 \frac{1}{4}"$
-  110587


**Broaching unit for ID and OD**

TN765050 414532002-50 1:1 EC




Static Toolholders - Standard Program


Static Toolholders - Enhanced Program

- 


OD cutting holder, HP-IC

20	48-107026-HP	IC 80 bar
25	48-91361-HP	IC 80 bar
3/4"	48-107027-HP	IC 80 bar
1"	48-91362-HP	IC 80 bar
- 


OD cutting holder, both sides, HP-IC

25	48-106347-HP	IC 80 bar
1"	48-106477-HP	IC 80 bar
- 


Face cutting holder

25	48-91363	
----	----------	--
- 



Face cutting holder

1"	48-91364	
----	----------	--
- 


Face cutting holder, both sides

25	48-107240	
1"	48-107331	
- 

Combination toolholder, universal, LF=95


Ø 40	48-107211	IC 80 bar
	 241140020	ER32
Ø 1 1/2"	48-107212	IC 80 bar
	 2411150020	ER32
- 

Combination toolholder, both sides


Ø 40	48-106346	IC 80 bar
Ø 1 1/2"	48-106571	IC 80 bar
- 

Plug


48-106936		
-----------	--	--

- 


OD cutting holder, double, Y axis

20 (3/4")	48-106582	
-----------	-----------	--
- 


OD cutting holder, both sides, double, Y axis

20 (3/4")	48-106575	
-----------	-----------	--
- 





Cut-off holder, adjustable

SH 32	48-112064	
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- 

Cut-off holder, adjustable, HP-IC

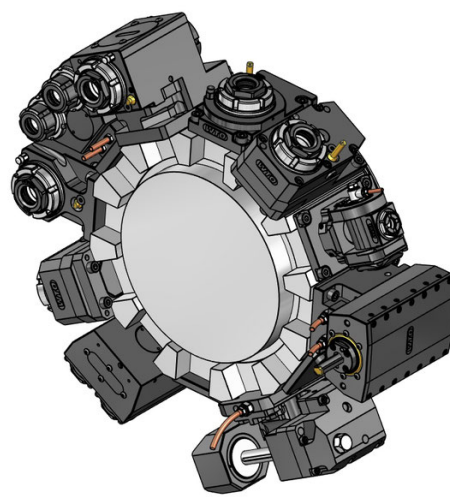
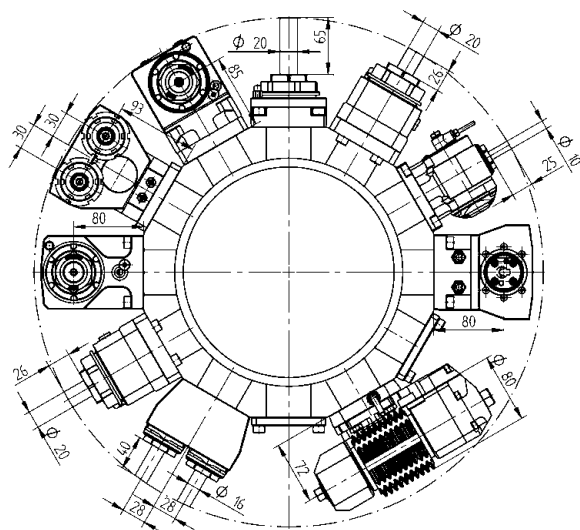
SH 32	48-112062R	IC 80 bar
SH 32	48-112062L	IC 80 bar
- 

Combination toolholder, universal, double, Y axis

Ø 32	48-106578	
	 241132016	ER25
	 241132020	ER32
Ø 1 1/4"	48-106579	
	 2411125020	ER32
- 

Combination toolholder, both sides, double, Y axis

Ø 32	48-106584	IC 80 bar
Ø 1 1/4"	48-106595	IC 80 bar



Driven Toolholders - QuickFlex®

Driven Toolholders - QuickFlex®



Straight drill/milling unit

ER-32 QF 420132012-68 1:1 EC
0067732000

ER-32 QF 420132013-68 1:1 IC 80 bar
0067732000



Straight drill/milling unit (12000 RPM)

ER-32 QF 420132016-68 1:1 EC
0067732000

ER-32 QF 420132017-68 1:1 IC 80 bar
0067732000



Right angle drill/milling unit

ER-32 QF 420532012-68 1:1 EC
0067732000

ER-32 QF 420532013-68 1:1 IC 80 bar
0067732000



Right angle drill/milling unit (12000 RPM)

ER-32 QF 420532020-68 1:1 EC
0067732000

ER-32 QF 420532021-68 1:1 IC 80 bar
0067732000



Right angle drill/milling unit, sub spindle

ER-32 QF 420532024-68 1:1 EC
0067732000

ER-32 QF 420532025-68 1:1 IC 80 bar
0067732000



Right angle drill/milling unit, sub spindle (12000 RPM)

ER-32 QF 420532022-68 1:1 EC
0067732000

ER-32 QF 420532023-68 1:1 IC 80 bar
0067732000



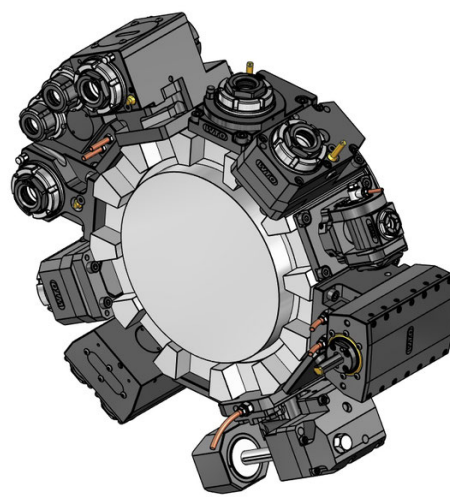
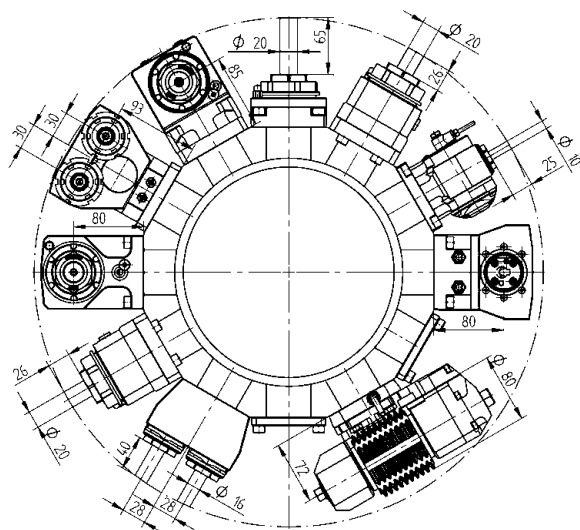
Right angle drill/milling unit, both sides

ER-32 QF 420532026-68 1:1 EC
0067732000



Right angle drill/milling unit, both sides (12000 RPM)

ER-32 QF 420532019-68 1:1 EC
0067732000



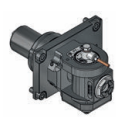
Driven Toolholders - Enhanced Program

Driven Toolholders - Enhanced Program



Straight offset drill/milling unit

ER-32 QF	420132018-68	1:1	EC
	0067732000		
ER-32 QF	420132019-68	1:1	IC 80 bar
	0067732000		
ER-25 QF	420125010-68	1:2	EC
	0067725001		
ER-25 QF	420125011-68	1:2	IC 80 bar
	0067725001		
ER-32 QF	420132020-68	2:1	EC
	0067732000		
ER-32 QF	420132021-68	2:1	IC 80 bar
	0067732000		



Adjustable angle drill/milling unit

ER 16	411010002-68	1:1	EC
	00675000913		
ER 16	411010003-68	1:1	IC 80 bar
	00675000913		
ER 11	411007002-68	1:2	EC
	00675000914		
ER 11	411007003-68	1:2	IC 80 bar
	00675000914		



Straight offset drill/milling unit (12000 RPM)

ER-32 QF	420132022-68	1:1	EC
	0067732000		
ER-32 QF	420132023-68	1:1	IC 80 bar
	0067732000		



Gear hobbing unit

Type 16-1	411500007-68	1:1	EC
	00675000926		
	160016161 Ø 16		
	160022161 Ø 22		
	160027161 Ø 27		
	160015161 Ø 5/8"		
	160019161 Ø 3/4"		
	160025161 Ø 1"		
	160031161 Ø 1 1/4"		
	110587		
Type 16-1	411500008-68	2:1	EC
	00675000926		
	160016161 Ø 16		
	160022161 Ø 22		
	160027161 Ø 27		
	160015161 Ø 5/8"		
	160019161 Ø 3/4"		
	160025161 Ø 1"		
	160031161 Ø 1 1/4"		
	110587		



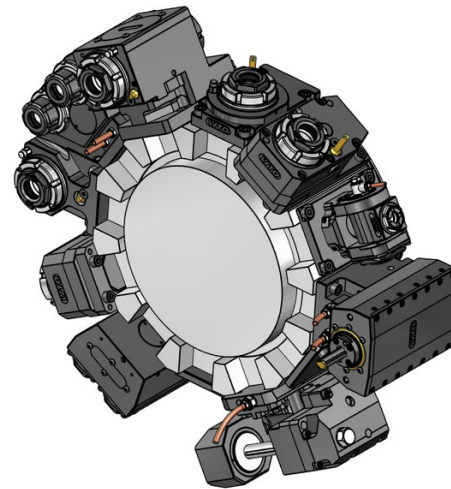
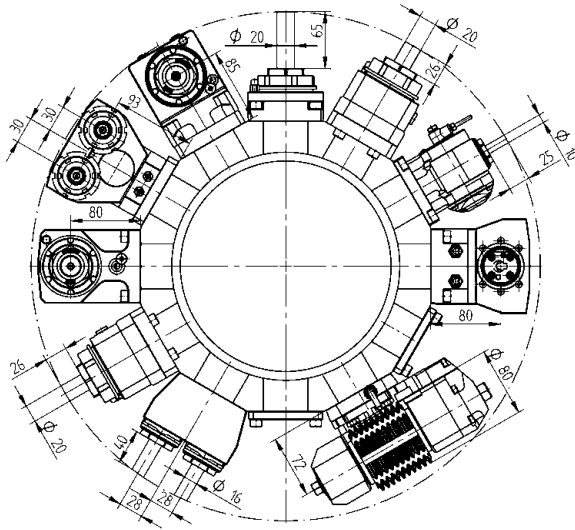
Straight offset drill/milling unit, both sides

ER-32 QF	423002010-68	1:1	EC
	0067732000		
ER-32 QF	423002011-68	1:1	IC 80 bar
	0067732000		



Right angle drill/milling unit

ER-25 QF	420525010-68	1:2	EC
	0067725001		
ER-25 QF	420525011-68	1:2	IC 80 bar
	0067725001		
ER-32 QF	420532014-68	2:1	EC
	0067732000		
ER-32 QF	420532015-68	2:1	IC 80 bar
	0067732000		



Driven Toolholders - Enhanced Program



Straight drill/milling unit, double, Y axis

ER 25	413002008-68	1:1	EC
	00675000932		
ER 25	413002009-68	1:1	IC 80 bar
	00675000932		



2-spindle - Right angle drill/milling unit, Y axis

ER 25	413502005-68	1:1	EC
	00675000915		
ER 25	413502006-68	1:1	IC 80 bar
	00675000915		



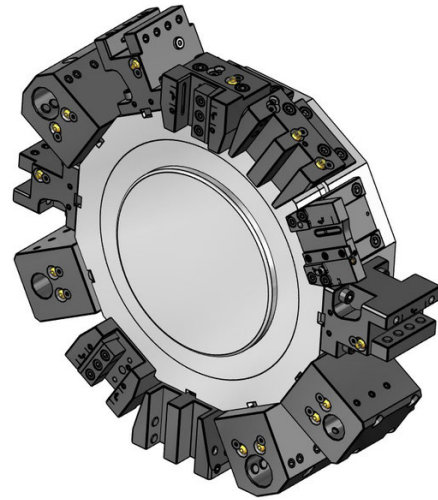
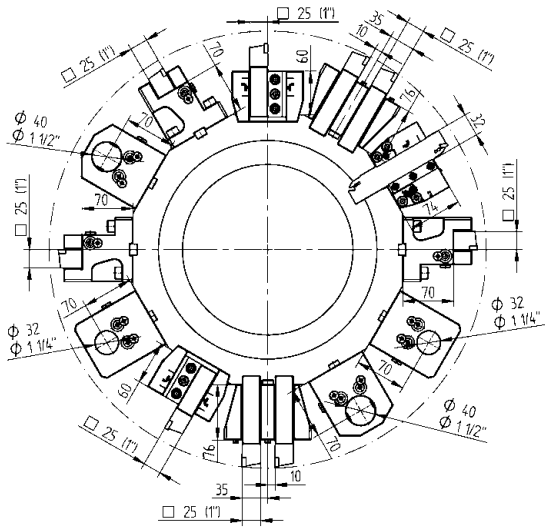
2-spindle - Right angle drill/milling unit, both sides, Y axis

ER 25	413502007-68	1:1	EC
	00675000915		



Broaching unit for ID and OD

TN765050	414532000-68	1:1	EC
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Static Toolholders - Standard Program

Static Toolholders - Enhanced Program



OD cutting holder
 25 48-87097
 1" 48-87098



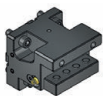
OD cutting holder, HP-IC
 25 48-87097-HP IC 80 bar
 1" 48-87098-HP IC 80 bar



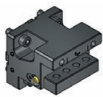
OD cutting holder, both sides
 25 48-87099
 1" 48-87100



OD cutting holder, both sides, HP-IC
 25 48-87099-HP IC 80 bar
 1" 48-87100-HP IC 80 bar



Face cutting holder
 25 48-87101
 1" 48-87102



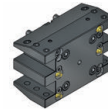
Face cutting holder, HP-IC
 25 48-87101-HP IC 80 bar
 1" 48-87102-HP IC 80 bar



Combination toolholder, LF=70
 Ø 32 48-106897 IC 80 bar
 Ø 40 48-87103 IC 80 bar
 Ø 1 1/4" 48-106872 IC 80 bar
 Ø 1 1/2" 48-87104 IC 80 bar



OD cutting holder, double, Y axis
 25(1") 48-87140



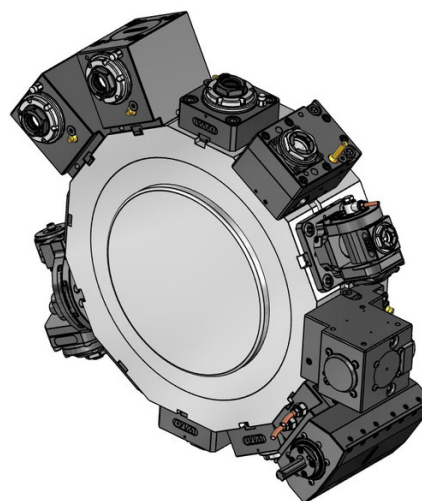
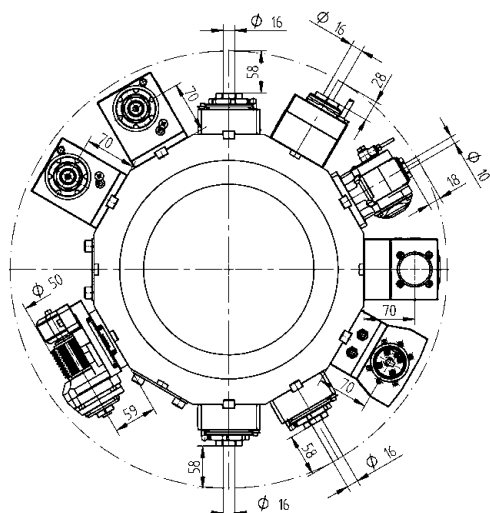
OD cutting holder, both sides, double, Y axis
 25(1") 48-87141



Cut-off holder, adjustable
 SH 32 48-103287



Cut-off holder, adjustable, HP-IC
 SH 32 48-110160R IC 80 bar
 SH 32 48-110160L IC 80 bar



Driven Toolholders - QuickFlex®



Straight drill/milling unit

ER-25 QF 420125015-55 1:1 EC
 0067725000

ER-25 QF 420125016-55 1:1 IC 80 bar
 0067725000

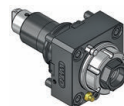


Right angle drill/milling unit, LF=70

ER-25 QF 420525015-55 1:1 EC
 0067725000

ER-25 QF 420525016-55 1:1 IC 80 bar
 0067725000

Driven Toolholders - Enhanced Program



Straight drill/milling unit

ER 32 410120010-55 1:1 EC
 0067725000

ER 32 410120011-55 1:1 IC 80 bar
 0067725000



Straight milling unit with combination mill arbor DIN 6358

Ø 22 410222004-55 1:1 EC
 00675000483

Ø 3/4" 410219002-55 1:1 EC
 00675000483



Straight offset drill/milling unit

ER 25 410116029-55 1:1 EC
 00675000932

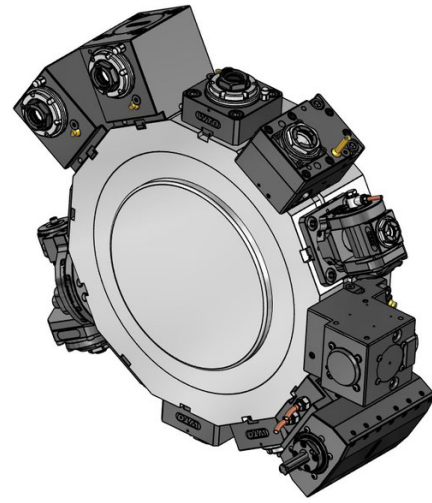
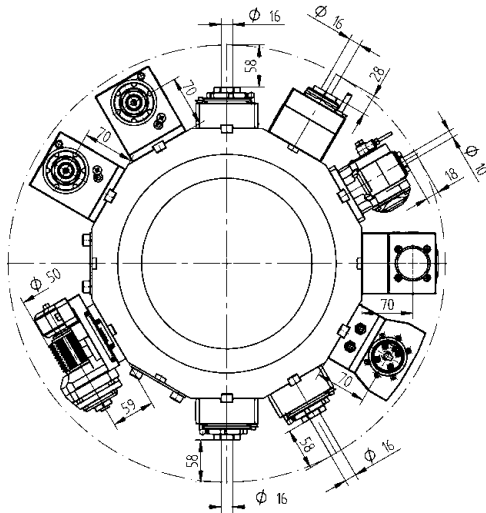
ER 25 410116030-55 1:1 IC 80 bar
 00675000932

ER 20 410113009-55 1:2 EC
 00675000939

ER 20 410113010-55 1:2 IC 80 bar
 00675000939

ER 16 410410004-55 1:3 EC
 00675000937

ER 16 410410005-55 1:3 IC 80 bar
 00675000937



Driven Toolholders - Enhanced Program



Right angle drill/milling unit, LF=70

ER 32	410520033-55	1:1	EC
	0067725000		
ER 32	410520034-55	1:1	IC 80 bar
	0067725000		
ER-20 QF	420520012-55	1:2	EC
	0067720001		
ER-20 QF	420520013-55	1:2	IC 80 bar
	0067720001		
ER 16	410810016-55	1:3	EC
	00675000841		
ER 16	410810017-55	1:3	IC 80 bar
	00675000841		
ER-25 QF	420525030-55	2:1	EC
	0067725000		
ER-25 QF	420525031-55	2:1	IC 80 bar
	0067725000		



Right angle milling unit with combination mill arbor DIN 6358, LF=70

Ø 22	410622010-55	1:1	EC
	00675000483		
Ø 3/4"	410619005-55	1:1	EC
	00675000483		



Right angle back set drill/milling unit

ER 25	410516024-55	1:1	EC
	00675000801		
ER 25	410516025-55	1:1	IC 80 bar
	00675000801		

Driven Toolholders - Enhanced Program



Adjustable angle drill/milling unit

ER 16	411010005-55	1:1	EC
	00675000902		
ER 16	411010006-55	1:1	IC 80 bar
	00675000902		
ER 11	411007007-55	1:2	EC
	00675000914		
ER 11	411007008-55	1:2	IC 80 bar
	00675000914		



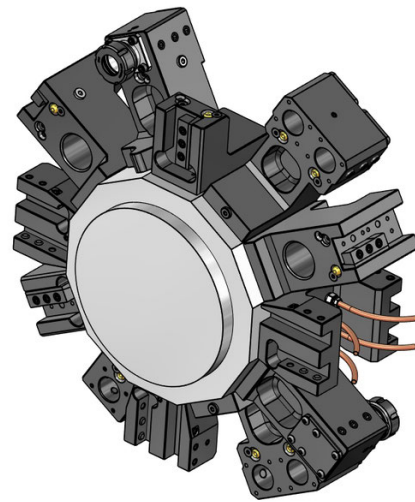
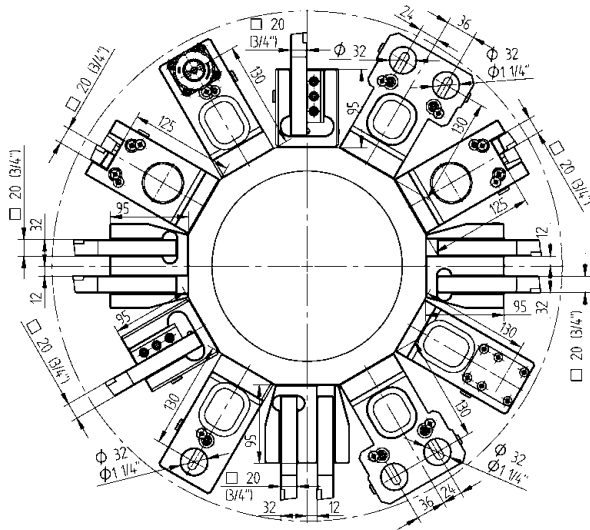
Gear hobbing unit

Type 15-2	410900002-55	1:1	EC
	00675001015		
	160008152 Ø 8		
	160010152 Ø 10		
	160013152 Ø 13		
	160016152 Ø 16		
	160022152 Ø 22		
	160015152 Ø 5/8"		
	160019152 Ø 3/4"		
	110587		




Broaching unit for ID and OD


TN765050	414532001-55	1:1	EC
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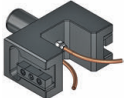



Static Toolholders - Standard Program


Static Toolholders - Standard Program


- 


OD cutting holder, HP-IC
 20 48-82534-HP IC 80 bar
 3/4" 48-82535-HP IC 80 bar
- 

OD cutting holder, HP-IC
 20 48-82536-HP IC 80 bar
 3/4" 48-82538-HP IC 80 bar
- 


OD cutting holder, both sides
 20 48-89297
- 

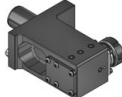
OD cutting holder, both sides, HP-IC
 20 48-89297-HP IC 80 bar
 3/4" 48-89298-HP IC 80 bar
- 

Face cutting holder
 20 48-84005
 3/4" 48-84158
- 

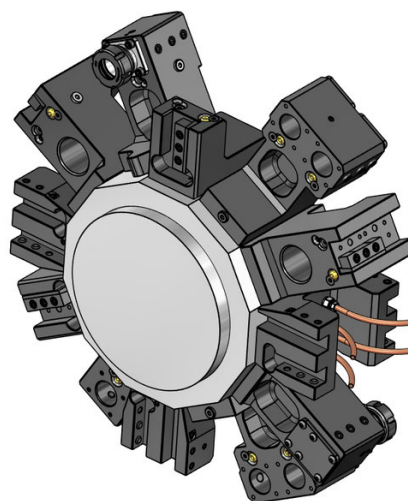
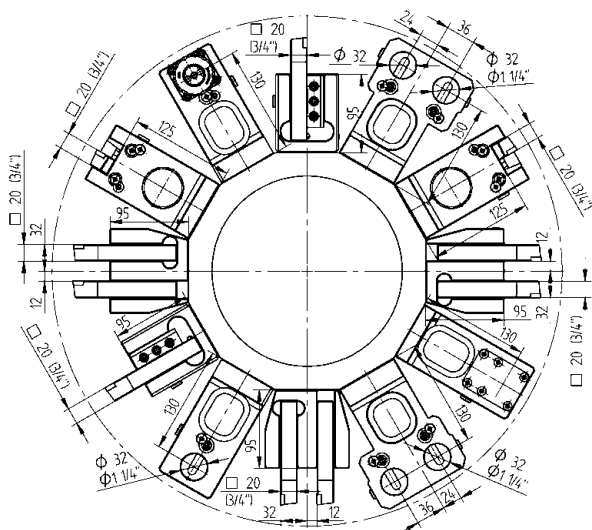
Combination toolholder, universal
 Ø 32 48-81929
 241132016 ER25
 241132020 ER32
 Ø 40 48-111846
 241140020 ER32
 241140026 ER40
 Ø 1 1/4" 48-82389
- 

Combination toolholder
 Ø 32 48-82787
 241132016 ER25
 241132020 ER32
 Ø 1 1/4" 48-82788

- 

Collet face drill holder
 ER 32 48-83071
 107532000
- 

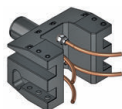
Collet face drill holder
 ER 32 48-83072
 107532000



Static Toolholders - Enhanced Program



OD cutting holder, double, Y axis
 20 (3/4") 48-88028



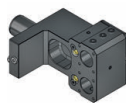
OD cutting holder, both sides, double, Y axis
 20 (3/4") 48-87850






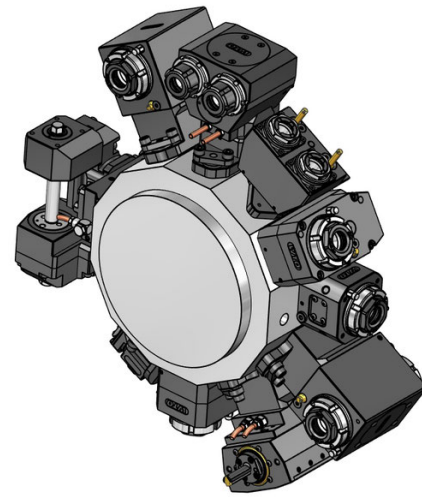
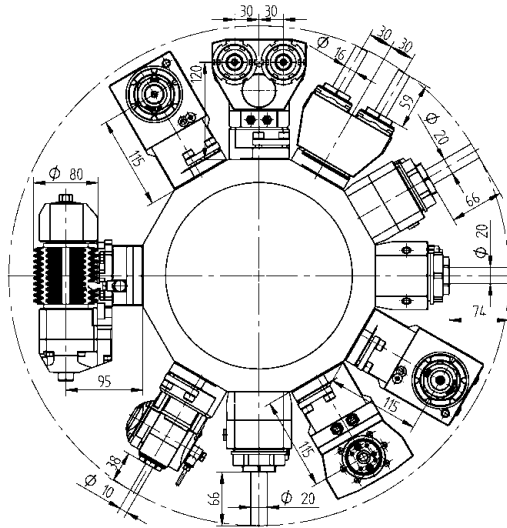
Cut-off holder, adjustable
 SH 32 48-99061



Cut-off holder, adjustable, HP-IC
 SH 32 48-99650R IC 80 bar
 343-810100R17
 SH 32 48-99650L IC 80 bar
 343-810100L17



Combination toolholder, universal, double, Y axis
 Ø 32 48-87853
 241132016 ER25
 241132020 ER32
 Ø 1 1/4" 48-87907
 241125020 ER32



Driven Toolholders - QuickFlex®

Driven Toolholders - Enhanced Program



- Straight offset drill/milling unit**
- ER-32 QF 420132030-40 1:1 EC
0067732000
 - ER-32 QF 420132031-40 1:1 IC 80 bar
0067732000



- Straight offset drill/milling unit**
- ER-32 QF 420132034-40 1:1 EC
0067732000
 - ER-32 QF 420132035-40 1:1 IC 80 bar
0067732000



- Right angle drill/milling unit**
- ER-32 QF 420532071-40 1:1 EC
0067732000
 - ER-32 QF 420532072-40 1:1 IC 80 bar
0067732000



- Right angle drill/milling unit**
- ER-32 QF 420532073-40 1:1 EC
0067732000
 - ER-32 QF 420532074-40 1:1 IC 80 bar
0067732000



- Right angle drill/milling unit, both sides**
- ER-32 QF 420532075-40 1:1 EC
0067732000



- Straight drill/milling unit**
- ER-32 QF 420132038-40 1:1 EC
0067732000
 - ER-32 QF 420132039-40 1:1 IC 80 bar
0067732000



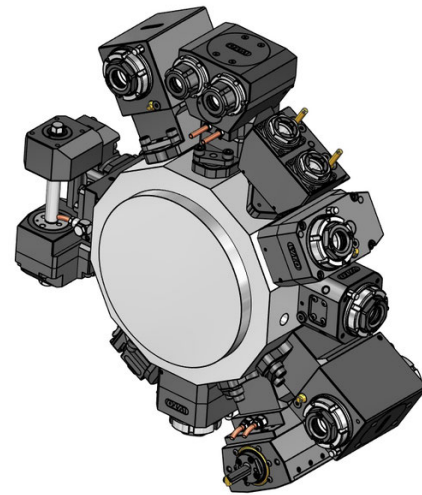
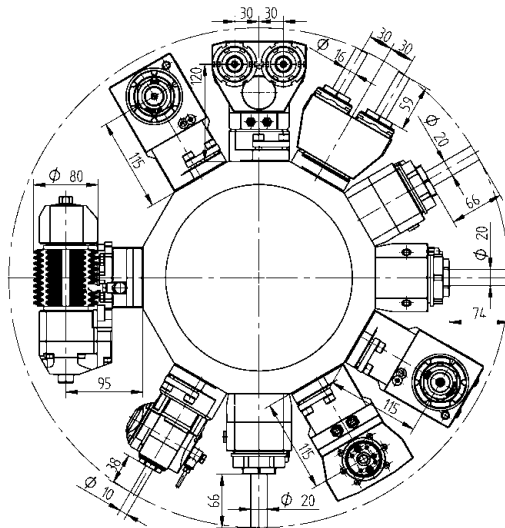
- Straight offset drill/milling unit**
- ER-25 QF 420125016-40 1:2 EC
0067725001
 - ER-25 QF 420125017-40 1:2 IC 80 bar
0067725001
 - ER-32 QF 420132052-40 2:1 EC
0067732000
 - ER-32 QF 420132053-40 2:1 IC 80 bar
0067732000



- Straight offset drill/milling unit**
- ER-25 QF 420125040-40 1:2 EC
0067725001
 - ER-25 QF 420125041-40 1:2 IC 80 bar
0067725001



- Straight offset drill/milling unit, both sides**
- ER-32 QF 423002010-40 1:1 EC
0067732000
 - ER-32 QF 423002011-40 1:1 IC 80 bar
0067732000



Driven Toolholders - Enhanced Program



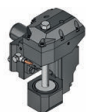
Right angle drill/milling unit

ER-25 QF	420525034-40	1:2	EC
	0067725001		
ER-25 QF	420525035-40	1:2	IC 80 bar
	0067725001		
ER-32 QF	420532089-40	2:1	EC
	0067732000		
ER-32 QF	420532090-40	2:1	IC 80 bar
	0067732000		



Adjustable angle drill/milling unit

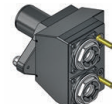
ER 16	411010010-40	1:1	EC
	00675000902		
ER 16	411010011-40	1:1	IC 80 bar
	00675000902		
ER 11	411007003-40	1:2	EC
	00675000914		
ER 11	411007004-40	1:2	IC 80 bar
	00675000914		



Gear hobbing unit

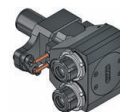
Type 16-1	411500028-40	2:1	EC
	00675000926		
	160016161 Ø 16		
	160022161 Ø 22		
	160027161 Ø 27		
	160015161 Ø 5/8"		
	160019161 Ø 3/4"		
	160025161 Ø 1"		
	160031161 Ø 1 1/4"		
	110587		

Driven Toolholders - Enhanced Program



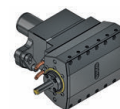
Straight drill/milling unit, double, Y axis

ER 25	413002022-40	1:1.5	EC
	00675000930		
ER 25	413002023-40	1:1.5	IC 80 bar
	00675000930		



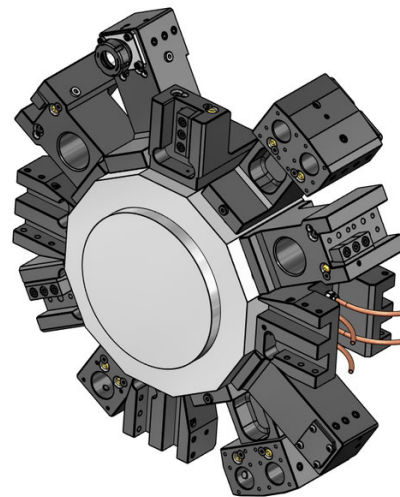
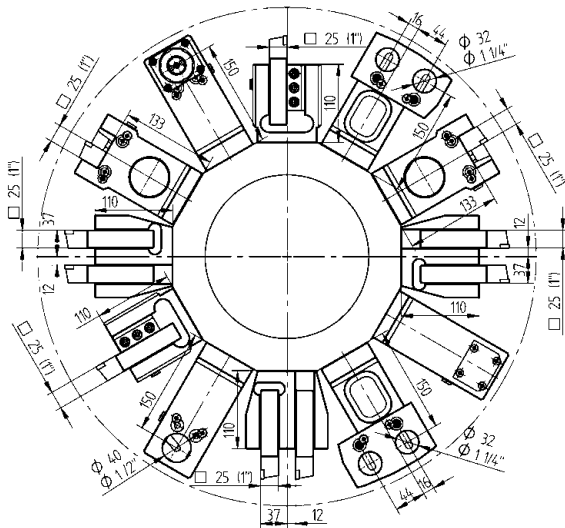
2-spindle - Right angle drill/milling unit, Y axis

ER 25	413502012-40	1:1	EC
	00675000915		
ER 25	413502013-40	1:1	IC 80 bar
	00675000915		



Broaching unit for ID and OD

TN765050	414532010-40	1:1	EC
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Static Toolholders - Standard Program

Static Toolholders - Standard Program



OD cutting holder, HP-IC

25 48-81926-HP IC 80 bar
1" 48-82544-HP IC 80 bar



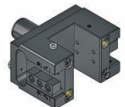
OD cutting holder

1" 48-82546



OD cutting holder, HP-IC

25 48-82545-HP IC 80 bar
1" 48-82546-HP IC 80 bar



OD cutting holder, both sides, HP-IC

25 48-89299-HP IC 80 bar
1" 48-89300-HP IC 80 bar



Face cutting holder

25 48-84006
1" 48-84226



Combination toolholder

Ø 40 48-81930
241140020 ER32
Ø 1 1/2" 48-82481



Combination toolholder

Ø 40 48-82783
241140020 ER32
Ø 1 1/2" 48-82784



Combination toolholder, both sides

Ø 40 48-106919



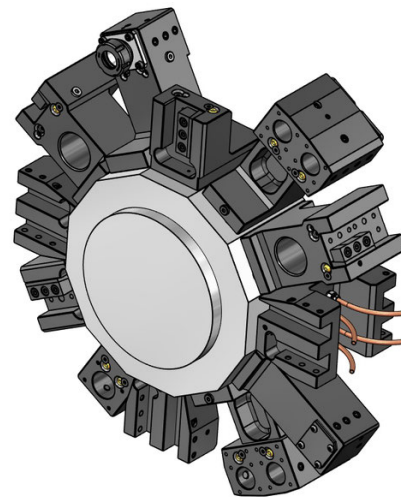
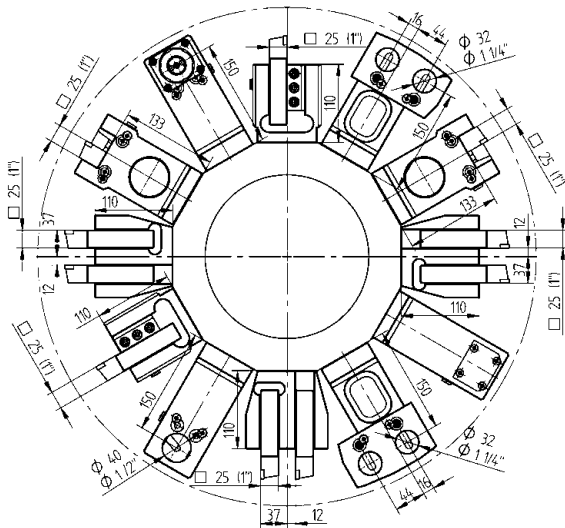
Collet face drill holder

ER 32 48-82986
107532000



Collet face drill holder

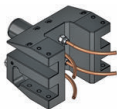
ER 32 48-82988
107532000



Static Toolholders - Enhanced Program



OD cutting holder, double, Y axis
 25(1") 48-88032



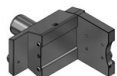
OD cutting holder, both sides, double, Y axis
 25(1") 48-87706



Cut-off holder, adjustable
 SH 32 48-99062



Cut-off holder, adjustable, HP-IC
 SH 32 48-102266R IC 80 bar
 SH 32 48-102266L IC 80 bar



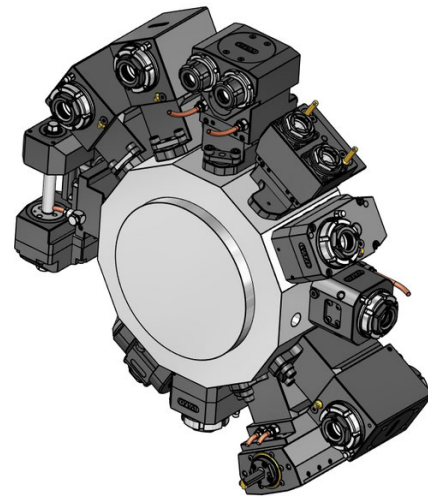
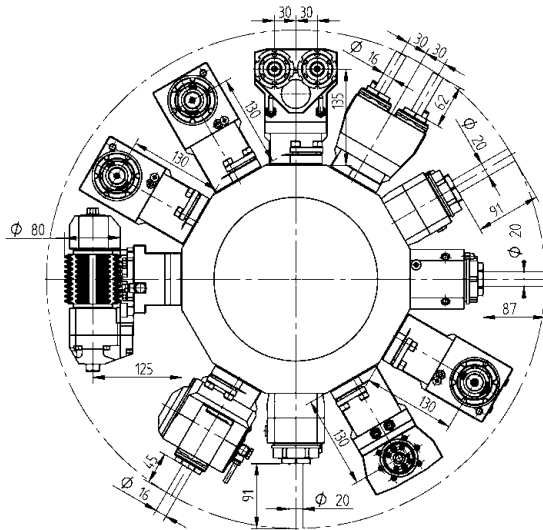
Cut-off holder, adjustable
 SH 32 48-116443



Cut-off holder, adjustable, HP-IC
 SH 32 48-116441R IC 80 bar
 343-810100R106
 SH 32 48-116441L IC 80 bar
 343-810100L106



Combination toolholder, both sides, double, Y axis
 Ø 32 48-87698
 241132020 ER32
 Ø 1 1/4" 48-87741
 2411125020 ER32



Driven Toolholders - QuickFlex®

Driven Toolholders - Enhanced Program



- Straight offset drill/milling unit**
- ER-32 QF 420132032-40 1:1 EC
0067732000
 - ER-32 QF 420132033-40 1:1 IC 80 bar
0067732000



- Straight offset drill/milling unit**
- ER-32 QF 420132036-40 1:1 EC
0067732000
 - ER-32 QF 420132037-40 1:1 IC 80 bar
0067732000



- Right angle drill/milling unit**
- ER-32 QF 420532076-40 1:1 EC
0067732000
 - ER-32 QF 420532077-40 1:1 IC 80 bar
0067732000



- Right angle drill/milling unit**
- ER-32 QF 420532078-40 1:1 EC
0067732000
 - ER-32 QF 420532079-40 1:1 IC 80 bar
0067732000



- Right angle drill/milling unit, both sides**
- ER-32 QF 420532156-40 1:1 EC
0067732000



- Straight drill/milling unit**
- ER-32 QF 420132042-40 1:1 EC
0067732000
 - ER-32 QF 420132043-40 1:1 IC 80 bar
0067732000



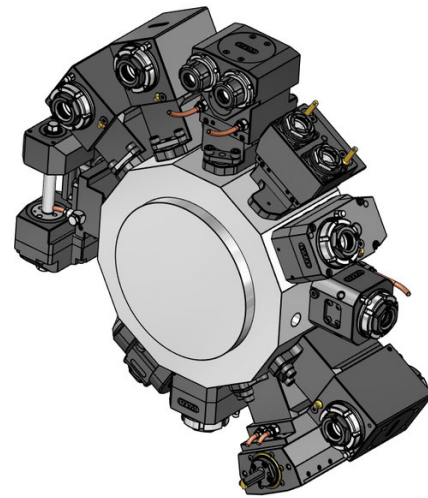
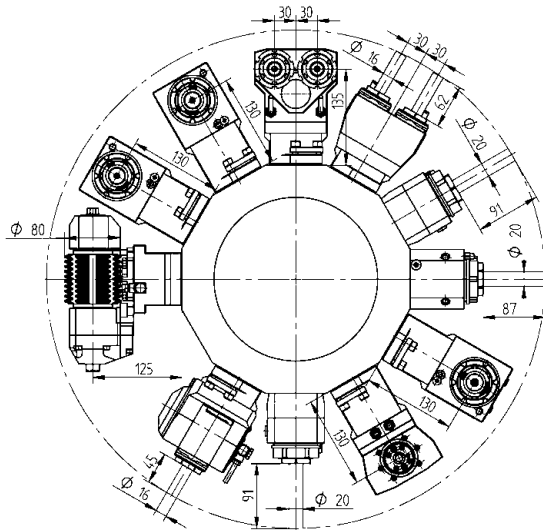
- Straight offset drill/milling unit**
- ER-25 QF 420125022-40 1:2 EC
0067725001
 - ER-25 QF 420125023-40 1:2 IC 80 bar
0067725001
 - ER-32 QF 420132050-40 2:1 EC
0067732000
 - ER-32 QF 420132051-40 2:1 IC 80 bar
0067732000



- Straight offset drill/milling unit**
- ER-25 QF 420125054-40 1:2 EC
0067725001
 - ER-25 QF 420125055-40 1:2 IC 80 bar
0067725001
 - ER-32 QF 420132111-40 2:1 EC
0067732000
 - ER-32 QF 420132112-40 2:1 IC 80 bar
0067732000



- Straight offset drill/milling unit, both sides**
- ER-32 QF 423002016-40 1:1 EC
0067732000
 - ER-32 QF 423002017-40 1:1 IC 80 bar
0067732000



Driven Toolholders - Enhanced Program



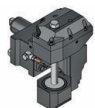
Right angle drill/milling unit

ER-25 QF	420525032-40	1:2	EC
	0067725001		
ER-25 QF	420525033-40	1:2	IC 80 bar
	0067725001		
ER-32 QF	420532087-40	2:1	EC
	0067732000		
ER-32 QF	420532088-40	2:1	IC 80 bar
	0067732000		



Adjustable angle drill/milling unit

ER 25	411016005-40	1:1	EC
	00675000934		
ER 25	411016023-40	1:1	IC 80 bar
	00675000934		
ER 16	411010014-40	1:2	EC
	00675000936		
ER 16	411010015-40	1:2	IC 80 bar
	00675000936		



Gear hobbing unit

Type 16-1	411500030-40	2:1	EC
	00675000954		
	160016161 Ø 16		
	160022161 Ø 22		
	160027161 Ø 27		
	160015161 Ø 5/8"		
	160019161 Ø 3/4"		
	160025161 Ø 1"		
	160031161 Ø 1 1/4"		
	110587		

Driven Toolholders - Enhanced Program



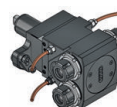
Straight drill/milling unit, double, Y axis

ER 25	413002026-40	1:1.5	EC
	00675000930		
ER 25	413002027-40	1:1.5	IC 80 bar
	00675000930		



2-spindle - Right angle drill/milling unit, Y axis

ER 25	413502016-40	1:1	EC
	00675000915		
ER 25	413502017-40	1:1	IC 80 bar
	00675000915		



2-spindle - Right angle drill/milling unit, both sides, Y axis

ER 25	413502023-40	1:1	EC
	00675000915		



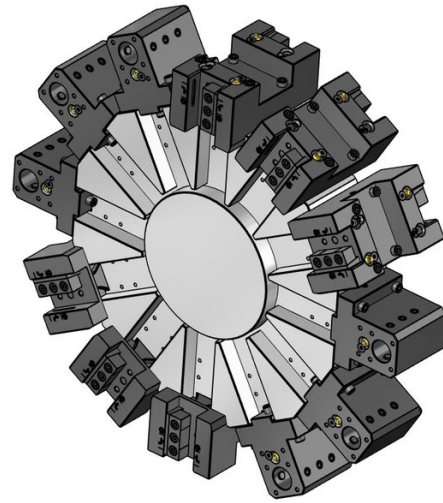
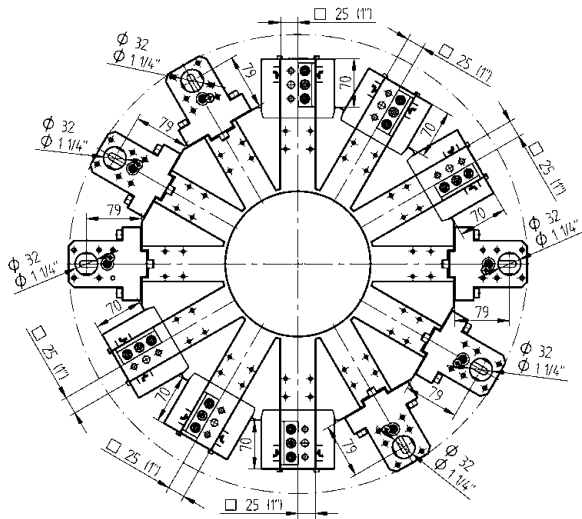
Broaching unit for ID and OD

TN765050	414532011-40	1:1	EC
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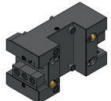


Broaching unit for ID and OD

TN765050	414532014-40	1:1	EC
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Static Toolholders - Standard Program



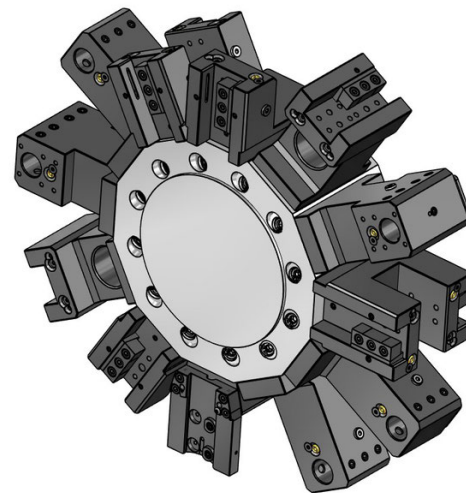
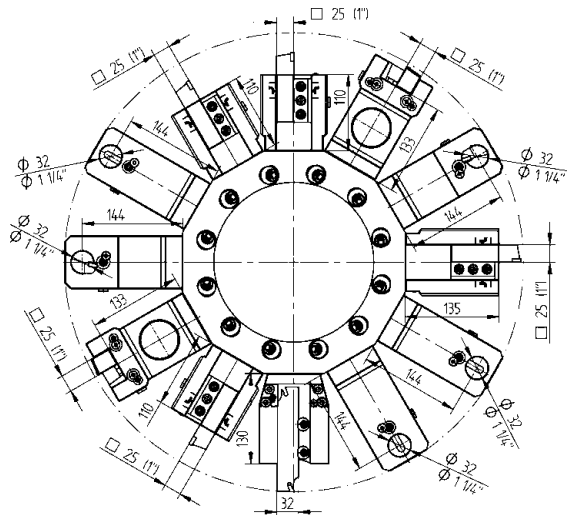
OD cutting holder, both sides, HP-IC

25	48-116172-HP	IC 80 bar
1"	48-116422-HP	IC 80 bar




Combination toolholder

Ø 32	48-116173	IC 80 bar
	241132016 ER25	
	241132020 ER32	
Ø 1 1/4"	48-116421	IC 80 bar
	2411125020 ER32	




Static Toolholders - Standard Program

Static Toolholders - Enhanced Program

- 


OD cutting holder, HP-IC

25	48-81926-HP	IC 80 bar
1"	48-82544-HP	IC 80 bar

- 


OD cutting holder, HP-IC

25	48-82545-HP	IC 80 bar
1"	48-82546-HP	IC 80 bar

- 


OD cutting holder, both sides, HP-IC

25	48-116404-HP	IC 80 bar
1"	48-116406-HP	IC 80 bar



- 


Face cutting holder

25	48-84006	
1"	48-84226	

- 


Combination toolholder

Ø 32	48-115977	
	 241132016 ER25	
	 241132020 ER32	
Ø 1 1/4"	48-115978	

- 


Combination toolholder, both sides

Ø 32	48-115979	
Ø 1 1/4"	48-115986	

- 


Cut-off holder, adjustable

SH 32	48-99062	
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- 


Cut-off holder, adjustable, HP-IC

SH 32	48-102266R	IC 80 bar
SH 32	48-102266L	IC 80 bar

- 

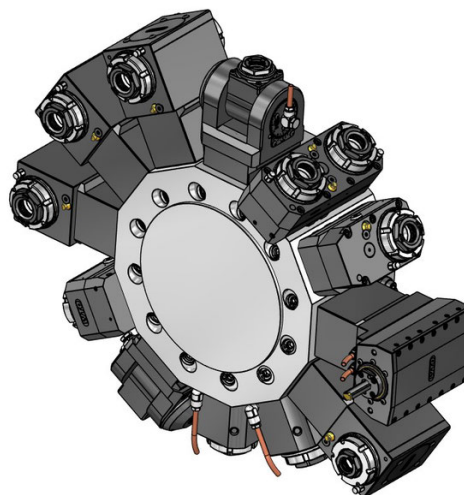
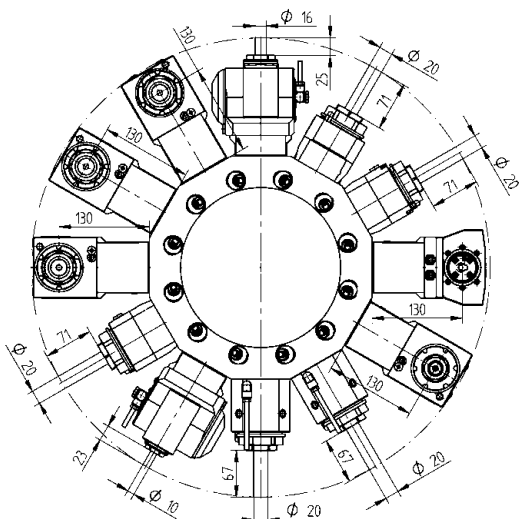
Cut-off holder, adjustable

SH 32	48-116443	
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Cut-off holder, adjustable, HP-IC

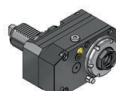

















SH 32	48-116441R	IC 80 bar
	343-810100R106	
SH 32	48-116441L	IC 80 bar
	343-810100L106	

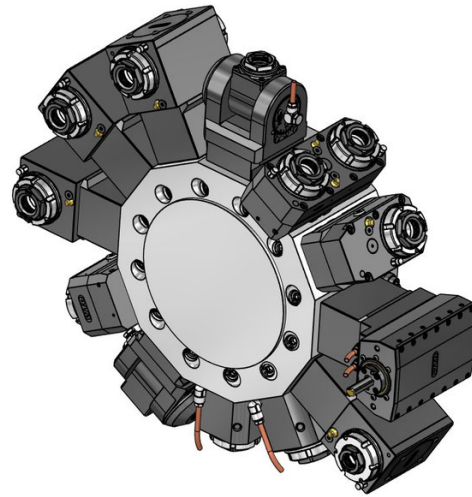
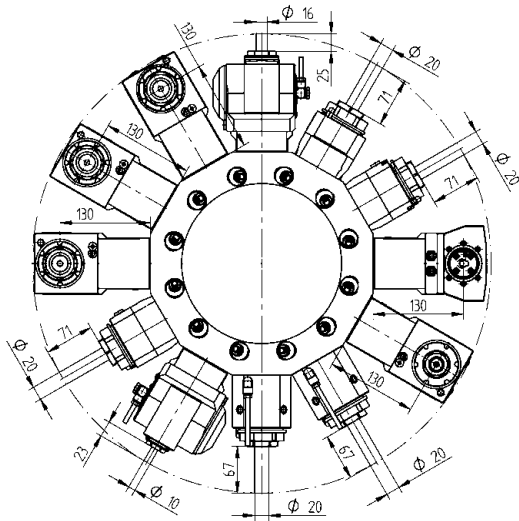


Driven Toolholders - QuickFlex®

- | | | | | |
|---|---|--|--|--|
|  | Straight drill/milling unit | | | |
| | ER-32 QF 420132042-40 1:1 EC
 0067732000 | | | |
| | ER-32 QF 420132043-40 1:1 IC 80 bar
 0067732000 | | | |
|  | Straight offset drill/milling unit | | | |
| | ER-32 QF 420132032-40 1:1 EC
 0067732000 | | | |
| | ER-32 QF 420132033-40 1:1 IC 80 bar
 0067732000 | | | |
|  | Straight offset drill/milling unit | | | |
| | ER-32 QF 420132036-40 1:1 EC
 0067732000 | | | |
| | ER-32 QF 420132037-40 1:1 IC 80 bar
 0067732000 | | | |
|  | Right angle drill/milling unit | | | |
| | ER-32 QF 420532076-40 1:1 EC
 0067732000 | | | |
| | ER-32 QF 420532077-40 1:1 IC 80 bar
 0067732000 | | | |
|  | Right angle drill/milling unit | | | |
| | ER-32 QF 420532078-40 1:1 EC
 0067732000 | | | |
| | ER-32 QF 420532079-40 1:1 IC 80 bar
 0067732000 | | | |
|  | Right angle drill/milling unit, both sides | | | |
| | ER-32 QF 420532156-40 1:1 EC
 0067732000 | | | |

Driven Toolholders - Enhanced Program

- | | | | | |
|---|---|--|--|--|
|  | Straight offset drill/milling unit | | | |
| | ER-25 QF 420125022-40 1:2 EC
 0067725001 | | | |
| | ER-25 QF 420125023-40 1:2 IC 80 bar
 0067725001 | | | |
| | ER-32 QF 420132050-40 2:1 EC
 0067732000 | | | |
| | ER-32 QF 420132051-40 2:1 IC 80 bar
 0067732000 | | | |
|  | Straight offset drill/milling unit | | | |
| | ER-25 QF 420125054-40 1:2 EC
 0067725001 | | | |
| | ER-25 QF 420125055-40 1:2 IC 80 bar
 0067725001 | | | |
| | ER-32 QF 420132111-40 2:1 EC
 0067732000 | | | |
| | ER-32 QF 420132112-40 2:1 IC 80 bar
 0067732000 | | | |
|  | Straight offset drill/milling unit, both sides | | | |
| | ER-32 QF 423002016-40 1:1 EC
 0067732000 | | | |
| | ER-32 QF 423002017-40 1:1 IC 80 bar
 0067732000 | | | |
|  | Right angle drill/milling unit | | | |
| | ER-25 QF 420525032-40 1:2 EC
 0067725001 | | | |
| | ER-25 QF 420525033-40 1:2 IC 80 bar
 0067725001 | | | |
| | ER-32 QF 420532087-40 2:1 EC
 0067732000 | | | |
| | ER-32 QF 420532088-40 2:1 IC 80 bar
 0067732000 | | | |

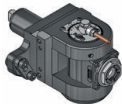


Driven Toolholders - Enhanced Program



Right angle drill/milling unit

ER-25 QF	420525064-40	1:2	EC
	0067725001		
ER-25 QF	420525065-40	1:2	IC 80 bar
	0067725001		
ER-32 QF	420532161-40	2:1	EC
	0067732000		
ER-32 QF	420532162-40	2:1	IC 80 bar
	0067732000		



Adjustable angle drill/milling unit

ER 25	411016005-40	1:1	EC
	00675000934		
ER 25	411016023-40	1:1	IC 80 bar
	00675000934		
ER 16	411010014-40	1:2	EC
	00675000936		
ER 16	411010015-40	1:2	IC 80 bar
	00675000936		



Broaching unit for ID and OD

TN765050	414532011-40	1:1	EC
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Broaching unit for ID and OD

TN765050	414532014-40	1:1	EC
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Standard reduction sleeves - cylindrical



Reduction sleeve Ø 20

240020006	ø 6
240020008	ø 8
240020010	ø 10
240020012	ø 12
240020014	ø 14
240020016	ø 16



Reduction sleeve Ø 32

240032006	ø 6
240032008	ø 8
240032010	ø 10
240032012	ø 12
240032014	ø 14
240032016	ø 16
240032018	ø 18
240032020	ø 20
240032025	ø 25



Reduction sleeve Ø 40

240040006	ø 6
240040008	ø 8
240040010	ø 10
240040012	ø 12
240040014	ø 14
240040016	ø 16
240040020	ø 20
240040025	ø 25
240040032	ø 32



Reduction sleeve Ø 50

240050010	ø 10
240050012	ø 12
240050016	ø 16
240050020	ø 20
240050025	ø 25
240050032	ø 32
240050040	ø 40



Reduction sleeve Ø 3/4"

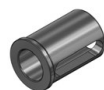
2400075025	ø 1/4"
2400075032	ø 5/16"
2400075038	ø 3/8"
2400075050	ø 1/2"
2400075063	ø 5/8"



Reduction sleeve Ø 1 1/4"

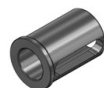
2400125038	ø 3/8"
2400125050	ø 1/2"
2400125063	ø 5/8"
2400125075	ø 3/4"
2400125088	ø 7/8"
2400125100	ø 1"

Standard reduction sleeves - cylindrical



Reduction sleeve Ø 1 1/2"

2400150038	ø 3/8"
2400150050	ø 1/2"
2400150063	ø 5/8"
2400150075	ø 3/4"
2400150088	ø 7/8"
2400150100	ø 1"
2400150125	ø 1 1/4"



Reduction sleeve Ø 2"

2400200050	ø 1/2"
2400200063	ø 5/8"
2400200088	ø 7/8"
2400200100	ø 1"
2400200125	ø 1 1/4"
2400200150	ø 1 1/2"
2400200175	ø 1 3/4"

Standard reduction sleeves - morse taper



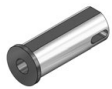
Reduction sleeve Ø 32

240532001	MT 1
240532002	MT 2
240532003	MT 3



Reduction sleeve Ø 40

240540001	MT 1
240540002	MT 2
240540003	MT 3
240540004	MT 4



Reduction sleeve Ø 50

240550002	MT 2
240550003	MT 3
240550004	MT 4

Collets DIN 6499B (ER/ESX)

Collets DIN 6499B (ER/ESX)



ER 11	mm	inch
190011000	ø 7-0.5	ø 0.276-0.020
190011010	ø 1-0.5	ø 0.039-0.020
190011015	ø 1.5-1	ø 0.059-0.039
190011020	ø 2-1.5	ø 0.079-0.059
190011025	ø 2.5-2	ø 0.098-0.079
190011030	ø 3-2.5	ø 0.118-0.098
190011035	ø 3.5-3	ø 0.138-0.118
190011040	ø 4-3.5	ø 0.158-0.138
190011045	ø 4.5-4	ø 0.177-0.158
190011050	ø 5-4.5	ø 0.197-0.177
190011055	ø 5.5-5	ø 0.217-0.197
190011060	ø 6-5.5	ø 0.236-0.217
190011065	ø 6.5-6	ø 0.256-0.236
190011070	ø 7-6.5	ø 0.276-0.256



ER 25	mm	inch
190025000	ø 16-1	ø 0.630-0.039
190025020	ø 2-1	ø 0.079-0.039
190025030	ø 3-2	ø 0.118-0.079
190025040	ø 4-3	ø 0.157-0.118
190025050	ø 5-4	ø 0.197-0.157
190025060	ø 6-5	ø 0.236-0.197
190025070	ø 7-6	ø 0.276-0.236
190025080	ø 8-7	ø 0.315-0.276
190025090	ø 9-8	ø 0.354-0.315
190025100	ø 10-9	ø 0.394-0.354
190025110	ø 11-10	ø 0.433-0.394
190025120	ø 12-11	ø 0.472-0.433
190025130	ø 13-12	ø 0.512-0.472
190025140	ø 14-13	ø 0.551-0.512
190025150	ø 15-14	ø 0.591-0.551
190025160	ø 16-15	ø 0.630-0.591



ER 16	mm	inch
190016000	ø 10-0.5	ø 0.394-0.020
190016010	ø 1-0.5	ø 0.039-0.020
190016020	ø 2-1	ø 0.079-0.039
190016030	ø 3-2	ø 0.118-0.079
190016040	ø 4-3	ø 0.158-0.118
190016050	ø 5-4	ø 0.197-0.158
190016060	ø 6-5	ø 0.236-0.197
190016070	ø 7-6	ø 0.276-0.236
190016080	ø 8-7	ø 0.315-0.276
190016090	ø 9-8	ø 0.354-0.315
190016100	ø 10-9	ø 0.394-0.354



ER 32	mm	inch
190032000	ø 20-2	ø 0.787-0.079
190032030	ø 3-2	ø 0.118-0.079
190032040	ø 4-3	ø 0.157-0.118
190032050	ø 5-4	ø 0.197-0.157
190032060	ø 6-5	ø 0.236-0.197
190032070	ø 7-6	ø 0.276-0.236
190032080	ø 8-7	ø 0.315-0.276
190032090	ø 9-8	ø 0.354-0.315
190032100	ø 10-9	ø 0.394-0.354
190032110	ø 11-10	ø 0.433-0.394
190032120	ø 12-11	ø 0.472-0.433
190032130	ø 13-12	ø 0.512-0.472
190032140	ø 14-13	ø 0.551-0.512
190032150	ø 15-14	ø 0.591-0.551
190032160	ø 16-15	ø 0.630-0.591
190032170	ø 17-16	ø 0.669-0.630
190032180	ø 18-17	ø 0.709-0.669
190032190	ø 19-18	ø 0.748-0.709
190032200	ø 20-19	ø 0.787-0.748



ER 20	mm	inch
190020000	ø 13-1	ø 0.512-0.039
190020010	ø 1-0.5	ø 0.039-0.020
190020020	ø 2-1	ø 0.079-0.039
190020030	ø 3-2	ø 0.118-0.079
190020040	ø 4-3	ø 0.157-0.118
190020050	ø 5-4	ø 0.197-0.157
190020060	ø 6-5	ø 0.236-0.197
190020070	ø 7-6	ø 0.276-0.236
190020080	ø 8-7	ø 0.315-0.276
190020090	ø 9-8	ø 0.354-0.315
190020100	ø 10-9	ø 0.394-0.354
190020110	ø 11-10	ø 0.433-0.394
190020120	ø 12-11	ø 0.472-0.433
190020130	ø 13-12	ø 0.512-0.472

Collets DIN 6499B (ER/ESX)



ER 40	mm	inch
190040000	ø 26-3	ø 1.024-0.118
190040040	ø 4-3	ø 0.157-0.118
190040050	ø 5-4	ø 0.197-0.157
190040060	ø 6-5	ø 0.236-0.197
190040070	ø 7-6	ø 0.276-0.236
190040080	ø 8-7	ø 0.315-0.276
190040090	ø 9-8	ø 0.354-0.315
190040100	ø 10-9	ø 0.394-0.354
190040110	ø 11-10	ø 0.433-0.394
190040120	ø 12-11	ø 0.472-0.433
190040130	ø 13-12	ø 0.512-0.472
190040140	ø 14-13	ø 0.551-0.512
190040150	ø 15-14	ø 0.591-0.551
190040160	ø 16-15	ø 0.630-0.591
190040170	ø 17-16	ø 0.669-0.630
190040180	ø 18-17	ø 0.709-0.669
190040190	ø 19-18	ø 0.748-0.709
190040200	ø 20-19	ø 0.787-0.748
190040210	ø 21-20	ø 0.827-0.787
190040220	ø 22-21	ø 0.866-0.827
190040230	ø 23-22	ø 0.906-0.866
190040240	ø 24-23	ø 0.945-0.906
190040250	ø 25-24	ø 0.984-0.945
190040260	ø 26-25	ø 1.024-0.984

Collets DIN 6499D (ER/ESX) - sealed, for IC



ER 11	mm	inch
191011030	ø 3	
191011040	ø 4	
191011050	ø 5	
191011060	ø 6	
191111013-in		ø 0.125
191111019-in		ø 0.188
191111025-in		ø 0.25



ER 16	mm	inch
191016000	ø 3-10	
191016030	ø 3	
191016040	ø 4	
191016050	ø 5	
191016060	ø 6	
191016070	ø 7	
191016080	ø 8	
191016090	ø 9	
191016100	ø 10	
191116001		ø 0.125-0.375
191116013-in		ø 0.125
191116019-in		ø 0.188
191116025-in		ø 0.25
191116031-in		ø 0.313
191116038-in		ø 0.375



ER 20	mm	inch
191020000	ø 3-12	
191020030	ø 3	
191020040	ø 4	
191020050	ø 5	
191020060	ø 6	
191020070	ø 7	
191020080	ø 8	
191020090	ø 9	
191020100	ø 10	
191020110	ø 11	
191020120	ø 12	
191120001		ø 0.125-0.5
191120013-in		ø 0.125
191120019-in		ø 0.188
191120025-in		ø 0.25
191120031-in		ø 0.313
191120038-in		ø 0.375
191120044-in		ø 0.438
191120050-in		ø 0.5

Collets DIN 6499D (ER/ESX) - sealed, for IC

Collets DIN 6499D (ER/ESX) - sealed, for IC



ER 25	mm	inch
191025000	ø 4-16	
191025030	ø 3	
191025040	ø 4	
191025050	ø 5	
191025060	ø 6	
191025070	ø 7	
191025080	ø 8	
191025090	ø 9	
191025100	ø 10	
191025110	ø 11	
191025120	ø 12	
191025130	ø 13	
191025140	ø 14	
191025150	ø 15	
191025160	ø 16	
191125001		ø 0.25-0.625
191125025-in		ø 0.25
191125031-in		ø 0.313
191125038-in		ø 0.375
191125044-in		ø 0.438
191125050-in		ø 0.5
191125056-in		ø 0.563
191125063-in		ø 0.625



ER 40	mm	inch
191040060	ø 6	
191040080	ø 8	
191040100	ø 10	
191040120	ø 12	
191040140	ø 14	
191040160	ø 16	
191040180	ø 18	
191040200	ø 20	
191040220	ø 22	
191040250	ø 25	
191140025-in		ø 0.25
191140031-in		ø 0.313
191140038-in		ø 0.375
191140044-in		ø 0.438
191140050-in		ø 0.5
191140056-in		ø 0.563
191140063-in		ø 0.625
191140069-in		ø 0.688
191140075-in		ø 0.75
191140088-in		ø 0.875
191140100-in		ø 1



ER 32	mm	inch
191032000	ø 4-20	
191032030	ø 3	
191032040	ø 4	
191032050	ø 5	
191032060	ø 6	
191032070	ø 7	
191032080	ø 8	
191032090	ø 9	
191032100	ø 10	
191032110	ø 11	
191032120	ø 12	
191032130	ø 13	
191032140	ø 14	
191032150	ø 15	
191032160	ø 16	
191032170	ø 17	
191032180	ø 18	
191032190	ø 19	
191032200	ø 20	
191132001		ø 0.25-0.75
191132025-in		ø 0.25
191132031-in		ø 0.313
191132038-in		ø 0.375
191132044-in		ø 0.438
191132050-in		ø 0.5
191132056-in		ø 0.563
191132063-in		ø 0.625
191132069-in		ø 0.688
191132075-in		ø 0.75

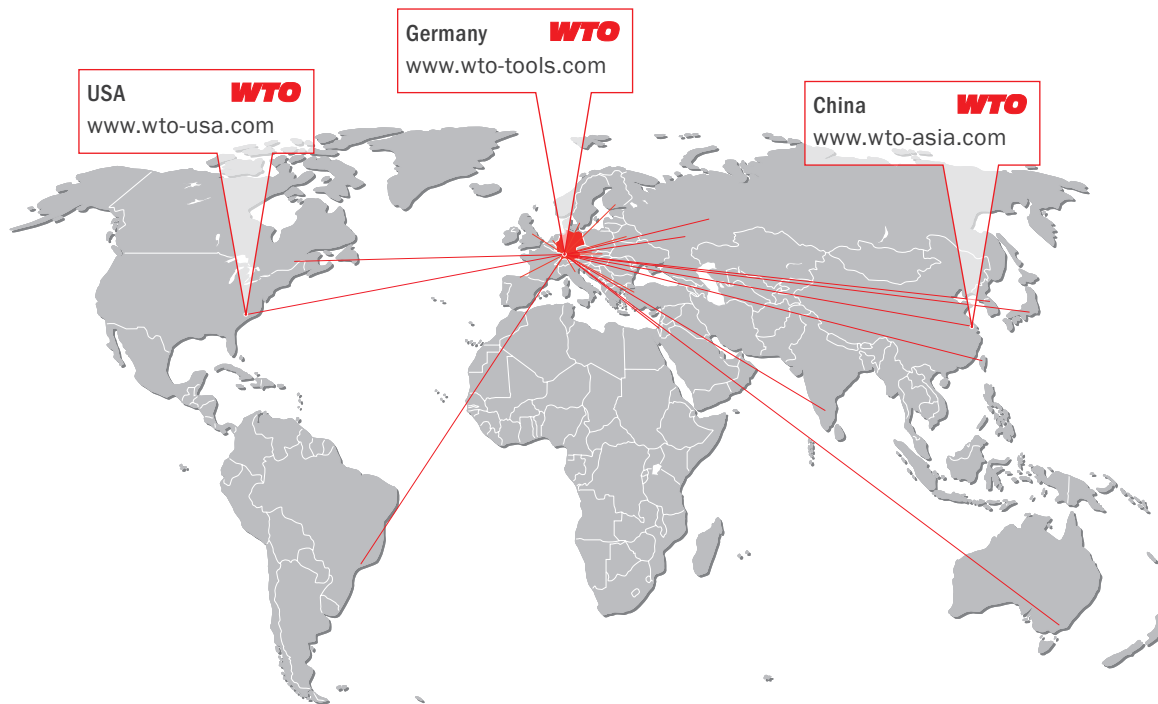


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