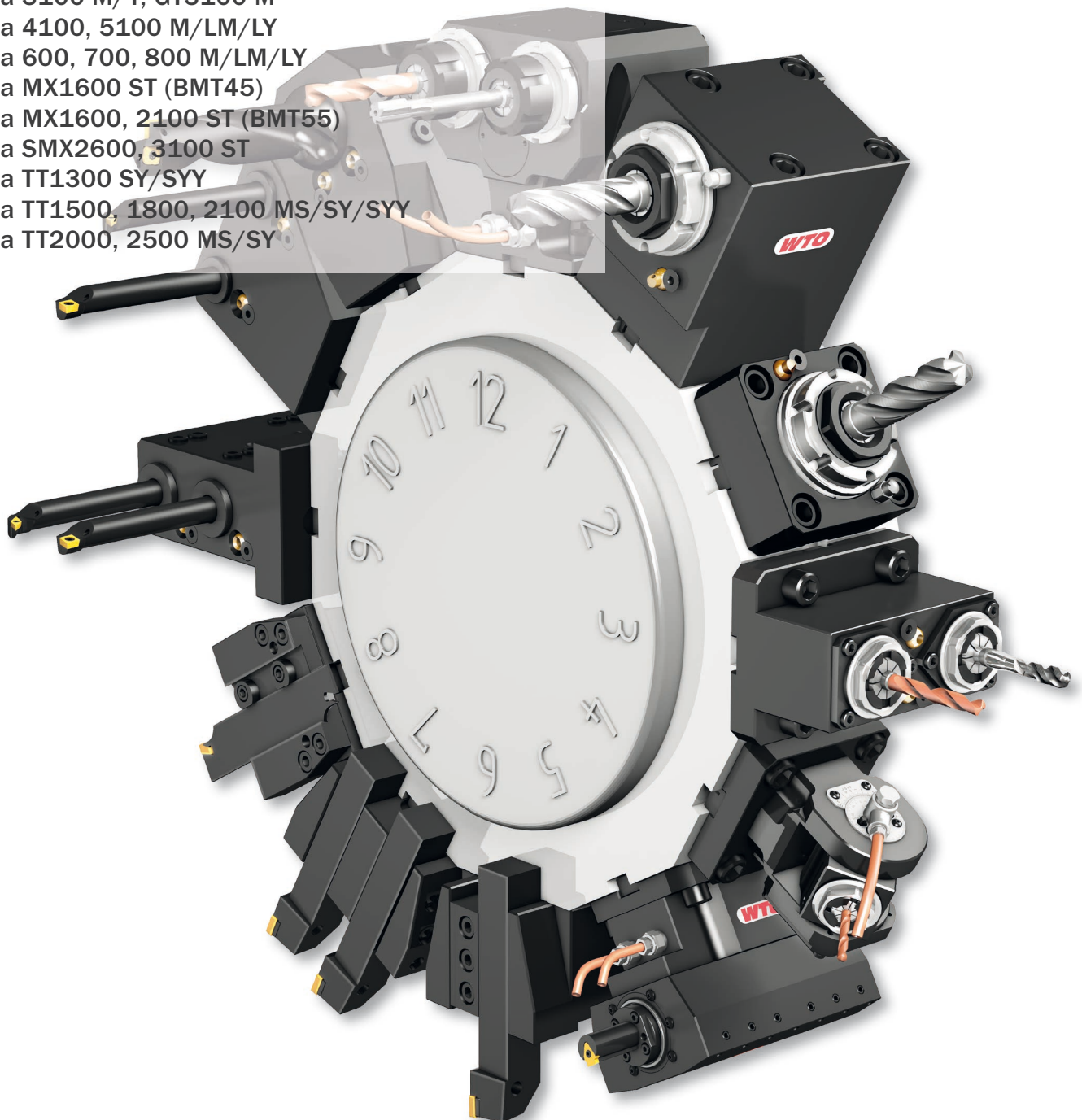


Toolholder Program

Lynx 220 M/LM
Lynx 220 LMS/LY/LSY, Lynx 2100 M/MS/LY/LSY
Lynx 300 M, 2600 Y, Puma GT2100, 2600 M
Lynx 2600 SY (12ST)
Puma 2100, 2600 (II) M/MS/Y/SY (BMT55)
Puma 2100, 2600 (II) M/MS/Y/SY (BMT65)
Puma 2100, 2600 Y/SY, Lynx 2600 Y/SY (16ST, BMT55)
Puma 3100 M/Y, GT3100 M
Puma 4100, 5100 M/LM/LY
Puma 600, 700, 800 M/LM/LY
Puma MX1600 ST (BMT45)
Puma MX1600, 2100 ST (BMT55)
Puma SMX2600, 3100 ST
Puma TT1300 SY/SYY
Puma TT1500, 1800, 2100 MS/SY/SYY
Puma TT2000, 2500 MS/SY



QuickFlex®

The new quick change system for high performance and precision.

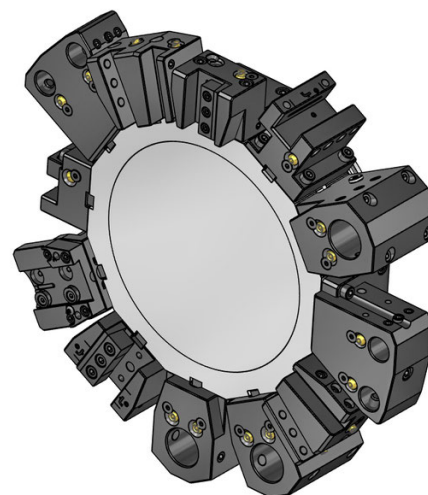
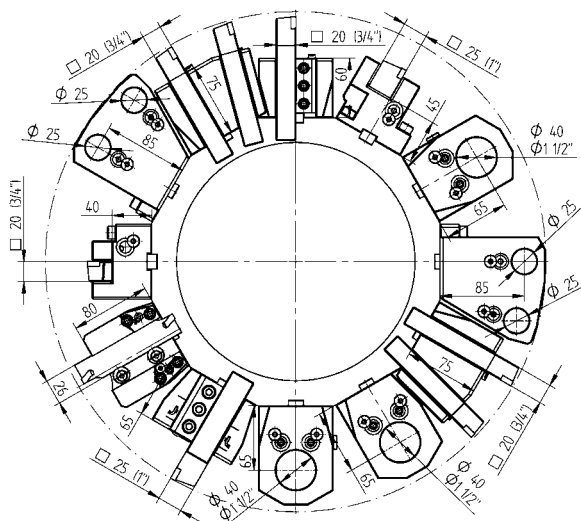
Minimal investment, maximal expandability.



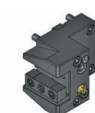
Designed
for
BMT Turrets

Lynx 220 M/LM	Page	4 - 6
Lynx 220 LMS/LY/LSY, Lynx 2100 M/MS/LY/LSY	Page	7 - 10
Lynx 300 M,2600 Y, Puma GT2100,2600 M	Page	11 - 13
Lynx 2600 SY (12ST)	Page	14 - 17
Puma 2100,2600(II) M/MS/Y/SY (BMT55)	Page	18 - 23
Puma 2100,2600(II) M/MS/Y/SY (BMT65)	Page	24 - 27
Puma 2100,2600 Y/SY, Lynx 2600 Y/SY (16ST, BMT55)	Page	28 - 30
Puma 3100 M/Y, GT3100 M	Page	31 - 33
Puma 4100, 5100 M/LM/LY	Page	34 - 35
Puma 600, 700, 800 M/LM/LY	Page	36 - 37
Puma MX1600 ST (BMT45)	Page	38 - 41
Puma MX1600, 2100 ST (BMT55)	Page	42 - 44
Puma SMX2600, 3100 ST	Page	45 - 48
Puma TT1300 SY/SYY	Page	49 - 51
Puma TT1500, 1800, 2100 MS/SY/SYY	Page	52 - 54
Puma TT2000, 2500 MS/SY	Page	55 - 58
Reduction sleeves	Page	59 - 60
Collets	Page	61 - 63

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.

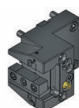


Static Toolholders - Standard Program



OD cutting holder

20	48-95083
3/4"	48-95084



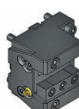
OD cutting holder, HP-IC

20	48-100605-HP	IC 80 bar
25	48-104395-HP	IC 80 bar
3/4"	48-108926-HP	IC 80 bar
1"	48-104396-HP	IC 80 bar



Face cutting holder

20	48-109148
----	-----------



Face cutting holder

3/4"	48-95338
------	----------



Face cutting holder, HP-IC

20	48-109148-HP	IC 80 bar
25	48-104397-HP	IC 80 bar
3/4"	48-109149-HP	IC 80 bar
1"	48-104398-HP	IC 80 bar



Combination toolholder, LF=65

Ø 40	48-95090	IC 80 bar
Ø 1 1/2"	48-95327	IC 80 bar

Static Toolholders - Enhanced Program



OD cutting holder, double, 24 station

20	48-95087
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Cut-off holder, adjustable

SH 26	48-94968
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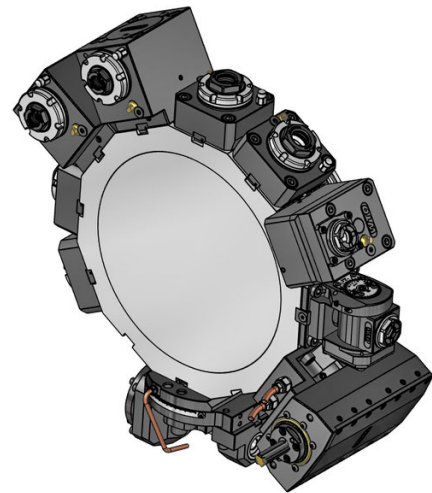
Cut-off holder, adjustable, HP-IC

SH 26	48-102252R	IC 80 bar
SH 26	48-102252L	IC 80 bar

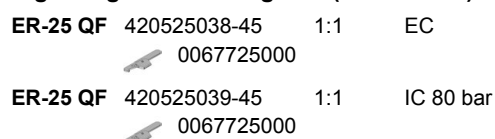


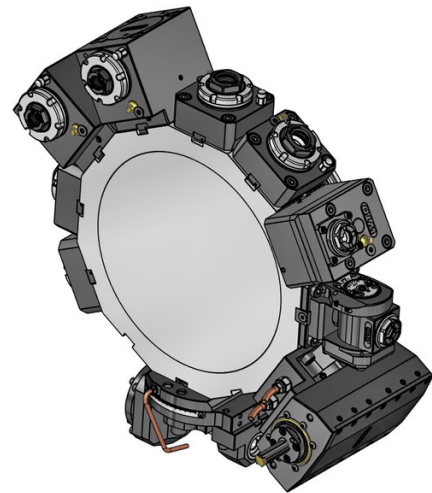
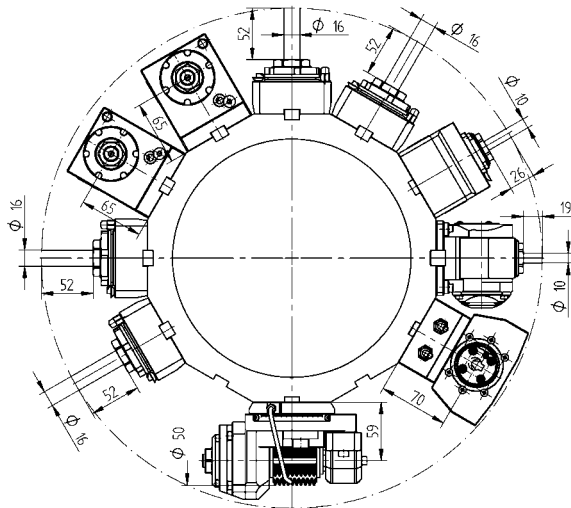
Boring bar holder, double, 24 station

Ø 25	48-95091
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Driven Toolholders - Enhanced Program





Driven Toolholders - Enhanced Program



Gear hobbing unit

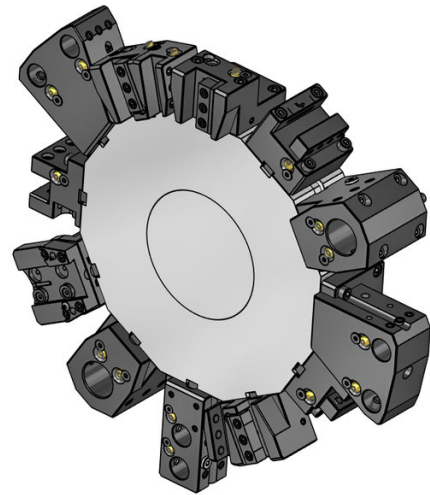
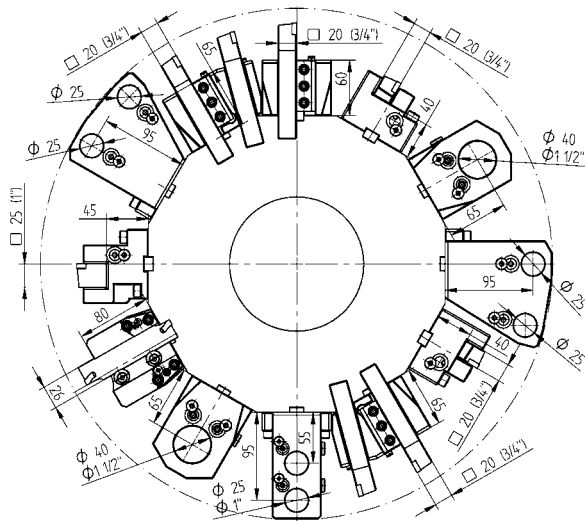
Type 15-2 410900001-45 1:1 EC

-  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 414532000-45 1:1 EC

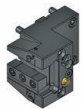


Static Toolholders - Standard Program



OD cutting holder

20	48-95083
3/4"	48-95084



OD cutting holder, HP-IC

20	48-100605-HP	IC 80 bar
25	48-104395-HP	IC 80 bar
3/4"	48-108926-HP	IC 80 bar
1"	48-104396-HP	IC 80 bar



OD cutting holder, both sides

20	48-95085
3/4"	48-95086



OD cutting holder, both sides, HP-IC

20	48-95085-HP	IC 80 bar
3/4"	48-95086-HP	IC 80 bar



Face cutting holder

20	48-109148
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Face cutting holder

3/4"	48-95338
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Face cutting holder, HP-IC

20	48-109148-HP	IC 80 bar
25	48-104397-HP	IC 80 bar
3/4"	48-109149-HP	IC 80 bar
1"	48-104398-HP	IC 80 bar



Combination toolholder, LF=65

Ø 40	48-95090	IC 80 bar
Ø 1 1/2"	48-95327	IC 80 bar

Static Toolholders - Standard Program



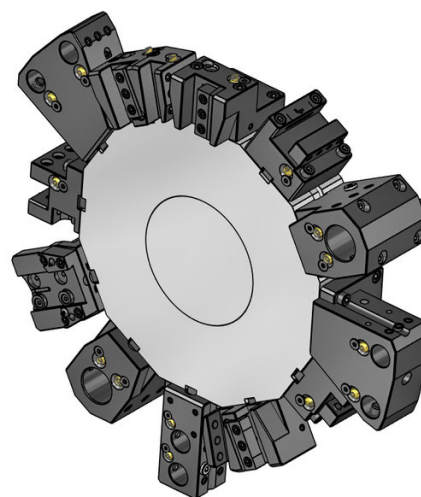
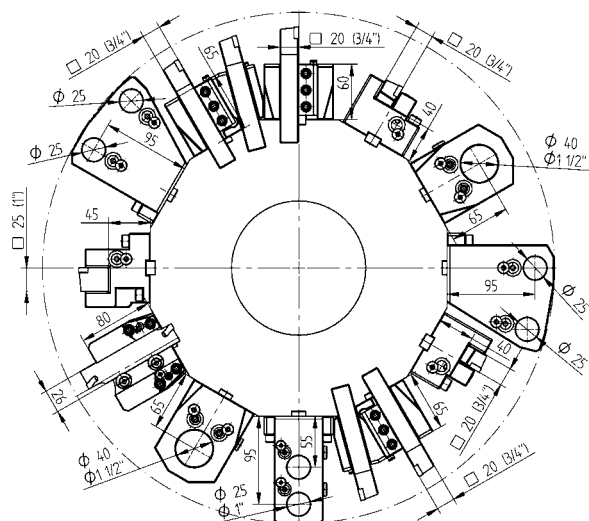
Combination toolholder, universal, LF=85

Ø 32	48-95998	IC 80 bar
	241132016 ER25	
	241132020 ER32	
Ø 1 1/4"	48-96029	IC 80 bar
	2411125020 ER32	



Boring bar holder universal, double

Ø 25	48-95093
Ø 1"	48-95325

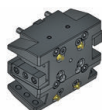


Static Toolholders - Enhanced Program



OD cutting holder, double, 24 station

20 48-95088



OD cutting holder, both sides, double, 24 station

20 48-95355



OD cutting holder, both sides, double, Y axis

20 (3/4") 48-110811



Cut-off holder, adjustable

SH 26 48-94968



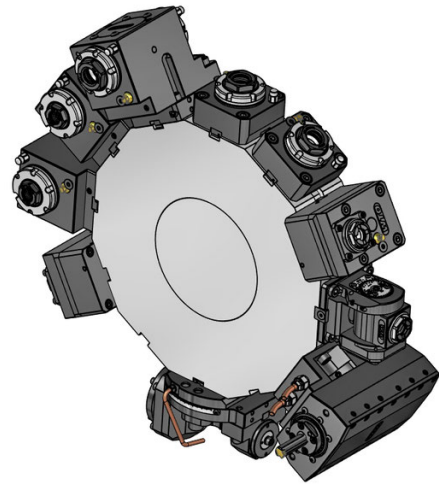
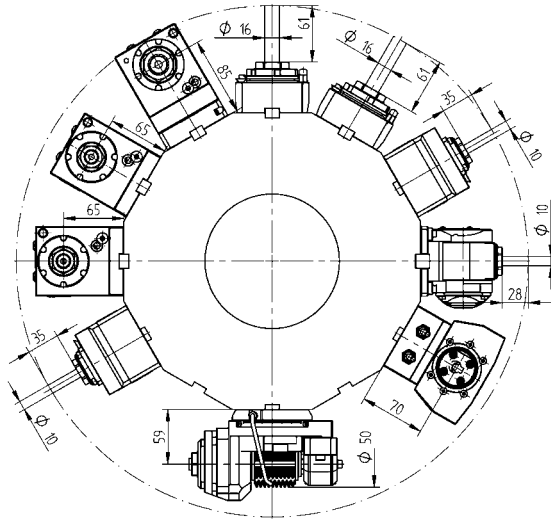
Cut-off holder, adjustable, HP-IC

SH 26	48-102252R	IC 80 bar
SH 26	48-102252L	IC 80 bar



Boring bar holder, universal, double, 24 station

Ø 25 48-95092



Driven Toolholders - QuickFlex®



Straight drill/milling unit

ER-25 QF	420125015-45	1:1	EC
	0067725000		
ER-25 QF	420125016-45	1:1	IC 80 bar
	0067725000		



Straight drill/milling unit (12000 RPM)

ER-25 QF	420125019-45	1:1	EC
	0067725000		
ER-25 QF	420125020-45	1:1	IC 80 bar
	0067725000		



Right angle drill/milling unit

ER-25 QF	420525015-45	1:1	EC
	0067725000		
ER-25 QF	420525016-45	1:1	IC 80 bar
	0067725000		



Right angle drill/milling unit (12000 RPM)

ER-25 QF	420525038-45	1:1	EC
	0067725000		
ER-25 QF	420525039-45	1:1	IC 80 bar
	0067725000		



Right angle back set drill/milling unit, LF=85

ER-25 QF	420525024-45	1:1	EC
	0067725000		
ER-25 QF	420525025-45	1:1	IC 80 bar
	0067725000		



Right angle back set drill/milling unit, LF=85, (12000 RPM)

ER-25 QF	420525049-45	1:1	EC
	0067725000		
ER-25 QF	420525050-45	1:1	IC 80 bar
	0067725000		

Driven Toolholders - QuickFlex®



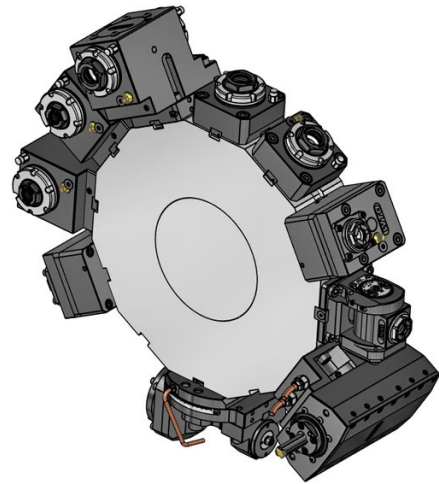
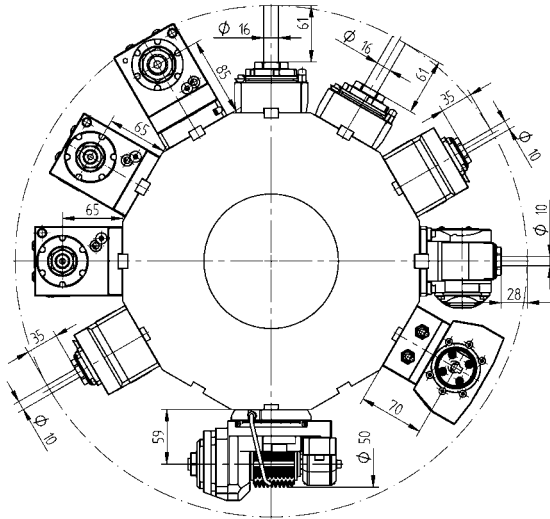
Right angle drill/milling unit, both sides, LF=85

ER-25 QF	420525043-45	1:1	EC
	0067725000		



Right angle drill/milling unit, both sides, LF=85, (12000 RPM)

ER-25 QF	420525051-45	1:1	EC
	0067725000		



Driven Toolholders - Enhanced Program



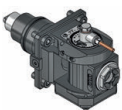
Straight offset drill/milling unit

ER 16	410410008-45	1:3	EC
	00675000937		
ER 16	410410002-45	1:3	IC 80 bar
	00675000937		



Right angle drill/milling unit

ER-20 QF	420520018-45	1:2	EC
	0067720001		
ER-20 QF	420520019-45	1:2	IC 80 bar
	0067720001		
ER-25 QF	420525020-45	2:1	EC
	0067725000		
ER-25 QF	420525021-45	2:1	IC 80 bar
	0067725000		



Adjustable angle drill/milling unit

ER 16	411010002-45	1:1	EC
	00675000902		
ER 16	411010003-45	1:1	IC 80 bar
	00675000902		
ER 11	411007004-45	1:2	EC
	00675000914		
ER 11	411007005-45	1:2	IC 80 bar
	00675000914		

Driven Toolholders - Enhanced Program



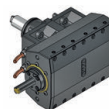
Gear hobbing unit

Type 15-2	410900001-45	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		



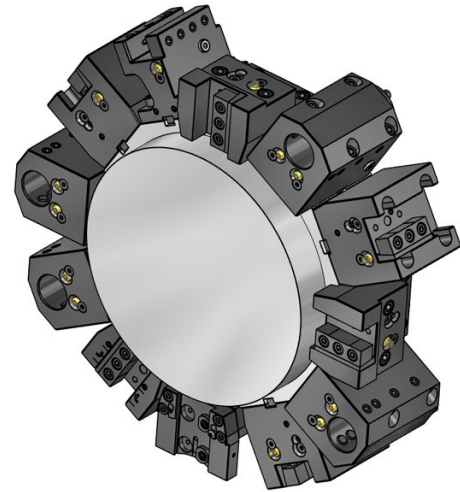
Straight drill/milling unit, double, Y axis

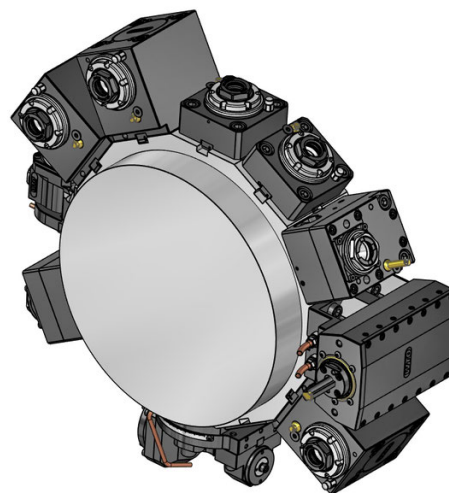
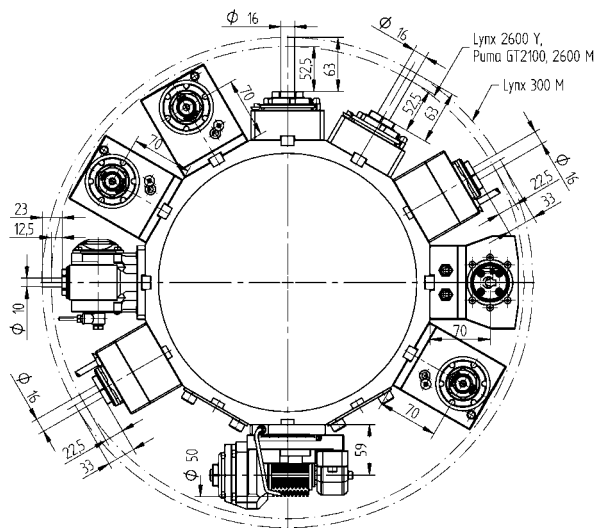
ER 20	413002006-45	1:1	EC
	00675000947		
ER 20	413002008-45	1:1	IC 80 bar
	00675000947		



Broaching unit for ID and OD

TN765050	414532000-45	1:1	EC
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Driven Toolholders - Enhanced Program



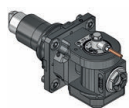
Right angle drill/milling unit, LF=70

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

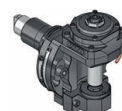
Ø 22	410622010-55	1:1	EC
	00675000483		
Ø 3/4"	410619005-55	1:1	EC
	00675000483		



Adjustable angle drill/milling unit

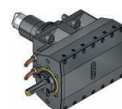
ER 16	411010005-55	1:1	EC
	00675000902		
ER 16	411010006-55	1:1	IC 80 bar
	00675000902		
ER 11	411007007-55	1:2	EC
	00675000914		
ER 11	411007008-55	1:2	IC 80 bar
	00675000914		

Driven Toolholders - Enhanced Program



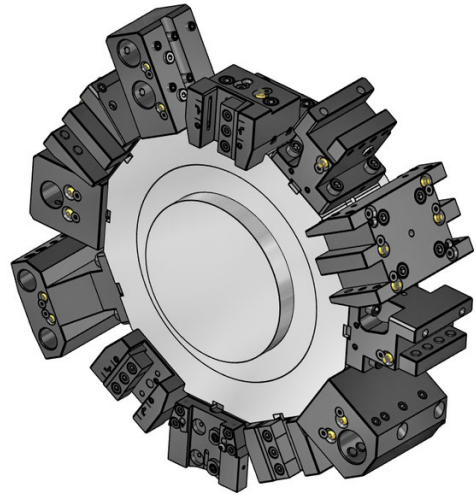
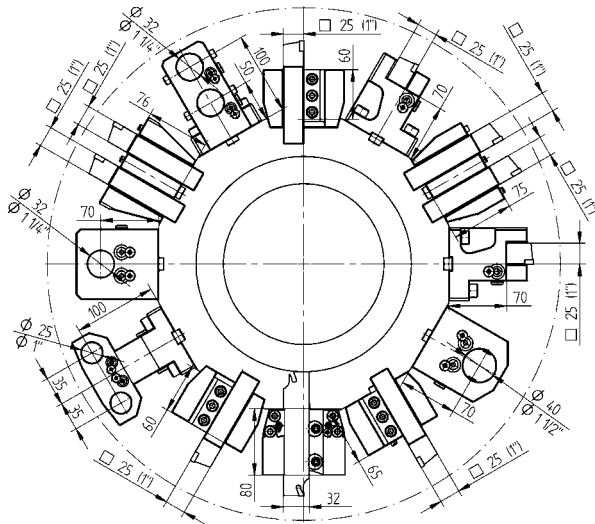
Gear hobbing unit

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



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



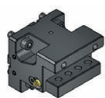
OD cutting holder, both sides

25 48-87099
1" 48-87100



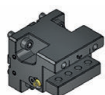
OD cutting holder, both sides, HP-IC

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



Boring bar holder, double

Ø 32 48-87149
Ø 1 1/4" 48-87150



Cover plate

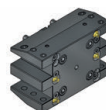
48-87111

Static Toolholders - Enhanced Program



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



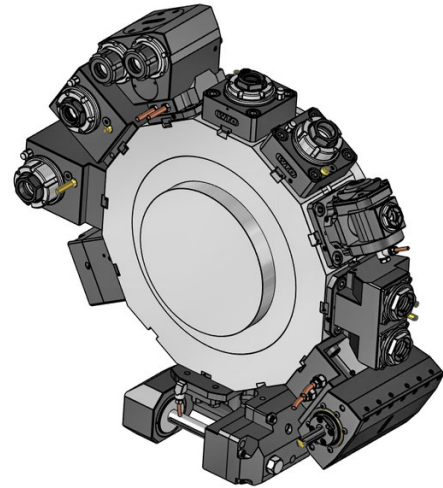
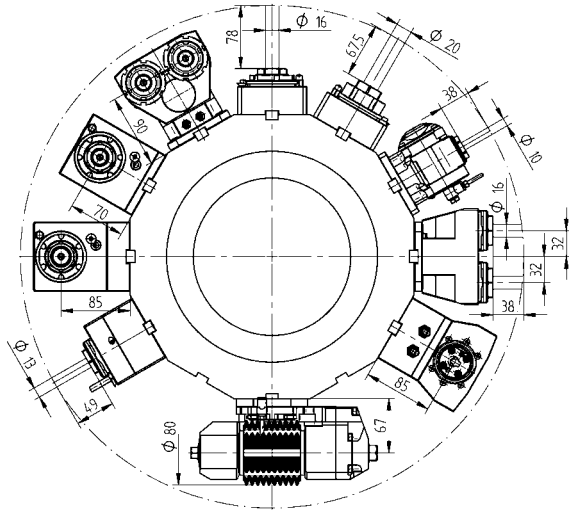
Cut-off holder, adjustable, HP-IC

SH 32 48-110160R IC 80 bar
SH 32 48-110160L IC 80 bar



Boring bar holder, both sides, double, Y axis

Ø 25 48-87147
Ø 1" 48-87148



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		



Right angle drill/milling unit, LF=85

ER-25 QF	420525018-55	1:1	EC
	0067725000		
ER-25 QF	420525019-55	1:1	IC 80 bar
	0067725000		



Right angle drill/milling unit, both sides, LF=85

ER-25 QF	420525020-55	1:1	EC
	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		



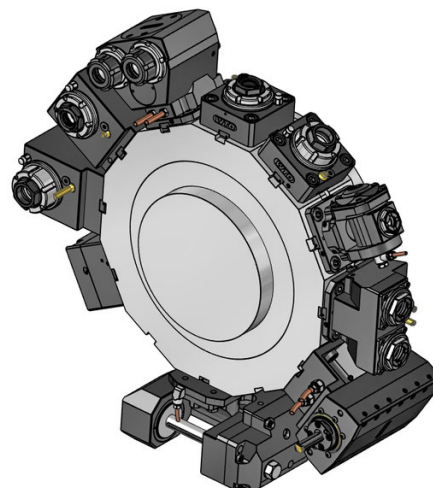
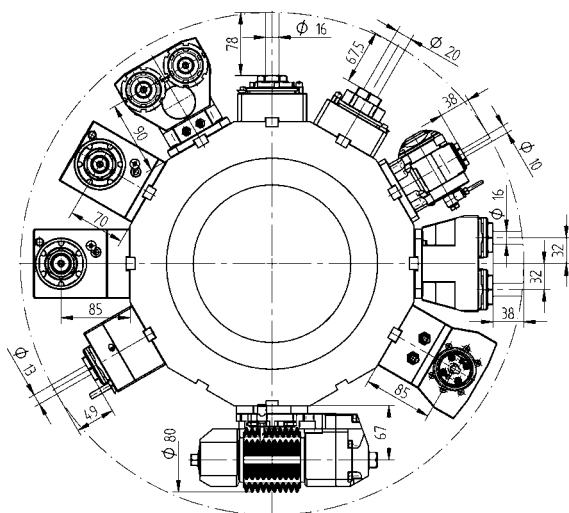
Straight milling unit with combination mill arbor DIN 6358

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 drill/milling unit, LF=85

ER 32	410520030-55	1:1	EC
	0067725000		
ER 32	410520031-55	1:1	IC 80 bar
	0067725000		
ER-20 QF	420520014-55	1:2	EC
	0067720001		
ER-20 QF	420520015-55	1:2	IC 80 bar
	0067720001		
ER 16	410810020-55	1:3	EC
	00675000841		
ER 16	410810021-55	1:3	IC 80 bar
	00675000841		
ER-25 QF	420525032-55	2:1	EC
	0067725000		
ER-25 QF	420525033-55	2:1	IC 80 bar
	0067725000		

Driven Toolholders - Enhanced Program



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		



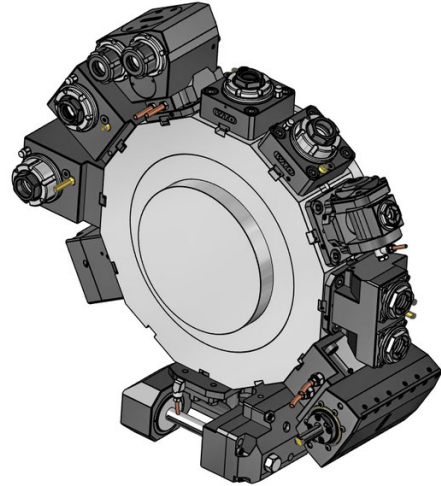
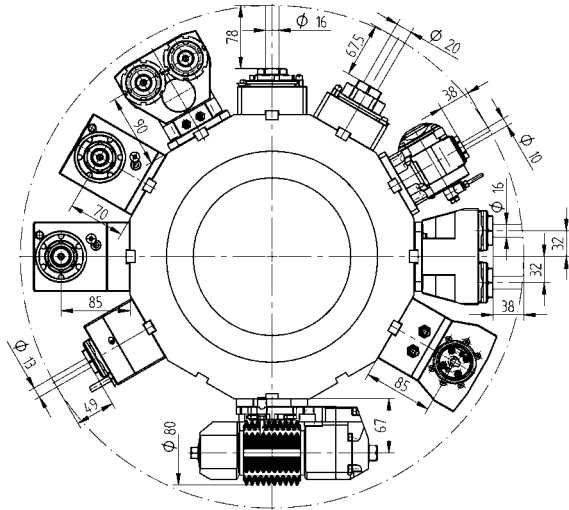
Right angle milling unit with combination mill arbor DIN 6358, LF=85

Ø 22	410622011-55	1:1	EC
	00675000483		
Ø 3/4"	410619006-55	1:1	EC
	00675000483		



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		



Driven Toolholders - Enhanced Program



Gear hobbing unit

Type 16-1	411500002-55	1:1	EC
Type 16-1	411500001-55	2:1	EC

- 00675000927
- 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



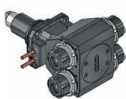
Straight drill/milling unit, double, Y axis

ER 25	413002004-55	1:1	EC
	00675000970		
ER 25	413002003-55	1:1	IC 80 bar
	00675000970		



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

ER 25	413502007-55	1:1	EC
	00675000915		
ER 25	413502008-55	1:1	IC 80 bar
	00675000915		



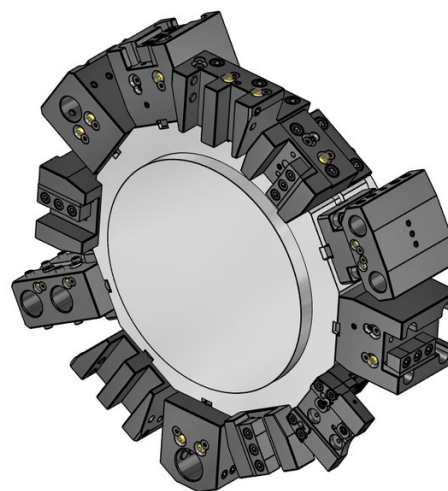
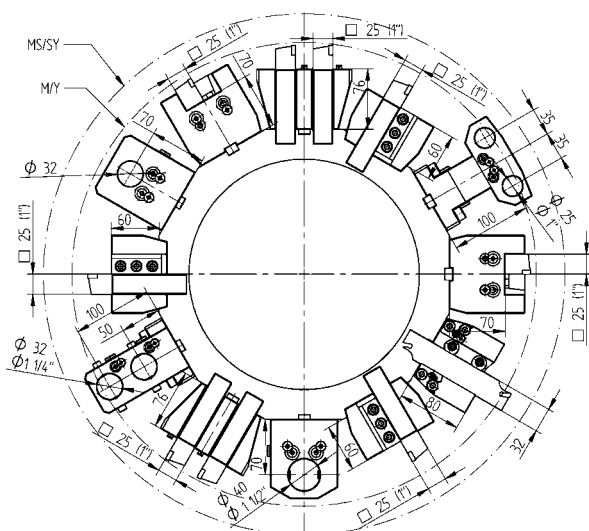
2-spindle - Right angle drill/milling unit, both sides, Y axis

ER 25	413502006-55	1:1	EC
	00675000915		



Broaching unit for ID and OD

TN765050	414532000-55	1:1	EC
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Static Toolholders - Standard Program (12ST)



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



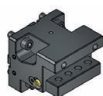
OD cutting holder, both sides

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



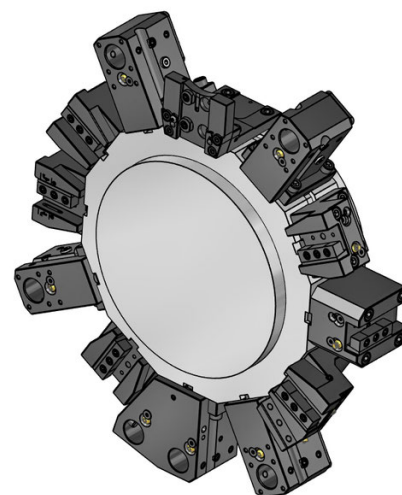
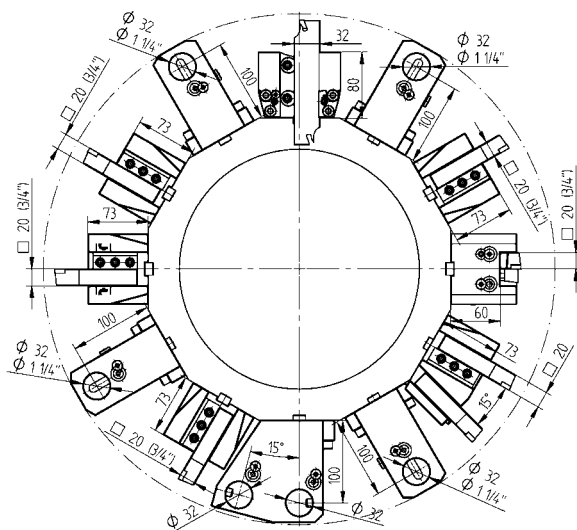
Boring bar holder, double

Ø 32	48-87149
Ø 1 1/4"	48-87150



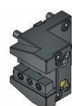
Cover plate

48-87111



Static Toolholders - Standard Program (24ST)

Static Toolholders - Standard Program (24ST)



OD cutting holder

20	48-92036
3/4"	48-92037



OD cutting holder, HP-IC

20	48-92036-HP	IC 80 bar
3/4"	48-92037-HP	IC 80 bar



OD cutting holder, both sides

20	48-92038
3/4"	48-92039



OD cutting holder, both sides, HP-IC

20	48-92038-HP	IC 80 bar
3/4"	48-92039-HP	IC 80 bar



Face cutting holder

20	48-92045
3/4"	48-92046



Face cutting holder, HP-IC

20	48-92045-HP	IC 80 bar
3/4"	48-92046-HP	IC 80 bar



Combination toolholder, universal, LF=100

Ø 32	48-92043	IC 80 bar
	 241132016 ER25	
	 241132020 ER32	
Ø 1 1/4"	48-92044	IC 80 bar
	 241125020 ER32	



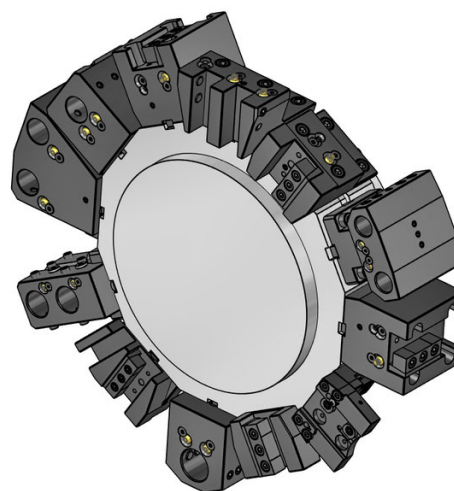
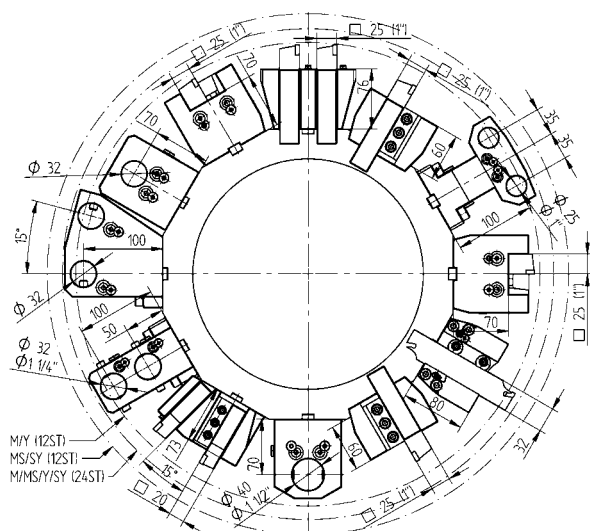
Boring bar holder, double

Ø 32	48-87149
Ø 1 1/4"	48-87150



Cover plate

48-87111



Static Toolholders - Enhanced Program



OD cutting holder, double, 24 station

20 48-92069 EC



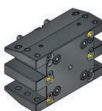
OD cutting holder, both sides, double, 24 station

20 48-92071



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



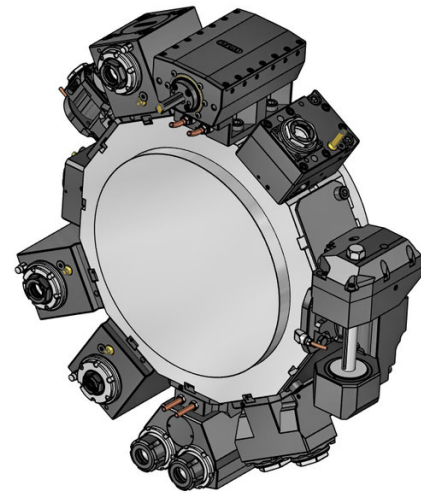
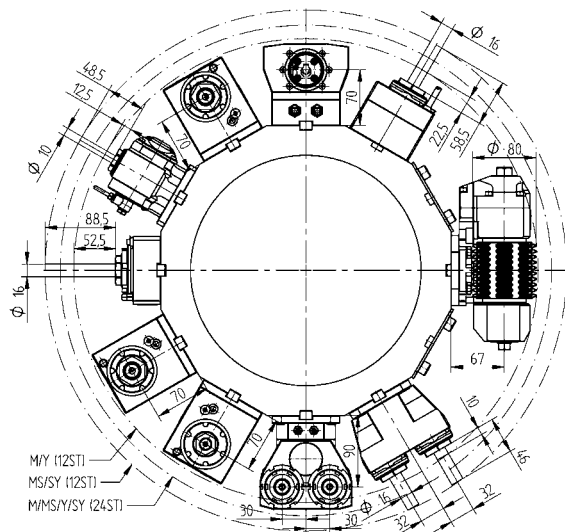
Boring bar holder, both sides, double, Y axis

Ø 25 48-87147
Ø 1" 48-87148



Boring bar holder, double, 24 station

Ø 32 48-92073



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



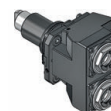
Adjustable angle drill/milling unit

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 16-1	411500002-55	1:1	EC
Type 16-1	411500001-55	2:1	EC
	00675000927		
	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		



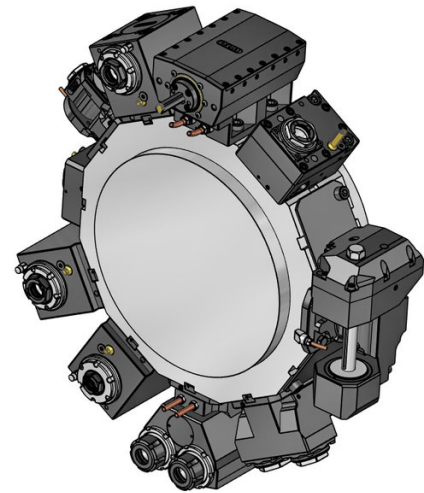
Straight drill/milling unit, double, Y axis

ER 25	413002004-55	1:1	EC
	00675000970		
ER 25	413002003-55	1:1	IC 80 bar
	00675000970		



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

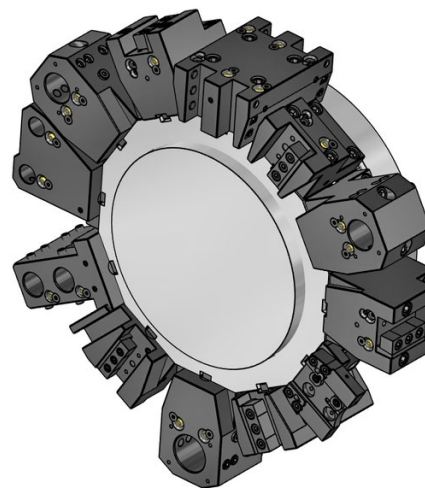
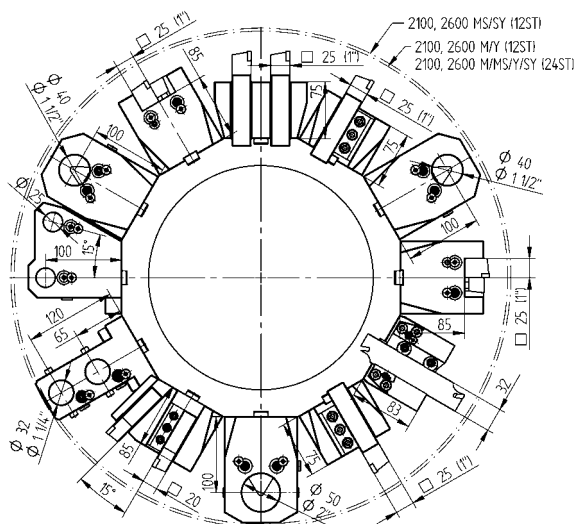
ER 25	413502007-55	1:1	EC
	00675000915		
ER 25	413502008-55	1:1	IC 80 bar
	00675000915		



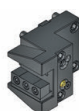
ER 25 413502006-55 1:1 EC
00675000915



TN765050 414532001-55 1:1 EC



Static Toolholders - Standard Program



OD cutting holder

25	48-92428
1"	48-92466



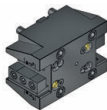
OD cutting holder, HP-IC

25	48-92428-HP	IC 80 bar
1"	48-92466-HP	IC 80 bar



OD cutting holder, both sides

25	48-92438
1"	48-92472



OD cutting holder, both sides, HP-IC

25	48-92438-HP	IC 80 bar
1"	48-92472-HP	IC 80 bar



Face cutting holder, long

25	48-92958
1"	48-92959



Combination toolholder, LF=100

Ø 40	48-92397	IC 80 bar
	241140020 ER32	
	241140026 ER40	
Ø 50	48-92467	IC 80 bar
Ø 1 1/2"	48-92468	IC 80 bar
	241150020 ER32	
Ø 2"	48-92469	IC 80 bar



Boring bar holder, both sides

Ø 32	48-101033
Ø 1 1/4"	48-113514

Static Toolholders - Standard Program



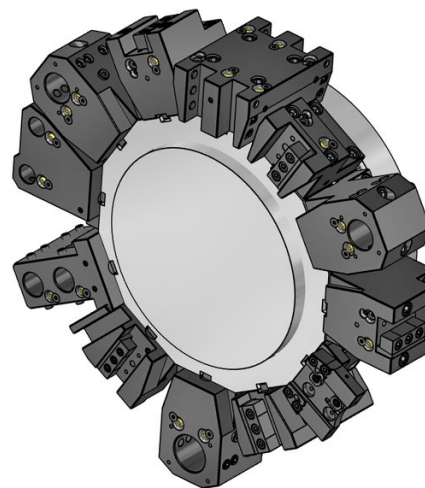
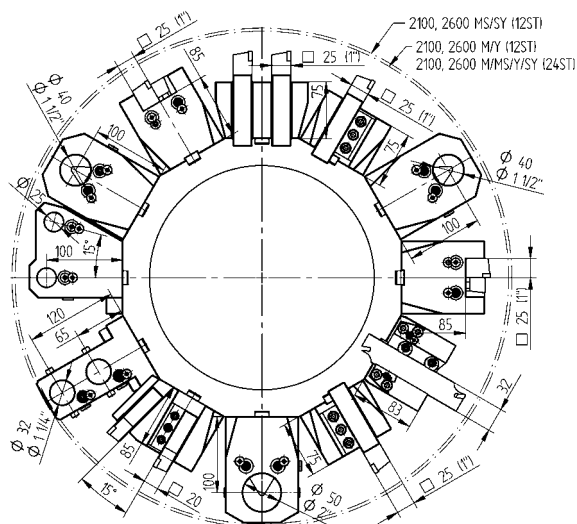
Boring bar holder, double

Ø 32	48-84524
Ø 1 1/4"	48-86905



Cover plate

48-87089



Static Toolholders - Enhanced Program



OD cutting holder, short

25	48-86991
1"	48-86992



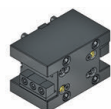
OD cutting holder, short, HP-IC

25	48-86991-HP	IC 80 bar
1"	48-86992-HP	IC 80 bar



OD cutting holder, long

25	48-86711
1"	48-86712



OD cutting holder, both sides, long

25	48-84523
1"	48-86718



OD cutting holder, double, 24 station

20	48-92089
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OD cutting holder, both sides, double, 24 station

20	48-92091
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OD cutting holder, double, Y axis

25(1")	48-86103
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OD cutting holder, both sides, double, Y axis

25(1")	48-86150
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Static Toolholders - Enhanced Program



Cut-off holder, adjustable

SH 32	48-99060
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Cut-off holder, adjustable, HP-IC

SH 32	48-102256R	IC 80 bar
SH 32	48-102256L	IC 80 bar



Cut-off holder, adjustable, long, HP-IC

SH 32	48-100082R	IC 80 bar
SH 32	48-100082L	IC 80 bar



Boring bar holder, double, 24 station

Ø 25	48-92102
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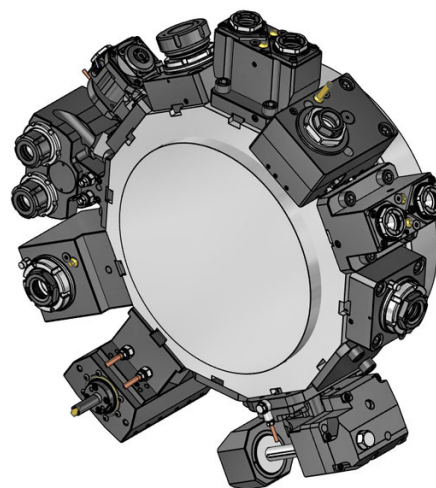
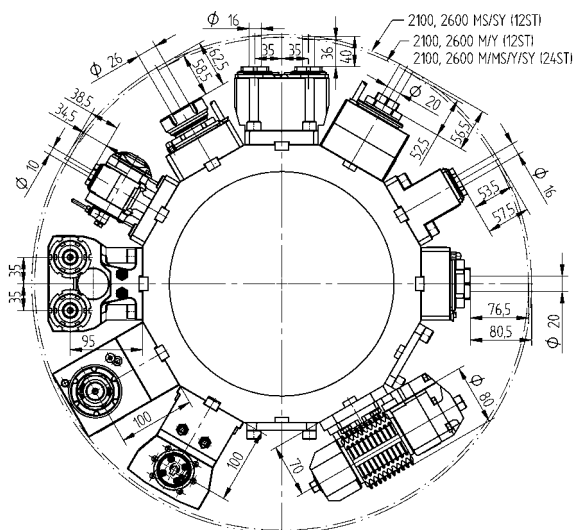
Combination toolholder, both sides, double, 24 station

Ø 25	48-109092
Ø 1"	48-108887



Boring bar holder, double, both sides

Ø 32	48-86160
Ø 1 1/4"	48-86274



Driven Toolholders - QuickFlex®



Straight drill/milling unit

ER-32 QF 420132015-65 1:1 EC
0067732000

ER-32 QF 420132016-65 1:1 IC 80 bar
0067732000



Right angle drill/milling unit, LF=100

ER-32 QF 420532018-65 1:1 EC
0067732000

ER-32 QF 420532019-65 1:1 IC 80 bar
0067732000



Right angle drill/milling unit, both sides, LF=100

ER-32 QF 420532020-65 1:1 EC
0067732000

Driven Toolholders - Enhanced Program



Straight drill/milling unit

ER 40 410126001-65 1:1 EC
00675000079



Straight milling unit with combination mill arbor DIN 6358

Ø 22 410222002-65 1:1 EC
00675000483

Ø 1" 410225002-65 1:1 EC
00675000483



Straight offset drill/milling unit

ER-32 QF 420132037-65 1:1 EC
0067732000

ER-32 QF 420132038-65 1:1 IC 80 bar
0067732000

ER-25 QF 420125010-65 1:2 EC
0067725001

ER-25 QF 420125011-65 1:2 IC 80 bar
0067725001



Right angle drill/milling unit, LF=100

ER 40 410526007-65 1:1 EC
00675000079

ER 40 410526008-65 1:1 IC 80 bar
00675000079



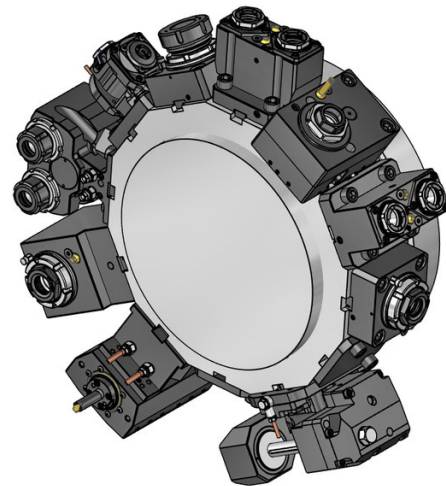
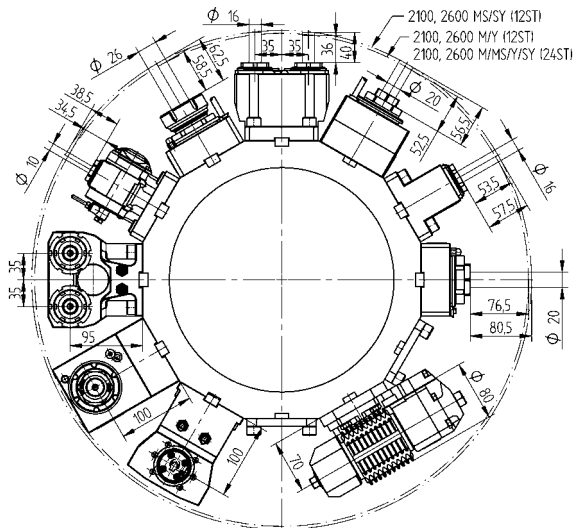
Right angle drill/milling unit, LF=100

ER-25 QF 420525012-65 1:2 EC
0067725001

ER-25 QF 420525013-65 1:2 IC 80 bar
0067725001

ER-32 QF 420532029-65 2:1 EC
0067732000

ER-32 QF 420532030-65 2:1 IC 80 bar
0067732000



Driven Toolholders - Enhanced Program



Right angle milling unit with combination mill arbor DIN 6358, LF=100

Ø 22	410622002-65	1:1	EC
	00675000483		
Ø 1"	410625002-65	1:1	EC
	00675000483		



Adjustable angle drill/milling unit

ER 16	411010002-65	1:1	EC
	00675000902		
ER 16	411010003-65	1:1	IC 80 bar
	00675000902		
ER 11	411007002-65	1:2	EC
	00675000914		
ER 11	411007003-65	1:2	IC 80 bar
	00675000914		



Gear hobbing unit

Type 16-1	411500003-65	1:1	EC
Type 16-1	411500002-65	2:1	EC
	00675000927		
	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, both sides

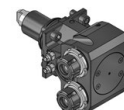
ER 25	413002001-65	1:1	EC
	00675000907		

Driven Toolholders - Enhanced Program



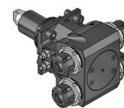
Straight drill/milling unit, double, Y axis

ER 25	413002004-65	1:1	EC
	00675000907		



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

ER 25	413502006-65	1:1	EC
	00675000915		
ER 25	413502007-65	1:1	IC 80 bar
	00675000915		



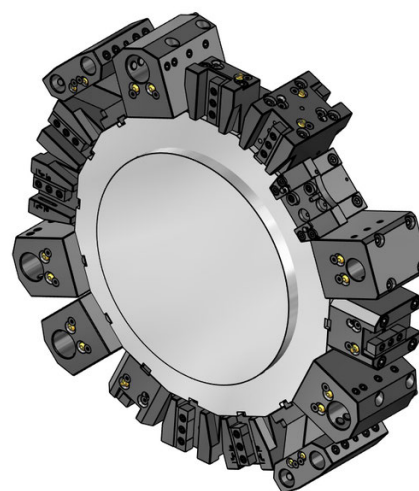
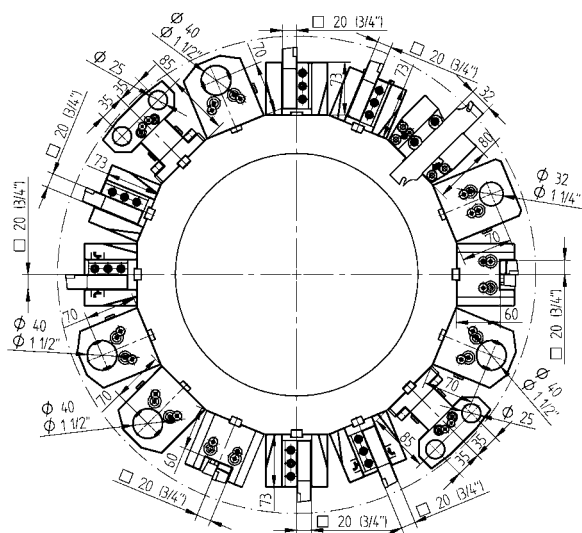
2-spindle - Right angle drill/milling unit, both sides, Y axis

ER 25	413502008-65	1:1	EC
	00675000915		



Broaching unit for ID and OD

TN765050	414532000-65	1:1	EC
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Static Toolholders - Standard Program



OD cutting holder

20	48-92036
3/4"	48-92037



OD cutting holder, HP-IC

20	48-92036-HP	IC 80 bar
3/4"	48-92037-HP	IC 80 bar



OD cutting holder, both sides

20	48-92038
3/4"	48-92039



OD cutting holder, both sides, HP-IC

20	48-92038-HP	IC 80 bar
3/4"	48-92039-HP	IC 80 bar



Face cutting holder

20	48-92045
3/4"	48-92046



Face cutting holder, HP-IC

20	48-92045-HP	IC 80 bar
3/4"	48-92046-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



Cover plate

48-87111

Static Toolholders - Enhanced Program



Cut-off holder, adjustable

SH 32	48-103287
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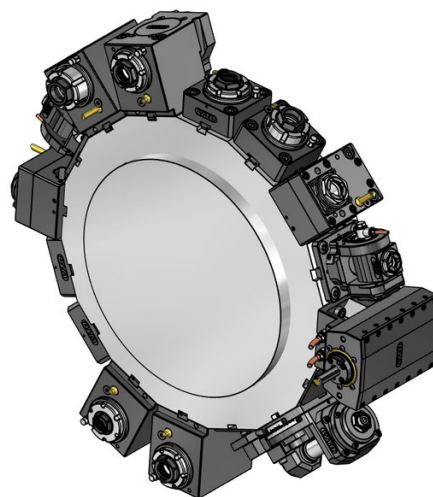
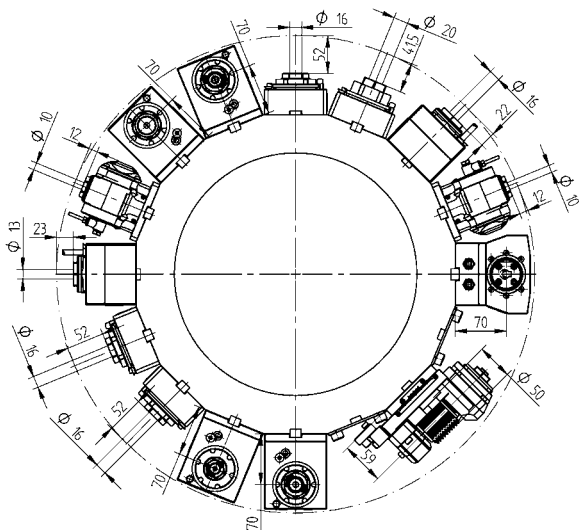
Cut-off holder, adjustable, HP-IC

SH 32	48-110160R	IC 80 bar
SH 32	48-110160L	IC 80 bar



Boring bar holder, both sides, double, Y axis, short

Ø 25	48-98353
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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		



Right angle drill/milling unit, both sides, LF=70

ER-25 QF	420525017-55	1:1	EC
	0067725000		

Driven Toolholders - Enhanced Program



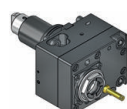
Straight drill/milling unit

ER 32	410120010-55	1:1	EC
	0067725000		
ER 32	410120011-55	1:1	IC 80 bar
	0067725000		



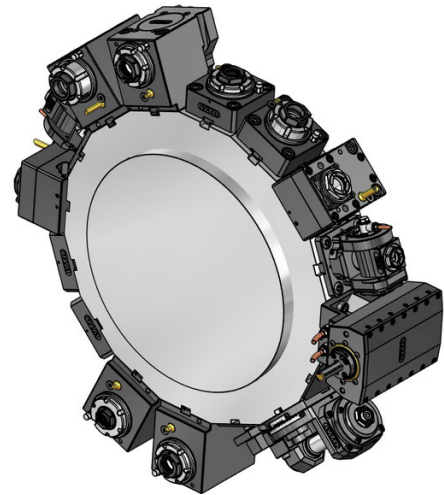
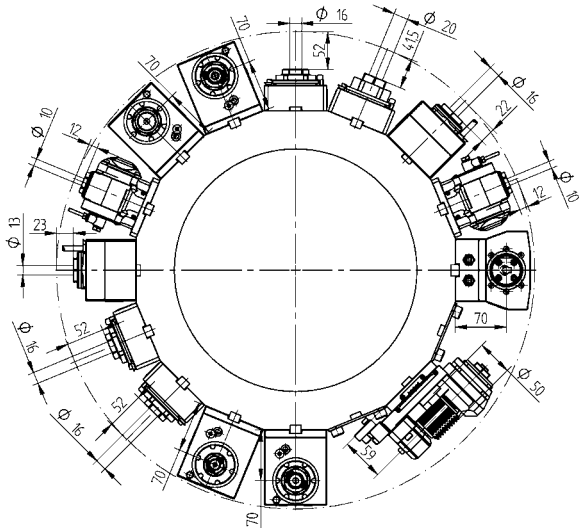
Straight milling unit with combination mill arbor DIN 6358

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		



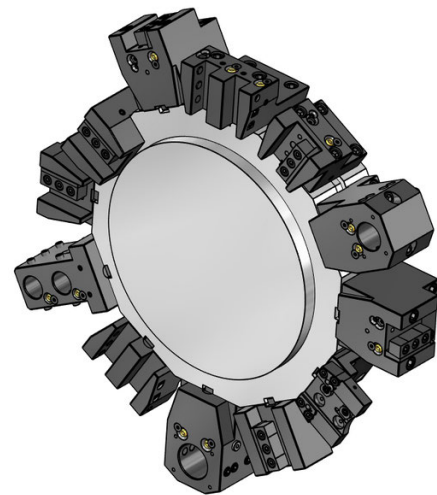
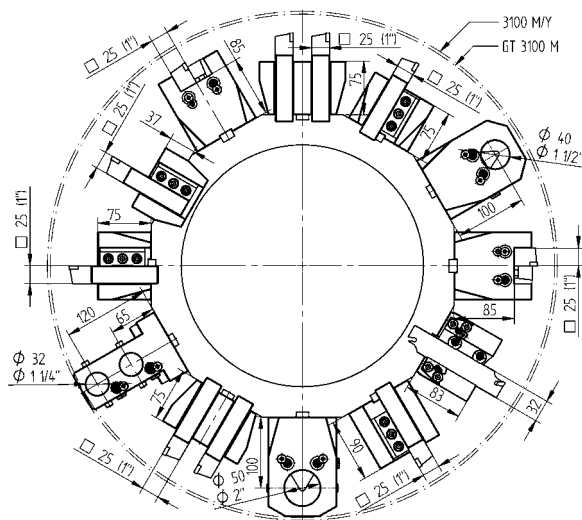
Gear hobbing unit

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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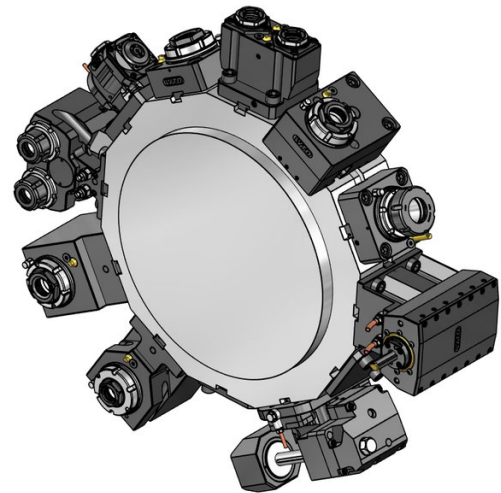
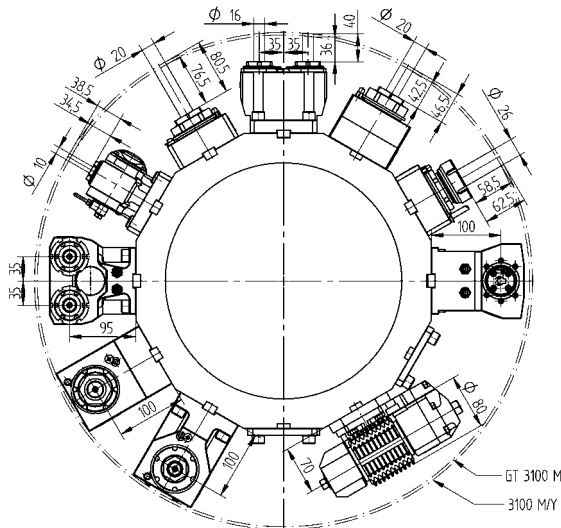


Static Toolholders - Standard Program

	OD cutting holder		
	25	48-92428	
	OD cutting holder, HP-IC		
	25	48-92428-HP	IC 80 bar
	Face cutting holder, long		
	25	48-92958	
	Combination toolholder, LF=100		
	Ø 40	48-92397	IC 80 bar
	Boring bar holder, double		
	Ø 32	48-84524	
	Cover plate		
	Ø 1 1/4"	48-86905	

Static Toolholders - Enhanced Program

	OD cutting holder, short		
	25	48-86991	
	OD cutting holder, short, HP-IC		
	25	48-86991-HP	IC 80 bar
	OD cutting holder, long		
	25	48-86711	
	OD cutting holder, double, Y axis		
	25(1")	48-86103	
	Cut-off holder, adjustable		
	SH 32	48-99060	
	Cut-off holder, adjustable, HP-IC		
	SH 32	48-102256R	IC 80 bar
	Cut-off holder, adjustable, long, HP-IC		
	SH 32	48-102256L	IC 80 bar



Driven Toolholders - QuickFlex®



Straight drill/milling unit

ER-32 QF	420132015-65	1:1	EC
	0067732000		
ER-32 QF	420132016-65	1:1	IC 80 bar
	0067732000		



Right angle drill/milling unit, LF=100

ER-32 QF	420532018-65	1:1	EC
	0067732000		
ER-32 QF	420532019-65	1:1	IC 80 bar
	0067732000		

Driven Toolholders - Enhanced Program



Straight drill/milling unit

ER 40	410126001-65	1:1	EC
	00675000079		



Straight milling unit with combination mill arbor DIN 6358

Ø 22	410222002-65	1:1	EC
	00675000483		
Ø 1"	410225002-65	1:1	EC
	00675000483		



Straight offset drill/milling unit

ER-32 QF	420132037-65	1:1	EC
	0067732000		
ER-32 QF	420132038-65	1:1	IC 80 bar
	0067732000		
ER-25 QF	420125010-65	1:2	EC
	0067725001		
ER-25 QF	420125011-65	1:2	IC 80 bar
	0067725001		



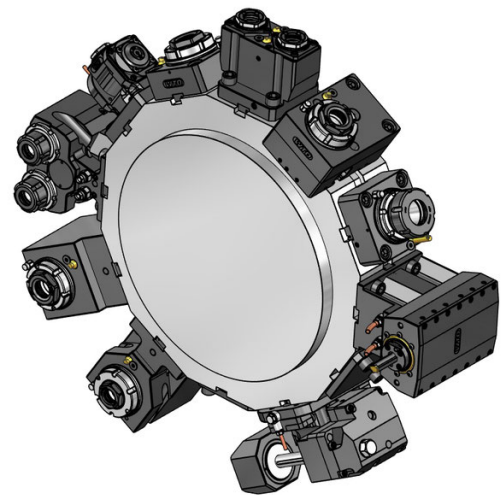
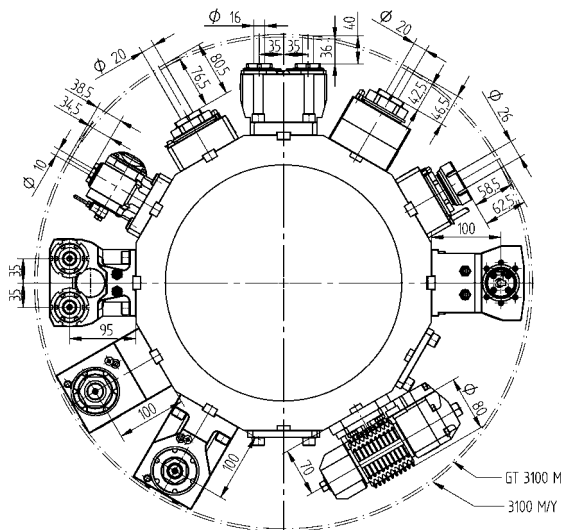
Right angle drill/milling unit, LF=100

ER 40	410526007-65	1:1	EC
	00675000079		
ER 40	410526008-65	1:1	IC 80 bar
	00675000079		



Right angle drill/milling unit, LF=100

ER-25 QF	420525012-65	1:2	EC
	0067725001		
ER-25 QF	420525013-65	1:2	IC 80 bar
	0067725001		
ER-32 QF	420532029-65	2:1	EC
	0067732000		
ER-32 QF	420532030-65	2:1	IC 80 bar
	0067732000		



Driven Toolholders - Enhanced Program



Right angle milling unit with combination mill arbor DIN 6358, LF=100

Ø 22	410622002-65	1:1	EC
	00675000483		
Ø 1"	410625002-65	1:1	EC
	00675000483		



Adjustable angle drill/milling unit

ER 16	411010002-65	1:1	EC
	00675000902		
ER 16	411010003-65	1:1	IC 80 bar
	00675000902		
ER 11	411007002-65	1:2	EC
	00675000914		
ER 11	411007003-65	1:2	IC 80 bar
	00675000914		



Gear hobbing unit

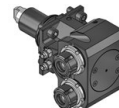
Type 16-1	411500003-65	1:1	EC
Type 16-1	411500002-65	2:1	EC
	00675000927		
	160016161 Ø 16		
	160022161 Ø 22		
	160027161 Ø 27		
	160015161 Ø 5/8"		
	160019161 Ø 3/4"		
	160025161 Ø 1"		
	160031161 Ø 1 1/4"		
	110587		



Straight drill/milling unit, double, Y axis

ER 25	413002004-65	1:1	EC
	00675000907		

Driven Toolholders - Enhanced Program



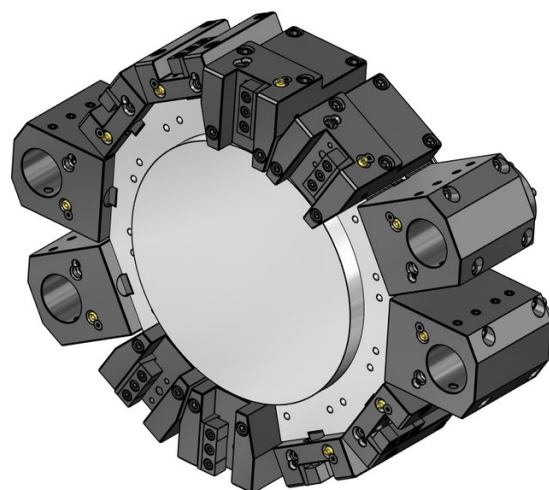
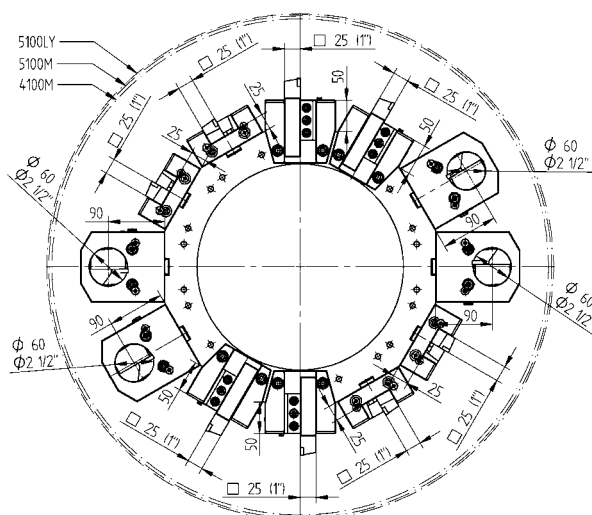
2-spindle - Right angle drill/milling unit, Y axis

ER 25	413502006-65	1:1	EC
	00675000915		
ER 25	413502007-65	1:1	IC 80 bar
	00675000915		



Broaching unit for ID and OD

TN765050	414532000-65	1:1	EC
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Static Toolholders - Standard Program



OD cutting holder

25	48-96421
1"	48-96422



Face cutting holder

25	48-96355
1"	48-96357



Combination toolholder, LF=90

Ø 60	48-104448	IC 80 bar
Ø 2 1/2"	48-104449	IC 80 bar

Static Toolholders - Enhanced Program



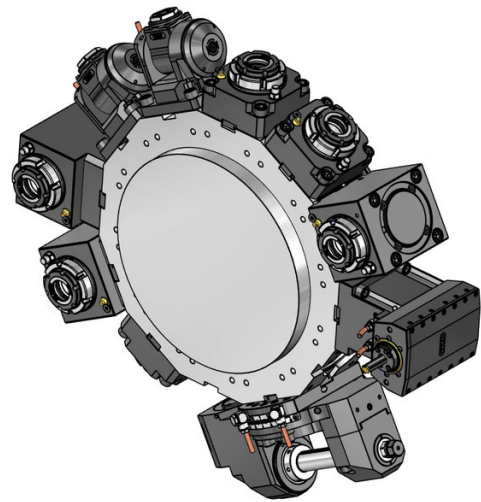
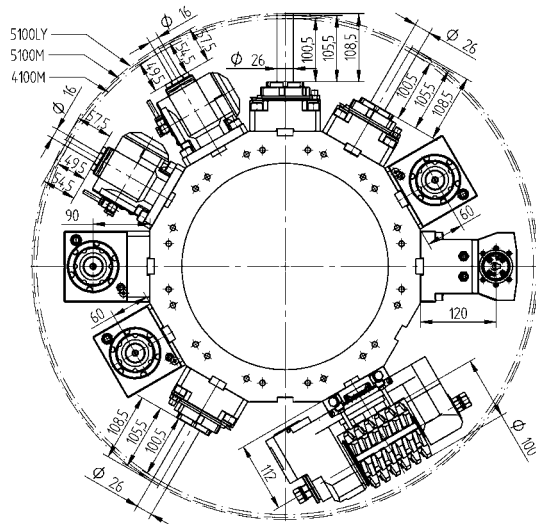
OD cutting holder, double, Y axis

25(1")	48-112317
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VDI adapter, right, LF=110

VDI 50	48-112600
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Driven Toolholders - QuickFlex®



OD drill/milling unit

ER-40 QF	420140015-75	1:1	EC
	0067740000		
ER-40 QF	420140016-75	1:1	IC 80 bar
	0067740000		



Face drill/milling unit, LF=60

ER-40 QF	420540015-75	1:1	EC
	0067740000		
ER-40 QF	420540016-75	1:1	IC 80 bar
	0067740000		



Face drill/milling unit, LF=90

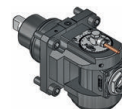
ER-40 QF	420540017-75	1:1	EC
	0067740000		
ER-40 QF	420540018-75	1:1	IC 80 bar
	0067740000		

Driven Toolholders - Enhanced Program



Face drill/milling unit, LF=60

ER-32 QF	420532010-75	1:2	EC
	0067732001		
ER-32 QF	420532011-75	1:2	IC 80 bar
	0067732001		
ER-40 QF	420540021-75	2:1	EC
	0067740000		
ER-40 QF	420540022-75	2:1	IC 80 bar
	0067740000		



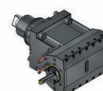
Adjustable angle drill/milling unit

ER 25	411016000-75	1:1	EC
	00675000934		
ER 25	411016001-75	1:1	IC 80 bar
	00675000934		
ER 16	411010002-75	1:2	EC
	00675000936		
ER 16	411010003-75	1:2	IC 80 bar
	00675000936		



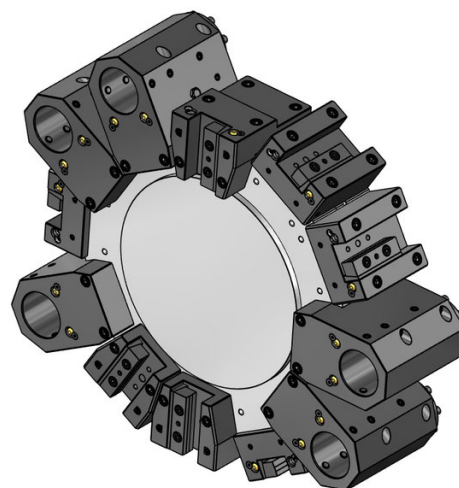
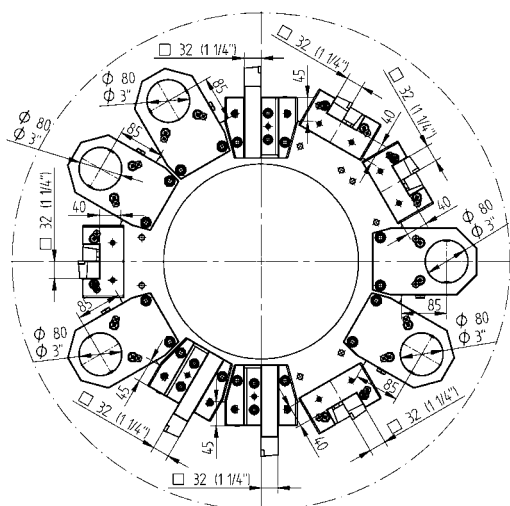
Gear hobbing unit

Type C5-1	410900001-75	2:1	EC
	00675001008		
	160022C51 Ø 22		
	160027C51 Ø 27		
	160032C51 Ø 32		
	160015C51 Ø 5/8"		
	160019C51 Ø 3/4"		
	160025C51 Ø 1"		
	160031C51 Ø 1 1/4"		



Broaching unit for ID and OD

TN765050	414532000-75	1:1	EC
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Static Toolholders - Standard Program



OD cutting holder

32	48-95667
1 1/4"	48-95668



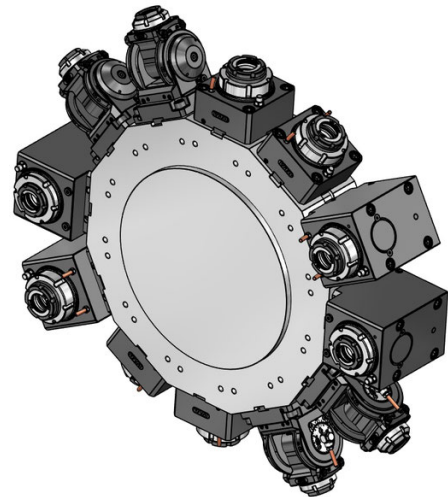
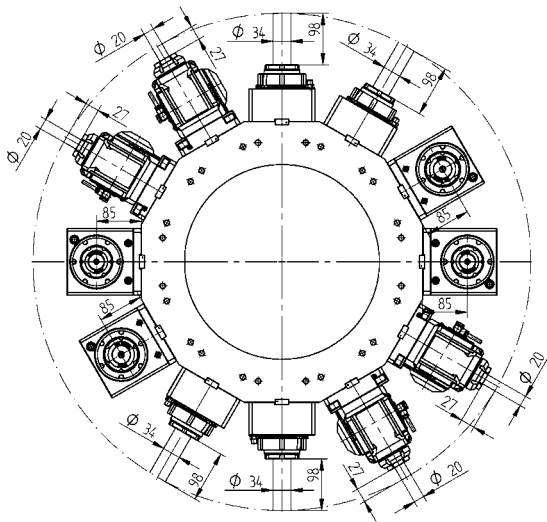
Face cutting holder

32	48-95669
1 1/4"	48-95670



Combination toolholder

Ø 80	48-95671	IC 80 bar
Ø 3"	48-95672	IC 80 bar



Driven Toolholders - QuickFlex®



OD drill/milling unit

ER-50 QF	420150015-85	1:1	EC
	0067750000		
ER-50 QF	420150016-85	1:1	IC 80 bar
	0067750000		



Face drill/milling unit, LF=85

ER-50 QF	420550015-85	1:1	EC
	0067750000		
ER-50 QF	420550016-85	1:1	IC 80 bar
	0067750000		

Driven Toolholders - Enhanced Program



Face drill/milling unit, LF=85

ER-40 QF	420540015-85	1:2	EC
	0067740001		
ER-40 QF	420540016-85	1:2	IC 80 bar
	0067740001		



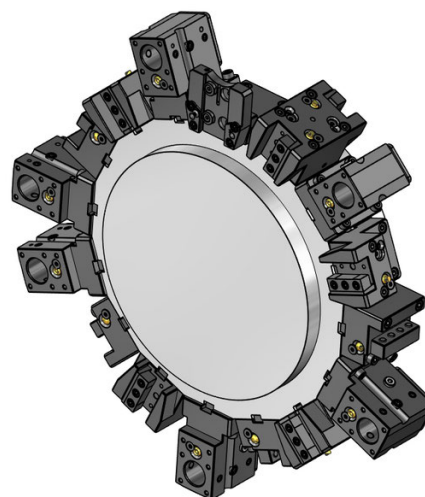
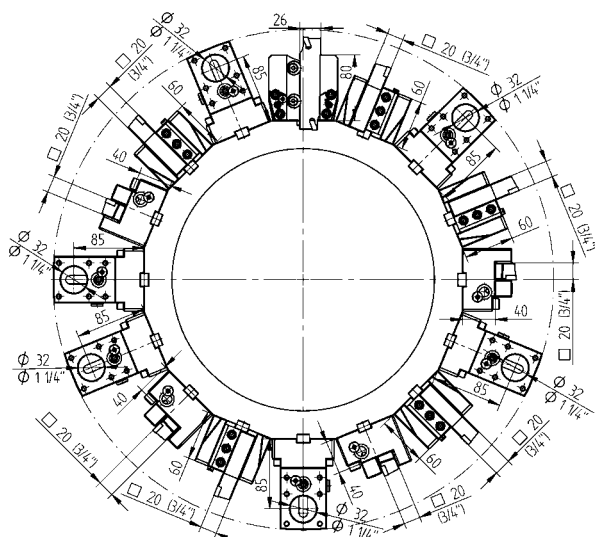
Adjustable angle drill/milling unit

ER-32 QF	421032010-85	1:1	EC
	00675000976		
ER-32 QF	421032011-85	1:1	IC 80 bar
	00675000976		

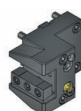


Gear hobbing unit

Type C5-1	410900000-85	2:1	EC
	00675001008		
	160022C51 Ø 22		
	160027C51 Ø 27		
	160032C51 Ø 32		
	160019C51 Ø 3/4"		
	160025C51 Ø 1"		
	160031C51 Ø 1 1/4"		

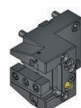


Static Toolholders - Standard Program



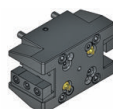
OD cutting holder

20	48-95083
3/4"	48-95084



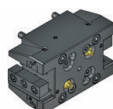
OD cutting holder, HP-IC

20	48-100605-HP	IC 80 bar
25	48-104395-HP	IC 80 bar
3/4"	48-108926-HP	IC 80 bar
1"	48-104396-HP	IC 80 bar



OD cutting holder, both sides

20	48-95085
3/4"	48-95086



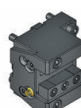
OD cutting holder, both sides, HP-IC

20	48-95085-HP	IC 80 bar
3/4"	48-95086-HP	IC 80 bar



Face cutting holder

20	48-109148
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Face cutting holder

3/4"	48-95338
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Face cutting holder, HP-IC

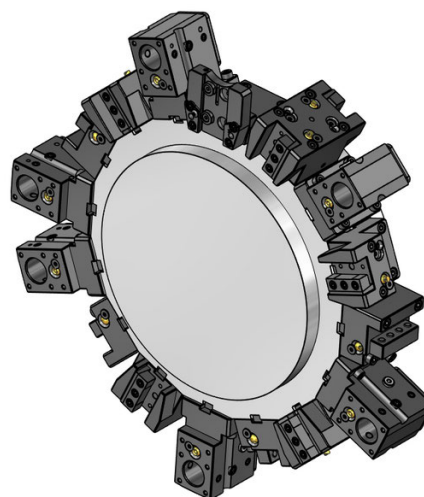
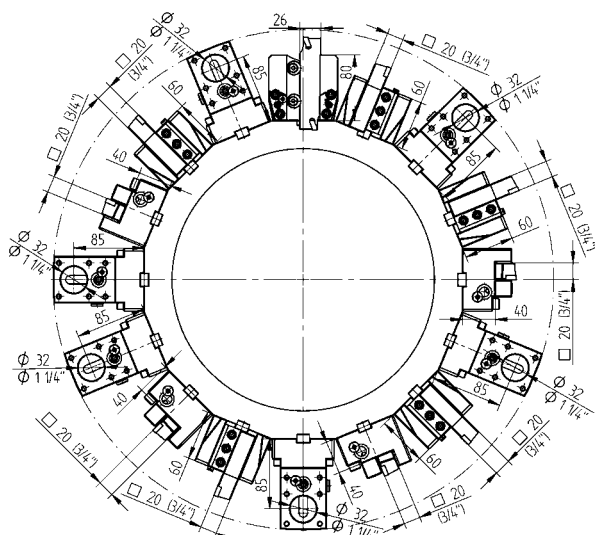
20	48-109148-HP	IC 80 bar
25	48-104397-HP	IC 80 bar
3/4"	48-109149-HP	IC 80 bar
1"	48-104398-HP	IC 80 bar

Static Toolholders - Standard Program



Combination toolholder, universal, LF=85

Ø 32	48-95998	IC 80 bar
	241132016 ER25	
	241132020 ER32	
Ø 1 1/4"	48-96029	IC 80 bar
	2411125020 ER32	



Static Toolholders - Enhanced Program



Cut-off holder, adjustable

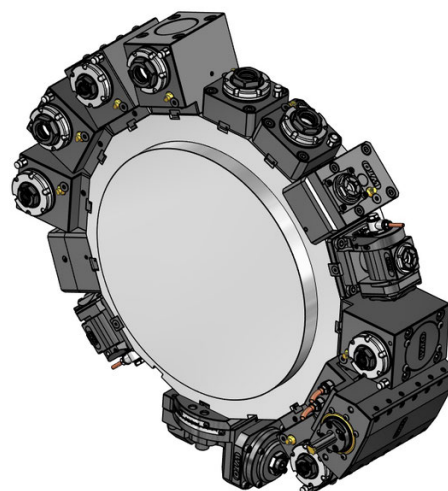
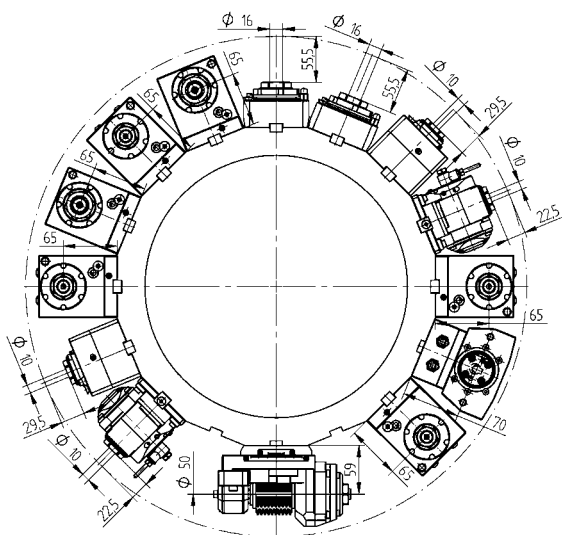
SH 26 48-94968



Cut-off holder, adjustable, HP-IC

SH 26 48-102252R IC 80 bar

SH 26 48-102252L IC 80 bar



Driven Toolholders - QuickFlex®



Straight drill/milling unit

ER-25 QF	420125015-45	1:1	EC
	0067725000		
ER-25 QF	420125016-45	1:1	IC 80 bar
	0067725000		



Right angle drill/milling unit

ER-25 QF	420525015-45	1:1	EC
	0067725000		
ER-25 QF	420525016-45	1:1	IC 80 bar
	0067725000		

Driven Toolholders - Enhanced Program



Straight offset drill/milling unit

ER 16	410410008-45	1:3	EC
	00675000937		
ER 16	410410002-45	1:3	IC 80 bar
	00675000937		



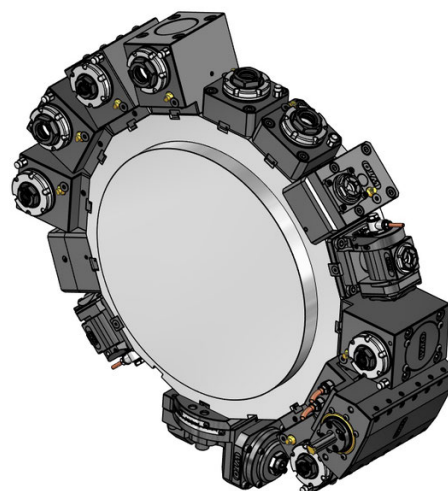
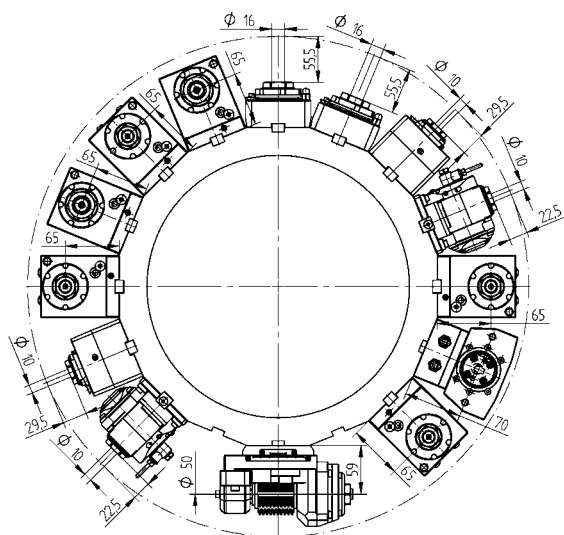
Right angle drill/milling unit

ER-20 QF	420520018-45	1:2	EC
	0067720001		
ER-20 QF	420520019-45	1:2	IC 80 bar
	0067720001		
ER-25 QF	420525020-45	2:1	EC
	0067725000		
ER-25 QF	420525021-45	2:1	IC 80 bar
	0067725000		



Adjustable angle drill/milling unit

ER 16	411010002-45	1:1	EC
	00675000902		
ER 16	411010003-45	1:1	IC 80 bar
	00675000902		
ER 11	411007004-45	1:2	EC
	00675000914		
ER 11	411007005-45	1:2	IC 80 bar
	00675000914		



Driven Toolholders - Enhanced Program



Gear hobbing unit

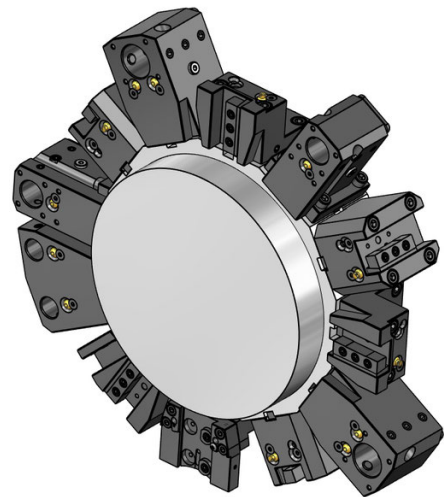
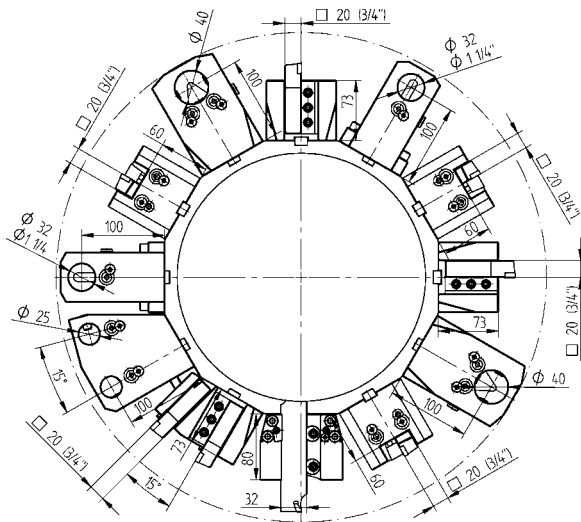
Type 15-2 410900001-45 1:1 EC

-  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

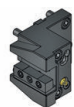


Broaching unit for ID and OD

TN765050 414532000-45 1:1 EC



Static Toolholders - Standard Program



OD cutting holder

20 48-92036
3/4" 48-92037



OD cutting holder, HP-IC

20 48-92036-HP IC 80 bar
3/4" 48-92037-HP IC 80 bar



OD cutting holder, both sides

20 48-92038
3/4" 48-92039



OD cutting holder, both sides, HP-IC

20 48-92038-HP IC 80 bar
3/4" 48-92039-HP IC 80 bar



Face cutting holder

20 48-92045
3/4" 48-92046



Face cutting holder, HP-IC

20 48-92045-HP IC 80 bar
3/4" 48-92046-HP IC 80 bar



Combination toolholder, universal, LF=100

Ø 32 48-92043 IC 80 bar
241132016 ER25
241132020 ER32
Ø 1 1/4" 48-92044 IC 80 bar
241125020 ER32



Combination toolholder, universal, LF=100

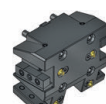
Ø 40 48-103474 IC 80 bar
241140020 ER32
241140026 ER40

Static Toolholders - Enhanced Program



OD cutting holder, double, 24 station

20 48-87674



OD cutting holder, both sides, double, 24 station

20 48-92980



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



Cut-off holder, adjustable, long

SH 32 48-103288



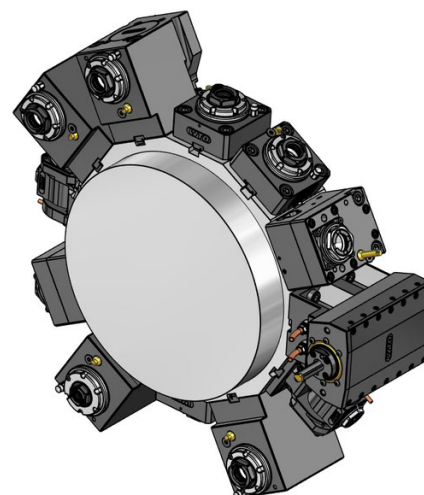
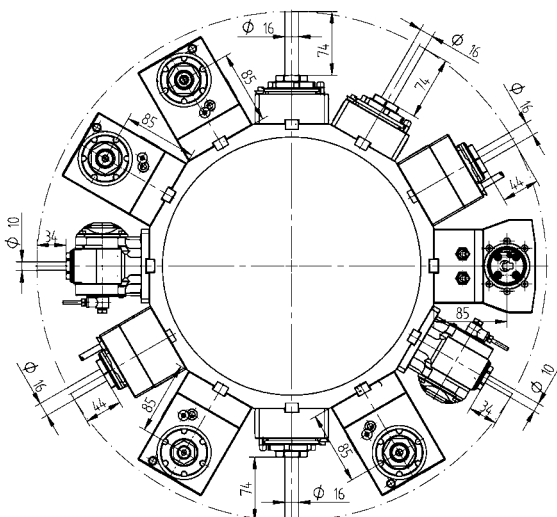
Cut-off holder, adjustable, long, HP-IC

SH 32 48-111142R IC 80 bar
343-810100R90
SH 32 48-111142L IC 80 bar
343-810100L90



Boring bar holder, double, 24 station

Ø 25 48-87678



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=85

ER-25 QF	420525018-55	1:1	EC
	0067725000		
ER-25 QF	420525019-55	1:1	IC 80 bar
	0067725000		



Right angle drill/milling unit, both sides, LF=85

ER-25 QF	420525020-55	1:1	EC
	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		



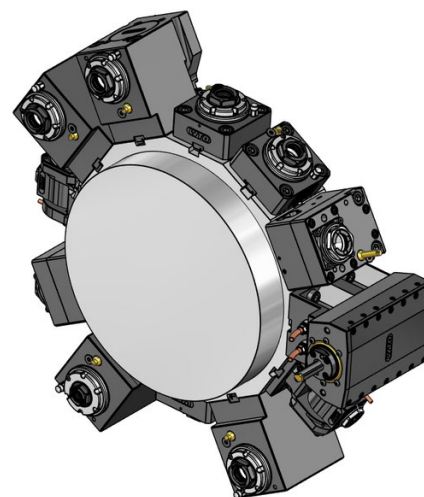
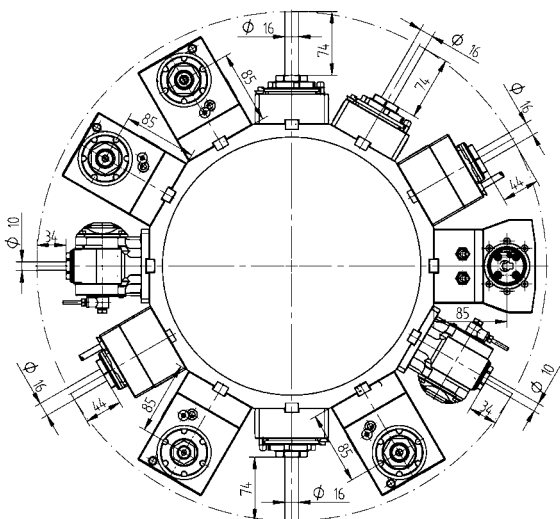
Straight milling unit with combination mill arbor DIN 6358

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=85

ER 32	410520030-55	1:1	EC
	0067725000		
ER 32	410520031-55	1:1	IC 80 bar
	0067725000		
ER-20 QF	420520014-55	1:2	EC
	0067720001		
ER-20 QF	420520015-55	1:2	IC 80 bar
	0067720001		
ER 16	410810020-55	1:3	EC
	00675000841		
ER 16	410810021-55	1:3	IC 80 bar
	00675000841		
ER-25 QF	420525032-55	2:1	EC
	0067725000		
ER-25 QF	420525033-55	2:1	IC 80 bar
	0067725000		



Right angle milling unit with combination mill arbor DIN 6358, LF=85

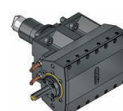
Ø 22	410622011-55	1:1	EC
	00675000483		
Ø 3/4"	410619006-55	1:1	EC
	00675000483		



Adjustable angle drill/milling unit

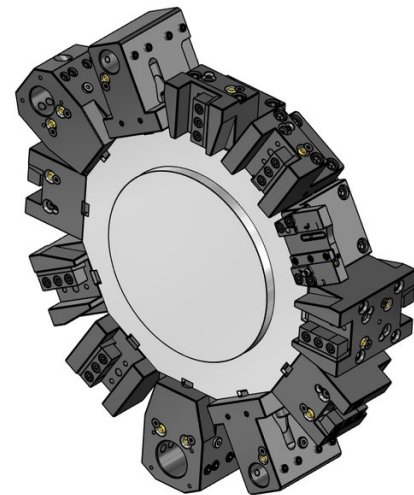
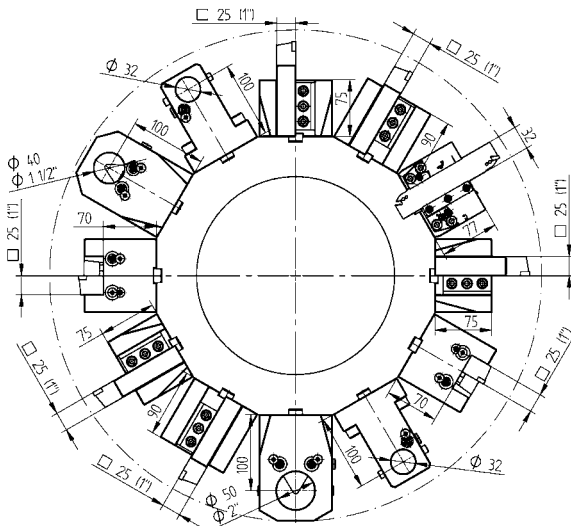
ER 16	411010005-55	1:1	EC
	00675000902		
ER 16	411010006-55	1:1	IC 80 bar
	00675000902		
ER 11	411007007-55	1:2	EC
	00675000914		
ER 11	411007008-55	1:2	IC 80 bar
	00675000914		

Driven Toolholders - Enhanced Program



Broaching unit for ID and OD

TN765050	414532000-55	1:1	EC
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Static Toolholders - Standard Program



OD cutting holder

25	48-92428
1"	48-92466



OD cutting holder, HP-IC

25	48-92428-HP	IC 80 bar
1"	48-92466-HP	IC 80 bar



OD cutting holder, long

25	48-86711
1"	48-86712



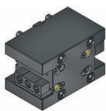
OD cutting holder, both sides

25	48-92438
1"	48-92472



OD cutting holder, both sides, HP-IC

25	48-92438-HP	IC 80 bar
1"	48-92472-HP	IC 80 bar



OD cutting holder, both sides, long

25	48-84523
1"	48-86718



Face cutting holder

25	48-86719
1"	48-86720



Face cutting holder, HP-IC

25	48-109249-HP	IC 80 bar
1"	48-109250-HP	IC 80 bar

Static Toolholders - Standard Program



Combination toolholder, LF=100

Ø 40	48-92397	IC 80 bar
	241140020 ER32	
	241140026 ER40	
Ø 50	48-92467	IC 80 bar
Ø 1 1/2"	48-92468	IC 80 bar
	2411150020 ER32	
Ø 2"	48-92469	IC 80 bar



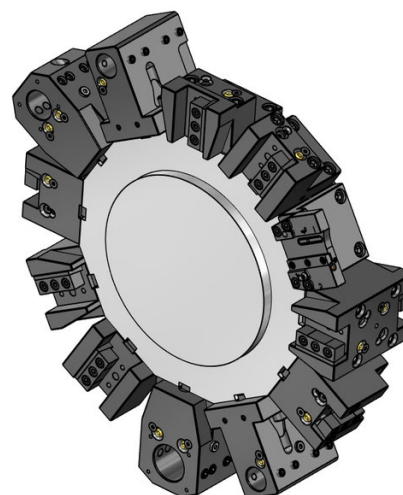
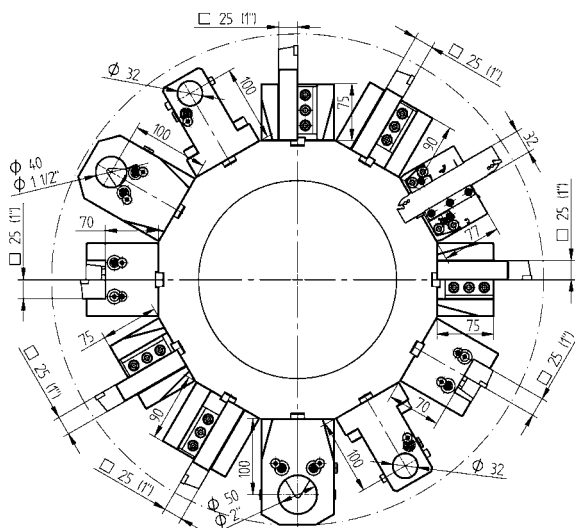
Boring bar holder, both sides

Ø 32	48-101033
Ø 1 1/4"	48-113514



Cover plate

48-87089



Static Toolholders - Enhanced Program



Cut-off holder, adjustable

SH 32 48-99060



Cut-off holder, adjustable, long

SH 32 48-100084



Cut-off holder, adjustable, HP-IC

SH 32 48-102256R IC 80 bar

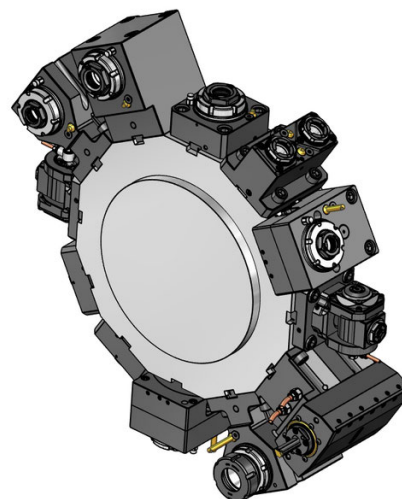
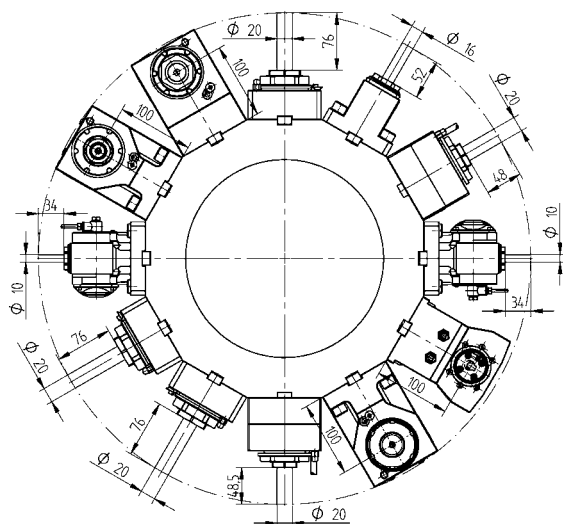
SH 32 48-102256L IC 80 bar



Cut-off holder, adjustable, long, HP-IC

SH 32 48-100082R IC 80 bar

SH 32 48-100082L IC 80 bar



Driven Toolholders - QuickFlex®



Straight drill/milling unit

ER-32 QF 420132015-65 1:1 EC
0067732000

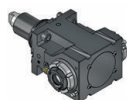
ER-32 QF 420132016-65 1:1 IC 80 bar
0067732000



Right angle drill/milling unit, LF=100

ER-32 QF 420532018-65 1:1 EC
0067732000

ER-32 QF 420532019-65 1:1 IC 80 bar
0067732000



Right angle drill/milling unit, both sides, LF=100

ER-32 QF 420532020-65 1:1 EC
0067732000

Driven Toolholders - Enhanced Program



Straight drill/milling unit

ER 40 410126001-65 1:1 EC
00675000079



Straight milling unit with combination mill arbor DIN 6358

Ø 22 410222002-65 1:1 EC
00675000483

Ø 1" 410225002-65 1:1 EC
00675000483



Straight offset drill/milling unit

ER-32 QF 420132037-65 1:1 EC
0067732000

ER-32 QF 420132038-65 1:1 IC 80 bar
0067732000

ER-25 QF 420125010-65 1:2 EC
0067725001

ER-25 QF 420125011-65 1:2 IC 80 bar
0067725001



Right angle drill/milling unit, LF=100

ER 40 410526007-65 1:1 EC
00675000079

ER 40 410526008-65 1:1 IC 80 bar
00675000079



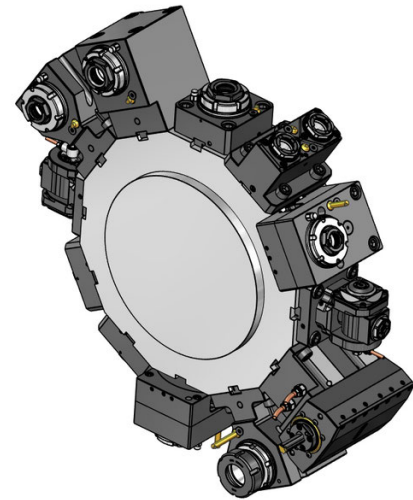
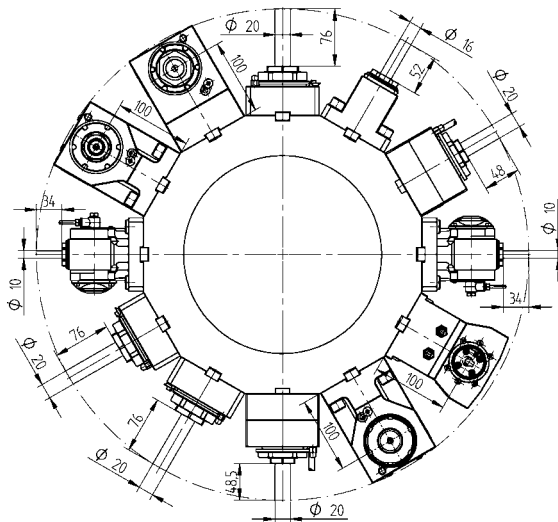
Right angle drill/milling unit, LF=100

ER-25 QF 420525012-65 1:2 EC
0067725001

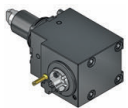
ER-25 QF 420525013-65 1:2 IC 80 bar
0067725001

ER-32 QF 420532029-65 2:1 EC
0067732000

ER-32 QF 420532030-65 2:1 IC 80 bar
0067732000



Driven Toolholders - Enhanced Program



Right angle milling unit with combination mill arbor DIN 6358, LF=100

Ø 22	410622002-65	1:1	EC
	00675000483		
Ø 1"	410625002-65	1:1	EC
	00675000483		



Adjustable angle drill/milling unit

ER 16	411010002-65	1:1	EC
	00675000902		
ER 16	411010003-65	1:1	IC 80 bar
	00675000902		
ER 11	411007002-65	1:2	EC
	00675000914		
ER 11	411007003-65	1:2	IC 80 bar
	00675000914		



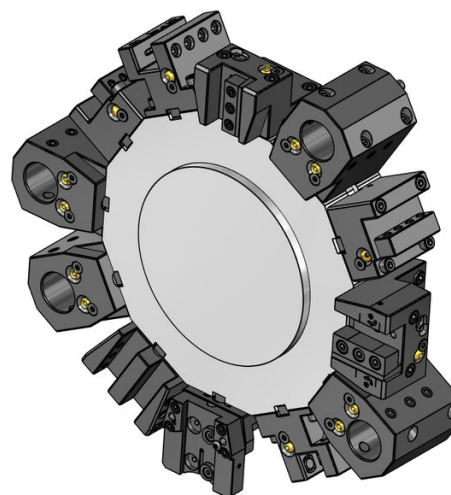
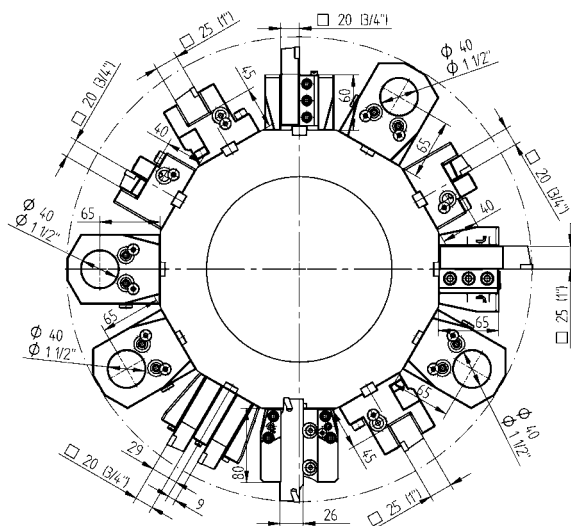
Straight drill/milling unit, both sides

ER 25	413002001-65	1:1	EC
	00675000907		



Broaching unit for ID and OD

TN765050	414532000-65	1:1	EC
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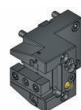


Static Toolholders - Standard Program



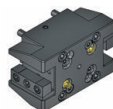
OD cutting holder

20	48-95083
3/4"	48-95084



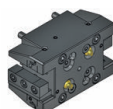
OD cutting holder, HP-IC

20	48-100605-HP	IC 80 bar
25	48-104395-HP	IC 80 bar
3/4"	48-108926-HP	IC 80 bar
1"	48-104396-HP	IC 80 bar



OD cutting holder, both sides

20	48-95085
3/4"	48-95086



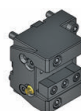
OD cutting holder, both sides, HP-IC

20	48-95085-HP	IC 80 bar
3/4"	48-95086-HP	IC 80 bar



Face cutting holder

20	48-109148
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Face cutting holder

3/4"	48-95338
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Face cutting holder, HP-IC

20	48-109148-HP	IC 80 bar
25	48-104397-HP	IC 80 bar
3/4"	48-109149-HP	IC 80 bar
1"	48-104398-HP	IC 80 bar



Combination toolholder, LF=65

Ø 40	48-95090	IC 80 bar
Ø 1 1/2"	48-95327	IC 80 bar

Static Toolholders - Enhanced Program



OD cutting holder, both sides, double, Y axis

20 (3/4")	48-110811
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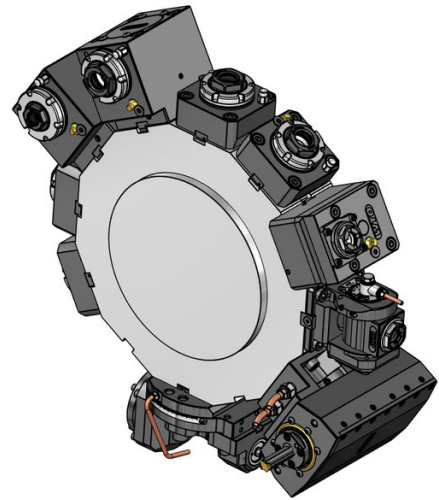
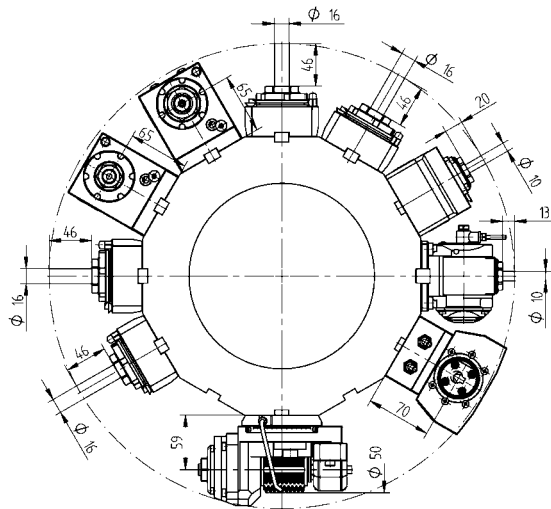
Cut-off holder, adjustable

SH 26	48-94968
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Cut-off holder, adjustable, HP-IC

SH 26	48-102252R	IC 80 bar
SH 26	48-102252L	IC 80 bar



Driven Toolholders - QuickFlex®



Straight drill/milling unit

ER-25 QF	420125015-45	1:1	EC
	0067725000		
ER-25 QF	420125016-45	1:1	IC 80 bar
	0067725000		



Straight drill/milling unit (12000 RPM)

ER-25 QF	420125019-45	1:1	EC
	0067725000		
ER-25 QF	420125020-45	1:1	IC 80 bar
	0067725000		



Right angle drill/milling unit

ER-25 QF	420525015-45	1:1	EC
	0067725000		
ER-25 QF	420525016-45	1:1	IC 80 bar
	0067725000		



Right angle drill/milling unit (12000 RPM)

ER-25 QF	420525038-45	1:1	EC
	0067725000		
ER-25 QF	420525039-45	1:1	IC 80 bar
	0067725000		

Driven Toolholders - Enhanced Program



Straight offset drill/milling unit

ER 16	410410008-45	1:3	EC
	00675000937		
ER 16	410410002-45	1:3	IC 80 bar
	00675000937		



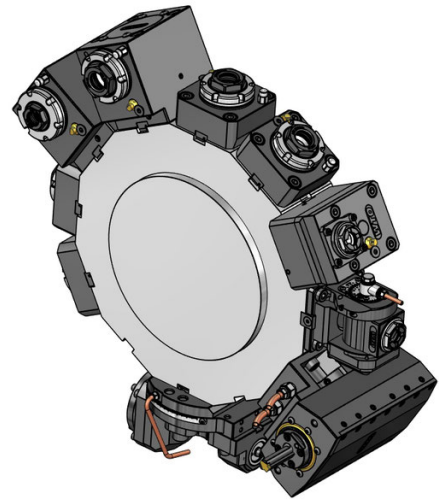
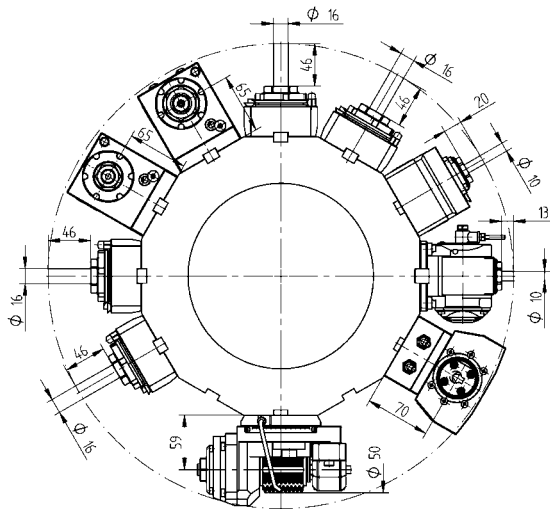
Right angle drill/milling unit

ER-20 QF	420520018-45	1:2	EC
	0067720001		
ER-20 QF	420520019-45	1:2	IC 80 bar
	0067720001		
ER-25 QF	420525020-45	2:1	EC
	0067725000		
ER-25 QF	420525021-45	2:1	IC 80 bar
	0067725000		



Adjustable angle drill/milling unit

ER 16	411010002-45	1:1	EC
	00675000902		
ER 16	411010003-45	1:1	IC 80 bar
	00675000902		
ER 11	411007004-45	1:2	EC
	00675000914		
ER 11	411007005-45	1:2	IC 80 bar
	00675000914		



Driven Toolholders - Enhanced Program



Gear hobbing unit

Type 15-2 410900001-45 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



Straight drill/milling unit, double, Y axis

ER 20 413002006-45 1:1 EC

-  00675000947

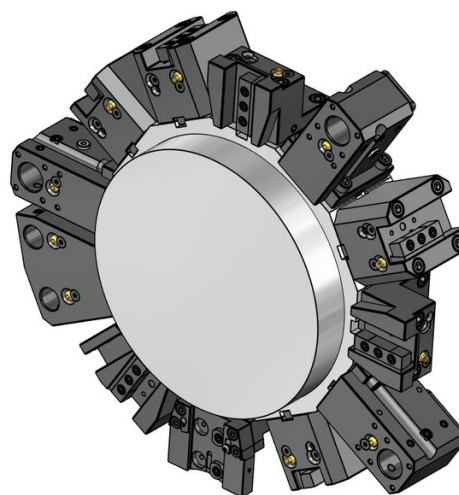
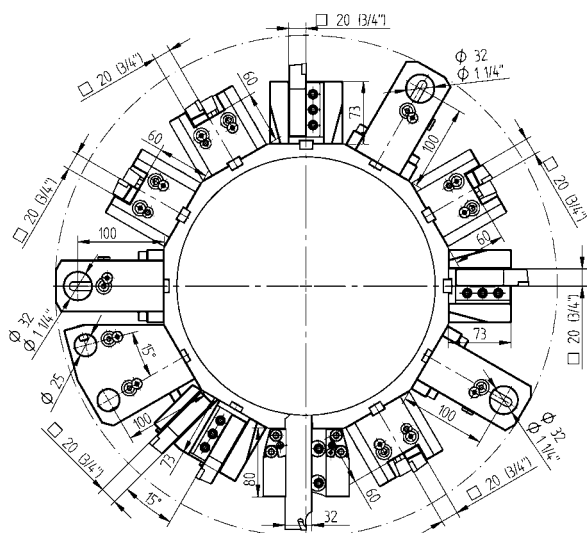
ER 20 413002008-45 1:1 IC 80 bar

-  00675000947

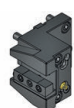


Broaching unit for ID and OD

TN765050 414532000-45 1:1 EC

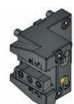


Static Toolholders - Standard Program



OD cutting holder

20 48-92036
3/4" 48-92037



OD cutting holder, HP-IC

20 48-92036-HP IC 80 bar
3/4" 48-92037-HP IC 80 bar



OD cutting holder, both sides

20 48-92038
3/4" 48-92039



OD cutting holder, both sides, HP-IC

20 48-92038-HP IC 80 bar
3/4" 48-92039-HP IC 80 bar



Face cutting holder

20 48-92045
3/4" 48-92046



Face cutting holder, HP-IC

20 48-92045-HP IC 80 bar
3/4" 48-92046-HP IC 80 bar



Combination toolholder, universal, LF=100

Ø 32 48-92043 IC 80 bar
241132016 ER25
241132020 ER32
Ø 1 1/4" 48-92044 IC 80 bar
241125020 ER32



Cover plate

48-87111

Static Toolholders - Enhanced Program



OD cutting holder, double, 24 station

20 48-87674



OD cutting holder, both sides, double, 24 station

20 48-92980



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



Cut-off holder, adjustable, long

SH 32 48-103288



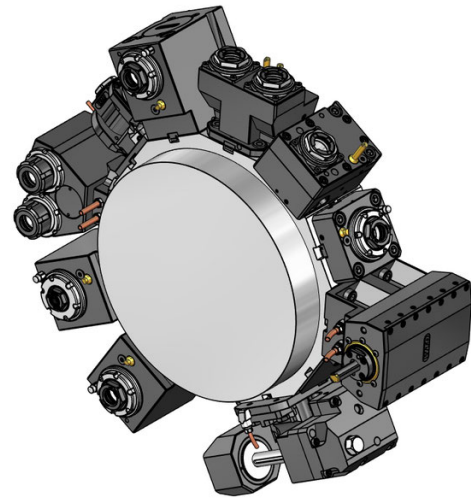
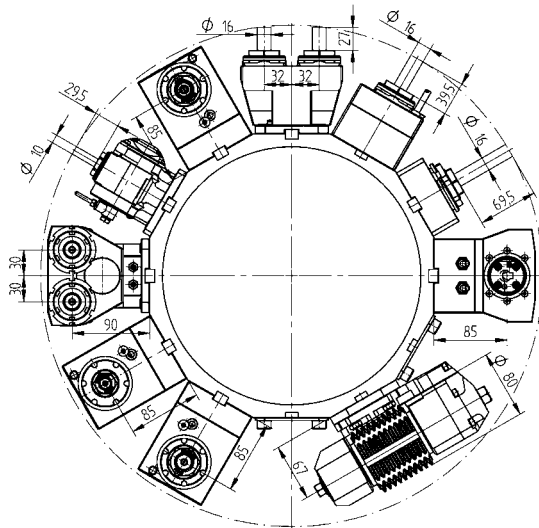
Cut-off holder, adjustable, long, HP-IC

SH 32 48-111142R IC 80 bar
343-810100R90
SH 32 48-111142L IC 80 bar
343-810100L90



Boring bar holder, double, 24 station

Ø 25 48-87678



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=85

ER-25 QF	420525018-55	1:1	EC
	0067725000		
ER-25 QF	420525019-55	1:1	IC 80 bar
	0067725000		



Right angle drill/milling unit, both sides, LF=85

ER-25 QF	420525020-55	1:1	EC
	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		



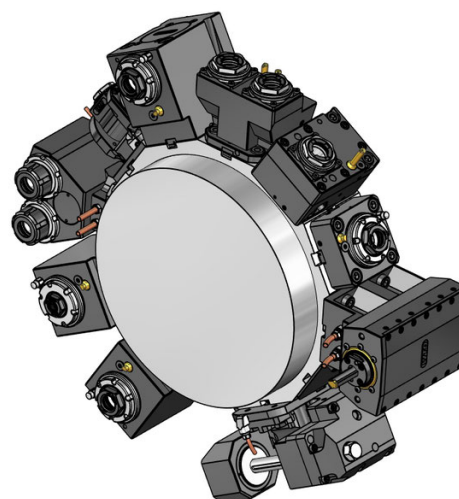
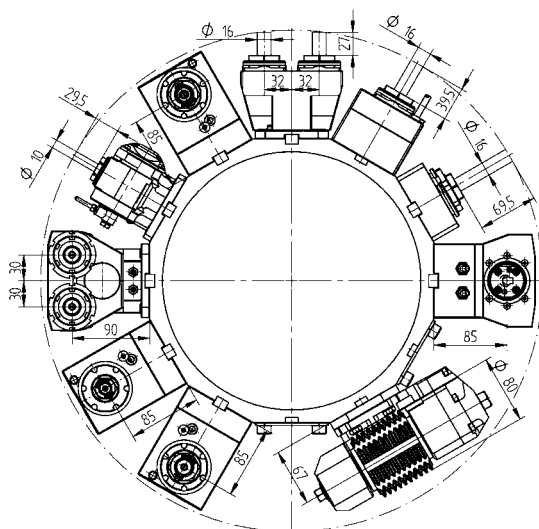
Straight milling unit with combination mill arbor DIN 6358

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=85**

ER 32	410520030-55	1:1	EC
	0067725000		
ER 32	410520031-55	1:1	IC 80 bar
	0067725000		
ER-20 QF	420520014-55	1:2	EC
	0067720001		
ER-20 QF	420520015-55	1:2	IC 80 bar
	0067720001		
ER 16	410810020-55	1:3	EC
	00675000841		
ER 16	410810021-55	1:3	IC 80 bar
	00675000841		
ER-25 QF	420525032-55	2:1	EC
	0067725000		
ER-25 QF	420525033-55	2:1	IC 80 bar
	0067725000		

**Right angle milling unit with combination mill arbor DIN 6358, LF=85**

Ø 22	410622011-55	1:1	EC
	00675000483		
Ø 3/4"	410619006-55	1:1	EC
	00675000483		

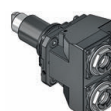
**Adjustable angle drill/milling unit**

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		

Driven Toolholders - Enhanced Program

**Gear hobbing unit**

Type 16-1	411500002-55	1:1	EC
Type 16-1	411500001-55	2:1	EC
	00675000927		
	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**

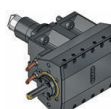
ER 25	413002004-55	1:1	EC
	00675000970		
ER 25	413002003-55	1:1	IC 80 bar
	00675000970		

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

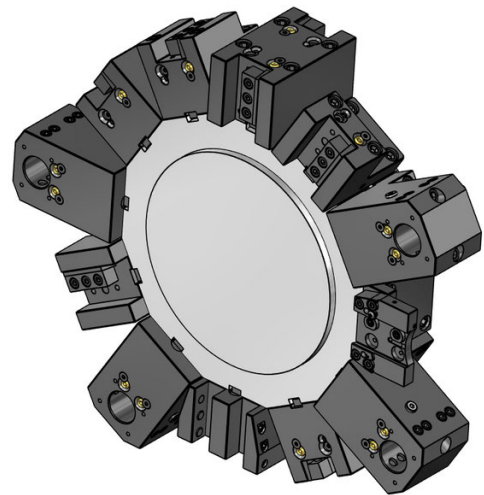
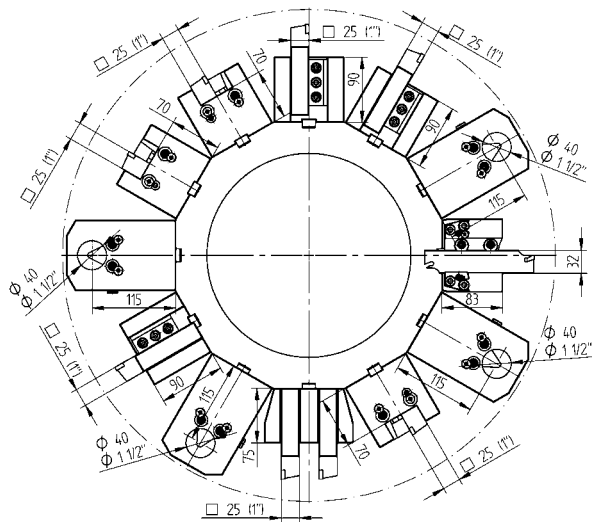
ER 25	413502007-55	1:1	EC
	00675000915		
ER 25	413502008-55	1:1	IC 80 bar
	00675000915		

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

ER 25	413502006-55	1:1	EC
	00675000915		

**Broaching unit for ID and OD**

TN765050	414532000-55	1:1	EC
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Static Toolholders - Standard Program



OD cutting holder

25	48-92428
1"	48-92466



OD cutting holder, HP-IC

25	48-92428-HP	IC 80 bar
1"	48-92466-HP	IC 80 bar



OD cutting holder, long

25	48-86711
1"	48-86712



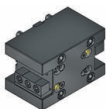
OD cutting holder, both sides

25	48-92438
1"	48-92472



OD cutting holder, both sides, HP-IC

25	48-92438-HP	IC 80 bar
1"	48-92472-HP	IC 80 bar



OD cutting holder, both sides, long

25	48-84523
1"	48-86718



Face cutting holder

25	48-86719
1"	48-86720



Face cutting holder, HP-IC

25	48-109249-HP	IC 80 bar
1"	48-109250-HP	IC 80 bar

Static Toolholders - Standard Program



Combination toolholder, LF=115

Ø 40 48-86623 IC 80 bar

241140020 ER32

241140026 ER40

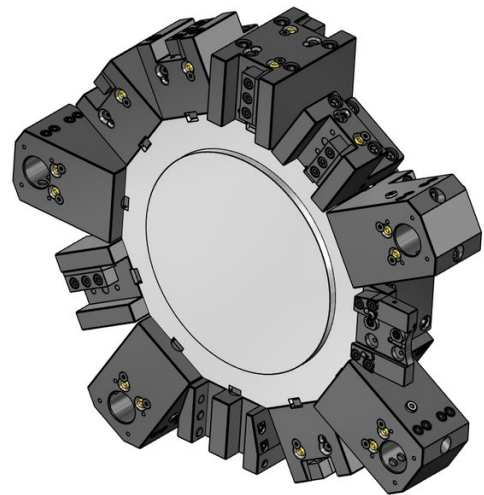
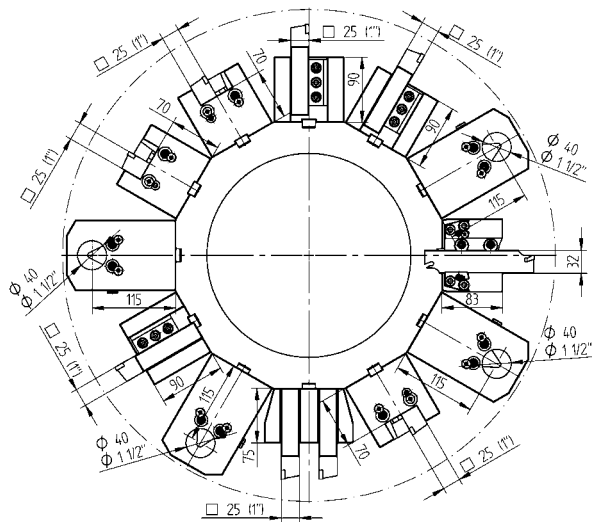
Ø 1 1/2" 48-86624 IC 80 bar

2411150020 ER32



Cover plate

48-87089



Static Toolholders - Enhanced Program



OD cutting holder, double, Y axis

25(1") 48-86103



OD cutting holder, both sides, double, Y axis

25(1") 48-86150



Cut-off holder, adjustable

SH 32 48-99060



Cut-off holder, adjustable, long

SH 32 48-100084



Cut-off holder, adjustable, HP-IC

SH 32 48-102256R IC 80 bar

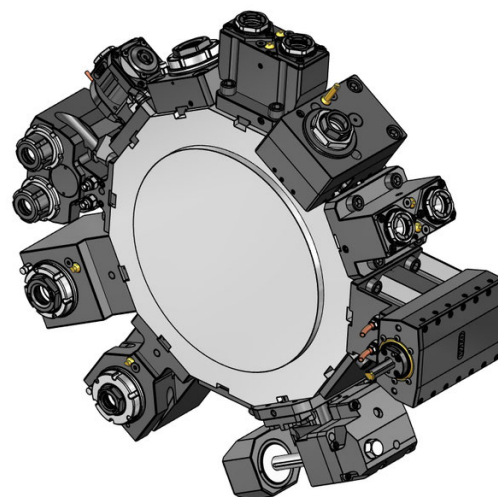
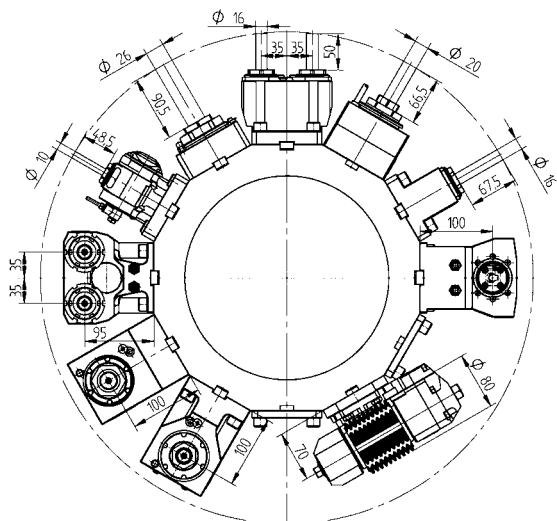
SH 32 48-102256L IC 80 bar



Cut-off holder, adjustable, long, HP-IC

SH 32 48-100082R IC 80 bar

SH 32 48-100082L IC 80 bar



Driven Toolholders - QuickFlex®



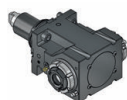
Straight drill/milling unit

ER-32 QF	420132015-65	1:1	EC
	0067732000		
ER-32 QF	420132016-65	1:1	IC 80 bar
	0067732000		



Right angle drill/milling unit, LF=100

ER-32 QF	420532018-65	1:1	EC
	0067732000		
ER-32 QF	420532019-65	1:1	IC 80 bar
	0067732000		



Right angle drill/milling unit, both sides, LF=100

ER-32 QF	420532020-65	1:1	EC
	0067732000		

Driven Toolholders - Enhanced Program



Straight drill/milling unit

ER 40	410126001-65	1:1	EC
	00675000079		



Straight milling unit with combination mill arbor DIN 6358

Ø 22	410222002-65	1:1	EC
	00675000483		
Ø 1"	410225002-65	1:1	EC
	00675000483		



Straight offset drill/milling unit

ER-32 QF	420132037-65	1:1	EC
	0067732000		
ER-32 QF	420132038-65	1:1	IC 80 bar
	0067732000		
ER-25 QF	420125010-65	1:2	EC
	0067725001		
ER-25 QF	420125011-65	1:2	IC 80 bar
	0067725001		



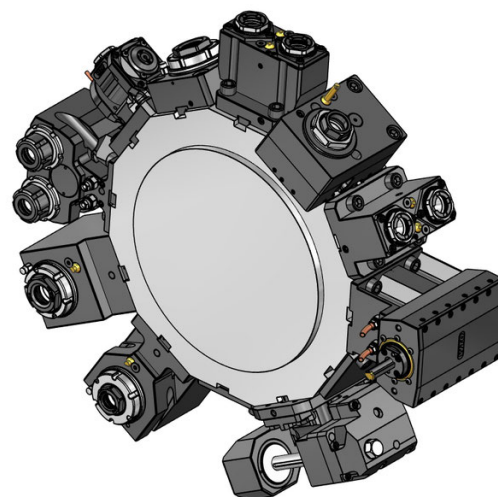
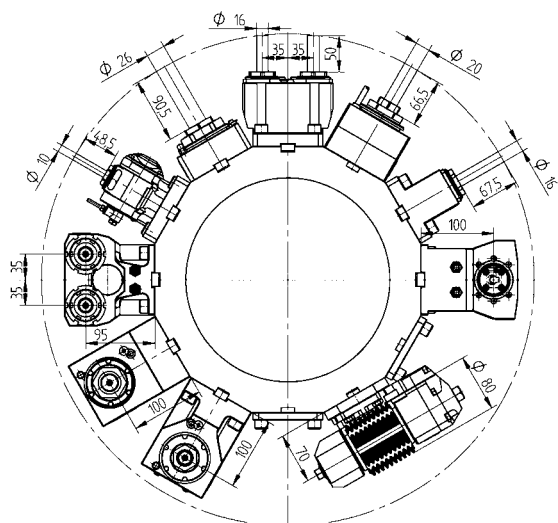
Right angle drill/milling unit, LF=100

ER 40	410526007-65	1:1	EC
	00675000079		
ER 40	410526008-65	1:1	IC 80 bar
	00675000079		



Right angle drill/milling unit, LF=100

ER-25 QF	420525012-65	1:2	EC
	0067725001		
ER-25 QF	420525013-65	1:2	IC 80 bar
	0067725001		
ER-32 QF	420532029-65	2:1	EC
	0067732000		
ER-32 QF	420532030-65	2:1	IC 80 bar
	0067732000		



Driven Toolholders - Enhanced Program



Right angle milling unit with combination mill arbor DIN 6358, LF=100

Ø 22	410622002-65	1:1	EC
	00675000483		
Ø 1"	410625002-65	1:1	EC
	00675000483		



Adjustable angle drill/milling unit

ER 16	411010002-65	1:1	EC
	00675000902		
ER 16	411010003-65	1:1	IC 80 bar
	00675000902		
ER 11	411007002-65	1:2	EC
	00675000914		
ER 11	411007003-65	1:2	IC 80 bar
	00675000914		



Gear hobbing unit

Type 16-1	411500003-65	1:1	EC
Type 16-1	411500002-65	2:1	EC
	00675000927		
	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, both sides

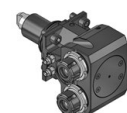
ER 25	413002001-65	1:1	EC
	00675000907		

Driven Toolholders - Enhanced Program



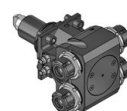
Straight drill/milling unit, double, Y axis

ER 25	413002004-65	1:1	EC
	00675000907		



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

ER 25	413502006-65	1:1	EC
	00675000915		
ER 25	413502007-65	1:1	IC 80 bar
	00675000915		



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

ER 25	413502008-65	1:1	EC
	00675000915		



Broaching unit for ID and OD

TN765050	414532000-65	1:1	EC
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Standard reduction sleeves - cylindrical



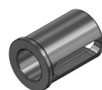
Reduction sleeve Ø 20

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



Reduction sleeve Ø 25

240025006	ø 6
240025008	ø 8
240025010	ø 10
240025012	ø 12
240025014	ø 14
240025016	ø 16
240025020	ø 20



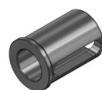
Reduction sleeve Ø 32

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

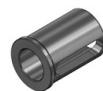
240040006	ø 6
240040008	ø 8
240040010	ø 10
240040012	ø 12
240040014	ø 14
240040016	ø 16
240040020	ø 20
240040025	ø 25
240040032	ø 32



Reduction sleeve Ø 50

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

Standard reduction sleeves - cylindrical



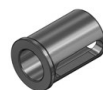
Reduction sleeve Ø 60

240060012	ø 12
240060016	ø 16
240060020	ø 20
240060025	ø 25
240060032	ø 32
240060040	ø 40
240060050	ø 50



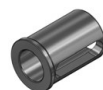
Reduction sleeve Ø 80

240080020	ø 20
240080025	ø 25
240080032	ø 32
240080040	ø 40
240080050	ø 50
240080060	ø 60



Reduction sleeve Ø 1"

2400100025	ø 1/4"
2400100031	ø 5/16"
2400100038	ø 3/8"
2400100050	ø 1/2"
2400100063	ø 5/8"
2400100075	ø 3/4"



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"



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"

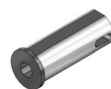
Standard reduction sleeves - cylindrical, with slot



Reduction sleeve Ø 40

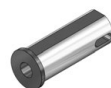
240140010	Ø 10
240140012	Ø 12
240140015	Ø 15
240140016	Ø 16
240140020	Ø 20
240140025	Ø 25
240140032	Ø 32

Standard reduction sleeves - morse taper



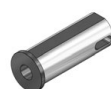
Reduction sleeve Ø 32

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)



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 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 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 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 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

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



ER 50	mm	inch
190050000	ø 34-10	ø 1.339-0.394
190050060	ø 6-4	ø 0.236-0.157
190050080	ø 8-6	ø 0.315-0.236
190050100	ø 10-8	ø 0.394-0.315
190050120	ø 12-10	ø 0.472-0.394
190050140	ø 14-12	ø 0.551-0.472
190050160	ø 16-14	ø 0.630-0.551
190050180	ø 18-16	ø 0.709-0.630
190050200	ø 20-18	ø 0.787-0.709
190050220	ø 22-20	ø 0.866-0.787
190050240	ø 24-22	ø 0.945-0.866
190050260	ø 26-24	ø 1.024-0.945
190050280	ø 28-26	ø 1.102-1.024
190050300	ø 30-28	ø 1.181-1.102
190050320	ø 32-30	ø 1.260-1.181
190050340	ø 34-32	ø 1.339-1.260

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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