

HYFORE

— WORKHOLDING —

It's gripping stuff...



ACROW TOOLING
SYSTEMS

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Acrow was founded in 1985 with their factory being located at Taichung City, Taiwan. They are a leading specialist manufacturer of CNC Tooling Systems in Taiwan. Their factory is over 7,500 m². Acrow installs CNC lathes, CNC machining centers and CNC grinding machines to manufacturers and inspection is carried out with electronic air gauges, numerical control machines and other high precision inspection instruments.

Acrow produces more than 90,000 tool-holders every year and distributes into Taiwan, China, Europe, Germany, Switzerland, Japan, USA, Australia, Southeast Asia, Russia and South Africa markets.

They are continually investing in R & D as well as new facilities and strives to not only meet, but also exceed customers' expectations with regards to quality and demand.



BSD

BSD Fine Boring Systems, BT / ABT

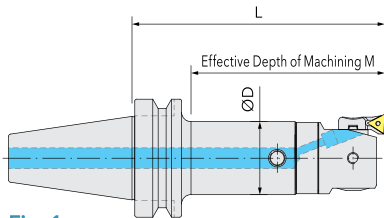


Fig. 1

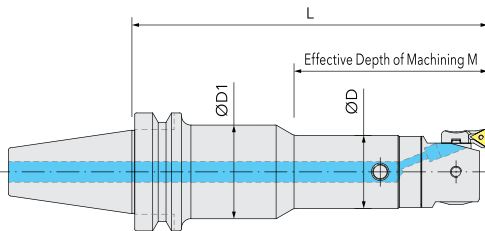


Fig. 2

Features

- BSD19~BSD90 : $\varnothing 20 \sim \varnothing 153$ °
- Boring range of BSD19~BSD90: $\varnothing 20 \sim \varnothing 153$.
- The holder is coolant type and compatible for rough and fine boring system.

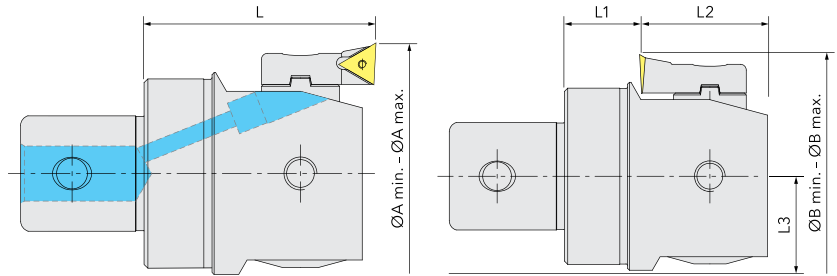
Set		Ø Range	Fig.	M	ØD	ØD1	L
Shanks	Boring Heads						
BT30-AK1-070	BSD19	20~ 26	2	65	19	31	105
-AK2-040	BSD24	25~ 33	1	50	24	—	75
-080				85			115
-AK3-040	BSD31	32~ 42	1	50	31	—	80
-075				85			115
-AK4-040	BSD39	41~ 54	1	60	39	—	85
-075				90			120
-AK5-065	BSD50	53~ 70	1	90	50	—	120
-AK6-084	BSD64	68~100	1	120	64	—	154

BT40-AK1-070	BSD19	20~ 26	1	70	19	—	100	
-120			2	72		40	150	
-170							200	
-AK2-080	BSD24	25~ 33	1	83	24	—	115	
-125			2	88		45	160	
-175							210	
-AK3-095	BSD31	32~ 42	1	103	31	—	135	
-150			2	98		50	190	
-200							240	
-AK4-090	BSD39	41~ 54	1	103	39	—	135	
-145			2			103	50	190
-195								240
-AK5-080	BSD50	53~ 70	1	103	50	—	135	
-135				140		190		
-185				150		240		
-AK6-065	BSD64	68~100	1	103	64	—	135	
-120				158		190		
-170				208		240		
-AK6-065	BSD90	100~153	1	103	64	—	135	
-120				158		190		
-170				208		240		

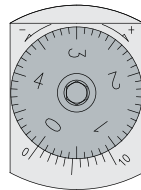
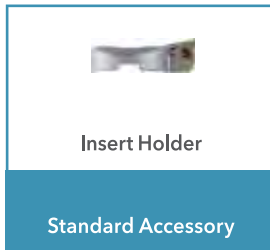
BT50-AK1-105	BSD19	20~ 26	2	72	19	31	135	
-170						40	200	
-220							250	
-AK2-110	BSD24	25~ 33	1	100	24	—	143	
-175			2			100	45	210
-225								260
-AK3-120	BSD31	32~ 42	1	113	31	—	158	
-200			2	120		50	240	
-240							280	
-AK4-120	BSD39	41~ 54	1	120	39	—	165	
-195			2	127		50	240	
-235							280	
-AK5-110	BSD50	53~ 70	1	120	50	—	165	
-185				190		240		
-225				230		280		
-AK6-095	BSD64	68~100	1	125	64	—	165	
-170				200		240		
-210				240		280		
-AK6-095	BSD90	100~153	1	125	64	—	165	
-170				200		240		
-210				240		280		

BSD

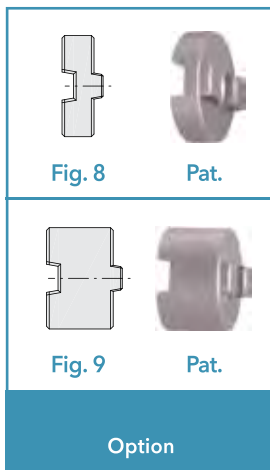
BSD Fine Boring Systems



- Included in the delivery is insert holder type BSD.H.
- Please use the correct hexagon and Torx wrenches according operations.



- One division on the scale corresponds to 0.005 mm movement, or 0.01 mm diametrical adjustment.
- High precision vernier setting to 0.001 mm. (dia)



Part No.	ØA Range	ØB Range	L	L1	L2	L3
BSD19	20~ 36	—	32.5	10.5	19	10
BSD24	25~ 33	—	35.5	11.5	21	12.5
BSD31	32~ 42	—	40	10	25	16
BSD39	41~ 54	—	47	14	29	20
BSD50	53~ 70	62~ 70	57	19	34	25.5
BSD64	68~100	80~100	71	22	45.2	32.5
BSD90	100~153	112~153				45.5

BSD Insert Holder Extensions

Part No.	For BSD	Fig.	Ø Range	Ø Back Range	
B.BSD19-025	BSD19	8	25~ 31	30~ 31	B.BSD.HC1.19.1
B.BSD19-050		9	30~ 36	30~ 36	B.BSD.HC1.19.2
B.BSD24-045	BSD24	8	32~ 40	36~ 40	B.BSD.HC2.24.1
B.BSD24-070		9	39~ 47	39~ 47	B.BSD.HC2.24.2
B.BSD31-045	BSD31	8	41~ 51	46~ 51	B.BSD.HC3.31.1
B.BSD31-090		9	50~ 60	51~ 60	B.BSD.HC3.31.2
B.BSD39-045	BSD39	8	50~ 63	53~ 63	B.BSD.HC4.39.1
B.BSD39-100		9	61~ 74	61~ 74	B.BSD.HC4.39.2
B.BSD50-060	BSD50	8	65~ 82	65~ 82	B.BSD.HC5.50.1
B.BSD50-125		9	78~ 95	78~ 95	B.BSD.HC5.50.2
B.BSD64-130	BSD64	8	94~126	94~126	B.BSD.HC6.64.1
B.BSD64-250		9	118~150	118~150	B.BSD.HC6.64.2
B.BSD64-130	BSD90	8	126~179	126~179	B.BSD.HC6.64.1
B.BSD64-250		9	150~203	150~203	B.BSD.HC6.64.2



FBH/NBJ

FBH / NBJ Modular Fine Boring Systems, BT / ABT



Set		Ø Range	Ød	ØD	L
Shanks	FBH/NBJ Boring Heads				
BT30-FBH55-080	FBH55	3.5~32	12	55	125
-AK6-084	FBH64	3.5~40	16	64	130
-AK6-084	NBJ16	3.5~40	16	64	130

BT40-FBH55-057	FBH55	3.5~32	12	55	102
-AK6-065	FBH64	3.5~40	16	64	110
-AK6-065	NBJ16	3.5~40	16	64	110

BT50-FBH55-080	FBH55	3.5~32	12	55	125
-AK6-095	FBH64	3.5~40	16	64	140
-AK6-095	NBJ16	3.5~40	16	64	140

● FBH/NBJ FBH/NBJ Fine Boring Heads

Part No.	Ø Range	Fig.	Ød	ØD	L
FBH55	3.5~32	1	12	55	47
FBH64	3.5~40	1	16	64	47
NBJ16	3.5~40	2	16	64	47

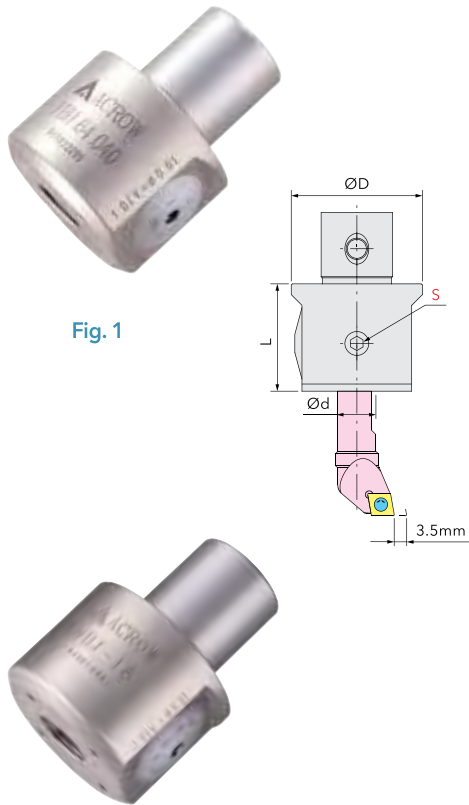
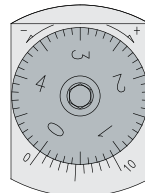
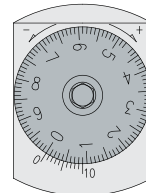


Fig. 1

- With coolant supply.
- Please use the correct hexagon wrenches according operations.
- Before adjusting, the screw "S" should be loosened.



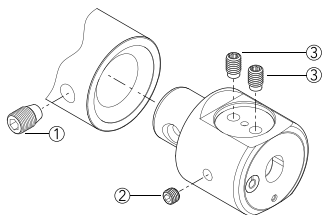
FBH



NBJ

- 0.005 mm ° (0.01 mm)
- 0.001 mm °
- One division on the scale corresponds to 0.005 mm movement, or 0.01 mm diametrical adjustment.
- High precision vernier setting to 0.001 mm. (dia)

Fig. 2

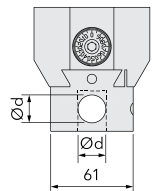
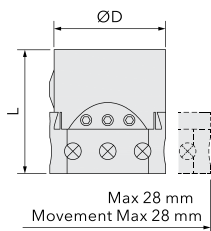
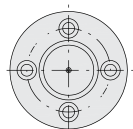
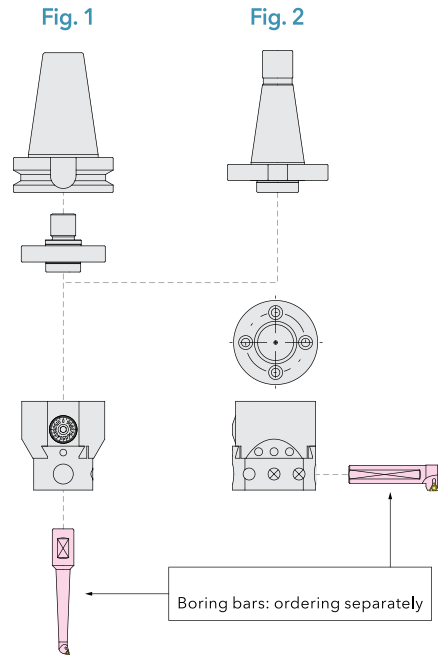


● Spare Parts

Part No.	①	②	③
FBH55	M.800.000.550	X.0855-M080P125-0060	Z-FBH-11-55
FBH64	B.BSD.LS.64	X.0855-M100P150-0100	Z-FBH-11-64
NBJ16			

FBH84

FBH84 Modular Fine Boring Systems, BT / ABT



Part No.	Ø Range	Fig.	Boring Head	Ød	ØD	L
BT40-FBH84	8~280	1	FBH.84	20	84	150
BT50-FBH84						143
NT40-FBH84		2				104
NT50-FBH84						130

- NT40 : UNC5/8" 11 / NT50: UNC1" 8 -
- Inch thread of NT holder is available. NT40: UNC5/8"-11 / NT50: UNC1"-8.

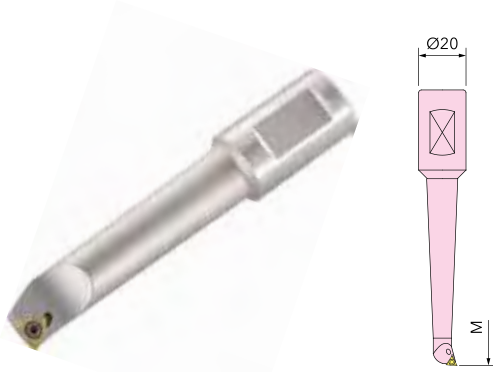
● FBH FBH Fine Boring Head

Part No.	Ø Range	Movement	Ød	ØD	L
FBH84	8~280	28	20	84	89

- 0.01 mm °
- Easily read by large dials. One division on the main scale corresponds to 0.01 mm movement.
- Please use the correct hexagon wrenches according operations.

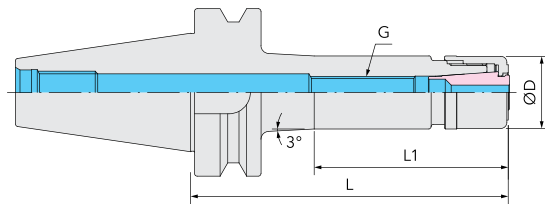
● FBH84 FBH84 Boring Bars

Part No.	Ø Range	M	Inserts
BJ.008.006	8~ 11	32	TBGT060102L
BJ.010.006	10~ 13	40	TBGT060104L
BJ.012.009	12~ 17	53	TPGH090202L
BJ.016.009	16~ 21	68	TPGH090204L
BJ.020.011	20~130	83	TPGH110302L TPGH110304L
BJ.025.011	25~135	96	
BJ.030.011	30~140	115	
BJ.120.011	120~280	84+BT bar	



NR

NR High Speed Precision Collet Chucks, BT / ABT



Part No.	Ø Range	ØD	L	L1	G	Collets	Wrench
BT30-NR06-060	3.0~ 6.0	19.5	60	—	M08*P1.25	NR06	W-D19.5
-090			90				
-NR10-060	3.0~10.0	27	60	—	M12*P1.75	NR10	W-D27
-090			90				
-NR13-060	3.0~13.0	34	60	—	M15*P1.00	NR13	W-D34
-090			90				
-NR16-060	3.0~16.0	40	60	—	M18*P1.50	NR16	W-D40
-090			90				

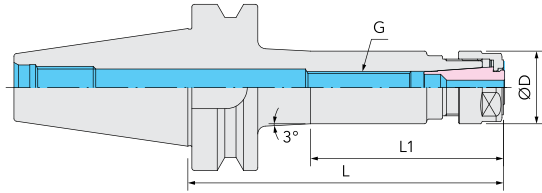
BT40-NR06-060	3.0~ 6.0	19.5	60	—	M08*P1.25	NR06	W-D19.5						
-090			90										
-120			120										
-160			160										
-NR10-060	3.0~10.0	27	60	—	M12*P1.75	NR10	W-D27						
-090			90										
-120			120										
-160			160										
-NR13-060	3.0~13.0	34	60	—	M15*P1.00	NR13	W-D34						
-090			90										
-120			120										
-160			160										
-NR16-060	3.0~16.0	40	60	—	M18*P1.50	NR16	W-D40						
-090			90										
-120			120										
-160			160										
-NR13-060	3.0~13.0	34	200	106	M15*P1.00	NR13	W-D34						
-200			200										
-NR16-060			3.0~16.0					40	60	—	M18*P1.50	NR16	W-D40
-090									90				
-120	120												
-160	160												
-NR16-060	3.0~16.0	40	200	—	M18*P1.50	NR16	W-D40						
-200			200										

BT50-NR06-105	3.0~ 6.0	19.5	105	—	M08*P1.25	NR06	W-D19.5
-135			135				
-165			165				
-NR10-105	3.0~10.0	27	105	—	M12*P1.75	NR10	W-D27
-135			135				
-165			165				
-NR13-105	3.0~13.0	34	105	—	M15*P1.00	NR13	W-D34
-135			135				
-165			165				
-NR16-105	3.0~16.0	40	105	—	M18*P1.50	NR16	W-D40
-135			135				
-165			165				

• In case of heavy cutting with end-mill, please use "C-H" or "C" Power Milling Chunks.

NR-WD

NR-WD High Speed Precision Collet Chucks, BT / ABT



Part No.	Ø Range	ØD	L	L1	G	Collets	Wrench
BT30-NR06-060WD	3.0~ 6.0	19.5	60	—	M08*P1.25	NR06	W-NR06WD
-090WD			90				
-NR10-060WD	3.0~10.0	27.5	60	—	M12*P1.75	NR10	W-NR10WD
-090WD			90				
-NR13-060WD	3.0~13.0	34	60	—	M15*P1.00	NR13	W-FK05
-090WD			90				
-NR16-060WD	3.0~16.0	40	60	—	M18*P1.50	NR16	W-FK06
-090WD			90				

BT40-NR06-060WD	3.0~ 6.0	19.5	60	—	M08*P1.25	NR06	W-NR06WD
-090WD			90				
-120WD			120				
-160WD			160				
-NR10-060WD	3.0~10.0	27.5	60	—	M12*P1.75	NR10	W-NR10WD
-090WD			90				
-120WD			120				
-160WD			160				
-200WD			200				
-NR13-060WD	3.0~13.0	34	60	—	M15*P1.00	NR13	W-FK05
-090WD			90				
-120WD			120				
-160WD			160				
-200WD			200				
-NR16-060WD	3.0~16.0	40	60	—	M18*P1.50	NR16	W-FK06
-090WD			90				
-120WD			120				
-160WD			160				
-200WD			200				

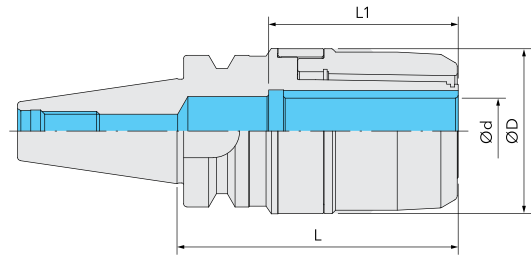
BT50-NR06-105WD	3.0~ 6.0	19.5	105	—	M08*P1.25	NR06	W-NR06WD
-135WD			135				
-165WD			165				
-NR10-105WD	3.0~10.0	27.5	105	—	M12*P1.75	NR10	W-NR10WD
-135WD			135				
-165WD			165				
-NR13-105WD	3.0~13.0	34	105	—	M15*P1.00	NR13	W-FK05
-135WD			135				
-165WD			165				
-NR16-105WD	3.0~16.0	40	105	—	M18*P1.50	NR16	W-FK06
-135WD			135				
-165WD			165				

• In case of heavy cutting with end-mill, please use "C-H" or "C" Power Milling Chunks.



C-H

C-H High Speed Precision Power Milling Chucks, BT / ABT



Tool Shanks (h6)



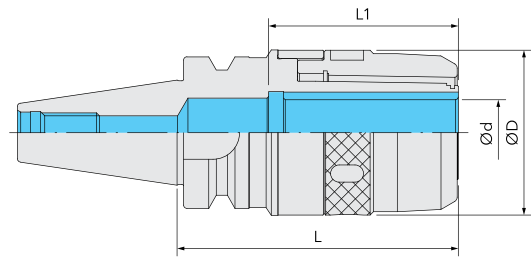
Features

- Special dust-proof design can extend more than 50% lifetime of tool holders.
- Caution: Excessive tightening torque will damage the chucks, nut or / and collet permanently.

Part No.	Ød	ØD	L	L1	Collets	Wrench
BT30-C20H-085	20	50	85	57.5	ARH20	W-D48
BT40-C20H-090	20	50	90	57.5	ARH20	W-D48
-C25H-090	25	57	90	60	ARH25	W-D55
-C32H-090	32	69	90	64.5	ARH32	W-D68
-105			105			
-120			120			
BT50-C20H-105	20	50	105	57.5	ARH20	W-D48
-165			165			
-C25H-105	25	57	105	60	ARH25	W-D55
-165			165			
-C32H-105	32	69	105	64.5	ARH32	W-D68
-165			165			

C

C Type Precision Power Milling Chucks, BT / ABT



Tool Shanks (h6)



Features

- Special dust-proof design can extend more than 50% lifetime of tool holders.
- Caution: Excessive tightening torque will damage the chucks, nut or / and collet permanently.

Part No.	Ød	ØD	L	L1	Collets	Wrench
BT30-C20-085	20	50	85	57.5	ARH20	W-FK08
BT40-C20-090	20	50	90	57.5	ARH20	W-FK08
-C25-090	25	57	90	60	ARH25	W-FK09
-C32-090	32	69	90	64.5	ARH32	W-FK10
-105			105			
-120			120			
BT50-C20-105	20	50	105	57.5	ARH20	W-FK08
-165			165			
-C25-105	25	57	105	60	ARH25	W-FK09
-165			165			
-C32-105	32	69	105	64.5	ARH32	W-FK10
-165			165			

HC

HC High Speed Precision Collet Chucks, BT / ABT



Fig. 1

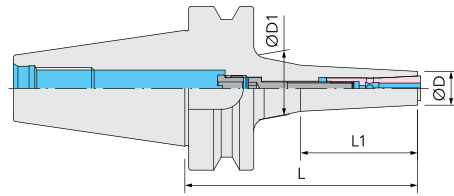


Fig. 2

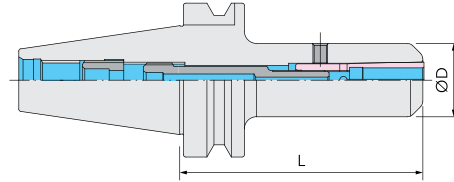


Fig. 3

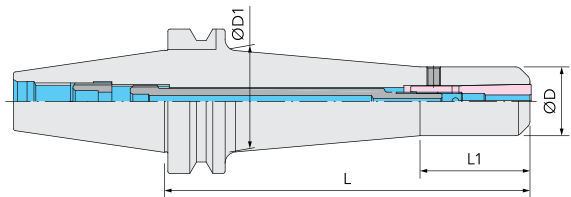


Fig. 4

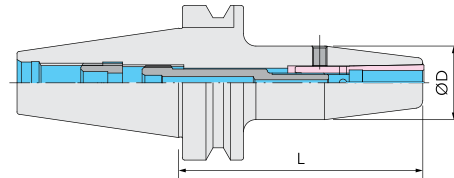
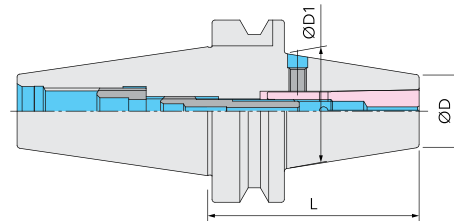
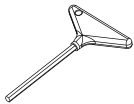


Fig. 5



Features

- Suitable for high speed & light cutting.
- These chucks have self-holding function.



BT30/40-HC06 = 4 mm
 BT30 = 5 mm
 BT40/50 = 6 mm

Part No.	Fig.	Ø Range	ØD	ØD1	L	L1	Collets	Nm Tightening Torque
BT30-HC06-060	1	3.0~ 6.0	13	22	60	26	HC06	4
-090				25	90	50		
-HC10-080	2	3.0~10.0	30	—	80	—	HC10	12
-HC16-070								

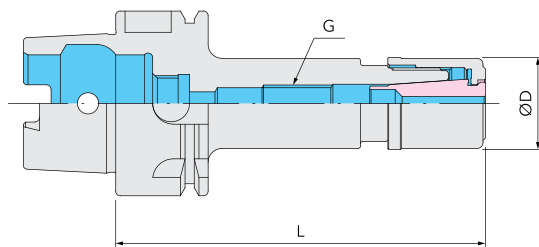
BT40-HC06-060	1	3.0~ 6.0	13	20	60	26	HC06	4
-090				25	90	45		
-120				28	120	60		
-150				30	150	76		
-HC10-075	5	3.0~10.0	25	40	73.6	—	HC10	12
-100	2			—	100	—		
-100S	4			—	100	—		
-160	3			45	160	48		
-HC16-100	2	6.0~16.0	35	—	100	—	HC16	20
-100S	4			—	100	—		
-160	3			45	160	63		

BT50-HC10-100	2	3.0~10.0	30	—	100	—	HC10	12
-160	3			43	160	48		
-HC16-100	2	6.0~16.0	35	—	100	—	HC16	20
-160	3			43	160	63		



NR

NR High Speed Precision Collet Chucks, HSK



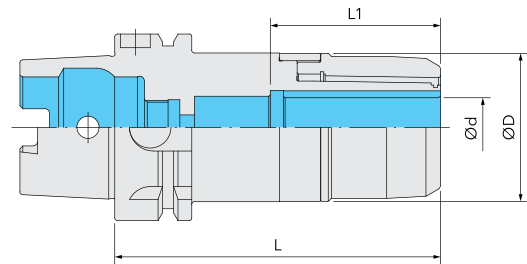
Part No.	Ø Range	ØD	L	G	Collets	Wrench	Max. rpm
HSK40A-NR06-060	3.0~ 6.0	19.5	60	—	NR06	W-D19.5	30,000
-NR06-080			80	M08*P1.25			
-NR10-060	3.0~10.0	27	60	—	NR10	W-D27	
-NR10-080			80				
-NR13-090	3.0~13.0	34	86		NR13	W-D34	
-NR16-070	3.0~16.0	40	72				
-NR16-090			90				

HSK50A-NR06-060	3.0~ 6.0	19.5	60	—	NR06	W-D19.5	30,000
-NR06-080			80	M08*P1.25			
-NR10-080	3.0~10.0	27	80	—	NR10	W-D27	
-NR13-090	3.0~13.0	34	86	—	NR13	W-D34	
-NR16-100	3.0~16.0	40	100	M18*P1.50	NR16	W-D40	

HSK63A-NR06-060	3.0~ 6.0	19.5	60	—	NR06	W-D19.5	30,000
-NR06-080			80	M08*P1.25			
-NR06-100			100				
-NR06-120			120				
-NR10-100	3.0~10.0	27	100		M12*P1.75	NR10	
-NR13-090	3.0~13.0	34	86	—	NR13	W-D34	
-NR13-120			116	M15*P1.00			
-NR16-120	3.0~16.0	40	120	M18*P1.50	NR16	W-D40	

C-H

C-H High Speed Precision Power Milling Chucks, HSK



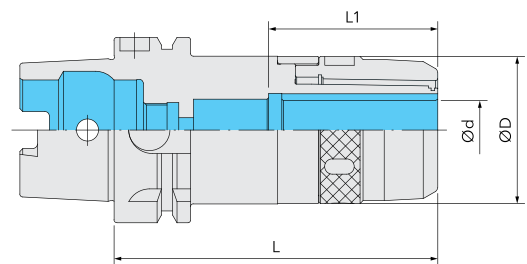
Features

- Special dust-proof design can extend more than 50% lifetime of tool holders.
- Caution: Excessive tightening torque will damage the chucks, nut or / and collet permanently.

Part No.	Ød	ØD	L	L1	Collets	Wrench
HSK40A-C20H-110	20	50	110	57.5	ARH20	W-D48
HSK50A-C20H-110	20	50	110	57.5	ARH20	W-D48
HSK63A-C20H-110	20	50	110	57.5	ARH20	W-D48
-C25H-110	25	57		60	ARH25	W-D55
-C32H-110	32	69		64.5	ARH32	W-D68

C

C Type Precision Power Milling Chucks, HSK



Features

- Special dust-proof design can extend more than 50% lifetime of tool holders.
- Caution: Excessive tightening torque will damage the chucks, nut or / and collet permanently.

Part No.	Ød	ØD	L	L1	Collets	Wrench
HSK40A-C20-110	20	50	110	57.5	ARH20	W-FK08
HSK50A-C20-110	20	50	110	57.5	ARH20	W-FK08
HSK63A-C20-110	20	50	110	57.5	ARH20	W-FK08
-C25-110	25	57		60	ARH25	W-FK09
-C32-110	32	69		64.5	ARH32	W-FK10



HC

HC High Speed Precision Collet Chucks, HSK

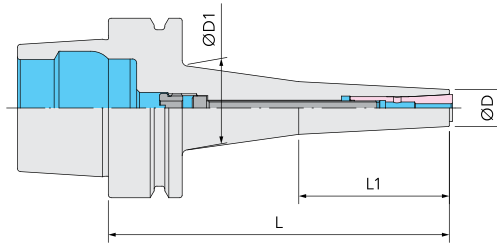


Fig. 1

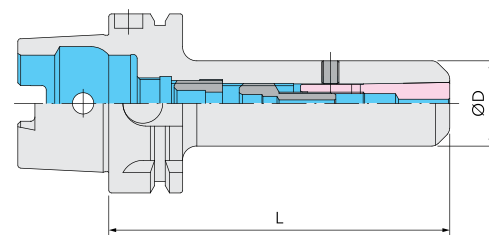


Fig. 2

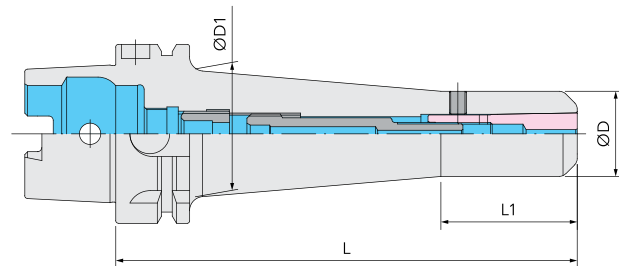


Fig. 3

Features

- Suitable for high speed & light cutting.
- These chucks have self-holding function

Part No.	Fig.	\varnothing Range	$\varnothing D$	$\varnothing D1$	L	L1	Collets	Nm Tightening Torque
HSK40E-HC06-075	1	3.0~ 6.0	13	22	75	26	HC06	4
HSK50E-HC06-080	1	3.0~ 6.0	13	22	80	26	HC06	4
HSK63E-HC06-075	1	3.0~ 6.0	13	22	75	26	HC06	4
-095				25	95	45		
-120				30	120	53		
HSK63A-HC10-120	2	3.0~10.0	30	—	120	—	HC10	12
-160	3			45	162.4	48		

PD

PD Position Detectors (mechanical type)



Fig. 1

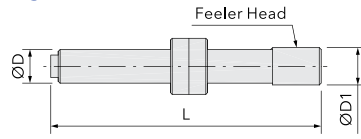
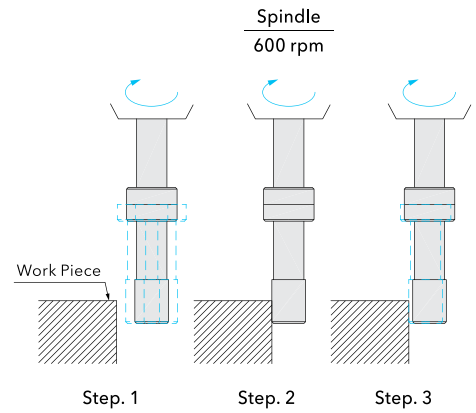
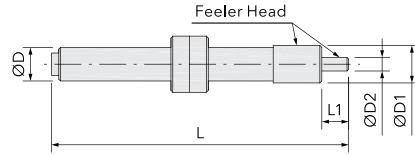


Fig. 2



規格 Part No.	Fig.	ØD	測頭 Feeler Head			L
			ØD1	ØD2	L1	
ATM-10	1	10	10	—	—	84
ATM-10/4	2			4	7.5	

Universal 3D-Sensor



Part No.	Description
80.360.00	0.01 mm ° Universal 3D-senser, mechanical type. Accuracy: 0.01 mm.
80.362	Ø4 mm Short probe tip dia. Ø4 mm.
80.363	Ø8 mm Long probe tip dia. Ø8 mm.



Tool Pre-Setters



Fig. 1

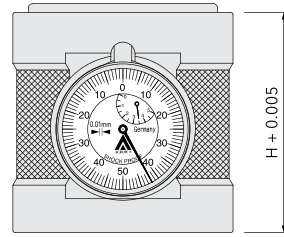


Fig. 2

Part No.	Fig.	H	Description
Z-50	1	50	±0.01 mm Accuracy ±0.01 mm, Base w/o magnet.
Z-50M	1		±0.01 mm Accuracy ±0.01 mm, Base with magnet.
Z-50-A	2		±0.01 mm Accuracy ±0.01 mm, Base w/o magnet.
Z-50M-A	2		±0.01 mm Accuracy ±0.01 mm, Base with magnet.

Tool Holder Locking Fixtures



Fig. 1



Fig. 2



Fig. 3



Fig. 4

(Pat.)

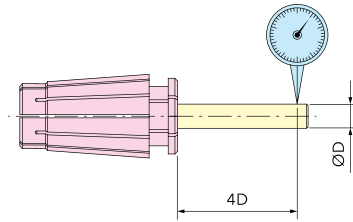
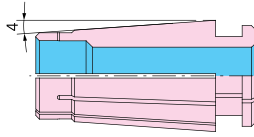
Part No.	Fig.	Description
V500.00.30	1	SK30 Taper7/24
V500.00.40		SK40 Taper7/24
V500.00.50		SK50 Taper7/24
V500.00.63A	2	HSK63A

Part No.	Fig.	Description
4118-411	3	SK30, V+H
4118-011		SK40, V+H
4118-211		SK50, V+H
—		

Part No.	Fig.	Description
THLF-HSK32	4	HSK32
THLF-HSK40		HSK40
THLF-HSK50		HSK50
THLF-HSK63		HSK63

NR

Accessories for NR High Speed Precision Collet Chucks



- TIR: AA grade ≤ 0.005 mm; A grade ≤ 0.01 mm.

- A grade collets: May no stock.

Part No.	Ø Range
NR06AA-030	2.75~3.0
-03175	2.75~3.175
-035	3.0 ~3.5
-040	3.5 ~4.0
-045	4.0 ~4.5
-050	4.5 ~5.0
-055	5.0 ~5.5
-060	5.5 ~6.0

Part No.	Ø Range
NR10AA-030	2.75~ 3.0
-03175	2.75~ 3.175
-035	3.0 ~ 3.5
-040	3.5 ~ 4.0
-045	4.0 ~ 4.5
-050	4.5 ~ 5.0
-055	5.0 ~ 5.5
-060	5.5 ~ 6.0
-065	6.0 ~ 6.5
-070	6.5 ~ 7.0
-075	7.0 ~ 7.5
-080	7.5 ~ 8.0
-085	8.0 ~ 8.5
-090	8.5 ~ 9.0
-095	9.0 ~ 9.5
-100	9.5 ~10.0

Part No.	Ø Range
NR13AA-030	2.75~ 3.0
-03175	2.75~ 3.175
-035	3.0 ~ 3.5
-040	3.5 ~ 4.0
-045	4.0 ~ 4.5
-050	4.5 ~ 5.0
-055	5.0 ~ 5.5
-060	5.5 ~ 6.0
-065	6.0 ~ 6.5
-070	6.5 ~ 7.0
-075	7.0 ~ 7.5
-080	7.5 ~ 8.0
-085	8.0 ~ 8.5
-090	8.5 ~ 9.0
-095	9.0 ~ 9.5
-100	9.5 ~10.0
-105	10.0 ~10.5
-110	10.5 ~11.0
-115	11.0 ~11.5
-120	11.5 ~12.0
-125	12.0 ~12.5
-130	12.5 ~13.0

Part No.	Ø Range
NR16AA-030	2.75~ 3.0
-03175	2.75~ 3.175
-035	3.0 ~ 3.5
-040	3.5 ~ 4.0
-045	4.0 ~ 4.5
-050	4.5 ~ 5.0
-055	5.0 ~ 5.5
-060	5.5 ~ 6.0
-065	6.0 ~ 6.5
-070	6.5 ~ 7.0
-075	7.0 ~ 7.5
-080	7.5 ~ 8.0
-085	8.0 ~ 8.5
-090	8.5 ~ 9.0
-095	9.0 ~ 9.5
-100	9.5 ~10.0
-105	10.0 ~10.5
-110	10.5 ~11.0
-115	11.0 ~11.5
-120	11.5 ~12.0
-125	12.0 ~12.5
-130	12.5 ~13.0
-135	13.0 ~13.5
-140	13.5 ~14.0
-145	14.0 ~14.5
-150	14.5 ~15.0
-155	15.0 ~15.5
-160	15.5 ~16.0

NR Precision Collets (for end-mill)

- A grade collets: May no stock.

Part No.	Ø Range
NR06AA-E030	3.0
-E03175	3.175
-E040	4.0
-E050	5.0
-E060	6.0

Part No.	Ø Range
NR10AA-E030	3.0
-E03175	3.175
-E040	4.0
-E050	5.0
-E060	6.0
-E080	8.0
-E100	10.0

Part No.	Ø Range
NR13AA-E030	3.0
-E03175	3.175
-E040	4.0
-E050	5.0
-E060	6.0
-E080	8.0
-E100	10.0
-E120	12.0

Part No.	Ø Range
NR16AA-E030	3.0
-E03175	3.175
-E040	4.0
-E050	5.0
-E060	6.0
-E080	8.0
-E100	10.0
-E120	12.0
-E140	14.0
-E160	16.0



NR

Accessories for NR High Speed Precision Collet Chucks



NR Precision Coolant Collets

Part No.	Ø Range
NR10OH-E030	3.0
-E03175	3.175
-E040	4.0
-E050	5.0
-E060	6.0
-E080	8.0
-E100	10.0

Part No.	Ø Range
NR16OH-E030	3.0
-E03175	3.175
-E040	4.0
-E050	5.0
-E060	6.0
-E080	8.0
-E100	10.0
-E110	11.0
-E120	12.0
-E130	13.0
-E140	14.0
-E160	16.0

NR Precision Tap Collets

Part No.	Tap Shank
NR06-T055	5.5*4.5 M5
-T060	6.0*4.5 M6

Part No.	Tap Shank
NR10-T055	5.5*4.5 M5
-T060	6.0*4.5 M6
-T061	6.1*5.0 5/16
-T062	6.2*5.0 M8
-T070	7.0*5.5 M10
-T080	8.0*6.2 7/16
-T085	8.5*6.5 M12

Attaching & Detaching Collet



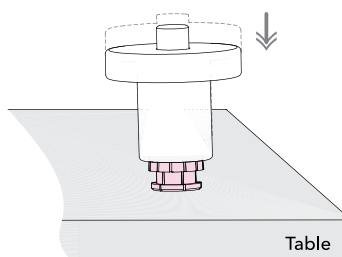
Pat.



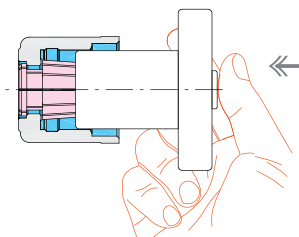
NR Collet Extractors

規格 Part No.	適用筒夾 Collets
NR06E	NR06
NR10E	NR10
NR13E	NR13
NR16E	NR16

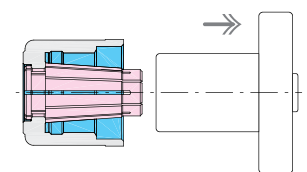
1 Attaching collet



2 Attaching the collet to correct position of the nut



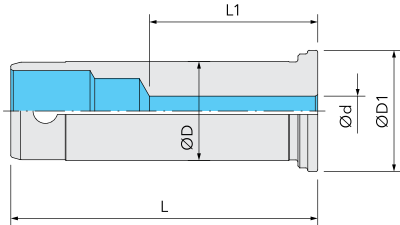
3 Take extractor out



- Detaching: reverse step.

ARH

ARH Spring Collets

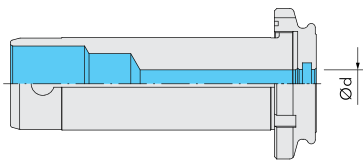


Part No.	L	ØD	ØD1
ARH-20-***	62	20	24.5
ARH-25-***	64	25	29.5
ARH-32-***	71	32	38
ARH-42-***	80	42	48

Part No.				Ød	L1
ARH20	ARH25	ARH32	ARH42		
ARH-20-060	ARH-25-060	ARH-32-060	ARH-42-060	6	34
ARH-20-080	ARH-25-080	ARH-32-080	ARH-42-080	8	36
ARH-20-100	ARH-25-100	ARH-32-100	ARH-42-100	10	38
ARH-20-120	ARH-25-120	ARH-32-120	ARH-42-120	12	40
ARH-20-140	ARH-25-140	ARH-32-140	ARH-42-140	14	46
ARH-20-160	ARH-25-160	ARH-32-160	ARH-42-160	16	48
	ARH-25-180	ARH-32-180	ARH-42-180	18	50
	—	ARH-32-190	—	19	50
	ARH-25-200	ARH-32-200	ARH-42-200	20	52
		ARH-32-220	ARH-42-220	22	54
		ARH-32-240	—	24	56
		ARH-32-250	ARH-42-250	25	56
			ARH-42-320	32	60

ARHJOH

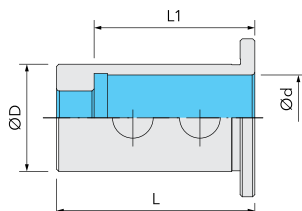
ARHJOH Coolant Collets



Part No.				Ød
ARH20	ARH25	ARH32	ARH42	
ARHJOH-20-060	ARHJOH-25-060	ARHJOH-32-060	ARHJOH-42-060	6
ARHJOH-20-080	ARHJOH-25-080	ARHJOH-32-080	ARHJOH-42-080	8
ARHJOH-20-100	ARHJOH-25-100	ARHJOH-32-100	ARHJOH-42-100	10
ARHJOH-20-120	ARHJOH-25-120	ARHJOH-32-120	ARHJOH-42-120	12
ARHJOH-20-140	ARHJOH-25-140	ARHJOH-32-140	ARHJOH-42-140	14
ARHJOH-20-160	ARHJOH-25-160	ARHJOH-32-160	ARHJOH-42-160	16
	ARHJOH-25-180	ARHJOH-32-180	ARHJOH-42-180	18
	ARHJOH-25-200	ARHJOH-32-200	ARHJOH-42-200	20
		ARHJOH-32-250	ARHJOH-42-250	25
			ARHJOH-42-320	32

OSL

OSL Reduction Sleeves

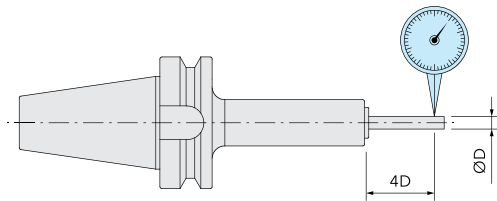
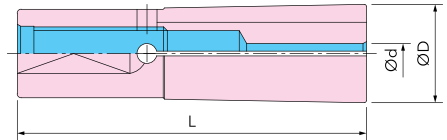


Part No.	Ød	ØD	L	L1
OSL25-160	16	25	60	48
-200	20			50
OSL32-160	16	32	64	56
-200	20			
-250	25			
OSL40-250	25	40	74	60
-320	32			



Spring Collets

HC High Precision Spring Collets - AA Grade



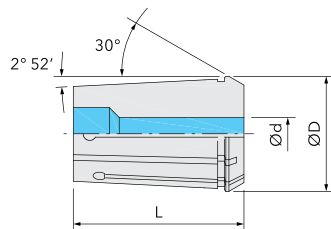
Part No.	Ø Range	ØD	L
HC06AA-XXX	3.0~ 6.0	9.6	36.1
HC10AA-XXX	3.0~10.0	15.0	52.5
HC16AA-XXX	6.0~16.0	21.6	64.2

- 同心度 0.005 mm 以内。
- TIR Accuracy < 0.005 mm.

Part No.	Ø Range
HC06AA-030	3.0
-03175	3.175
-040	4.0
-050	5.0
-060	6.0

Part No.	Ø Range
HC10AA-030	3.0
-03175	3.175
-035	3.5
-040	4.0
-045	4.5
-050	5.0
-055	5.5
-060	6.0
-065	6.5
-070	7.0
-075	7.5
-080	8.0
-085	8.5
-100	10.0

Part No.	Ø Range
HC16AA-060	6.0
-080	8.0
-100	10.0
-120	12.0
-140	14.0
-160	16.0

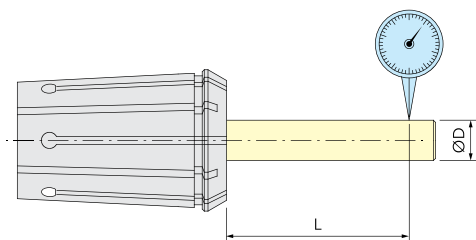


CTH Spring Collets (OZ) (DIN6388)

Part No.	Ø Range	ØD	L
CTH25-XXX	3~25	35.05	52
CTH32-XXX	6~32	43.7	60

Accuracy of CTH Spring Collets

Ø Range	L	TIR Accuracy
3.0~ 6.0	16	0.015
6.0~10.0	25	
10.0~18.0	40	0.020
18.0~24.0	50	
26.0~30.0	60	0.030
30.0~32.0	80	



Clamping Nuts



Fig. 1

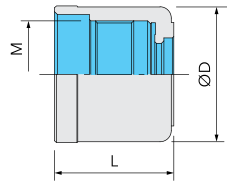


Fig. 2

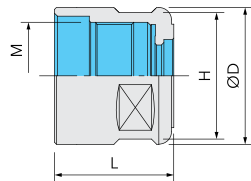
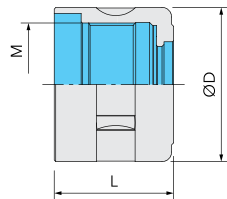


Fig. 3



NR Clamping Nuts

Part No.	Fig.	M	ØD	L
NR06N	1	M15.5*P1.00	19.5	21
NR10N		M21.5*P1.00	27.0	24
NR13N		M27.0*P1.00	34.0	28
NR16N		M32.0*P1.50	40.0	31

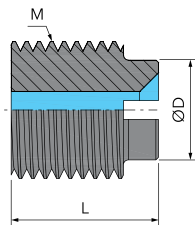
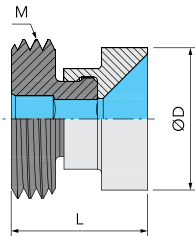
NR-WD Clamping Nuts

Part No.	Fig.	M	ØD	L	H
NR06WD	2	M15.5*P1.00	19.5	21	18.0
NR10WD		M21.5*P1.00	27.5	24	25.4
NR13WD	3	M27.0*P1.00	34.0	28	—
NR16WD		M32.0*P1.50	40.0	31	

Back-up Screws



Pat.



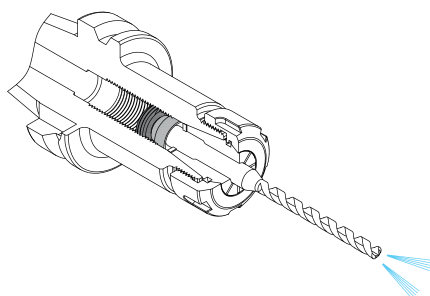
Back-up Screws

Part No.	M	ØD	L	Shanks
ERCBK-ER16	M11*P1.00	9.5	12.5	ER16
ERCBK-ER20	M14*P1.00	12.5	14.5	ER20
ERCBK-ER25	M18*P1.50	16.0	16.3	ER25/NR16
ERCBK-ER32	M24*P1.50	21.8	18.8	ER32

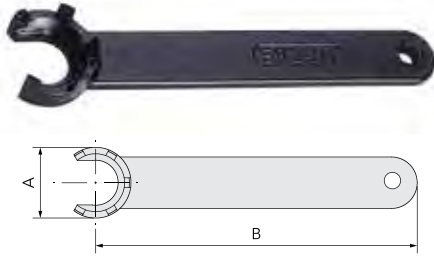
NRCBK-NR10	M12*P1.75	9.9	12.5	NR10
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Back-up Screws

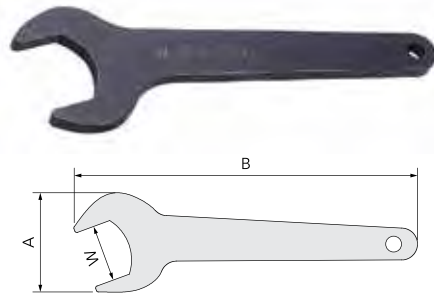
Part No.	M	ØD	L	Shanks
ARCBK-ER11	M08*P1.00	6	10	ER11
ARCBK-ER16	M11*P1.00	8	12	ER16
ARCBK-ER20	M14*P1.00	11	13	ER20
ARCBK-ER25	M18*P1.50	15	14	ER25/NR16
ARCBK-ER32	M24*P1.50	20	16	ER32
ARCBK-ER40	M28*P1.50	25	18	ER40



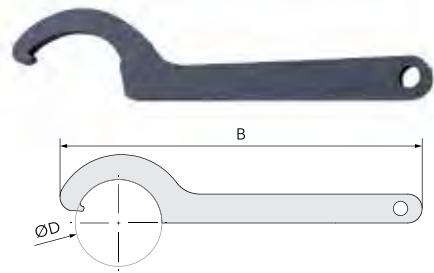
Wrenches



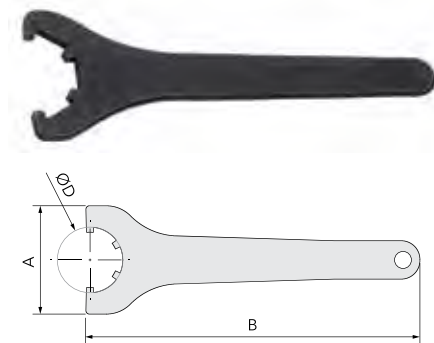
Part No.	A	B	Nuts
W-ER08M	12.8	75	N08M
W-ER11M	16.8	90	N11M
W-ER16M	22.8	110	N16M
W-ER20M	29	120	N20M



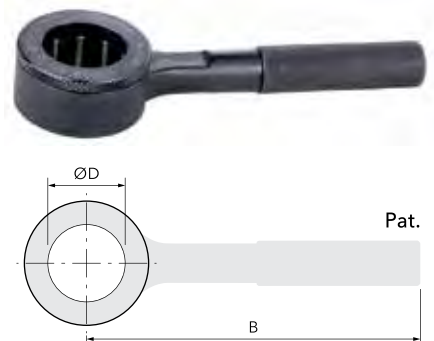
Part No.	A	B	W	Nuts
W-ER11	32	95	17	ER11SH
W-ER16	44	145	25	ER16SH
W-ER20	52	170	30	ER20SH
W-NR06WD	32	95	18	NR06WD
W-NR10WD	52	170	1"	NR10WD



Part No.	ØD	B	Nuts
W-FK04	30~33	135	ER16GM
W-FK05	34~37	160	ER20GM/NR13WD
W-FK06	38~43	170	ER25SH/NR16WD
W-FK07	44~49	195	ER25GM
W-FK08	50~57	210	C20/ER32SH/ER32GM
W-FK09	58~67	230	CTH25/C25/ER40SH
W-FK10	68~79	245	CTH32/C32
W-FK11	80~93	270	ARH42



Part No.	ØD	A	B	Nuts
W-ER25	42	65	210	ER25
W-ER32	50	75	250	ER32
W-ER40	63	90	290	ER40
W-ER50	80	110	355	ER50



High Speed Tooling Wrenches

Part No.	ØD	B	Nuts
W-D19.5	19.5	105	NR06
W-D27	27.1	115	NR10
W-D34	34	125	NR13
W-D40	40	155	NR16
W-D48	48	212	C20H
W-D55	55		C25H
W-D68	68	251	C32H

TQW Torque Wrenches



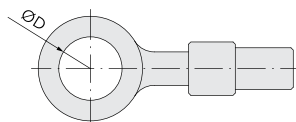
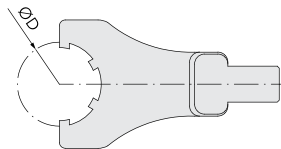
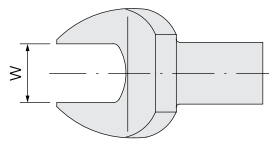
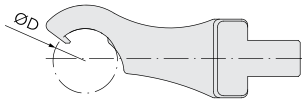
Part No.	Torque Range	□ (mm)
TQW3A-2N02M	20~100MN, TPR handle	14×18
TQW4B-1N02M	40~200MN, TPR handle	

Features

- Accuracy: CW±3%, CCW±5%.
- Special design, insert tools shoot automatically when press the button.
- Low weight and smooth adjusting design for energy saving.
- The tube made of alloy steel with good performance of hardenability.
- Heavy-duty & accurate mechanism for industrial use.

TQW

TQW Torque Wrench Accessories



Part No.	ØD	□ (mm)
TQW-D32	32 [±5 mm]	14×18
TQW-D43	43 [±5 mm]	
TQW-D50	50 [±5 mm]	
TQW-D60	60 [±5 mm]	
TQW-D63	63 [±5 mm]	
TQW-D72	72 [±5 mm]	
TQW-D82	82 [±5 mm]	

Part No.	W	Nuts	□ (mm)
TQW-ER11	17	ER11SH	14×18
TQW-ER16	25	ER16SH	
TQW-ER20	30	ER20SH	
TQW-NR06WD	18	NR06WD	
TQW-NR10WD	1"	NR10WD	

Part No.	ØD	Nuts	□ (mm)
TQW-ER25	42	ER25	14×18
TQW-ER32	50	ER32	
TQW-ER40	63	ER40	

Part No.	ØD	Nuts	□ (mm)
TQW-D19.5	19.5	NR06	14×18
TQW-D27	27.1	NR10	
TQW-D34	34	NR13	
TQW-D40	40	NR16	
TQW-D48	48	C20H	
TQW-D55	55	C25H	
TQW-D68	68	C32H	





It's gripping stuff...

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