

NEW

INNOTOOL

LOOK FORWARD



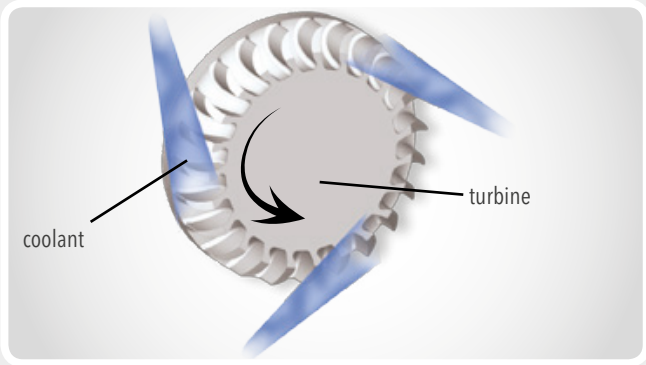
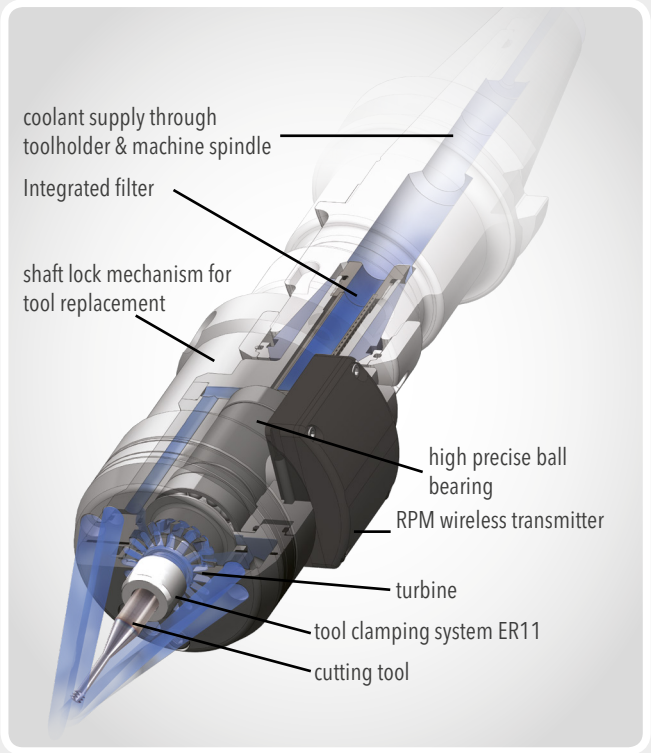
TYPHOON

UNIQUE HSM JET SPINDLES

- For finish & semi-finish machining applications
- High economical
- Reduced machining time
- Coolant driven spindle
- Improved tool life

TYPHOON HSM JET SPINDLE

- Unique spindle driven by coolant flow for finish and semi-finish machining
- Application on a wide variety of standard and special machines
- Efficient machining and shorter processing times
- High precise machining with excellent surface quality
- Higher cutting speed range than machining with original machine spindle
- Simple and easy to use
- Reduces use of the machine spindle
- Saves energy
- Efficient chip removal by coolant jet
- Increases tool life of cutting tools
- Spindle can be used in automatic tool changer systems

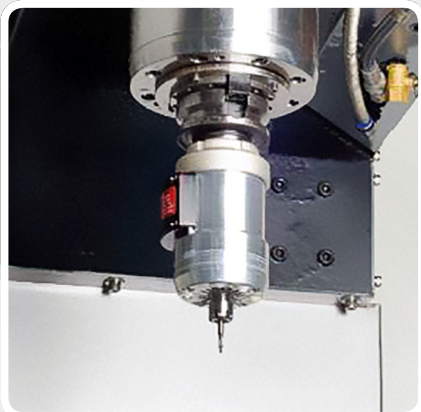


DIRECT WIRELESS ROTATION SPEED DISPLAY

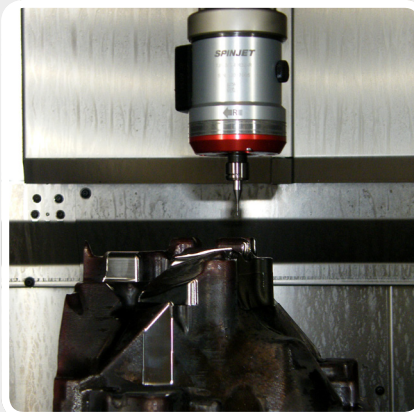


- Wireless RPM monitoring during machining
- The TSD-speed display can monitor speed data of several Typhoon systems
- Effective transmission range up to 3 m

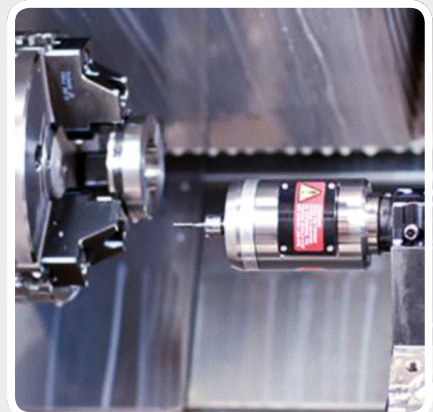
ADAPTION ON DIFFERENT TYPES OF MACHINES



Turn mill



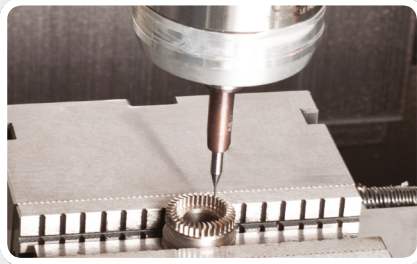
Milling



Turning

APPLICATION RANGE

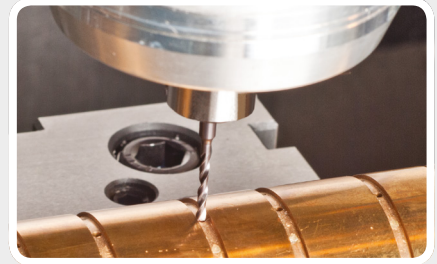
Typhoon is suitable for a variety of applications in a wide range of workpiece materials.



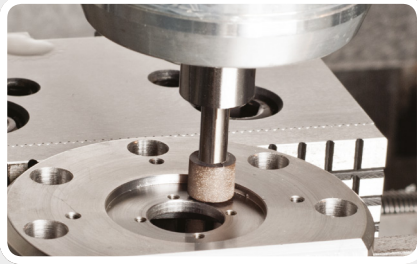
Milling



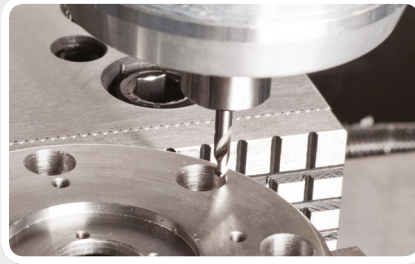
Thread milling



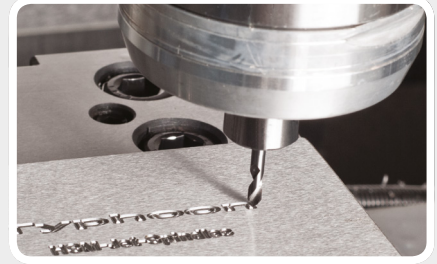
Drilling



Grinding

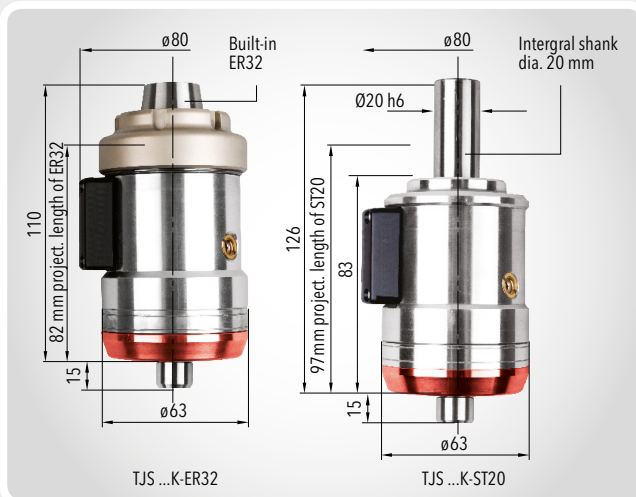


Chamfering

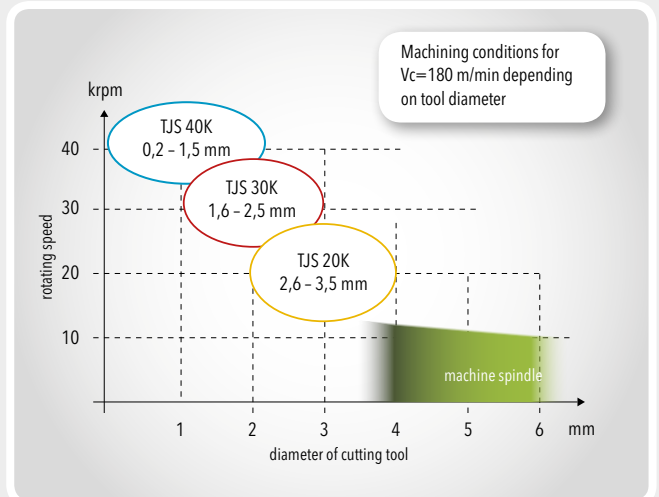


Engraving

TYPHOON MODELS: TJS ...K-ER32 AND TJS ...K-20



APPLICATION RANGE OF TYPHOON



Product Description	TJS 20K...	TJS 30K...	TJS 40K...
Rotation speed (RPM)	20.000	30.000	40.000
Coolant pump pressure (bar)*		20	
Flow rate of coolant (L/min)*		12	
Maximum tool shank diameter (mm)		6,0	
Maximum tool diameter (mm)	3,5	2,5	1,5

TYPHOON LOADED IN TOOL CHANGER MAGAZINE



Can be used on a wide range of tool changer magazines

* Increasing of coolant pressure and flow rate causes higher rotation speed and higher power output.

Weight of system: 1,1 kg

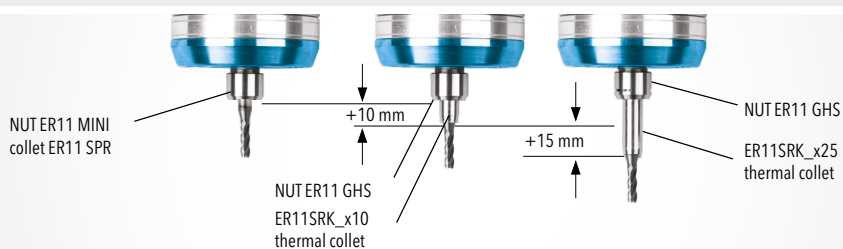
TJS is delivered incl. tightening nut ER11 MINI, wrench ER11 MINI and TSLT shaft lock tool.

Typhoon is offered as standard for right-turn, but can also be ordered as a left-turn variant.

HIGH EFFICIENCY MACHINING

- High rotating speeds enable higher cutting speeds and high feed rates, and reduces machining times
- Saves energy
- Up to 65% increased productivity compared to machining with original machine spindle

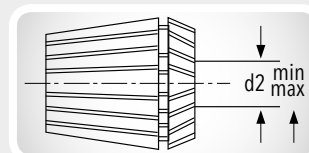
TOOL CLAMPING USING ER11 COLLETS



ER11 SPR-AA

DIN 6499 „AA“ spring collets, hardened, with high precision

Designation	d2 min	d2 max
ER11 SPR 0.5-1 AA	0,5	1,0
ER11 SPR 1-2 AA	1,0	2,0
ER11 SPR 2-3 AA	2,0	3,0
ER11 SPR 3-4 AA	3,0	4,0
ER11 SPR 4-5 AA	4,0	5,0
ER11 SPR 5-6 AA	5,0	6,0

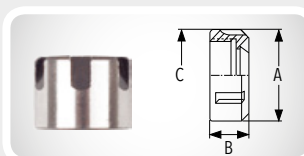


Spring collet ER11 SPR-AA

NUT ER11 MINI

Tightening nut DIN 6499 for collets

Tightening nut	A	B	C	Wrench
NUT ER11 MINI Tightening nut	16,0	10,8	M13X0,75	WRENCH ER11 MINI



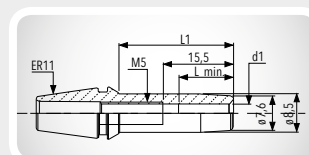
NUT ER11 MINI tightening nut

ER11SRK

ER11 Shrink collet adapter

Designation	d1	Lmin	L1
ER11SRK3x10	3	9,5	10
ER11SRK3x25	3	11,5	25
ER11SRK4x10	4	9,5	10
ER11SRK4x25	4	11,5	25

For use with carbide or HSS cutting tools.

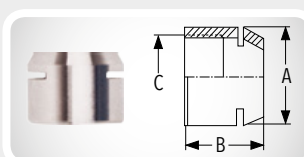


ER11 SRK

ER11

Tightening nut DIN 6499 for shrink collet adapter

Tightening nut	A	B	C	Wrench
NUT ER11 GHS Tightening nut	16,0	11,5	M13X0,75	ER11 SMS



NUT ER11 GHS tightening nut

TJS TSD DISPLAY - WIRELESS ROTATION SPEED DISPLAY

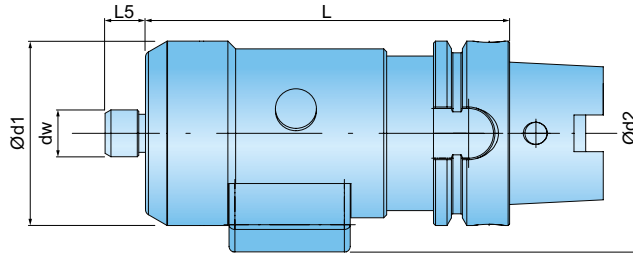


Delivered with universal AC/DC power adaptor.

TSLT - SHAFT LOCK TOOL

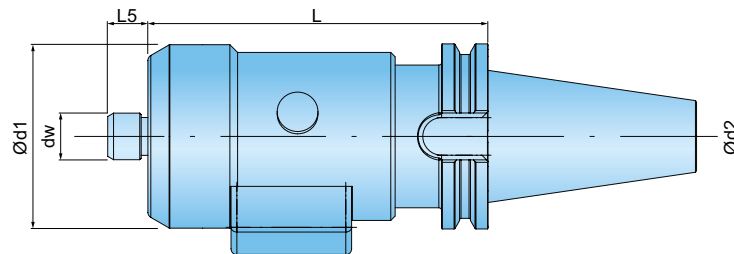


TYPHOON TJS-HSK A63



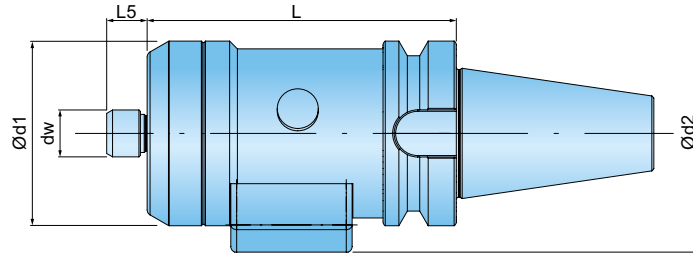
Designation	D max.	dw	d1	d2	L	L5	HSK-A	kg
TJS 20K HSK A63L	3,5	ER11	63	80	124	15	63	1,8
TJS 20K HSK A63R	3,5	ER11	63	80	124	15	63	1,8
TJS 30K HSK A63L	2,5	ER11	63	80	124	15	63	1,8
TJS 30K HSK A63R	2,5	ER11	63	80	124	15	63	1,8
TJS 40K HSK A63L	1,5	ER11	63	80	124	15	63	1,8
TJS 40K HSK A63R	1,5	ER11	63	80	124	15	63	1,8

TYPHOON TJS-DIN69871



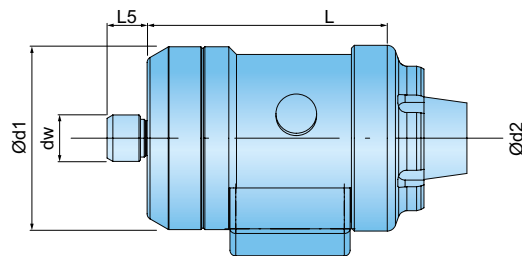
Designation	D max.	dw	d1	d2	L	L5	SK	kg
TJS 20K DIN69871 30L	3,5	ER11	63	80	117	15	30	1,4
TJS 20K DIN69871 30R	3,5	ER11	63	80	117	15	30	1,4
TJS 30K DIN69871 30L	2,5	ER11	63	80	117	15	30	1,4
TJS 30K DIN69871 30R	2,5	ER11	63	80	117	15	30	1,4
TJS 20K DIN69871 40L	3,5	ER11	63	80	117	15	40	1,9
TJS 20K DIN69871 40R	3,5	ER11	63	80	117	15	40	1,9
TJS 30K DIN69871 40L	2,5	ER11	63	80	117	15	40	1,9
TJS 30K DIN69871 40R	2,5	ER11	63	80	117	15	40	1,9
TJS 40K DIN69871 40L	1,5	ER11	63	80	117	15	40	1,9
TJS 40K DIN69871 40R	1,5	ER11	63	80	117	15	40	1,9

TYPHOON TJS-BT



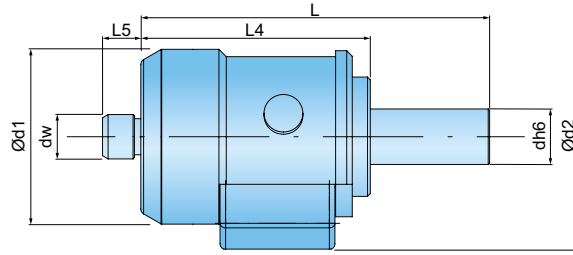
Designation	D max.	dw	d1	d2	L	L5	BT	kg
TJS 20K BT30L	3,5	ER11	63	80	115	15	30	1,4
TJS 20K BT30R	3,5	ER11	63	80	115	15	30	1,4
TJS 30K BT30L	2,5	ER11	63	80	115	15	30	1,4
TJS 30K BT30R	2,5	ER11	63	80	115	15	30	1,4
TJS 40K BT30L	1,5	ER11	63	80	115	15	30	1,4
TJS 40K BT30R	1,5	ER11	63	80	115	15	30	1,4
TJS 20K BT40L	3,5	ER11	63	80	105	15	40	1,8
TJS 20K BT40R	3,5	ER11	63	80	105	15	40	1,8
TJS 30K BT40L	2,5	ER11	63	80	105	15	40	1,8
TJS 30K BT40R	2,5	ER11	63	80	105	15	40	1,8
TJS 40K BT40L	1,5	ER11	63	80	105	15	40	1,8
TJS 40K BT40R	1,5	ER11	63	80	105	15	40	1,8

TYPHOON TJS-ER32



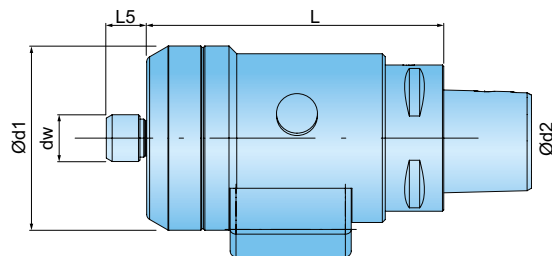
Designation	D max.	dw	d1	d2	L	L4	L5	ER	kg
TJS 20K ER32L	3,5	ER11	63	80	110	82	15	32	1,1
TJS 20K ER32R	3,5	ER11	63	80	110	82	15	32	1,1
TJS 30K ER32L	2,5	ER11	63	80	110	82	15	32	1,1
TJS 30K ER32R	2,5	ER11	63	80	110	82	15	32	1,1
TJS 40K ER32L	1,5	ER11	63	80	110	82	15	32	1,1
TJS 40K ER32R	1,5	ER11	63	80	110	82	15	32	1,1

TYPHOON TJS-ST



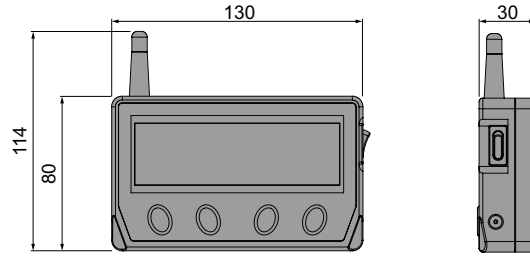
Designation	D max.	dh6	dw	d1	d2	L	L4	L5	kg
TJS 20K ST20L	3,5	20	ER11	63	80	126	83	15	0,8
TJS 20K ST20R	3,5	20	ER11	63	80	126	83	15	0,8
TJS 30K ST20L	2,5	20	ER11	63	80	126	83	15	0,8
TJS 30K ST20R	2,5	20	ER11	63	80	126	83	15	0,8
TJS 40K ST20L	1,5	20	ER11	63	80	126	83	15	0,8
TJS 40K ST20R	1,5	20	ER11	63	80	126	83	15	0,8

TYPHOON TJS-C#



Designation	D max.	dw	d1	d2	L	L5	PSK	kg
TJS 20K C5L	3,5	ER11	63	80	104	15	C5	1,3
TJS 20K C5R	3,5	ER11	63	80	104	15	C5	1,3
TJS 30K C5L	2,5	ER11	63	80	104	15	C5	1,3
TJS 30K C5R	2,5	ER11	63	80	104	15	C5	1,3
TJS 40K C5L	1,5	ER11	63	80	104	15	C5	1,3
TJS 40K C5R	1,5	ER11	63	80	104	15	C5	1,3
TJS 20K C6L	3,5	ER11	63	80	102	15	C6	1,6
TJS 20K C6R	3,5	ER11	63	80	102	15	C6	1,6
TJS 30K C6L	2,5	ER11	63	80	102	15	C6	1,6
TJS 30K C6R	2,5	ER11	63	80	102	15	C6	1,6
TJS 40K C6L	1,5	ER11	63	80	102	15	C6	1,6
TJS 40K C6R	1,5	ER11	63	80	102	15	C6	1,6

TYPHOON TJS TSD DISPLAY



Designation	Holder	kg
TJS TSD DISPLAY	TJS -*	1,000

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