

Offer valid until: 31.12.2026

FRIDRO
ALL IN ONE PLACE

10/26

TOOLS
special offer





NEW



LXHX & LNGX Series Disc Milling Cutter

Delivers powerful slot milling and excellent versatile milling performance. An integrated tool balancing precision, cost, efficiency and cycle time.

LXHX Series 4/5/6/8/10 mm cutters diameter ranging from 80 mm to 250 mm

LNGX Series 10/12/14/16/20 mm cutters diameter ranging from 80 mm to 250 mm

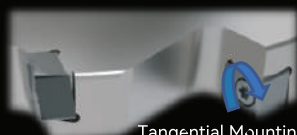


MORE INFORMATION ON THE QR CODE



Axial Mounting Screw

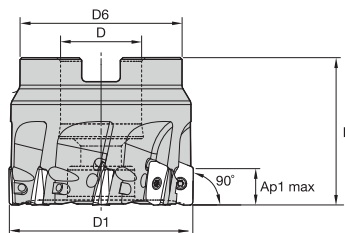
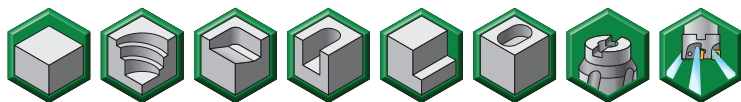
LXHX Series



Tangential Mounting Screw

LNGX Series

Shell Mill VSM 11 + set of inserts XD ...

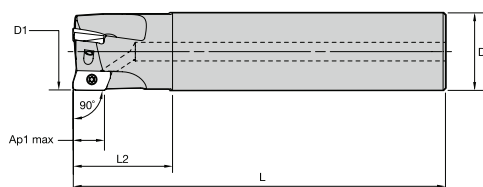
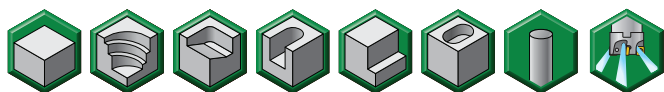


Buy a set of inserts and get
the cutter for **only 15,- €**



Cat. no.	Mark	D1	D	D6	L	Ap1 max	No. of inserts	Angle°	max RPM	Coolant supply	kg	No. of inserts in set
5416316	VSM11D040Z04S016XD11	40	16	37	40	11,4	4	2,6	22.600	Yes	0,22	30
5416318	VSM11D050Z05S022XD11	50	22	44	40	11,3	5	1,9	19.900	Yes	0,33	30
5416340	VSM11D063Z06S022XD11	63	22	44	40	11,3	6	1,5	17.500	Yes	0,50	30

Cylindrical End Mill + set of inserts XD...

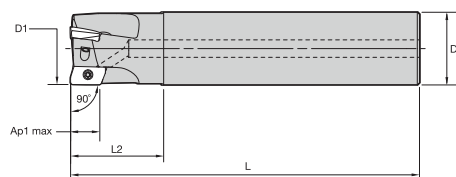
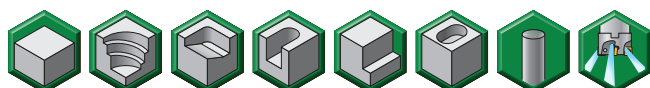


Buy a set of inserts and get
the cutter for **only 9,- €**



Cat. num.	Mark	D1	D	L	L2	Ap1 max	No. of inserts	Angle°	max RPM	Coolant supply	kg	No. of inserts in set
5416633	VSM11D016Z02A16XD11L100	16	16	100	31	11,5	2	10,0	41.400	Yes	0,12	20
5416635	VSM11D020Z03A20XD11L110	20	20	110	31	11,6	3	7,8	35.100	Yes	0,23	20
5416636	VSM11D025Z03A25XD11L120	25	25	120	33	11,5	3	5,3	30.200	Yes	0,39	20
5416638	VSM11D032Z03A32XD11L130	32	32	130	41	11,4	3	3,6	25.800	Yes	0,70	20

Cylindrical End Mill + set of inserts XD...



Buy a set of inserts and get
the cutter for **only 9,- €**



Cat. num.	Mark	D1	D	L	L2	Ap1 max	No. of inserts	Angle°	max RPM	Coolant supply	kg	No. of inserts in set
5416700	VSM11D016Z02A16XD11L170	16	16	170	25	11,5	2	10,0°	41.400	Yes	0,23	20
5416701	VSM11D018Z02A16XD11L170	18	16	170	25	11,6	2	9,7°	37.900	Yes	0,23	20
5416703	VSM11D020Z03A20XD11L170	20	20	170	41	11,6	3	7,8°	35.100	Yes	0,36	30
5416704	VSM11D022Z03A20XD11L170	22	20	170	30	11,5	3	6,6°	32.900	yes	0,37	30

Inserts XDCT...

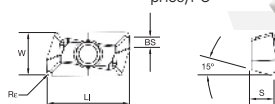
WIDIA

WN10HM

5936171

11,50

price/PC



XDCT110408PDRALP

No. of edges	LI	BS	S	W	Re	hm
2	13,44	1,69	4,00	6,90	0,80	0,02

Inserts XDPT...

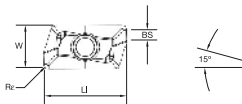
WIDIA

WS40PM

6180148

9,90

price/PC



XDPT110408PDSRMM

No. of edges	LI	BS	S	W	Re	hm
2	13,50	1,66	4,13	6,94	0,78	0,06

Inserts XDET...

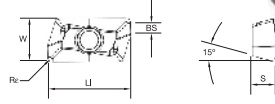
WIDIA

WU20PM

6487443

8,50

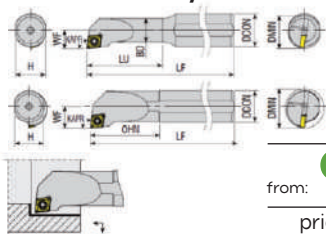
price/PC



XDPT110408PDSRMM

No. of edges	LI	BS	S	W	Re	hm
2	13,50	1,66	4,13	6,94	0,80	0,06

Holder SCLC R/L 95°



from: **9,00**
price/PC



The diagram shows the right hand holder

→ [CLICK HERE](#)

%

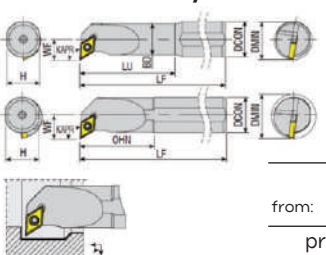
RIGHT-hand version!

Cat. num.	Product code	DCON	H	LF	WF	DMIN	Special price	Price with 30 inserts
M.01.02.03.09.01	S08H SCLCR 06	08	7.3	100	06	≥11	18,90	9,00
M.01.02.03.09.02	S10K SCLCR 06	10	09	125	07	≥13	21,50	9,00
M.01.02.03.09.03	S12K SCLCR 06	12	11	125	09	≥16	22,60	9,00
M.01.02.03.09.07	S16P SCLCR 09	16	14.8	170	11	≥20	25,80	9,00
M.01.02.03.09.08	S20R SCLCR 09	20	18.3	200	13	≥25	27,10	9,00

LEFT-hand version!

Cat. num.	Product code	DCON	H	LF	WF	DMIN	Special price	Price with 30 inserts
M.01.02.03.10.01	S08H SCLCL 06	08	7.3	100	06	≥11	18,90	9,00
M.01.02.03.10.02	S10K SCLCL 06	10	09	125	07	≥13	21,50	9,00
M.01.02.03.10.03	S12K SCLCL 06	12	11	125	09	≥16	22,60	9,00
M.01.02.03.10.07	S16P SCLCL 09	16	14.8	170	11	≥20	25,80	9,00
M.01.02.03.10.08	S20R SCLCL 09	20	18.3	200	13	≥25	27,10	9,00

Holder SDUC R/L 93°



from: **9,00**
price/PC



The diagram shows the right hand holder

→ [CLICK HERE](#)

%

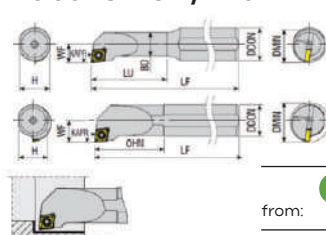
RIGHT-hand version!

Cat. num.	Product code	DCON	H	LF	WF	DMIN	Special price	Price with 30 inserts
M.01.02.03.01.01	S10K SDUCR 07	10	09	125	08	≥13	21,40	9,00
M.01.02.03.01.02	S12K SDUCR 07	12	11	125	09	≥16	22,60	9,00
M.01.02.03.01.03	S16P SDUCR 07	16	14.8	170	11	≥20	25,80	9,00
M.01.02.03.01.07	S16P SDUCR 11	16	14.8	170	11	≥20	25,80	9,00
M.01.02.03.01.08	S20R SDUCR 11	20	18.3	200	13	≥25	27,10	9,00
M.01.02.03.01.10	S25R SDUCR 11	25	23	250	17	≥32	36,10	9,00

LEFT-hand version!

Cat. num.	Product code	DCON	H	LF	WF	DMIN	Special price	Price with 30 inserts
M.01.02.03.02.01	S10K SDUCL 07	10	09	125	08	≥13	21,40	9,00
M.01.02.03.02.02	S12K SDUCL 07	12	11	125	09	≥16	22,60	9,00
M.01.02.03.02.03	S16P SDUCL 07	16	14.8	170	11	≥20	25,80	9,00
M.01.02.03.02.09	S16P SDUCL 11	16	14.8	170	11	≥20	25,80	9,00
M.01.02.03.02.10	S20R SDUCL 11	20	18.3	200	13	≥25	27,10	9,00
M.01.02.03.02.12	S25R SDUCL 11	25	23	250	17	≥32	36,10	9,00

Holder STFC R/L 95°



from: **9,00**
price/PC



The diagram shows the right hand holder

→ [CLICK HERE](#)

%

RIGHT-hand version!

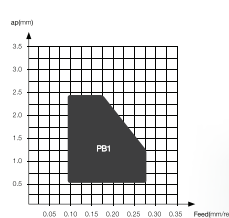
Cat. num.	Product code	DCON	H	LF	WF	DMIN	Special price	Price with 30 inserts
M.01.02.03.29.10	S10K STFCR 09	10	09	125	07	≥13	21,40	9,00
M.01.02.03.29.11	S12K STFCR 09	12	11	125	09	≥17	22,60	9,00
M.01.02.03.29.09	S12K STFCR 11	12	11	125	09	≥17	22,60	9,00
M.01.02.03.29.01	S16P STFCR 11	16	14.8	170	11	≥20	25,80	9,00
M.01.02.03.29.02	S20R STFCR 11	20	18.3	200	13	≥25	27,10	9,00
M.01.02.03.29.06	S25S STFCR 16	25	23	250	17	≥32	36,10	9,00

LEFT-hand version!

Cat. num.	Product code	DCON	H	LF	WF	DMIN	Special price	Price with 30 inserts
M.01.02.03.30.09	S10K STFCL 09	10	09	125	07	≥13	21,40	9,00
M.01.02.03.30.08	S12K STFCL 09	12	11	125	09	≥17	22,60	9,00
M.01.02.03.30.11	S12K STFCL 11	12	11	125	09	≥17	22,60	9,00
M.01.02.03.30.01	S16P STFCL 11	16	14.8	170	11	≥20	25,80	9,00
M.01.02.03.30.02	S20R STFCL 11	20	18.3	200	13	≥25	27,10	9,00
M.01.02.03.30.06	S25S STFCL 16	25	23	250	17	≥32	36,10	9,00

CCMT inserts

Buy 30 inserts and get the holder for only €9,00



CCMT
from: **3,90**
price/PC

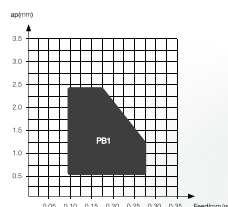


%

P	ACHTECK	ISO designation	quality	price/pc
○		CCMT 060202E-PB1 (80052711)	AC252P	3,90
○		CCMT 060204E-PB1 (80052712)	AC252P	3,90
○		CCMT 09T302E-PB1 (80052714)	AC252P	4,60
○		CCMT 09T304E-PB1 (80052715)	AC252P	4,60

DCMT inserts

Buy 30 inserts and get the holder for only €9,00



DCMT
from: **3,70**
price/PC

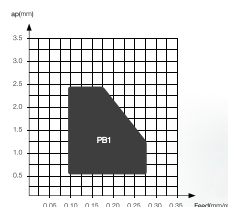


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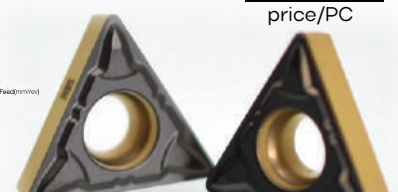
P	ACHTECK	ISO designation	quality	price/pc
○		DCMT 070202E-PB1 (80052732)	AC252P	3,70
○		DCMT 070204E-PB1 (80052733)	AC252P	3,70
○		DCMT 11T302E-PB1 (80052734)	AC252P	4,80
○		DCMT 11T304E-PB1 (80052735)	AC252P	4,80

TCMT inserts

Buy 30 inserts and get the holder for only €9,00



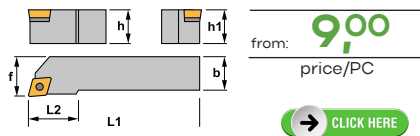
TCMT
from: **3,30**
price/PC



%

P	ACHTECK	ISO designation	quality	price/pc
○		TCMT 090204E-PB1 (80052760)	AC252P	3,30
○		TCMT 110202E-PB1 (80052761)	AC252P	3,40
○		TCMT 110204E-PB1 (80052762)	AC252P	3,40
○		TCMT 16T304E-PB1 (80052764)	AC252P	5,80

Holder SCLC 95°



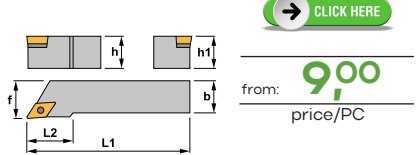
RIGHT-hand version!

Cat. num.	Product code	h=h1	b	L1	l2	f	Special price	Price with 30 inserts
M.01.01.03.19.06	SCLCR 0808 E06	8	8	60	12	10	28,00	9,00
M.01.01.03.19.05	SCLCR 1010 E06	10	10	70	14	12	28,00	9,00
M.01.01.03.19.01	SCLCR 1212 F09	12	12	80	16	16	29,00	9,00
M.01.01.03.19.02	SCLCR 1616 H09	16	16	100	18	20	31,00	9,00
M.01.01.03.19.07	SCLCR 2020 K09	20	20	125	22	25	33,00	9,00
M.01.01.03.19.03	SCLCR 2020 K12	20	20	125	22	25	33,00	9,00
M.01.01.03.19.09	SCLCR 2525 M12	25	25	150	28	32	34,00	9,00

LEFT-hand version!

Cat. num.	Product code	h=h1	b	L1	l2	f	Special price	Price with 30 inserts
M.01.01.03.20.06	SCLCL 0808 E06	8	8	60	12	10	28,00	9,00
M.01.01.03.20.05	SCLCL 1010 E06	10	10	70	14	12	28,00	9,00
M.01.01.03.20.01	SCLCL 1212 F09	12	12	80	16	16	29,00	9,00
M.01.01.03.20.02	SCLCL 1616 H09	16	16	100	18	20	31,00	9,00
M.01.01.03.20.09	SCLCL 2020 K09	20	20	125	22	25	33,00	9,00
M.01.01.03.20.03	SCLCL 2020 K12	20	20	125	22	25	33,00	9,00
M.01.01.03.20.08	SCLCL 2525 M12	25	25	150	28	32	34,00	9,00

Holder SDJC 93°



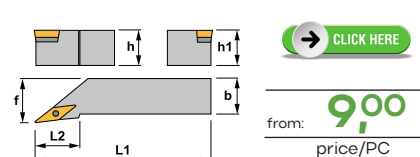
RIGHT-hand version!

Cat. num.	Product code	h=h1	b	L1	l2	f	Special price	Price with 30 inserts
M.01.01.03.12.07	SDJCR 1010 E07	10	10	70	14	12	28,00	9,00
M.01.01.03.12.01	SDJCR 1212 F07	12	12	80	16	16	29,00	9,00
M.01.01.03.12.02	SDJCR 1616 H07	16	16	100	16	20	31,00	9,00
M.01.01.03.12.34	SDJCR 1212 F11	12	12	80	18	16	29,00	9,00
M.01.01.03.12.03	SDJCR 1616 H11	16	16	100	18	20	31,00	9,00
M.01.01.03.12.04	SDJCR 2020 K11	20	20	125	22	25	33,00	9,00
M.01.01.03.12.05	SDJCR 2525 M11	25	25	150	28	32	34,00	9,00

LEFT-hand version!

Cat. num.	Product code	h=h1	b	L1	l2	f	Special price	Price with 30 inserts
M.01.01.03.13.07	SDJCL 1010 E07	10	10	70	14	12	28,00	9,00
M.01.01.03.13.01	SDJCL 1212 F07	12	12	80	16	16	29,00	9,00
M.01.01.03.13.02	SDJCL 1616 H07	16	16	100	16	20	31,00	9,00
M.01.01.03.13.03	SDJCL 1616 H11	16	16	100	18	20	31,00	9,00
M.01.01.03.13.04	SDJCL 2020 K11	20	20	125	22	25	33,00	9,00
M.01.01.03.13.05	SDJCL 2525 M11	25	25	150	28	32	34,00	9,00

Holder SVJC 93°



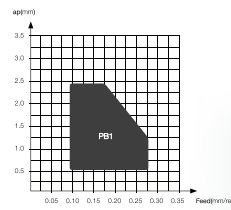
RIGHT-hand version!

Cat. num.	Product code	h=h1	b	L1	l2	f	Special price	Price with 30 inserts
M.01.01.03.06.01	SVJCR 1212 F11	12	12	80	20	16	29,00	9,00
M.01.01.03.06.02	SVJCR 1616 H11	16	16	100	25	20	31,00	9,00
M.01.01.03.06.03	SVJCR 2020 K11	20	20	125	28	25	33,00	9,00
M.01.01.03.06.18	SVJCR 2525 M11	25	25	150	28	32	34,00	9,00
M.01.01.03.06.04	SVJCR 2020 K16	20	20	125	34	25	33,00	9,00
M.01.01.03.06.05	SVJCR 2525 M16	25	25	150	34	32	34,00	9,00

LEFT-hand version!

Cat. num.	Product code	h=h1	b	L1	l2	f	Special price	Price with 30 inserts
M.01.01.03.07.01	SVJCL 1212 F11	12	12	80	20	16	29,00	9,00
M.01.01.03.07.02	SVJCL 1616 H11	16	16	100	25	20	31,00	9,00
M.01.01.03.07.03	SVJCL 2020 K11	20	20	125	28	25	33,00	9,00
M.01.01.03.07.19	SVJCL 2020 M11	25	25	150	28	32	34,00	9,00
M.01.01.03.07.04	SVJCL 2020 K16	20	20	125	34	25	33,00	9,00
M.01.01.03.07.05	SVJCL 2525 M16	25	25	150	34	32	34,00	9,00

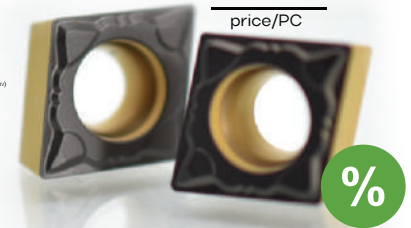
CCMT inserts



ACHTECK

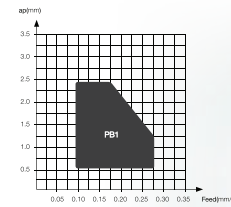
Buy 30 inserts and get the holder for only €9,00

CCMT
from: **3,90**
price/PC



P	ACHTECK	ISO designation	quality	price/pc
		CCMT 060202E-PB1 (80052711)	AC252P	3,90
		CCMT 060204E-PB1 (80052712)	AC252P	3,90
		CCMT 09T302E-PB1 (80052714)	AC252P	4,60
		CCMT 09T304E-PB1 (80052715)	AC252P	4,60
		CCMT 120404E-PC2 (80052722)	AC252P	6,40
		CCMT 120408E-PC2 (80052723)	AC252P	6,40

DCMT inserts



ACHTECK

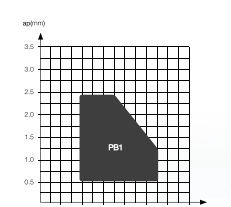
Buy 30 inserts and get the holder for only €9,00

DCMT
from: **3,70**
price/PC



P	ACHTECK	ISO designation	quality	price/pc
		DCMT 070202E-PB1 (80052732)	AC252P	3,70
		DCMT 070204E-PB1 (80052733)	AC252P	3,70
		DCMT 11T302E-PB1 (80052734)	AC252P	4,80
		DCMT 11T304E-PB1 (80052735)	AC252P	4,80
		DCMT 11T308E-PB1 (80052736)	AC252P	4,80

VCMT inserts



ACHTECK

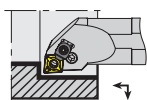
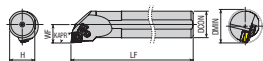
Buy 30 inserts and get the holder for only €9,00

VCMT
from: **5,70**
price/PC



P	ACHTECK	ISO designation	quality	price/pc
		VCMT 110304E-PC2 (80052796)	AC252P	5,70
		VCMT 160404E-PC2 (80052798)	AC252P	7,40
		VCMT 160408E-PC2 (80052799)	AC252P	7,40

Holder S-PCLN 95°



from: **15,00**
price/PC

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The diagram shows the right-hand holder



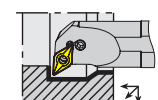
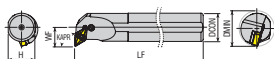
RIGHT-hand version!

Cat. num.	Product code	DCN	H	LF	WF	DMIN	Special price	Price with 30 inserts
M.01.02.04.01.01	S25S PCLNR 12	25	23	250	17	≥32	53,00	15,00
M.01.02.04.01.02	S32T PCLNR 12C	32	30	300	22	≥40	65,00	19,00
M.01.02.04.01.03	S40U PCLNR 12C	40	37,5	350	27	≥50	84,00	39,00

LEFT-hand version!

Cat. num.	Product code	DCN	H	LF	WF	DMIN	Special price	Price with 30 inserts
M.01.02.04.02.01	S25S PCLNL 12	25	23	250	17	≥32	53,00	15,00
M.01.02.04.02.02	S32T PCLNL 12C	32	30	300	22	≥40	65,00	19,00
M.01.02.04.02.03	S40U PCLNL 12C	40	37,5	350	27	≥50	84,00	39,00

Holder S-PDUN 93°



→ [CLICK HERE](#)

from: **15,00**
price/PC



The diagram shows the right-hand holder



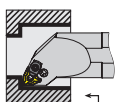
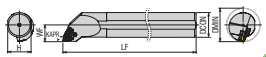
RIGHT-hand version!

Cat. num.	Product code	DCN	H	LF	WF	DMIN	Special price	Price with 30 inserts
M.01.02.04.03.01	S20R PDUNR 11	20	18,3	200	13	≥25	45,00	15,00
M.01.02.04.03.02	S25S PDUNR 11	25	23	250	17	≥32	52,00	15,00
M.01.02.04.03.11	S25S PDUNR 15	25	23	250	19	≥32	52,00	15,00
M.01.02.04.03.03	S32T PDUNR 15	32	30	300	22	≥40	65,00	19,00
M.01.02.04.03.04	S40U PDUNR 15	40	37,5	350	27	≥50	84,00	39,00

LEFT-hand version!

Cat. num.	Product code	DCN	H	LF	WF	DMIN	Special price	Price with 30 inserts
M.01.02.04.04.01	S20R PDUNL 11	20	18,3	200	13	≥25	45,00	15,00
M.01.02.04.04.02	S25S PDUNL 11	25	23	250	17	≥32	52,00	15,00
M.01.02.04.04.11	S25S PDUNL 15	25	23	250	19	≥32	52,00	15,00
M.01.02.04.04.03	S32T PDUNL 15	32	30	300	22	≥40	65,00	19,00
M.01.02.04.04.04	S40U PDUNL 15	40	37,5	350	27	≥50	84,00	39,00

Holder S-PWLN 95°



from: **15,00**
price/PC

→ [CLICK HERE](#)



The diagram shows the right-hand holder



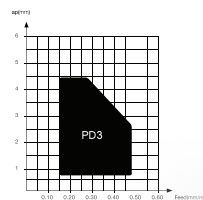
RIGHT-hand version!

Cat. num.	Product code	DCN	H	LF	WF	DMIN	Special price	Price with 30 inserts
M.01.02.04.09.11	S20R PWLNR 06	20	18,3	200	13	≥25	45,00	15,00
M.01.02.04.09.15	S25S PWLNR 06	25	23	250	17	≥32	52,00	15,00
M.01.02.04.09.01	S25S PWLNR 08C	25	23	250	17	≥32	52,00	15,00
M.01.02.04.09.02	S32T PWLNR 08C	32	30	300	22	≥40	65,00	19,00
M.01.02.04.09.03	S40U PWLNR 08C	40	37,5	350	27	≥50	84,00	39,00

LEFT-hand version!

Cat. num.	Product code	DCN	H	LF	WF	DMIN	Special price	Price with 30 inserts
M.01.02.04.10.11	S20R PWLNL 06	20	18,3	200	13	≥25	45,00	15,00
M.01.02.04.10.15	S25S PWLNL 06	25	23	250	17	≥32	52,00	15,00
M.01.02.04.10.01	S25S PWLNL 08C	25	23	250	17	≥32	52,00	15,00
M.01.02.04.10.02	S32T PWLNL 08C	32	30	300	22	≥40	65,00	19,00
M.01.02.04.10.03	S40U PWLNL 08C	40	37,5	350	27	≥50	84,00	39,00

CNMG inserts



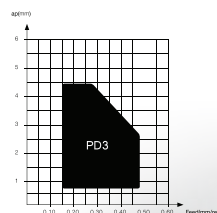
ACHTECK

CNMG
from: **6,60**
price/PC



P	ACHTECK	ISO designation	quality	price/pc
○	0.2	CNMG 120404E-PD3 (80052541)	AC252P	6,60
○	0.2	CNMG 120408E-PD3 (80052542)	AC252P	6,60

DNMG inserts



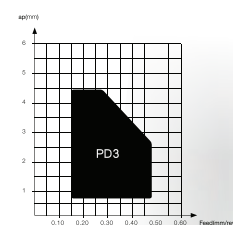
ACHTECK

DNMG
from: **5,50**
price/PC



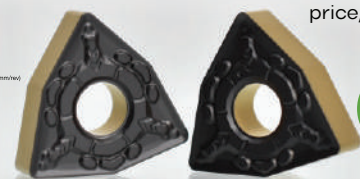
P	ACHTECK	ISO designation	quality	price/pc
○	0.2	DNMG 110404E-PD3 (80052595)	AC252P	5,50
○	0.2	DNMG 110408E-PD3 (80052596)	AC252P	5,50
○	0.2	DNMG 150604E-PD3 (80052600)	AC252P	8,90
○	0.2	DNMG 150608E-PD3 (80052601)	AC252P	8,90

WNMG inserts



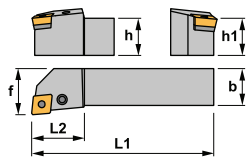
ACHTECK

WNMG
from: **4,90**
price/PC



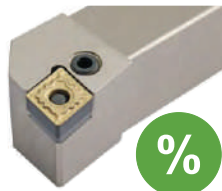
P	ACHTECK	ISO designation	quality	price/pc
○	0.2	WNMG 060408E-PD3 (80052696)	AC252P	4,90
○	0.2	WNMG 080404E-PD3 (80052697)	AC252P	6,50
○	0.2	WNMG 080408E-PD3 (80052698)	AC252P	6,50

Holder PCLN 95°



from: **9,00**
price/PC

[CLICK HERE](#)



The diagram shows the right hand holder!

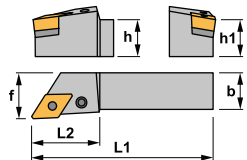
RIGHT-hand version!

Cat. num.	Product code	HF=H	B	LF	WF	Special price	Price with 30 inserts
PCLNR2020K12	PCLNR 2020 K12	20	20	125	25	45,00	9,00
PCLNR2525M12	PCLNR 2525 M12	25	25	150	32	48,00	9,00
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

LEFT-hand version!

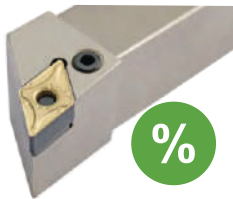
Cat. num.	Product code	HF=H	B	LF	WF	Special price	Price with 30 inserts
PCLNL2020K12	PCLNL 2020 K12	20	20	125	25	45,00	9,00
PCLNL2525M12	PCLNL 2525 M12	25	25	150	32	48,00	9,00
-	-	-	-	-	-	-	-

Holder PDJN 93°



[CLICK HERE](#)

from: **9,00**
price/PC



The diagram shows the right hand holder!

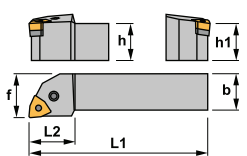
RIGHT-hand version!

Cat. num.	Product code	HF=H	B	LF	WF	Special price	Price with 30 inserts
PDJNR1616H11	PDJNR 1616 H11	16	16	100	20	45,00	9,00
PDJNR2020K11	PDJNR 2020 K11	20	20	125	25	46,00	9,00
PDJNR2525M11	PDJNR 2525 M11	25	25	150	32	48,00	9,00
PDJNR2020K15	PDJNR 2020 K15	20	20	125	25	46,00	9,00
PDJNR2525M15	PDJNR 2525 M15	25	25	150	32	48,00	9,00
PDJNR3232P15	PDJNR 3232 P15	32	32	170	40	54,00	9,00

LEFT-hand version!

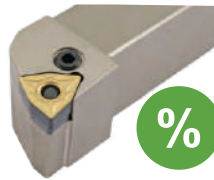
Cat. num.	Product code	HF=H	B	LF	WF	Special price	Price with 30 inserts
PDJNL1616H11	PDJNL 1616 H11	16	16	100	20	45,00	9,00
PDJNL2020K11	PDJNL 2020 K11	20	20	125	25	46,00	9,00
PDJNL2525M11	PDJNL 2525 M11	25	25	150	32	48,00	9,00
PDJNL2020K15	PDJNL 2020 K15	20	20	125	25	46,00	9,00
PDJNL2525M15	PDJNL 2525 M15	25	25	150	32	48,00	9,00
PDJNL3232P15	PDJNL 3232 P15	32	32	170	40	54,00	9,00

Holder PWLN 95°



from: **9,00**
price/PC

[CLICK HERE](#)



The diagram shows the right hand holder!

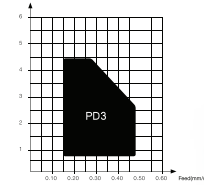
RIGHT-hand version!

Cat. num.	Product code	HF=H	B	LF	WF	Special price	Price with 30 inserts
PWLN2020K06	PWLN 2020 K06	20	20	125	25	46,00	9,00
PWLN2525M06	PWLN 2525 M06	25	25	150	32	48,00	9,00
PWLN2020K08	PWLN 2020 K08	20	20	125	25	46,00	9,00
PWLN2525M08	PWLN 2525 M08	25	25	150	32	48,00	9,00
PWLN3232P08	PWLN 3232 P08	32	32	170	40	54,00	9,00

LEFT-hand version!

Cat. num.	Product code	HF=H	B	LF	WF	Special price	Price with 30 inserts
PWLN2020K06	PWLN 2020 K06	20	20	125	25	46,00	9,00
PWLN2525M06	PWLN 2525 M06	25	25	150	32	48,00	9,00
PWLN2020K08	PWLN 2020 K08	20	20	125	25	46,00	9,00
PWLN2525M08	PWLN 2525 M08	25	25	150	32	48,00	9,00
PWLN3232P08	PWLN 3232 P08	32	32	170	40	54,00	9,00

CNMG inserts



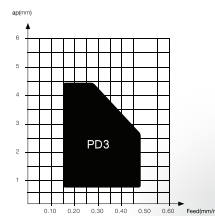
ACHTECK
Buy 30 inserts and get the holder for only €9,00

CNMG
from: **6,60**
price/PC



	ACHTECK	ISO designation	quality	price/pc
 	 0.2	CNMG 120404E-PD3 (80052541)	AC252P	6,60
	 0.2	CNMG 120408E-PD3 (80052542)	AC252P	6,60

DNMG inserts



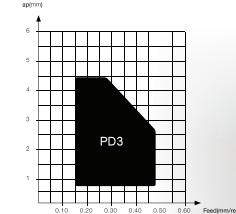
ACHTECK
Buy 30 inserts and get the holder for only €9,00

DNMG
from: **5,50**
price/PC



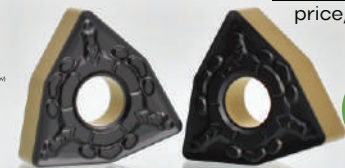
	ACHTECK	ISO designation	quality	price/pc
 	 0.2	DNMG 110404E-PD3 (80052595)	AC252P	5,50
	 0.2	DNMG 110408E-PD3 (80052596)	AC252P	5,50
	 0.2	DNMG 150604E-PD3 (80052600)	AC252P	8,90
	 0.2	DNMG 150608E-PD3 (80052601)	AC252P	8,90

WNMG inserts



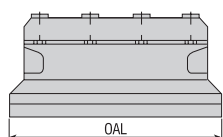
ACHTECK
Buy 30 inserts and get the holder for only €9,00

WNMG
from: **4,90**
price/PC



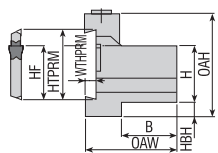
	ACHTECK	ISO designation	quality	price/pc
 	 0.2	WNMG 060408E-PD3 (80052696)	AC252P	4,90
	 0.2	WNMG 080404E-PD3 (80052697)	AC252P	6,50
	 0.2	WNMG 080408E-PD3 (80052698)	AC252P	6,50

Grooving toolholder



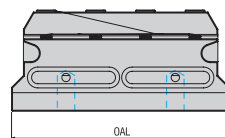
→ [CLICK HERE](#)

from: **66,00**
price/PC



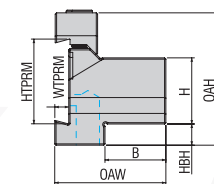
Cat. num.	Designation	HTPRM	HF	H	HBH	WTHPRM	OAL	B	OAW	price/pc
M.03.03.05	ALBU-20-26	26	21,4	20	9	4	86	19	38	66,00
M.03.03.03	ALBU-25-26	26	21,4	25	5	4	110	23	42	71,00
M.03.03.04	ALBU-20-32	32	25	20	13	5,3	100	19	38	66,00
M.03.03.01	ALBU-25-32	32	25	25	8	5,3	110	23	42	71,00

Grooving toolholder



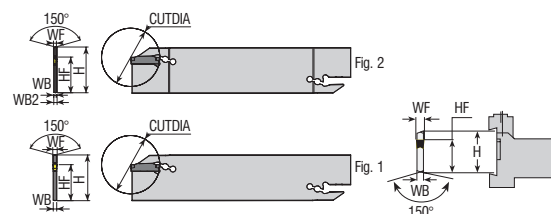
→ [CLICK HERE](#)

from: **109,00**
price/PC



Cat. num.	Designation	HTPRM	HD	H	HBH	WTHPRM	OAL	B	OAW	price/pc
M.03.03.06	ALBU-20-32-H	32	20	20	13	5,30	100	19	38	109,00
M.03.03.07	ALBU-25-32-H	32	25	25	8	5,30	110	23	42	119,00

SET: Parting-off blade + 10 MG... inserts



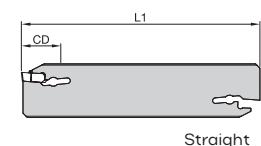
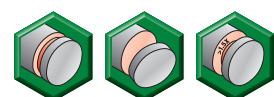
from: **92,00**
price/SET



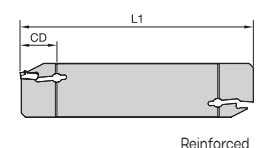
Cat. num. of inserts	Designation	A	price/pc
01237663	MGMN200-M KT8296	2,0 mm	4,50
01237654	MGMN300-M KT8296	3,0 mm	5,50

Set num.	Cat. num.	H	WF	WB2	WB	I	HF	CUTDIA	Fig.	insert	number of inserts	price/set
99001576	M.03.04.07.03	32	2	2,40	1,60	150	25	32	2	MGMN-2	10	92,00
99001577	M.03.04.07.02	32	3	-	2,40	150	25	42	1	MGMN-3	10	99,90

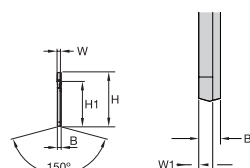
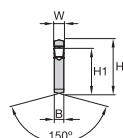
SET: Parting-off blade + 10 WC... inserts



Straight



Reinforced

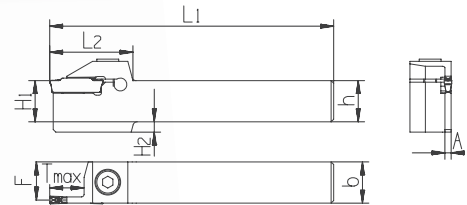


from: **98,00**
price/SET

→ [CLICK HERE](#)

Set number	Cat. num.	Designation	SSC	H	W	W1	H1	L1	B	CD	number of inserts	price/set
99000812	6499213	WGCBSN32M0250	2	32	2,0	-	25,1	150	1,65	-	10	98,00
99000813	6499214	WGCBSN26J0340	3	26	3,0	-	21,5	110	2,40	-	10	99,00
99000814	6499215	WGCBSN32M0350	3	32	3,0	-	25,1	150	2,40	-	10	99,00

SET: ATSER/L parting-off toolholder + 10 inserts



price/SET

from: **105,00** +

Image shows the LEFT version!

Insert		ATD
Application		TS
Page		P186
Parting off		•
External grooving	Grooving	•
	Turning	•

AP301U
P15-P35
M15-M35
K15-K35

5-Hand of tool	
	L: Left hand
	R: Right hand



10x
ATD...
Inserts



Cat. num. (Inserts)	Product code
00043085	ATD 203-TS
00006593	ATD 303-TS
00034984	ATD 404-TS
00043086	ATD 504-TS
00043087	ATD 604-TS

LEFT-HAND VERSION

Set number	Toolholder designation	Cat. num. toolholder	h	b	H	H2	A	L ₁	L ₂	F	T _{max}	insert	Price for toolholder +10 inserts
99001186	ATSEL 1616-2T17	00025130	16	16	16	4	1,8	110	37	15,1	17	ATD	105,00
99001187	ATSEL 2020-2T17	00024918	20	20	20	0	1,8	125	37	19,1	17	ATD	105,00
99001188	ATSEL 2525-2T17	00024958	25	25	25	0	1,8	150	37	24,1	17	ATD	105,00
99001189	ATSEL 1616-3T20	00025135	16	16	16	4	2,4	110	38	14,8	20	ATD	119,00
99001190	ATSEL 2020-3T20	00024923	20	20	20	0	2,4	125	38	18,8	20	ATD	119,00
99001191	ATSEL 2525-3T20	00024962	25	25	25	0	2,4	150	38	23,8	20	ATD	119,00
99001192	ATSEL 2525-3T25	00039044	25	25	25	0	2,4	150	45	23,8	25	ATD	119,00
99001193	ATSEL 2020-4T25	00024930	20	20	20	0	3,35	125	45	18,3	25	ATD	129,00
99001194	ATSEL 2525-4T20	80003686	25	25	25	0	3,35	150	40	23,3	20	ATD	129,00
99001195	ATSEL 2525-4T25	00024969	25	25	25	0	3,35	150	45	23,3	25	ATD	129,00
99001196	ATSEL 2525-5T20	00025171	25	25	25	0	4,35	150	37	22,8	20	ATD	179,00
99001197	ATSEL 2525-5T32	00033244	25	25	25	0	4,35	150	56	22,8	32	ATD	179,00
99001198	ATSEL 3232-5T25	80000857	32	32	32	0	4,35	170	46	29,8	25	ATD	179,00
99001199	ATSEL 3232-5T32	80000863	32	32	32	0	4,35	170	56	29,8	32	ATD	179,00

RIGHT-HAND VERSION

Set number	Toolholder designation	Cat. num. toolholder	h	b	H	H2	A	L ₁	L ₂	F	T _{max}	insert	Price for toolholder +10 inserts
99001202	ATSER 1616-2T17	00025129	16	16	16	4	1,8	110	37	15,1	17	ATD	105,00
99001203	ATSER 2020-2T17	00024917	20	20	20	0	1,8	125	37	19,1	17	ATD	105,00
99001204	ATSER 2525-2T17	00024959	25	25	25	0	1,8	150	37	24,1	17	ATD	105,00
99001205	ATSER 1616-3T20	00025136	16	16	16	4	2,4	110	38	14,8	20	ATD	119,00
99001206	ATSER 2020-3T20	00024924	20	20	20	0	2,4	125	38	18,8	20	ATD	119,00
99001207	ATSER 2525-3T20	00024963	25	25	25	0	2,4	150	38	23,8	20	ATD	119,00
99001208	ATSER 2525-3T25	00039043	25	25	25	0	2,4	150	45	23,8	25	ATD	119,00
99001209	ATSER 2020-4T25	00024929	20	20	20	0	3,35	125	45	18,3	25	ATD	129,00
99001210	ATSER 2525-4T20	80003684	25	25	25	0	3,35	150	40	23,3	20	ATD	129,00
99001211	ATSER 2525-4T25	00024968	25	25	25	0	3,35	150	45	23,3	25	ATD	129,00
99001212	ATSER 2525-5T20	00025170	25	25	25	0	4,35	150	37	22,8	20	ATD	179,00
99001213	ATSER 2525-5T32	00033243	25	25	25	0	4,35	150	56	22,8	32	ATD	179,00
99001214	ATSER 3232-5T25	80000855	32	32	32	0	4,35	170	46	29,8	25	ATD	179,00
99001215	ATSER 3232-5T32	80000861	32	32	32	0	4,35	170	56	29,8	32	ATD	179,00

Limited stock!



MICRO TURNING

Special offer



Micro tool for
thread cutting



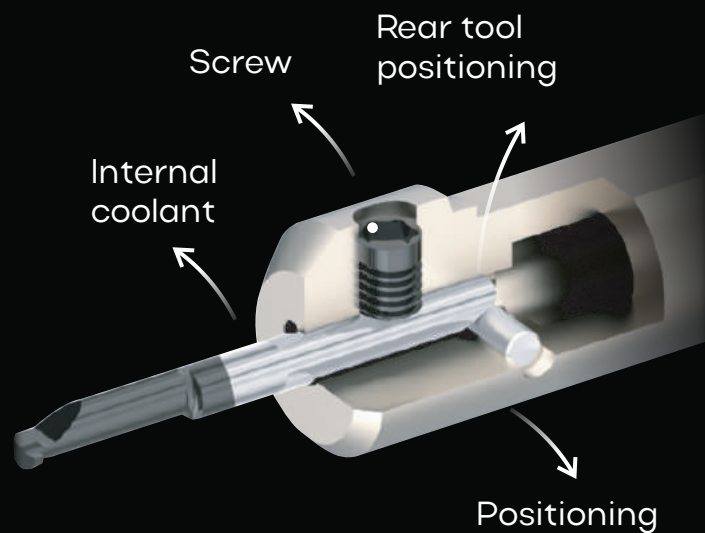
Micro tool for internal
groove machining



Micro tool
for bores

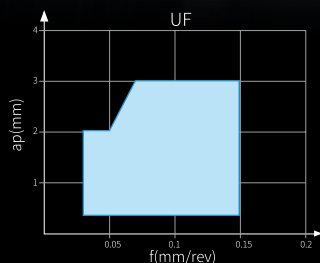
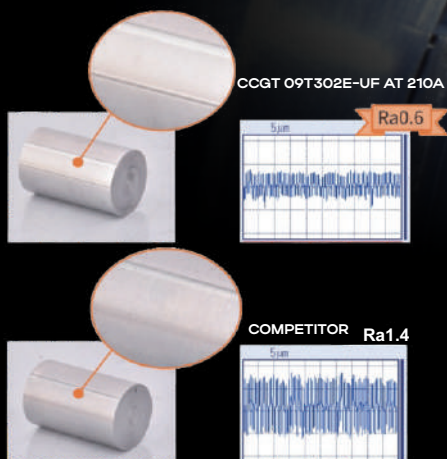


Micro tool
for face grooving



NEW

	Workpiece Material	Vc (m/min)
P	Unalloyed steel	70-200
	Low-alloyed steel	50-180
	High-alloyed steel	50-160



ACHTECK

AT210A Cermet

VCGT inserts



ACHTECK

VCGT

6,99

price/PC



P	ACHTECK	ISO designation	quality	price/pc
		VCGT110301E-UF (80123624)	AT210A	6,99
		VCGT110302E-UF (80123625)	AT210A	6,99
		VCGT110304E-UF (80123626)	AT210A	6,99

VBGT inserts



ACHTECK

VBGT

6,99

price/PC



P	ACHTECK	ISO designation	quality	price/pc
		VBGT110301E-UF (80095399)	AT210A	6,99
		VBGT110302E-UF (80115906)	AT210A	6,99
		VBGT110304E-UF (80095401)	AT210A	6,99

DCGT inserts



ACHTECK

DCGT

from: **6,70**

price/PC



P	ACHTECK	ISO designation	quality	price/pc
		DCGT 070201E-UF (80092860)	AT210A	6,70
		DCGT 070202E-UF (80092857)	AT210A	6,70
		DCGT 070204E-UF (80092859)	AT210A	6,70
		DCGT 11T301E-UF (80123619)	AT210A	6,99
		DCGT 11T302E-UF (80092861)	AT210A	6,99
		DCGT 11T304E-UF (80092855)	AT210A	6,99

CCGT inserts



ACHTECK

CCGT

from: **6,30**

price/PC



P	ACHTECK	ISO designation	quality	price/pc
		CCGT 060201E-UF (80091225)	AT210A	6,30
		CCGT 060202E-UF (80092862)	AT210A	6,30
		CCGT 060204E-UF (80029172)	AT210A	6,30
		CCGT 09T301E-UF (80092858)	AT210A	6,99
		CCGT 09T302E-UF (80091226)	AT210A	6,99
		CCGT 09T304E-UF (80091227)	AT210A	6,99

HEULE+

PRECISION TOOLS



ONE OPERATION



Deburring

Uniform deburring on both sides in a single pass, without rotating the workpiece.



Chamfering

Economical forward and backward bore chamfering in a single pass.



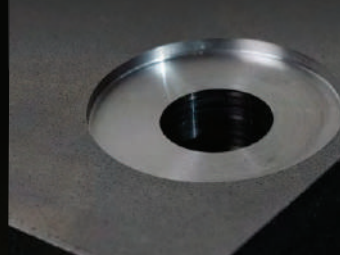
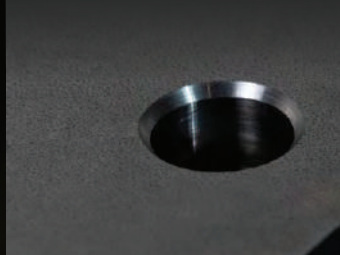
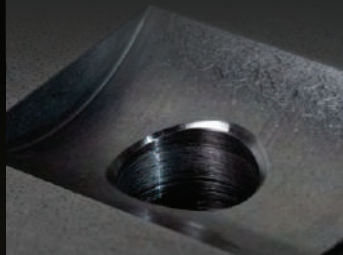
Counterboring

Back counterboring of bores without rotating the workpiece.



Drilling combined

Economical drilling combined with deburring, chamfering or countersinking.



MORE INFORMATION ON THE QR CODE



Solid carbide drill

- Reinforced geometry for reliable machining
- Excellent tool life thanks to carefully selected carbide (ultra-fine grain quality)
- Good self-centering capability
- Optimal chip breaking, even at greater drilling depths
- High concentricity
- Precise hole quality



More variations are available in our online store. Scan the QR code.

102632-
from: **18,60**
price/PC

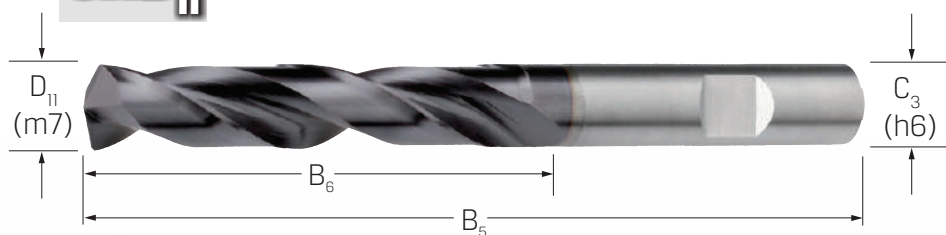
3xD₁₁

[CLICK HERE](#)

Solid carbide		DIN 6537	3 × D ₁₁	Teeth: 2		6535 HB-Shank
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P **K**

Cat. num.	P N/mm ²	K HB
102632	<1200	<750
vc = m/min.		
102632	85-130	155-210



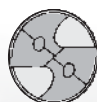
Solid carbide drill

- Reinforced geometry for reliable machining
- Excellent tool life thanks to carefully selected carbide (ultra-fine grain quality)
- Good self-centering capability
- Optimal chip breaking, even at greater drilling depths
- Very wide application range, even under non-ideal conditions
- High concentricity
- Precise hole quality
- With twisted coolant channels



More variations are available in our online store. Scan the QR code.

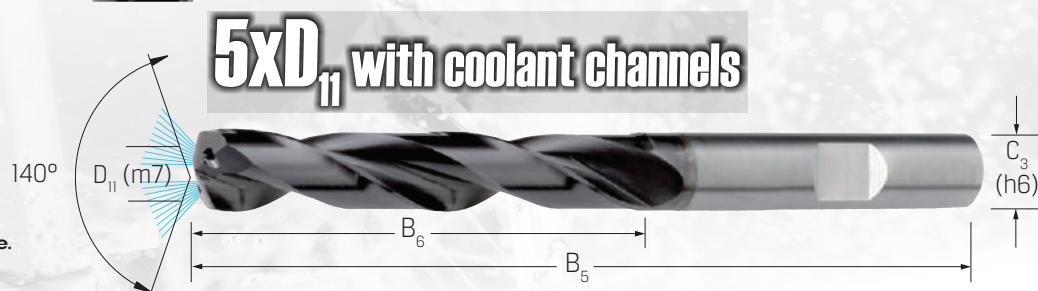
102657-
from: **28,60**
price/PC



[CLICK HERE](#)

	Solid carbide		DIN 6537	5 × D ₁₁	Teeth: 2		6535 HB-Shank
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Cat. num.	P N/mm ²	M N/mm ²	K HB	N N/mm ²
102657	<1200	<750	Aluminium	Bronze
vc = m/min.				
102657	85-170	45-60	130-210	220-310



5xD₁₁ with coolant channels

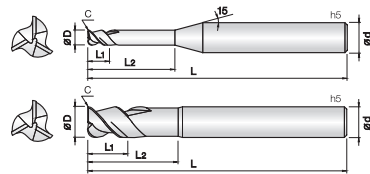
Excellent Chip Control End Mills for SUS

FOR SUS

End Mills for alloy steels, SUS, Ti/Ni base alloys, Inconel and hard to cut materials

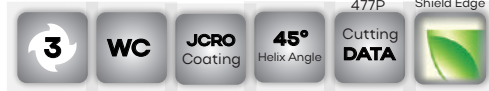
- Strong design for protection against chattering
- Excellent work surface finish by deep chip pocket
- 42° degree helix design for high speed, feed condition
- Minimize fracturing at high feed by high TRS fine WC grade

3SUE



3 Flutes 45° Helix End Mills for SUS

- Endmills for alloy steels, SUS, Ti/Ni base alloys, Inconel and hard-to-cut materials
- JCRO coating provides wear resistance improvement as well as avoid edge stress in various applications
- Excellent work surface finish by 3 flute and deep chip pocket
- 45° degree helix design for high speed, feed condition
- Minimize fracturing at high feed by high TRS fine WC grade



Prices are available in our online store. Scan the QR code.

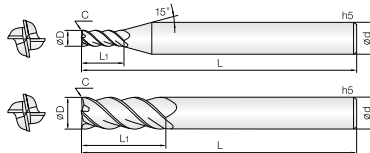
Condition	D Size	D Tolerance
ØD ≠ Ød	Ø0.5 ~ 6	+0 ~ -0.01mm
	Ø8 ~ 20	+0 ~ -0.015mm

Condition	D Size	D Tolerance
ØD = Ød	Ø4 ~ 6	-0.005 ~ -0.015mm
	Ø8 ~ 12	-0.01 ~ -0.025mm
	Ø16 ~ 20	-0.015 ~ -0.03mm

Order Number	Diameter D	Length of cut L1	Effective Length L2	Overall Length L	Shank Dia d
3SUE030080S04	3	8	-	45	4
3SUE040100S04	4	10	-	50	4
3SUE050120S06	5	12	-	50	6
3SUE060120S06	6	12	-	60	6

Order Number	Diameter D	Length of cut L1	Effective Length L2	Overall Length L	Shank Dia d
3SUE080190S08	8	19	-	60	8
3SUE100220S10	10	22	-	70	10
3SUE120260S12	12	26	-	80	12
-	-	-	-	-	-

4SUE



4 Flutes Non Symmetry End Mills for SUS

- Endmills for alloy steels, SUS, Ti/Ni base alloys, Inconel and hard-to-cut materials
- JCRO coating provides wear resistance improvement as well as avoid edge stress in various applications
- Strong design for protection against chattering
- Excellent work surface finish by 4 flute and deep chip pocket
- Minimize fracturing at high feed by high TRS fine WC grade



Prices are available in our online store. Scan the QR code.

Condition	D Size	D Tolerance
ØD ≠ Ød	Ø0.3 ~ 6	+0 ~ -0.01mm
	Ø7 ~ 20	+0 ~ -0.015mm

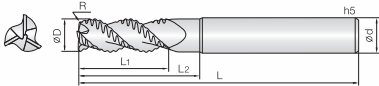
Condition	D Size	D Tolerance
ØD = Ød	Ø6	-0.005 ~ -0.015mm
	Ø8 ~ 12	-0.01 ~ -0.025mm
	Ø14 ~ 20	-0.015 ~ -0.03mm

Order Number	Diameter D	Length of cut L1	Chamfer C	Overall Length L	Shank Dia d
4SUE010025S04	1	2.5	0.01	50	4
4SUE010035S04	1	3.5	0.01	50	4
4SUE015055S04	1.5	5.5	0.015	50	4
4SUE020030S04	2	3	0.02	50	4
4SUE020080S04	2	8	0.02	50	4
4SUE030100S06	3	10	0.03	60	6
4SUE030120S06	3	12	0.03	60	6
4SUE040120S06	4	12	0.04	60	6
4SUE040160S06	4	16	0.04	60	6
4SUE050150S06	5	15	0.05	60	6

Order Number	Diameter D	Length of cut L1	Chamfer C	Overall Length L	Shank Dia d
4SUE050200S06	5	20	0.05	60	6
4SUE060180S06	6	18	0.06	60	6
4SUE060250S06	6	25	0.06	65	6
4SUE080240S08	8	24	0.08	70	8
4SUE080300S08	8	30	0.08	80	8
4SUE100250S10	10	25	0.1	80	10
4SUE100500S10	10	50	0.1	100	10
4SUE120300S12	12	30	0.12	90	12
4SUE120600S12	12	60	0.12	110	12
-	-	-	-	-	-

RTAC Coating

3AROC

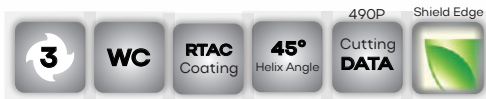


3 Flutes 45° Helix Roughing End Mills for Aluminum

- High speed semi finishing and roughing Endmills for Aluminum, AL alloys, non-ferrous and non-metallic materials
- Minimize built up edge by chip braker and deep pocket design
- Tetrabond TAC coating provides excellent work surface finish by high hardness and low friction
- Minimize fracturing at high feed by high TRS fine WC grade



Prices are available
in our online store.
Scan the QR code.

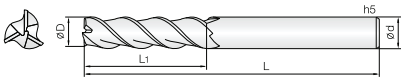


D Size	D Tolerance
Ø 4 ~ 8	-0.02 ~ -0.04mm
Ø 10 ~ 20	-0.02 ~ -0.05mm

Order Number	Diameter D	Length of cut L1	Effective Length L2	Overall Length L	Shank Dia d
3AROC040150S06	4	10	15	60	6
3AROC050200S06	5	15	20	60	6
3AROC060210S06	6	16	21	65	6

Order Number	Diameter D	Length of cut L1	Effective Length L2	Overall Length L	Shank Dia d
3AROC080270S08	8	21	27	70	8
3AROC100310S10	10	26	31	75	10
3AROC120380S12	12	30	38	80	12

3ALEC



3 Flutes 45° Helix End Mills for Aluminum

- Endmills for Aluminum, AL alloys, non-ferrous and non-metallic materials
- Applied fine WC grade for excellent surface finish
- Various flute length design for covering wide range application
- Tetrabond TAC coating provides excellent work surface finish by high hardness and low friction
- Minimize built up edge by double edge and deep pocket design



Prices are available
in our online store.
Scan the QR code.

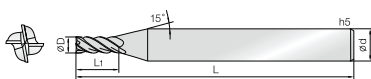


D Size	D Tolerance
Ø 0.8 ~ 20	+0 ~ -0.01mm

Order Number	Diameter D	Length of cut L1	Overall Length L	Shank Dia d
3ALEC020100S06	2	10	50	6
3ALEC030250S06	3	25	60	6
3ALEC040250S06	4	25	60	6
3ALEC050250S06	5	25	60	6
3ALEC060250060	6	25	60	6
3ALEC060450080	6	45	80	6

Order Number	Diameter D	Length of cut L1	Overall Length L	Shank Dia d
3ALEC080250065	8	25	65	8
3ALEC080450090	8	45	90	8
3ALEC100250070	10	25	70	10
3ALEC100500100	10	50	100	10
3ALEC120260075	12	26	75	12
3ALEC120450090	12	45	90	12

4ALEC

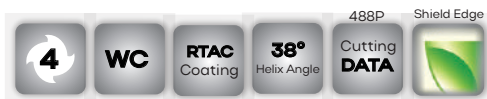


4 Flutes High Speed End Mills for Aluminum

- Endmills for Aluminum, AL alloys, non-ferrous and non-metallic materials
- The powerful anti-chattering design minimizes the vibration of the endmill during side milling
- Excellent performance in semi-finishing and roughing by applying a double cutting edge
- The pocket is deeply designed to adsorption



Prices are available
in our online store.
Scan the QR code.



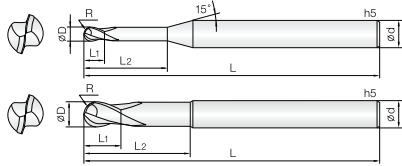
Condition	D Size	D Tolerance
ØD ≠ Ød	Ø3 ~ 6	+0 ~ -0.01mm
	Ø8 ~ 20	+0 ~ -0.015mm

Condition	D Size	D Tolerance
ØD = Ød	Ø6	-0.005 ~ -0.015mm
	Ø8 ~ 12	-0.01 ~ -0.025mm
	Ø16 ~ 20	-0.015 ~ -0.03mm

Order Number	Diameter D	Length of cut L1	Overall Length L	Shank Dia d
4ALEC050200S06	5	20	55	6
4ALEC060200S06	6	20	55	6
4ALEC080250S08	8	25	65	8

Order Number	Diameter D	Length of cut L1	Overall Length L	Shank Dia d
4ALEC100300S10	10	30	75	10
4ALEC120350S12	12	35	80	12
-	-	-	-	-

2JJRB

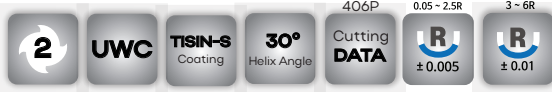


2 Flutes JJ Rib Ball End Mills for Hardened Steels



Prices are available in our online store. Scan the QR code.

- Endmills for pre-hardened and hardened steels(HRc52~68)
- Good wear resistance by high quality Si-based PVD coating
- High precise edge tolerance
- Excellent surface finish
- Very nice work surface finish
- Outstanding performance at high speed machining by ultra fine (0.2μm) WC grade



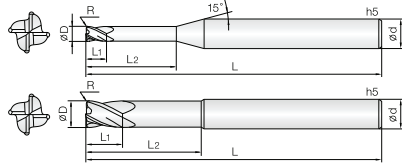
Condition	D Size	D Tolerance
ØD ≠ Ød	Ø0.1 ~ 0.15	+0 ~ -0.005mm
	Ø0.2 ~ 12	+0 ~ -0.01mm

Condition	D Size	D Tolerance
ØD = Ød	Ø6 ~ 12	-0.005 ~ -0.015mm

Order Number	Diameter Rx D	Length of cut L1	Effective Length L2	Overall Length L	Shank Dia d
2JJRB004010S04	0.2Rx0.4	0.4	1	40	4
2JJRB004015S04	0.2Rx0.4	0.4	1.5	40	4
2JJRB010040S04	0.5Rx1	1	4	45	4
2JJRB010100S04	0.5Rx1	1	10	50	4
2JJRB010120S04	0.5Rx1	1	12	50	4
2JJRB010120S06	0.5Rx1	1	12	50	6
2JJRB015100S04	0.75Rx1.5	1.5	10	50	4

Order Number	Diameter Rx D	Length of cut L1	Effective Length L2	Overall Length L	Shank Dia d
2JJRB015100S06	0.75Rx1.5	1.5	10	50	6
2JJRB020080S04	1Rx2	2	8	45	4
2JJRB020140S04	1Rx2	2	14	50	4
2JJRB020140S06	1Rx2	2	14	50	6
2JJRB020200S06	1Rx2	2	20	60	6
2JJRB030160S06	1.5Rx3	3	16	60	6
2JJRB040120S06	2Rx4	4	12	50	6

4JJCR



4 Flutes JJ Rib Corner Radius End Mills for Hardened Steels



Prices are available in our online store. Scan the QR code.

- Endmills for pre-hardened and hardened steels(HRc52~68)
- Good wear resistance by high quality Si-based PVD coating
- High precise edge tolerance
- Designed for minimizing edge chipping by corner R shape
- Various corner R and flute length for wide range application
- Outstanding performance at high speed machining by ultra fine (0.2μm) WC grade



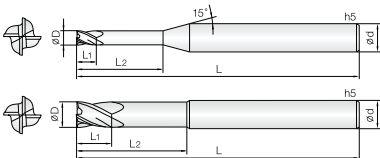
Condition	D Size	D Tolerance
ØD ≠ Ød	Ø0.5 ~ 12	+0 ~ -0.01mm

Condition	D Size	D Tolerance
ØD = Ød	Ø6 ~ 12	-0.005 ~ -0.015mm

Order Number	Diameter Dx R	Length of cut L1	Effective Length L2	Overall Length L	Shank Dia d
4JJCR015003160	1.5xR0.3	1.5	16	50	4
4JJCR0200005160	2xR0.05	2	16	50	4
4JJCR025005200	2.5xR0.5	2.5	20	50	4
4JJCR030005250	3xR0.5	3	25	65	6
4JJCR030010450	3xR1	3	45	90	6
4JJCR040002160	4xR0.2	4	16	55	6
4JJCR040003160	4xR0.3	4	16	55	6
4JJCR040005130	4xR0.5	4	13	55	6
4JJCR040005300	4xR0.5	4	30	70	6
4JJCR040010500	4xR1	4	50	100	6
4JJCR050005160	5xR0.5	5	16	60	6
4JJCR060005200	6xR0.5	7	20	60	6

Order Number	Diameter Dx R	Length of cut L1	Effective Length L2	Overall Length L	Shank Dia d
4JJCR080002220	8xR0.2	9	22	65	8
4JJCR080005220	8xR0.5	9	22	65	8
4JJCR080005400	8xR0.5	9	40	100	8
4JJCR080005500	8xR0.5	9	50	120	8
4JJCR080020500	8xR2	9	50	120	8
4JJCR100005240	10xR0.5	11	24	70	10
4JJCR100005400	10xR0.5	11	40	100	10
4JJCR100005600	10xR0.5	11	60	120	10
4JJCR100010600	10xR1	11	60	120	10
4JJCR120005400	12xR0.5	13	40	110	12
4JJCR120010400	12xR1	13	40	110	12

4JJRE



4 Flutes JJ Rib End Mills for Hardened Steels



Prices are available in our online store. Scan the QR code.

- Endmills for pre-hardened and hardened steels(HRc52~68)
- Good wear resistance by high quality Si-based PVD coating
- High precise edge tolerance
- Reinforced edge design for preventing edge chipping
- Outstanding performance at high speed machining by ultra fine (0.2μm) WC grade



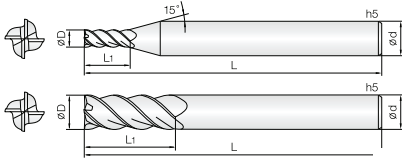
Condition	D Size	D Tolerance
ØD ≠ Ød	Ø0.5 ~ 6	+0 ~ -0.01mm
	Ø8 ~ 12	+0 ~ -0.015mm

Condition	D Size	D Tolerance
ØD = Ød	Ø6	-0.005 ~ -0.015mm
	Ø8 ~ 12	-0.01 ~ -0.025mm

Order Number	Diameter D	Length of cut L1	Effective Length L2	Overall Length L	Shank Dia d
4JJRE010160S04	1	1	16	50	4
4JJRE015160S04	1.5	1.5	16	50	4
4JJRE020060S04	2	2	6	45	4
4JJRE020200S04	2	2	20	50	4
4JJRE030080S06	3	3	8	45	6

Order Number	Diameter D	Length of cut L1	Effective Length L2	Overall Length L	Shank Dia d
4JJRE030200S06	3	3	20	60	6
4JJRE040100S06	4	4	10	50	6
4JJRE040300S06	4	4	30	70	6
4JJRE060200S06	6	6	20	60	6
4JJRE080250S08	8	12	25	65	8

4JJHE



4 Flutes JJ 45° Helix End Mills for Hardened Steel

- Endmills for pre-hardened and hardened steels(HRc52~68)
- Good wear resistance by high quality Si-based PVD coating
- High precise edge tolerance
- Reinforced edge design for preventing edge chipping
- Produce down to 0.03mm in diameter endmills at the first time in Korea
- Outstanding performance at high speed machining by ultra fine (0.2μm) WC grade



Prices are available
in our online store.
Scan the QR code.

Condition	D Size	D Tolerance
ØD ≠ Ød	Ø0.3 ~ 6	+0 ~ -0.01mm
	Ø7 ~ 20	+0 ~ -0.015mm

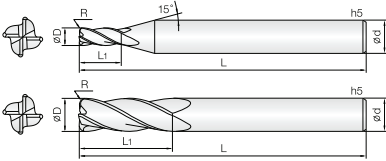
Condition	D Size	D Tolerance
ØD = Ød	Ø6	-0.005 ~ -0.015mm
	Ø8 ~ 12	-0.01 ~ -0.025mm
	Ø14 ~ 20	-0.015 ~ -0.03mm



Order Number	Diameter D	Length of cut L1	Overall Length L	Shank Dia d
4JJHE010035S06	1	3,5	40	6
4JJHE020080S06	2	8	40	6
4JJHE030080S06	3	8	45	6
4JJHE030120S06	3	12	50	6
4JJHE040110S06	4	11	45	6
4JJHE040150S06	4	15	55	6
4JJHE050130S06	5	13	50	6
4JJHE050250S06	5	25	70	6

Order Number	Diameter D	Length of cut L1	Overall Length L	Shank Dia d
4JJHE060150S06	6	15	55	6
4JJHE060250S06	6	25	70	6
4JJHE080200S08	8	20	60	8
4JJHE080300S08	8	30	80	8
4JJHE100220S10	10	22	70	10
4JJHE100300S10	10	30	90	10
4JJHE120260S12	12	26	75	12
4JJHE120350S12	12	35	90	12

4JJC



4 Flutes JJ Corner Radius End Mills for Hardened Steels

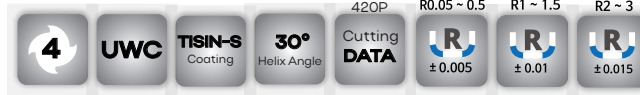
- Endmills for pre-hardened and hardened steels(HRc52~68)
- Good wear resistance by high quality Si-based PVD coating
- High precise edge tolerance
- Designed for minimizing edge chipping by corner R shape
- Various corner R and overall length for wide range application
- Outstanding performance at high speed machining by ultra fine (0.2μm) WC grade



Prices are available
in our online store.
Scan the QR code.

Condition	D Size	D Tolerance
ØD ≠ Ød	Ø0.4 ~ 16	+0 ~ -0.01mm

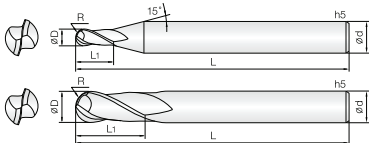
Condition	D Size	D Tolerance
ØD = Ød	Ø3 ~ 12	-0.005 ~ -0.015mm
	Ø14 ~ 16	-0.01 ~ -0.02mm



Order Number	Diameter DxR	Length of cut L1	Overall Length L	Shank Dia d
4JJCO30003S06	3xR0.3	8	60	6
4JJCO30005S06	3xR0.5	8	60	6
4JJCO30010S06	3xR1	8	60	6
4JJCO40010S06	4xR1	10	70	6
4JJCO40003S06	4xR0.3	10	70	6
4JJCO40005S06	4xR0.5	10	70	6
4JJCO50003S06	5xR0.3	13	75	6
4JJCO50010S06	5xR1	13	75	6
4JJCO60010080	6xR1	13	80	6
4JJCO50005S06	5xR0.5	13	75	6
4JJCO60003080	6xR0.3	13	80	6
4JJCO60005080	6xR0.5	13	80	6

Order Number	Diameter DxR	Length of cut L1	Overall Length L	Shank Dia d
4JJCO60020080	6xR2	13	80	6
4JJCO80005090	8xR0.5	19	90	8
4JJCO80010090	8xR1	19	90	8
4JJCO100005070	10xR0.5	19	70	10
4JJCO100010070	10xR1	19	70	10
4JJCO100020070	10xR2	19	70	10
4JJCO80015090	8xR1.5	19	90	8
4JJCO80020090	8xR2	19	90	8
4JJCO120005075	12xR0.5	22	75	12
4JJCO120010075	12xR1	22	75	12
4JJCO120015075	12xR1.5	22	75	12
4JJCO120020075	12xR2	22	75	12

2JJB



2 Flutes JJ Ball End Mills for Hardened Steels

- Endmills for pre-hardened and hardened steels(HRc52~68)
- Good wear resistance by high quality Si-based PVD coating
- High precise edge tolerance
- Excellent surface finish
- Very nice work surface finish
- Outstanding performance at high speed machining by ultra fine (0.2μm) WC grade



Prices are available
in our online store.
Scan the QR code.

Condition	D Size	D Tolerance
ØD ≠ Ød	Ø0.1 ~ 0.15	+0 ~ -0.005mm
	Ø0.2 ~ 14	+0 ~ -0.01mm

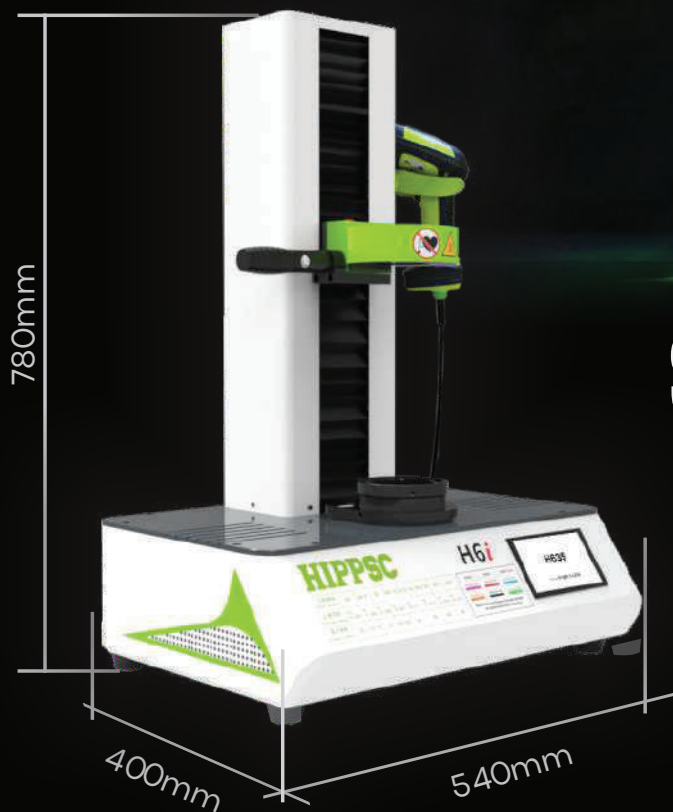
Condition	D Size	D Tolerance
ØD = Ød	Ø3 ~ 12	-0.005 ~ -0.015mm
	Ø14	-0.01 ~ -0.02mm



Order Number	Diameter RxR	Length of cut L1	Overall Length L	Shank Dia d
2JJB010025S06	0.5Rx1	2.5	50	4
2JJB010025070	0.5Rx1	2.5	70	6
2JJB020050075	1Rx2	5	75	6
2JJB040080080	2Rx4	8	80	4
2JJB050100S06	2.5Rx5	10	75	6
2JJB060100060	3Rx6	10	60	6

Order Number	Diameter RxR	Length of cut L1	Overall Length L	Shank Dia d
2JJB060120090	3Rx6	12	90	6
2JJB080120060	4Rx8	12	60	8
2JJB080140100	4Rx8	14	100	8
2JJB100180100	5Rx10	18	100	10
2JJB120220110	6Rx12	22	110	12

H6i



Shrink-FitMachine

Widely used in mold processing, aerospace, auto parts and other processing places. Extends the service life of the tool, and presents the excellent performance of multi-scene processing application.

MORE INFORMATION
ON THE QR CODE



Type	H6i		
Equipment size	540*400*780mm		
Packaging size	595*455*810mm		
Weight	25kg/39.2kg		
Input gas source	0.6-0.8MPa		
Power supply	AC220V/50-60Hz		
Maximum current	16A		
Cooling method	Air-cooled		
Sintering stroke	45-400mm		
Cooling stroke	45-400mm		
Display screen	4.3"		
Power	6KW		
Quick change coil	☑		
Coil	K620	K635	K655 Power
Coil diameter	D20	D35	D55
Maximum diameter	D15	D30	D50
Coil height	27.5	42	62
Effective heating thickness	19	37	52
Insulation ring	☑		☑
Heating range	D3-6	D3-12	D12-32
Alloy steel heating time	3-6S	4-9S	8-15S
Stainless steel heating time	8-15S	10-30S	30-45S
Disassemble the high-speed steel cutting tool	☑		
Barcode scanner	☑		
Heating material	☑ Stainless steel ☑ Alloy steel		

HPC
Machining strategy

Weldon
shank

TiAlN coating

Radius

Four cutting edges

The unequal helix pitch
helps reduce vibrations

HPC end mills (4-fluted)

- High-performance end mills with variable helix angle
- Centre cutting

54940-
from: **10,80**
price/PC

→ [CLICK HERE](#)

Areas of application



Milling in
solid material



Rough
milling



Angular
plunging



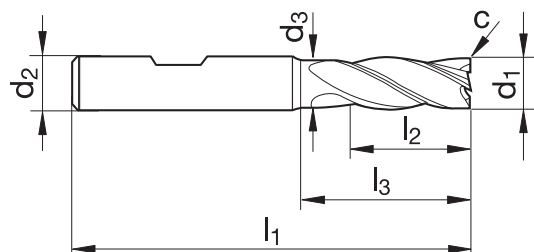
Helical
milling



Finishing

Universal application (materials)

First choice ● / alternative ○



Cat. num.	d1 e8 mm	d2 h6 mm	d3 mm	l1 mm	l2 mm	l3 mm	c mm x 45°	Z	price pc 1 - 4 pcs	price pc from 5 pcs	DIN 6527 L	VHM	HPC
54940 3,0	3,000	6,000	2,80	57,000	8,000	11,400	0,060	4	11,50	10,80			
54940 4,0	4,000	6,000	3,80	57,000	11,000	14,900	0,080	4	11,50	10,80			
54940 5,0	5,000	6,000	4,80	57,000	13,000	17,400	0,100	4	11,50	10,80			
54940 6,0	6,000	6,000	5,70	57,000	13,000	21,000	0,120	4	13,40	12,60			
54940 8,0	8,000	8,000	7,70	63,000	19,000	27,000	0,160	4	14,99	14,20			
54940 10,0	10,000	10,000	9,50	72,000	22,000	32,000	0,200	4	23,10	21,90			
54940 12,0	12,000	12,000	11,50	83,000	26,000	38,000	0,240	4	31,70	29,90			
54940 14,0	14,000	14,000	13,50	83,000	26,000	38,000	0,280	4	44,00	42,00			
54940 16,0	16,000	16,000	15,50	92,000	32,000	44,000	0,320	4	55,00	52,00			
54940 20,0	20,000	20,000	19,50	104,000	38,000	54,000	0,400	4	110,00	103,00			

e8

R

TiAlN

35°
38°

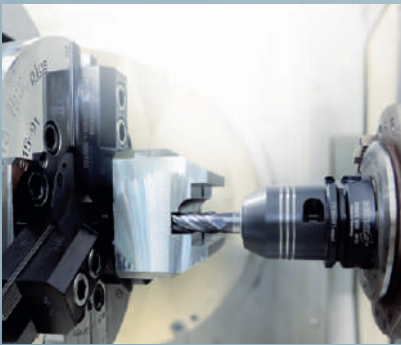
9°

HB

HYDRAULIC EXPANSION TOOLHOLDER TENDO E COMPACT

COMPACT. POWERFUL. ALL-ROUNDER.

The TENDO E compact hydraulic expansion toolholder excels in milling, drilling, reaming, threading and HPC applications
– with tool life up to 300% longer.



T | E | N | D | O® E compact

APPLICATION::

High-volume machining, milling, drilling, reaming, threading and HPC applications.

FUNCTIONS & HIGHLIGHTS:

► High torque for maximum material removal

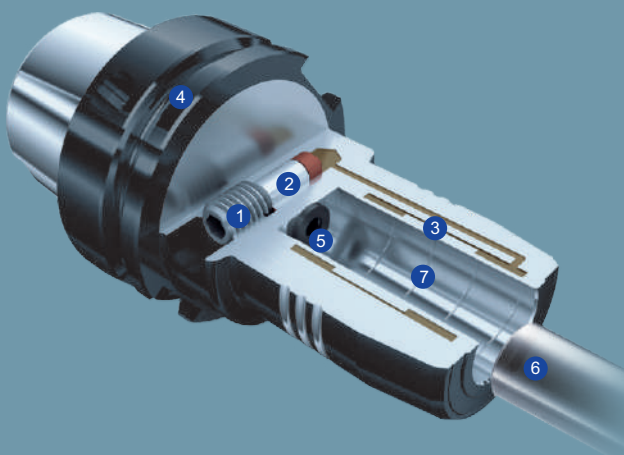
The compact design provides high clamping forces, ensuring consistently high torque transmission.

► High radial rigidity

No lateral deflection during machining, resulting in high dimensional accuracy on the workpiece while maintaining maximum material removal rates.

► High flexibility

Different diameters can be clamped using slotted or coolant-proof intermediate sleeves.

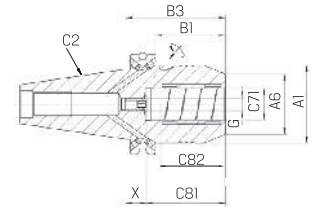


- 1 Clamping screw
- 2 Clamping piston
- 3 Expansion sleeve and chamber system
- 4 Basic body
- 5 Length adjustment screw
- 6 Tool
- 7 Dirt groove



Hydraulic expansion chuck

- Short, heavy-duty version, with axial length adjustment
- For automatic tool change
- With vibration damping and radial rigidity
- Concentricity < 0,003 mm
- Clamping without peripheral equipment, simply with an Allen key, all commercially available shank types can be clamped



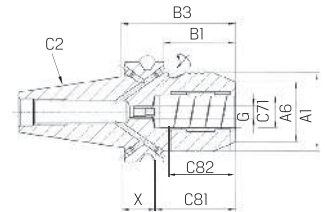
ISO 7388-1	Form AD/AF	HPC	HSC	G 2,5 25.000 min ⁻¹
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from: **162,00**
price/PC

Cat. num. Tendo E Compact, short	C2	C71 mm	A1 mm	A6 mm	B3 mm	B1 mm	C81 mm	C82 mm	G	X mm	Torque Nm _{min}	Weight kg	price/ pc
206414	SK40	12	42	32	50	30,9	46	36	M8 x 1	4	110	1,1	162,00
206415	SK40	16	49,25	38	64,5	45,4	51	41	M8 x 1	13,5	350	1,2	162,00
206416	SK40	20	49,25	38	64,5	45,4	51	41	M8 x 1	13,5	520	1,3	162,00
206424	SK50	12	42	32	50	31,9	46	36	M8 x 1	4	110	2,8	246,00
206426	SK50	20	49,25	38	64,5	45,4	51	41	M8 x 1	13,5	520	3,1	246,00
206428	SK50	32	75	58,5	81	61,9	61	51	M8 x 1	20	900	4,1	246,00

Hydraulic expansion chuck

- Short, heavy-duty version, with axial length adjustment
- For automatic tool change
- With vibration damping and radial rigidity
- Permanent concentricity and alternating repeatability < 0.003 mm
- Clamping without peripheral equipment, simply with an Allen key, all commercially available shank types can be clamped



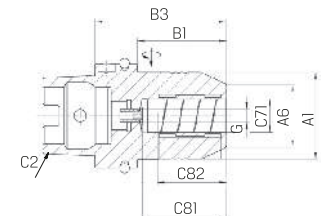
ISO 7388-2	Form JD/JF	HPC	HSC	G 2,5 25.000 min ⁻¹
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from: **162,00**
price/PC

Cat. num. Tendo E Compact, short, heavy	C2	C71 mm	A1 mm	A6 mm	B3 mm	B1 mm	C81 mm	C82 mm	G	X mm	Torque Nm _{min}	Weight kg	price/ pc
206434	SK40	12	42	32	58	31	46	36	M8 x 1	4	110	1,2	162,00
206435	SK40	16	49,25	38	72,5	45,5	51	41	M8 x 1	13,5	350	1,3	162,00
206436	SK40	20	49,25	38	72,5	45,5	51	41	M8 x 1	13,5	520	1,4	162,00
206444	SK50	12	42	32	69	31	46	36	M8 x 1	4	110	3,9	246,00
206446	SK50	20	49,25	38	83,5	45,5	51	41	M8 x 1	13,5	520	4,1	246,00
206448	SK50	32	72	58,5	90	52	61	51	M8 x 1	20	900	4,6	246,00

Hydraulic expansion chuck

- Short, heavy-duty version, with axial length adjustment
- For automatic tool change
- With vibration damping and radial rigidity
- Maximum speed 50,000 rpm-1
- Clamping without peripherals, only with an Allen key
- Permanent concentricity and alternating repeatability < 0.003 mm



ISO 12164-1	Form A	HPC	HSC	G 2,5 25.000 min ⁻¹
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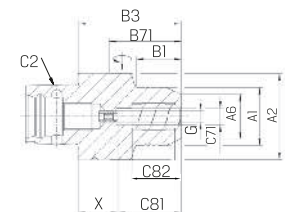
from: **173,00**
price/PC

Cat. num. Tendo E Compact	C2	C71 mm	A1 mm	A6 mm	B3 mm	B1 mm	C81 mm	C82 mm	G	Torque Nm _{min}	Weight kg	price/ pc
1368215	HSK-A100	16	52,5	38	90	61	51	41	M8 x 1	350	2,8	292,00
206566	HSK-A100	20	52,5	38	90	61	51	41	M8 x 1	520	2,8	292,00
206568	HSK-A100	32	72	58,5	100	71	61	51	M8 x 1	900	3,8	292,00
206404	HSK-A63	12	42	32	80	54	46	31	M8 x 1	110	1,25	173,00
206405	HSK-A63	16	52,5	38	80	54	51	37	M8 x 1	350	1,3	173,00
206406	HSK-A63	20	51,5	33	80	54	51	36,5	M8 x 1	360	1,3	173,00

Hydraulic expansion chuck

- Highly robust
- Torque up to 900 Nm
- Short heavy-duty version
- With vibration damping and radial rigidity
- Permanent concentricity and alternating repeatability < 0.003 mm

from: **282,00**
price/PC



SCHUNK CAPTO	HPC	HSC	G 2,5 25.000 min ⁻¹
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Cat. num. TENDO E Compact, short	C2	C71 mm	A1 mm	A6 mm	B3 mm	B71 mm	C81 mm	C82 mm	G	X mm	Torque Nm _{min}	Weight kg	price/ pc
206804	C4	12	39,5	32	65	44	46	31	M8 x 1	36	110	0,65	282,00
206806	C4	20	46	38	83	63	51	37	M8 x 1	41	440	0,85	282,00
206814	C5	12	42	32	70	50	46	31	M8 x 1	36	110	0,9	297,00
206816	C5	20	52,5	38	75	54	51	37	M8 x 1	41	440	1	297,00
206824	C6	12	42	32	75	53	46	31	M8 x 1	36	110	1,5	309,00
206826	C6	20	52,5	38	80	57	51	31	M8 x 1	41	400	1,6	309,00
206828	C6	32	62,5	58,5	90	67	61	44	M8 x 1	51	800	1,95	309,00

HYDRODEHN-SPANNFUTTER TENDO SILVER

UNIQUE. FLEXIBLE. EFFICIENT.

TENDO Silver offers a cost-effective entry into hydraulic expansion technology and provides the best price-performance ratio for direct clamping. Nine interfaces make TENDO Silver a reliable and precise clamping device with a standardized outer contour according to DIN 69882-7.



TENDO® Silver

APPLICATION:

Optionally suitable for HSC machining as well as drilling, reaming, milling and threading..

FUNCTIONS & HIGHLIGHTS:

► High flexibility

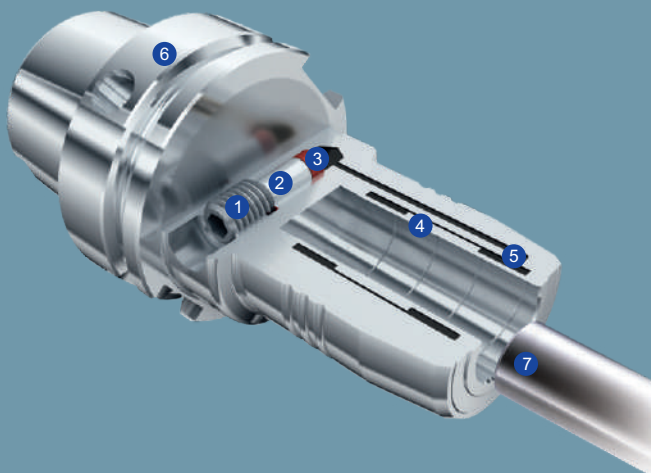
Can be used in existing processes without reprogramming.

► Tool changes in seconds with µm-level precision, without peripheral equipment

Time savings through reduced setup times and no investment or energy costs for additional clamping devices.

► Outstanding vibration damping

Prevents micro-chipping, ensures excellent workpiece surfaces and protects the machine spindle. Increased tool life and therefore reduced costs.

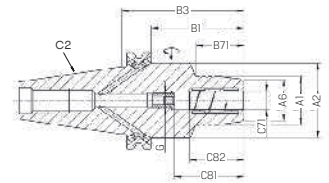


- 1 Clamping screw
- 2 Clamping piston
- 3 Sealing element
- 4 Expansion sleeve
- 5 Chamber system
- 6 Basic body
- 7 Tool

Hydraulic expansion chuck, TENDO SILVER

- With adjusting screw for axial length adjustment
- For automatic tool holder change
- Voltage without peripheral devices
- Concentricity < 0,003 mm at 2,5 × D

from: **188,00**
price/PC



ISO 7388-1	Form AD/AF	HPC	HSC	G 2,5 25.000 min ⁻¹
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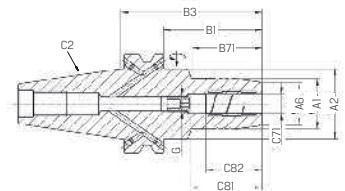


Cat. num.	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B1 mm	B71 mm	C81 mm	C82 mm	G	Torque min Nm	Weight kg	price/pc
1462652	SK40	6	26	49,25	22	80,5	61,4	29,5	37	27	M5	16	1,4	188,00
1462653	SK40	8	28	49,25	24	80,5	61,4	30	37	27	M6	23	1,4	188,00
1462654	SK40	10	30	49,25	26	80,5	61,4	31	41	31	M8 x 1	45	1,4	188,00
1462655	SK40	12	32	49,25	28	80,5	61,4	31,5	46	36	M10 x 1	90	1,4	188,00
1462656	SK40	16	38	49,25	34	80,5	61,4	33	49	39	M12 x 1	185	1,4	188,00
1467135	SK40	18	40	49,25	36	80,5	61,4	33	49	39	M12 x 1	240	1,4	188,00
1462657	SK40	20	42	49,25	38	80,5	61,4	34	51	41	M16 x 1	330	1,4	188,00
1467969	SK40	25	55	65,95	53	80,5	61,4	22	57	47	M16 x 1	400	1,8	188,00
1462658	SK40	32	63	72,95	60	80,5	61,4	25,5	61	51	M16 x 1	650	2	188,00
1462671	SK50	12	32	49,25	28	80,5	61,45	31,5	46	36	M10 x 1	90	3,2	279,00
1462672	SK50	16	38	49,25	34	80,5	61,45	33	49	39	M12 x 1	185	3,2	279,00
1462673	SK50	20	42	49,25	38	80,5	61,45	34	51	41	M16 x 1	330	3,3	279,00
1462674	SK50	32	64	70,25	60	103,2	81,15	62,5	61	51	M16 x 1	650	4,4	279,00

Hydraulic expansion chuck, TENDO SILVER

- With adjusting screw for axial length adjustment
- For automatic tool holder change
- Voltage without peripheral devices
- Concentricity < 0,003 mm at 2,5 × D

from: **188,00**
price/PC



ISO 7388-2	Form JD/JF	HPC	HSC	G 2,5 25.000 min ⁻¹
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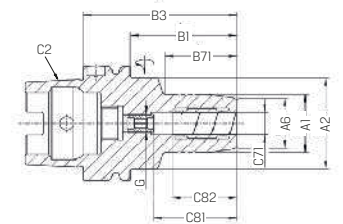


Cat. num.	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B1 mm	B71 mm	C81 mm	C82 mm	G	Torque min Nm	Weight kg	price/pc
1417054	BT40	6	26	44,5	22	90	63	43	37	27	M5	16	1,4	188,00
1417055	BT40	8	28	44,5	24	90	63	44,5	37	27	M6	23	1,4	188,00
1417056	BT40	10	30	44,5	26	90	63	44,5	41	31	M8 x 1	45	1,4	188,00
1417057	BT40	12	32	44,5	28	90	63	44,5	46	36	M10 x 1	90	1,4	188,00
1417058	BT40	16	38	44,5	34	90	63	47,5	49	39	M12 x 1	185	1,5	188,00
1417060	BT40	20	42	44,5	38	90	63	47,5	51	41	M16 x 1	330	1,5	188,00
1417062	BT40	32	62	-	59	100	73	-	61	51	M16 x 1	650	2,55	188,00

Hydraulic expansion chuck, TENDO SILVER

- With adjusting screw for axial length adjustment
- For automatic tool holder change
- Voltage without peripheral devices
- Concentricity < 0,003 mm at 2,5 × D

from: **196,00**
price/PC



ISO 12164-1	Form A	HPC	HSC	G 2,5 25.000 min ⁻¹
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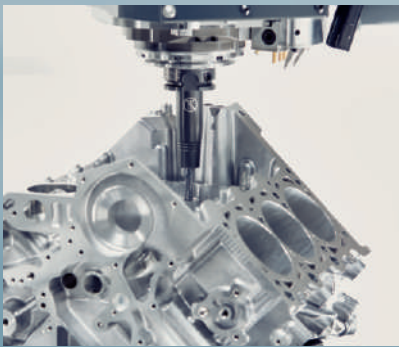
Cat. num.	C2	C71 mm	A1 mm	A2 mm	A6 mm	B3 mm	B1 mm	B71 mm	C81 mm	C82 mm	G	Torque min Nm	Weight kg	price/pc
1360923	HSK-A63	6	26	50	22	70	44	24	37	27	M5	16	1	196,00
1360924	HSK-A63	8	28	50	24	70	44	25	37	27	M6	23	1	196,00
1360925	HSK-A63	10	30	50	26	80	54	35	41	31	M8 x 1	45	1,1	196,00
1360926	HSK-A63	12	32	50	28	85	59	40	46	36	M10 x 1	90	1,1	196,00
1360927	HSK-A63	14	34	50	30	85	59	40	46	36	M10 x 1	110	1,1	196,00
1360928	HSK-A63	16	38	50	34	90	64	46	49	39	M12 x 1	185	1,2	196,00
1360929	HSK-A63	18	40	50	36	90	64	47	49	39	M12 x 1	240	1,3	196,00
1360930	HSK-A63	20	42	50	38	90	64	48	51	41	M16 x 1	330	1,3	196,00
1360931	HSK-A63	25	57	-	53	120	94	-	57	47	M16 x 1	400	2,2	196,00
1360932	HSK-A63	32	62	-	58	125	99	-	61	51	M16 x 1	650	2,7	196,00
1434533	HSK-A100	6	26	50	22	75	46	26	37	27	M5	16	2,5	332,00
1434534	HSK-A100	8	28	50	24	75	46	26	37	27	M6	23	2,5	332,00
1434535	HSK-A100	10	30	50	26	90	61	42	41	31	M8 x 1	45	2,5	332,00
1434536	HSK-A100	12	32	50	28	95	66	47	46	36	M10 x 1	90	2,6	332,00
1434538	HSK-A100	14	34	50	30	95	66	47	46	36	M10 x 1	110	2,6	332,00
1434545	HSK-A100	16	38	50	34	100	71	53	49	39	M12 x 1	185	2,7	332,00
1434546	HSK-A100	18	40	50	36	100	71	53	49	39	M12 x 1	240	2,8	332,00
1434547	HSK-A100	20	42	50	38	105	76	59	51	41	M16 x 1	330	2,8	332,00
1434548	HSK-A100	25	57	63	53	110	81	62	57	47	M16 x 1	400	3,7	332,00
1434549	HSK-A100	32	64	75	60	110	81	62	61	51	M16 x 1	650	3,8	332,00

HYDRODEHN-SPANNFUTTER TENDO SLIM 4AX



UNIQUE. FLEXIBLE. EFFICIENT.

The SCHUNK TENDO Slim 4ax is the toolholder for axial machining and radial fine machining that, uniquely in its class, meets all requirements: a heat-shrink contour according to DIN 69882-8, easy handling, short setup times, high tool service life, high flexibility, as well as Plug & Work capability and suitability for minimum quantity lubrication.



T | E | N | D | O[®] Slim 4ax

APPLICATION::

For milling, reaming, drilling, countersinking, chamfering and threading.

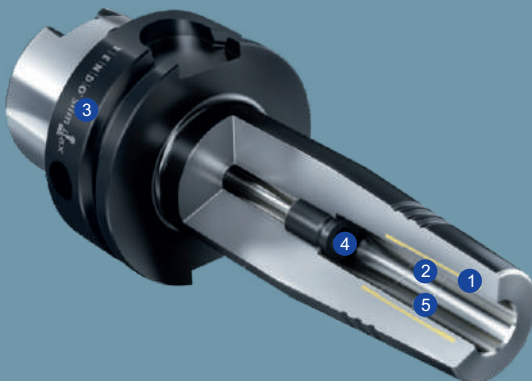
FUNCTIONS & HIGHLIGHTS:

► Plug & Work

Can be used in existing processes without reprogramming.

► Fine-balanced as standard

With a balancing quality of G2.5 at 25,000 rpm, suitable for high rotational speeds and HSC machining.



- 1 Chamber system
- 2 Expansion sleeve
- 3 Basic body
- 4 Length adjustment screw
- 5 Dirt groove



Hydraulic expansion chuck

- Slim version with axial length adjustment
- For automatic tool change
- Balancing quality G2.5 at 25,000 min⁻¹
- Permanent concentricity and alternating repeatability < 0.003 mm



from: **250,00**
price/PC



SCHUNK

ISO
7388-1

Form
AD/AF

G 2,5
25.000 min⁻¹

Cat. num. Tendo, slim, short	C2	C71 mm	A1 mm	B1 mm	B3 mm	C81 mm	C82 mm	G	price/ pc
1319638	SK40	6	27	60,9	80	36	26	M5	250,00
1319639	SK40	8	27	60,9	80	36	26	M6	250,00
1319640	SK40	10	32	60,9	80	42	32	M8 x 1	250,00
1319641	SK40	12	32	60,9	80	47	37	M10 x 1	250,00
1319643	SK40	16	34	60,9	80	50	40	M12 x 1	250,00
1319645	SK40	20	42	60,9	80	52	42	M16 x 1	250,00
1467911	SK50	6	27	60,9	80	36	26	M5	323,00
1467912	SK50	8	27	60,9	80	36	26	M6	323,00
1467913	SK50	10	32	60,9	80	43,2	33,2	M8 x 1	323,00
1467914	SK50	12	32	60,9	80	47	37	M10 x 1	323,00
1467915	SK50	16	34	60,9	80	50	40	M12 x 1	323,00
1467916	SK50	20	42	60,9	80	52	42	M16 X 1	323,00

Hydraulic expansion chuck

- With axial length adjustment
- For automatic tool change
- Balancing quality G2.5 at 25,000 min⁻¹
- Permanent concentricity and alternating repeatability < 0.003 mm



from: **283,00**
price/PC



SCHUNK

ISO
7388-2

Form
AD/AF

G 2,5
25.000 min⁻¹

Cat. num. Tendo slim, long	C2	C71 mm	A1 mm	B1 mm	B3 mm	C81 mm	C82 mm	G	price/ pc
1319655	SK40	6	27	100,9	120	36	26	M5	283,00
1319656	SK40	8	27	100,9	120	36	26	M6	283,00
1319657	SK40	10	32	100,9	120	42	32	M8 x 1	283,00
1319658	SK40	12	32	100,9	120	47	37	M10 x 1	283,00
1319660	SK40	16	34	100,9	120	50	40	M12 x 1	283,00
1319662	SK40	20	42	100,9	120	52	42	M16 x 1	283,00
1467923	SK50	6	27	100,9	120	36	26	M5	356,00
1467924	SK50	8	27	100,9	120	36	26	M6	356,00
1467925	SK50	10	32	100,9	120	43,2	33,2	M8 x 1	356,00
1467926	SK50	12	32	100,9	120	47	37	M10 x 1	356,00
1467927	SK50	16	34	100,9	120	50	40	M12 x 1	356,00
1467928	SK50	20	42	100,9	120	52	42	M16 X 1	356,00

Hydraulic expansion chuck

- With axial length adjustment
- For automatic tool change
- Balancing quality G2.5 at 25,000 min⁻¹
- Permanent concentricity and alternating repeatability < 0.003 mm



from: **250,00**
price/PC



SCHUNK

ISO
7388-2

Form
JD/JF

HSC

G 2,5
25.000 min⁻¹

Cat. num. Tendo slim 4AX, short	C2	C71 mm	A1 mm	A6 mm	B1 mm	B3 mm	C81 mm	C82 mm	G	Torque min Nm	price/ pc
1442015	BT30	6	27	21	58	80	36	10	M5	16	307,00
1442016	BT30	8	27	21	58	80	36	10	M6	23	307,00
1442017	BT30	10	32	24	58	80	42	10	M8 x 1	45	307,00
1442018	BT30	12	32	24	58	80	47	10	M10 x 1	90	307,00
1442019	BT30	16	34	27	58	80	50	10	M12 x 1	185	307,00
1442020	BT30	20	42	33	68	90	52	10	M16 x 1	330	307,00
1423076	BT40	6	27	21	63	90	36	10	M5	16	250,00
1423077	BT40	8	27	21	63	90	36	10	M6	23	250,00
1423078	BT40	10	32	24	63	90	42	10	M8 x 1	45	250,00
1423079	BT40	12	32	24	63	90	47	10	M10 x 1	90	250,00
1423080	BT40	16	34	27	63	90	50	10	M12 x 1	185	250,00
1423081	BT40	20	42	33	63	90	52	10	M16 X 1	330	250,00

Hydraulic expansion chuck

- With axial length adjustment
- For automatic tool change
- Balancing quality G2.5 at 25,000 min⁻¹
- Permanent concentricity and alternating repeatability < 0.003 mm



283,00
price/PC



SCHUNK

ISO
7388-2

Form
JD/JF

HSC

G 2,5
25.000 min⁻¹

Cat. num. Tendo slim, 4AX	C2	C71 mm	A1 mm	A6 mm	B1 mm	B3 mm	C81 mm	C82 mm	G	price/ pc
1423225	BT40	6	27	21	93	120	36	10	M5	283,00
1423226	BT40	8	27	21	93	120	36	10	M6	283,00
1423227	BT40	10	32	24	93	120	42	10	M8 x 1	283,00
1423228	BT40	12	32	24	93	120	47	10	M10 x 1	283,00
1423229	BT40	16	34	27	93	120	50	10	M12 x 1	283,00
1423230	BT40	20	42	33	93	120	52	10	M16 x 1	283,00

SET of ER clamping collets



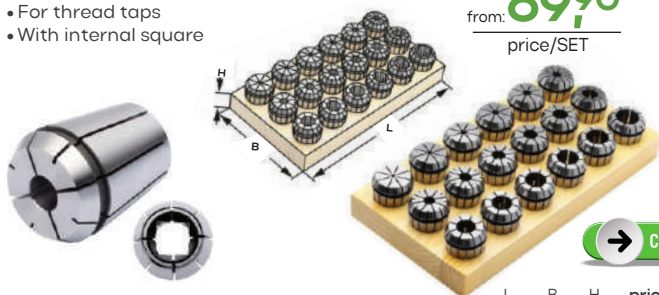
BER-
from: **51,00**
price/SET

→ [CLICK HERE](#)

Cat. num.	price/set	number of collets in the set/ø
BER16-K10	51,00	10 piece, ø 1,2,3,4,5,6,7,8,9,10
BER20-K12	57,00	12 piece, ø 2,3,4,5,6,7,8,9,10,11,12,13
BER25-K13	73,50	13 piece, ø 4,5,6,7,8,9,10,11,12,13,14,15,16
BER32-K18	94,00	18 piece, ø 3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20
BER40-K23	115,00	23 piece, ø 4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26

SET of collets for tapping drills

- For thread taps
- With internal square



from: **69,90**
price/SET

→ [CLICK HERE](#)

Cat. num.	number of collets in the set/ø	L mm	B mm	H mm	price/set
426G-S	ER16-6 piece, 3,5x2,7 - 4x3 - 4,5x3,4 - 6x4,9 - 7x5,5 - 8x6,2	130	50	25	69,90
428G-S	ER20-8 piece, 3,5x2,7 - 4x3 - 4,5x3,4 - 6x4,9 - 7x5,5 - 8x6,2 - 9x7 - 10x8	165	110	25	89,00
430G-S	ER25-10 piece, 3,5x2,7 - 4x3 - 4,5x3,4 - 6x4,9 - 7x5,5 - 8x6,2 - 9x7 - 10x8 - 11x9 - 12x9	150	195	25	109,00
470G-S	ER32-10 piece, 4,5x3,4 - 6x4,9 - 7x5,5 - 8x6,2 - 9x7 - 10x8 - 11x9 - 12x9 - 14x11 - 16x12	190	150	30	110,00
472G-S	ER40-11 piece, 6x4,9 - 7x5,5 - 8x6,2 - 9x7 - 10x8 - 11x9 - 12x9 - 14x11 - 16x12 - 18x14,5 - 20x16	290	195	25	159,00

Mounting stand for clamping arbors

- Use:
- Vertical and horizontal mounting
- Solid and stable design for safe work
- Better tool clamping to reduce damage
- Contributes to longer tool life



BLD-
from: **48,00**
price/PC

Cat. num.	price/pc	for arbors of size	size mm	weight kg
BLD-BT40	48,00	BT40	205x98,5x128	3,80
BLD-BT50	89,00	BT50	275x150x198	11,40
BLD-DT40	48,00	DIN69871 SK40	205x98,5x128	3,80
BLD-DT50	89,00	DIN69871 SK50	275x150x198	11,40

SET of sealed ER collets

- Accuracy: 15 µm
- For tools with through-coolant
- DIN 6499 B
- ISO 15488 B

→ [CLICK HERE](#)

from: **92,00**
price/SET



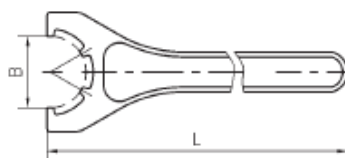
Sealed!

Cat. num.	price/set	number of collets in the set/ø
426EA-S	92,00	426E (ER 16; 8 piece) 3-4-5-6-7-8-9-10
428EA-S	122,00	428E (ER 20; 11 piece) 3-4-5-6-7-8-9-10-11-12-13
430EA-S	152,00	430E (ER 25; 14 piece) 3-4-5-6-7-8-9-10-11-12-13-14-15-16
470EA-S	172,00	470E (ER 32; 15 piece) 3-4-5-6-7-8-9-10-11-12-14-15-16-18-20
472EA-S	230,00	472E (ER 40; 16 piece) 4-5-6-7-8-9-10-11-12-14-16-18-20-22-24-26

ER collet wrench



→ [CLICK HERE](#)



BS/ER-
from: **7,25**
price/PC

Cat. num.	price/pc	B	L	for clamping nuts
BS/ER25-S	7,25	37	210	ER25-B ER25-T2
BS/ER32-S	8,29	45	250	ER32-B ER32-T2
BS/ER40-S	10,39	58	290	ER40-B ER40-T2

SECURE CLAMPING. PRECISE RESULTS.



Clamping arbors for ER bushings

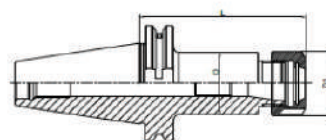
- DIN69871
- SK40

→ [CLICK HERE](#)

from: **25,00**
price/PC



DIN6499	A ≤0.003	RPM G2.5/25000	AD
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Cat. num.	price/pc	D mm	D1 mm	L mm	capacity
SK40-ER25-70	25,00	42	42	70	2-16
SK40-ER32-70	25,00	40	50	70	2-20
SK40-ER40-80	25,00	63	63	80	3-26
SK40-ER16UM-63	25,00	28	32	63	1-10
SK40-ER16UM-100	33,00	28	32	100	1-10

Clamping arbors for ER bushings

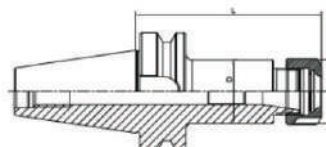
- MAS-BT40

→ [CLICK HERE](#)

from: **25,00**
price/PC



DIN6499	A ≤0.003	RPM G2.5/25000	AD
---------	----------	----------------	----



Cat. num.	price/pc	D mm	D1 mm	L mm	capacity
BT40-ER16-100	25,00	28	28	100	1-10
BT40-ER25-70	25,00	42	42	70	2-16
BT40-ER32-70	25,00	50	50	70	2-20
BT40-ER40-80	25,00	50	63	80	3-26
BT40-ER25-100	33,00	42	42	100	2-16
BT40-ER16UM-70	25,00	28	32	70	1-10

Clamping arbors, WELDON

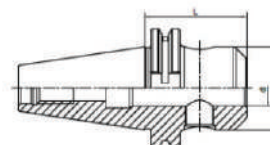
- DIN69871
- SK40

→ [CLICK HERE](#)

from: **24,00**
price/PC



DIN6359/18358	A ≤0.005	RPM G6.3/15000	AD
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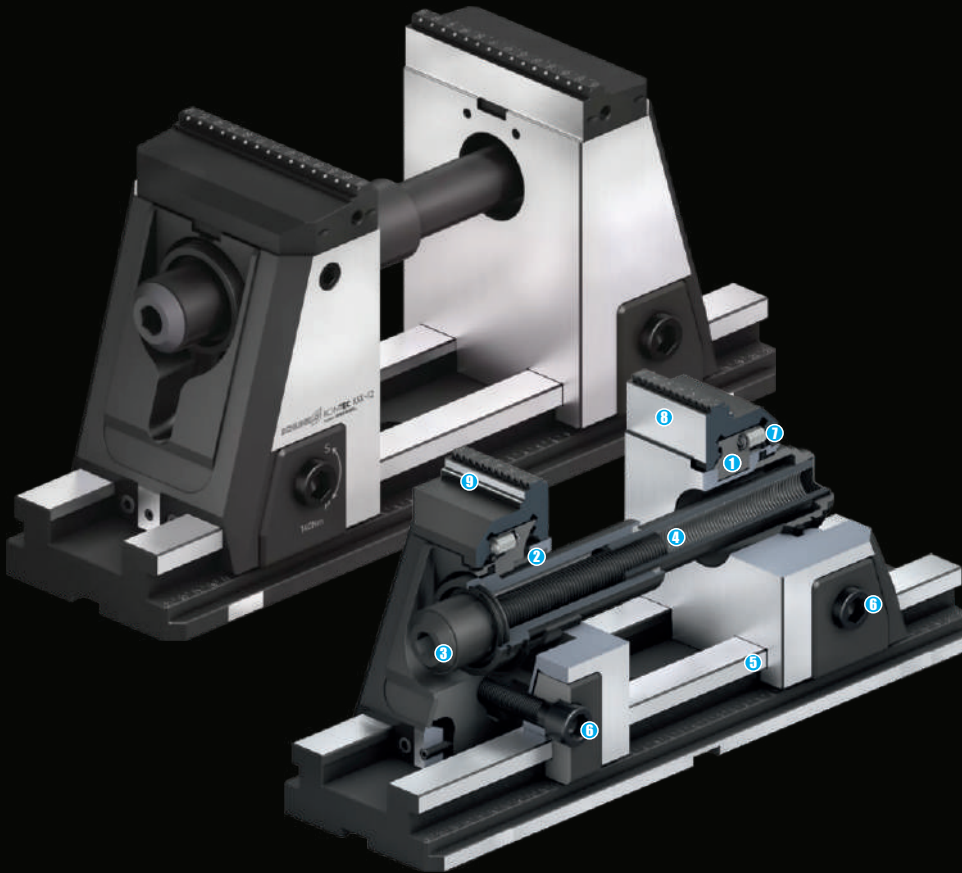


Cat. num.	price/pc	d mm	D mm	L mm	M	number of screws
SK40-SLA06-50	24,00	6	25	50	M6	1
SK40-SLA08-50	24,00	8	28	50	M8	1
SK40-SLA10-50	24,00	10	35	50	M10	1
SK40-SLA12-50	24,00	12	42	50	M12	1
SK40-SLA16-63	24,00	16	48	63	M14	1
SK40-SLA20-63	24,00	20	52	63	M16	1
SK40-SLA25-100	28,00	25	65	100	M18*2	2
SK40-SLA32-100	28,00	32	72	100	M20*2	2

KSX-C2

5-axis vise

5-axis vise with adjustable clamping center, largest basic clamping stroke and active jaw pull-down function for the complete and precise machining of the sixth side.



- ❶ Jaw quick-change system
System jaws can be exchanged in seconds, completely without tools
- ❷ Jaw pull-down mechanism
For the most accurate clamping of pre-machined workpieces
- ❸ Actuation via hexagon connection
This ensures easy operation
- ❹ Completely encapsulated spindle
Offers optimal protection against coolant and chips
- ❺ Long jaw guidance
Offers optimal support
- ❻ Jaw clamping via hexagonal connection
For individual adjustment of the clamping center and clamping of the second jaw for the active jaw pull-down
- ❼ Spring-loaded pressure piece
Secures the jaw against falling out in unclamped condition
- ❽ Quick-change jaws
Large selection for every type of application
- ❾ Diverse applications
For first- and second-side machining



MORE INFORMATION ON THE QR CODE

NSL3 Clamping Stations

Quick-change pallet system

VERO-S NSL3 – the SCHUNK clamping stations for general milling applications based on NSE3 138. The set-up time optimizer for milling machines ensures extremely rigid and secure clamping of the fixture with extremely high pull-down forces of the modules. The NSL3 clamping stations are 100% compatible with the predecessor NSL plus and can therefore be interchanged 1:1.



SCHUNK

VERO-S



MORE INFORMATION ON THE QR CODE

KSC3

CLAMPING VISE

Maximum precision. Built to last.

SCHUNK

- The KSC3 clamping vise combines best-in-class precision with robust construction and full compatibility with the KS generation.



High precision
for perfect results



Robust & reliable for
demanding environments



Short set-up times for
maximum productivity



100% compatibility with the KSC generation

- The clamping vises of the KSC3 generation are 100% compatible with the clamping vises of the KSC generation. This means that existing KSC clamping vises can be replaced 1:1 by KSC3 clamping vises or combined with one another.



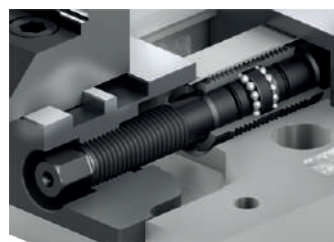
Optimal corrosion protection

- The base body of the KSC3 clamping vise has been completely nickel-plated, resulting in the best possible corrosion protection even in demanding environments.



Laser-etched ruler

- Laser-cut scales on the base bodies and system jaws make it easier to align the system jaws and workpieces, resulting in reduced set-up times.



Closed system

- The spindle drive is protected against the penetration of coolant and chips. The spindle is always sealed, regardless of the clamping position. This ensures a continuously reliable functioning and clamping force.

Basic clamping vise, KSC3

- Proven maximum precision with even higher process reliability due to nickel-plated base body
- Maximum precision with high clamping force and a very flat design – this is what the KSC3 centric clamping vises stand for
- The closed system with optimized chip drainage guarantees maximum process reliability
- The closed system with optimized chip drainage guarantees maximum process reliability

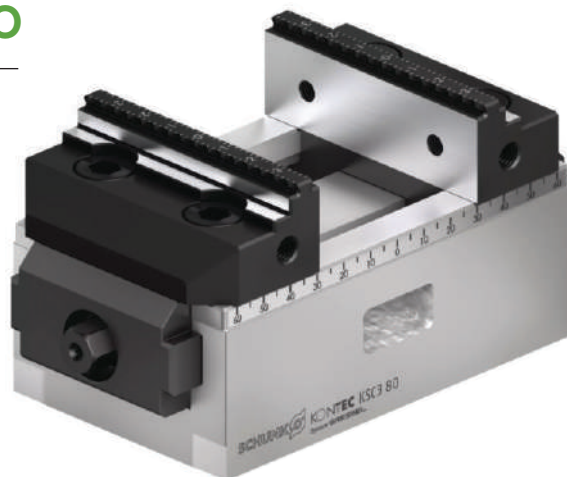
from: **690,00**
price/PC

→ **CLICK HERE**



Jaw change with just two screws

- The system jaws can be changed very quickly and easily by loosening just two screws. Tools such as a cordless screwdriver speed up the changing process even more. Replacement of complete base jaws is not necessary here.



Cat. num.	Mark	Width of the clamping vise mm	Vise length mm	price/pc
1514206	KSC3 grip 80-130	80	130	690,00
1514207	KSC3 grip 80-190	80	190	790,00
1514238	KSC3 grip 125-160	125	160	880,00
1514239	KSC3 grip 125-235	125	235	1.090,00

E236+ Tool Presetter

- Measuring range: X axis 130 mm (diameter 260 mm) Z axis 360 mm
- Base and column made of ground granite
- ISO/BT/HSK/VDI... etc. interchangeable rotating spindle-holder
- 4 re-circulating ball bearing linear slides
- Manual mechanical braking of the interchangeable spindle-holder rotation
- Manual axes movement
- External 24Vcc power supply
- Overall dimensions: L = 570 mm, H = 793 mm, D = 408 mm
- Net weight: ~ 46 kg

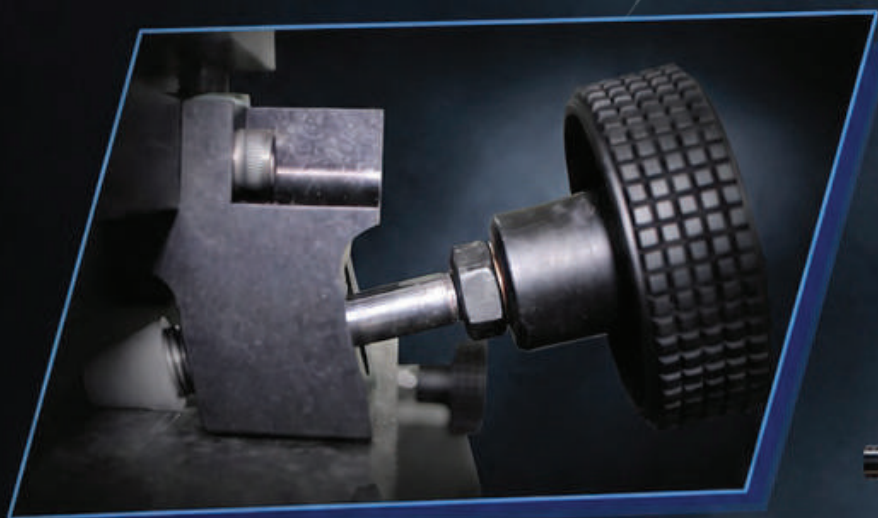


More information
on the QR code



Positioning as never seen before

- The **NEW** axes positioning system helps you to frame the cutting edge to be measured in the center of the screen quickly and easily

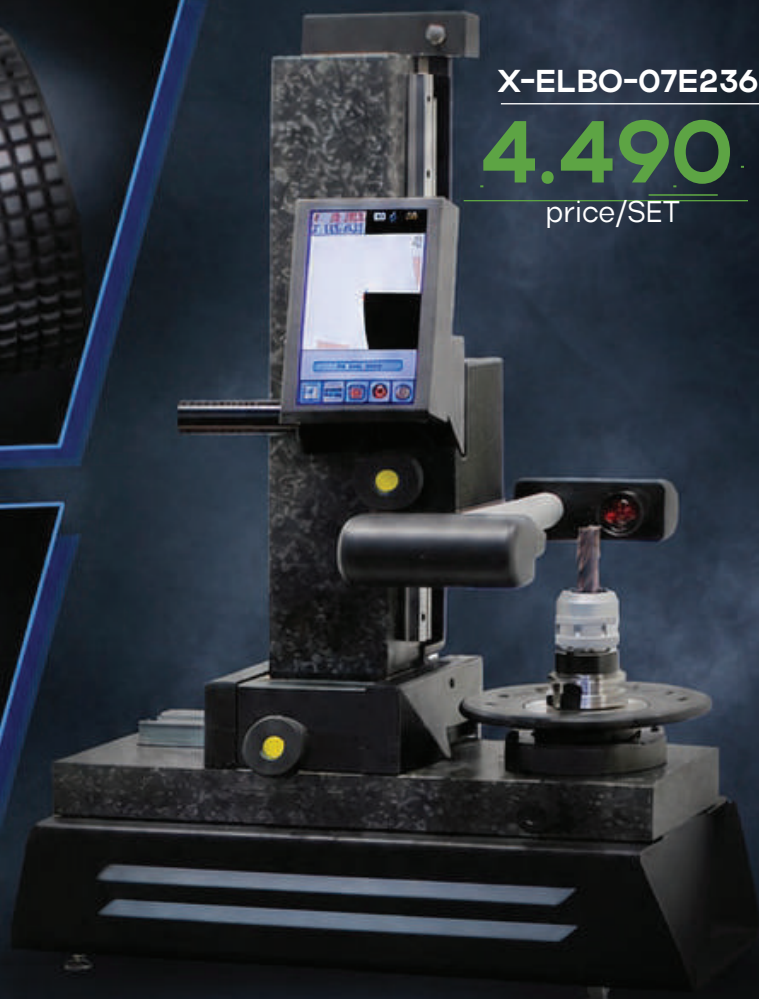


Evolution never stops

- The **NEW** TFT colour LCD 7" LED display makes the presetting experience simple and complete
- The tool data visualization is intuitive, all the machine functions are available in a single screen, simplifying your life

Software

- 9 numerical machine origin management
- 9 numerical tool tables management, each of them composed of 99 tools
- Tool corrector specific storage of T, Lx, Lz, insert radius
- Intuitive icons and menu-based software
- Display radius/diameter, mm/inch, abs/inc
- Measurement capability by full-screen auto-targeting
- X axis and Z axis focusing control bars
- Radius and angle automatic computing cycle
- Td236+ to manage backup and restore functions, machine origins and tool tables. Connection to the PC with an USB port and electronic Bios upgrade



X-ELBO-07E236+

4.490

price/SET

+ 1 taper holder of your choice

Cat. num.	d	price/set
X-ELBO-04PMI30	SK30	330,00
X-ELBO-04PMI40	SK40	330,00
X-ELBO-04PMI50	SK50	330,00
X-ELBO-04PMH50R	HSK50	990,00
X-ELBO-04PMH63R	HSK63	990,00
X-ELBO-04PMH80R	HSK80	990,00
X-ELBO-04PMC4RV	C4	1.690,00
X-ELBO-04PMC5RV	C5	1.690,00
X-ELBO-04PMC6RV	C6	1.690,00

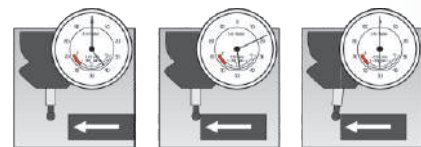
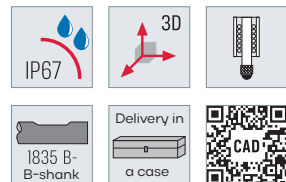
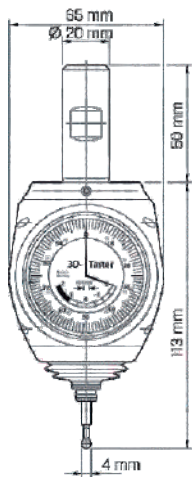


Analog 3D probe

- Designed for determining the workpiece reference point in all three axes (X, Y, Z) on all milling machines and machining centers.
- Easy and clear readability.
- Robust housing ensures long service life in industrial environments.
- Repeatability accuracy is better than 0.01 mm.
- Automatic probe radius compensation.
- Probe equipped with a ceramic insert.
- Accuracy adjustment via four adjustment screws.

Technical specifications:

- Cylindrical shank: Ø 20 mm, length 50 mm
- Length without shank: 113 mm
- Width: 65 mm
- Probe diameter: Ø 4 mm
- Protection rating: IP67



Digital caliper

- Measuring range: 0-150 mm
- Depth gauge: flat
- Accuracy: +/- 0,01 mm



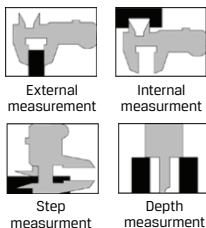
from: **84,90**
price/PC



Cat. num.	Gauge designation	Range mm	Accuracy mm	Price/pc
301705 150	500-181-30	0-150	±0.01	84,90
301705 200	500-182-30	0-200	±0.01	168,00



Mitutoyo



Digital caliper, IP67

- High accuracy and linearity
- Absolute zero setting
- Includes Quardi function
- Protection: IP67
- ABSolute function



500-706-20
(301800 150)

127,90
price/PC



HAIMER®

251500 U3D

275,00

price/PC

Limited stock!



Limited stock!

Limited stock!

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Consequently, price changes may also occur.

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Should there be any discrepancies in prices or technical data, we will notify you at the time of your order. Thank you for your understanding."



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info@fridro.si, www.fridro.si



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info@fridro.hr, www.fridro.hr



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