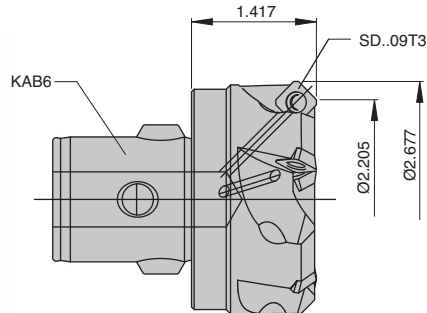


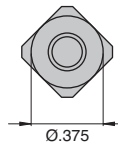
# MILLING TOOLS

- Especially designed for deep pocket or long reach milling.
- Through tool coolant capability for higher speeds/feeds.
- High positive geometry design for reduced vibration, precision cutting.

## 45° FACE MILLING CUTTER



CATALOG #10.335.801  
PFK Ø68xKA6x36



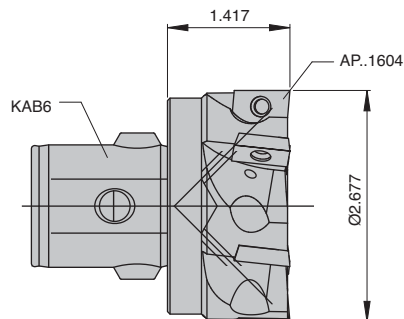
### INSERTS

DESCRIPTION	CATALOG NUMBER	MATERIAL
SDHT 09T3AE EN	10.654.230	STEEL
SDHT 09T3AE FN	10.654.231	ALUMINUM
SDHW 09T3AE EN	10.654.232	CI

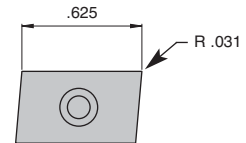


- Utilizes five SDHT09T3 Insert
- 45° Geometry for Face Milling Chamfering

## 90° SQUARE SHOULDER CUTTER



CATALOG #10.335.802  
EFK Ø68xKA6x36

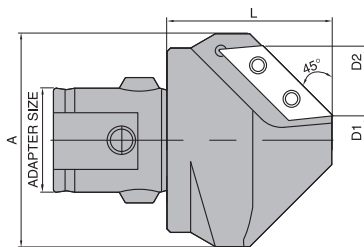


### INSERTS

DESCRIPTION	CATALOG NUMBER	MATERIAL
APHT 1604PD SR	10.655.800	STEEL
APHT 1604PD FR	10.655.801	ALUMINUM
APHW 1604PD ER	10.655.802	CI



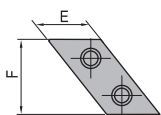
- Utilizes Six APHT1604 Inserts
- 90° Square Shoulder Milling
- Cutting Depth Up To .590" Possible



## CHAMFERING MILLS

TYPE	ADAPTER SIZE	CATALOG NUMBER	D1	D2	L	A	NO. OF INSERTS	WEIGHT LBS.
C0525	KAB2	10.335.021	0.20	0.98	0.0984	1.122	1	0.20
C1040	KAB4	10.335.022	0.40	1.57	1.378	1.772	2	0.57
C3060	KAB5	10.335.023	1.18	2.36	1.575	2.56	3	1.58
C50100	KAB6	10.335.024	1.97	3.93	2.56	4.173	3	5.9

## CHAMFERING MILL INSERTS



TYPE	CATALOG NUMBER	E	F	C*	INSERT SCREW	CUTTING SPEED			FEED IPR
						CAST IRON	STEEL	ALUMINUM	
C0525	CW1206A	0.250	0.50	.08x45	10.335.035	30-100	65-130	65-130	.004-.006"
C1040	CW1909A	0.375	0.75	.12x45	10.335.036	65-165	130-250	165-300	.004-.012"
C3060	CW1909A	0.375	0.75	.15x45	10.335.036	250-500	250-500	300-600	.008-.016"
C50100	CW3115A	0.625	1.25	.15x45	10.335.037	250-500	250-500	300-600	.008-.016"

\*C Max. chamfer

Clamping screw  
(10 screws and 1 wrench per package)



The chamfering tools can be mounted on single or twin-cutter boring bars. Chamfering in direct sequence with the boring operation eliminates the tool-change time for separate chamfering operations.

Each chamfering ring covers the full bore diameter capacity of the respective boring head. Carbide inserts for 30° and 45° chamfers are available. The standard inserts are grade C2.

## CHAMFER RINGS

CATALOG NUMBER		A	B		θ	C 1	C 2	D	E	INSERT SIZE
FIGURE I	FIGURE II		KAB SIZE	MIN						
10.663.110	N.A.	1	.79	1.38	30°	1.083		.511	1.378	1
					45°	.925				
10.663.120	10.663.121	2	.98	1.57	30°	1.083	2.146	.590	1.654	1
					45°	.925	1.988			
10.663.130	10.663.131	3	1.26	1.85	30°	1.083	2.322	.590	2.008	1
					45°	.925	2.165			
10.663.140	10.663.141	4	1.61	2.17	30°	1.083	2.600	.590	2.244	1
					45°	.925	2.441			
10.663.150	10.663.151	5	2.09	3.54	30°	2.047	3.582	.984	3.543	2
					45°	1.693	3.228			
10.663.160	10.663.161	6	2.68	4.09	30°	2.047	4.134	.984	4.094	2
					45°	1.693	3.780			
10.663.170	N.A.	6	3.54	5.12	30°	2.047	45°	.984	5.118	2
					45°	1.693	1.693			
11.663.180	N.A.	6	4.72	6.30	30°	2.047	45°	1.38	6.30	2
					45°	1.693	1.693			
10.688.209	N.A.	7	3.94	5.31	30°	2.047	45°	.984	5.35	2
					45°	1.693	1.693			
10.688.331	N.A.	7	4.92	6.30	30°	2.047	45°	.984	6.34	2
					45°	1.693	1.693			

N.A. Not Available

Figure I

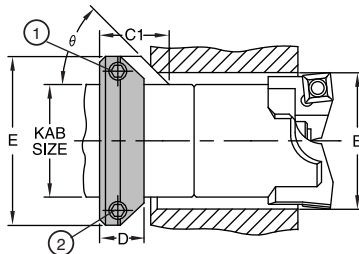
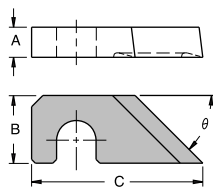
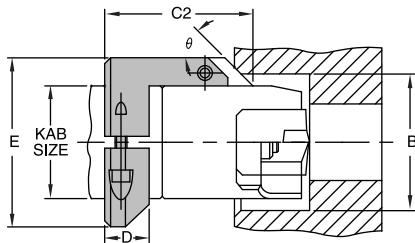





Figure II



## CHAMFERING INSERTS

INSERT SIZE	CATALOG NUMBER	θ	A	B	C
1	10.663.181	30°	.157	.354	1.083
1	10.663.191	45°	.157	.354	.925
2	10.663.185	30°	.315	.787	2.047
2	10.663.195	45°	.315	.787	1.693

## SPARE PARTS

			
KAB SIZE	1	2	3
1	10.690.101	10.693.175	10.690.803
2	10.690.102	10.693.176	10.690.804
3	10.690.103	10.693.176	10.690.804
4	10.690.104	10.693.176	10.690.804
5	10.690.105	10.693.131	10.690.807
6	10.690.106	10.693.131	10.690.807
7	10.690.106	10.693.131	10.690.807

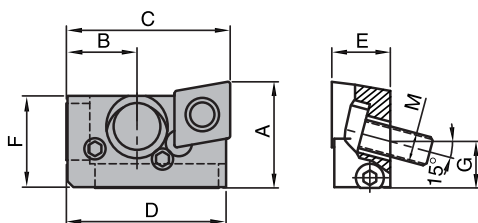
### Assembly Instructions

- Mount both ring parts on tool shank and adjust them in length.
- Assemble cutting insert between the ring parts and fasten screw ① tightly.
- Fasten clamp screw ②.

## ADJUSTABLE SHELF MOUNT CARTRIDGES, TYPE "ASM"

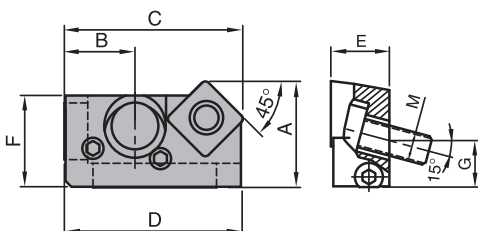
Radial and axial adjustment cartridges from front allow quick and easy insert adjustments for diameter and length. Especially suitable for use on special multiple diameter roughing and finish boring tools, highest cutting capacity at high speed and feed can be realized.

The compact design features a unique pivot pin which maintains line contact to the boring bar pocket at all times through the entire range of travel. Adjustments are easily made by turning the screw conveniently located on the front face of the cartridge. Each cartridge can be adjusted in either direction (radially or axially) by up to .024".



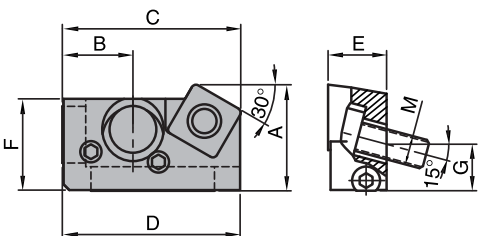
### CC..90°

INSERT SIZE	MIN. BORE	CATALOG NUMBER	A*	B	C	D	E	F	G	M	GAGE INSERT
CC..06 (1/4" I.C.)	1.260 (32mm)	11.382.316	.512 (13mm)	.335 (8.5mm)	.787 (20mm)	.768 (19.5mm)	.315 (8mm)	.457 (11.6mm)	.225 (5.7mm)	M3x0.5	CC..060202
CC..09 (3/8" I.C.)	1.570 (40mm)	11.382.326	.709 (18mm)	.472 (12mm)	1.102 (28mm)	1.075 (27.3mm)	.394 (10mm)	.614 (15.6mm)	.323 (8.2mm)	M5x0.8	CC..09T304
CC..12 (1/2" I.C.)	1.970 (50mm)	11.382.346	.866 (22mm)	.472 (12mm)	1.220 (31mm)	1.189 (30.2mm)	.472 (12mm)	.751 (19mm)	.422 (10.7mm)	M6x1	CC..120408
CC..16 (5/8" I.C.)	2.205 (56mm)	11.382.356	1.102 (28mm)	.591 (15mm)	1.496 (38mm)	1.476 (37.5mm)	.472 (12mm)	.992 (25.2mm)	.512 (13mm)	M6x1	CC..160508



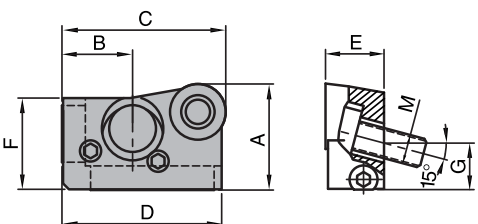
### SC..45°

INSERT SIZE	MIN. BORE	CATALOG NUMBER	A*	B	C*	D	E	F	G	M	GAGE INSERT
SC..09 (3/8" I.C.)	1.570 (40mm)	11.382.223	.709 (18mm)	.472 (12mm)	1.200 (30.5mm)	1.173 (29.8mm)	.394 (10mm)	.622 (15.8mm)	.323 (8.2mm)	M5x0.8	SC..09T304



### SC..30°

INSERT SIZE	MIN. BORE	CATALOG NUMBER	A*	B	C*	D	E	F	G	M	GAGE INSERT
SC..12 (1/2" I.C.)	1.970 (50mm)	11.382.244	1.024 (26mm)	.472 (12mm)	1.378 (35mm)	1.366 (34.7mm)	.472 (12mm)	.835 (21.2mm)	.500 (12.7mm)	M6x1	SC..120408



### RC

INSERT SIZE	MIN. BORE	CATALOG NUMBER	A	B	C*	D	E	F	G	M	GAGE INSERT
RC..12 (1/2" I.C.)	1.970 (50mm)	11.382.366	.866 (22mm)	.472 (12mm)	1.220 (31mm)	1.189 (30.2mm)	.472 (12mm)	.751 (19mm)	.422 (10.7mm)	M6x1	RC..120400

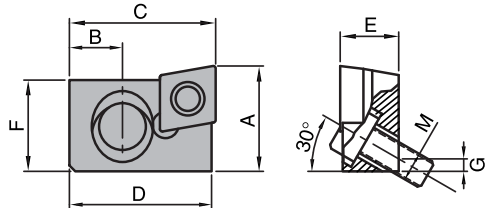
\*Dimensions based on .016" nose radius for CC06 & CC09 inserts.  
CC12 & CC16 cartridges based on .031" nose radius.

# FIXED POCKET INSERT CARTRIDGES, TYPE "FSM" & "TSM"



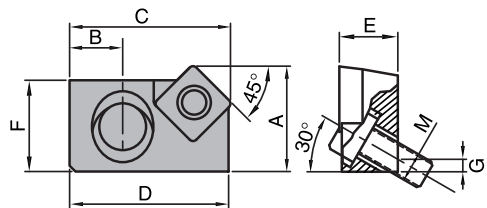
These compact and rigid insert cartridges are best utilized for special multi-diameter roughing and chamfering tools. Combined with other Kaiser boring tool components, they can optimize high production boring, facing, or chamfering. Other typical applications are for dedicated core drilling/rough boring operations requiring fixed diameter and length.

## TYPE "FSM" - .030"(0.8mm) ADJUSTMENT WITH SHIM



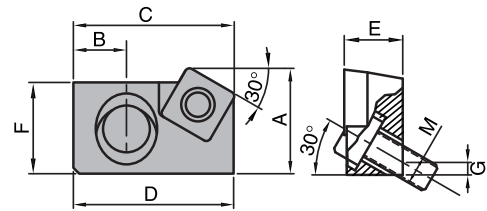
### CC..90°

INSERT SIZE	MIN. BORE	CATALOG NUMBER	A*	B	C	D	E	F	G	M	GAGE INSERT
CC..06 (1/4" I.C.)	1.260 (32mm)	11.381.316	.433 (11mm)	.276 (7mm)	.787 (20mm)	.768 (19.5mm)	.315 (8mm)	.377 (9.6mm)	.035 (0.9mm)	M3x0.5	CC..060202
CC..09 (3/8" I.C.)	1.570 (40mm)	11.381.326	.670 (17mm)	.295 (7.5mm)	.984 (25mm)	.961 (24.4mm)	.394 (10mm)	.583 (14.8mm)	.084 (2.1mm)	M5x0.8	CC..09T304
CC..12 (1/2" I.C.)	1.890 (48mm)	11.381.346	.866 (22mm)	.315 (8mm)	1.181 (30mm)	1.154 (29.3mm)	.472 (12mm)	.751 (19mm)	.151 (3.8mm)	M6x1	CC..120408



### SC..45°

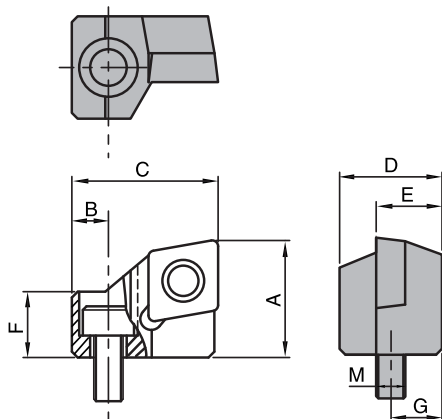
INSERT SIZE	MIN. BORE	CATALOG NUMBER	A*	B	C*	D	E	F	G	M	GAGE INSERT
SC..09 (3/8" I.C.)	1.570 (40mm)	11.381.223	.670 (17mm)	.295 (7.5mm)	1.023 (26mm)	1.000 (25.4mm)	.394 (10mm)	.583 (14.8mm)	.084 (2.1mm)	M5x0.8	SC..09T304
SC..12 (1/2" I.C.)	1.890 (48mm)	11.381.243	.866 (22mm)	.315 (8mm)	1.260 (32mm)	1.232 (31.3mm)	.472 (12mm)	.751 (19mm)	.151 (3.8mm)	M6x1	SC..120408



### SC..30°

INSERT SIZE	MIN. BORE	CATALOG NUMBER	A*	B	C*	D	E	F	G	M	GAGE INSERT
SC..09 (3/8" I.C.)	1.570 (40mm)	11.381.224	.670 (17mm)	.295 (7.5mm)	1.023 (26mm)	1.000 (25.4mm)	.394 (10mm)	.583 (14.8mm)	.084 (2.1mm)	M5x0.8	SC..09T304
SC..12 (1/2" I.C.)	1.890 (48mm)	11.381.244	.866 (22mm)	.315 (8mm)	1.260 (32mm)	1.232 (31.3mm)	.472 (12mm)	.751 (19mm)	.151 (3.8mm)	M6x1	SC..120408

## TYPE "TSM" - NO ADJUSTMENT



### CC..90°

INSERT SIZE	MIN. BORE	CATALOG NO.	A*	B	C	D	E	F	G	M	GAGE INSERT
CC..06 (1/4" I.C.)	1.181 (30mm)	11.381.416	.394 (10mm)	.157 (4mm)	.591 (15mm)	.394 (10mm)	.276 (7mm)	.197 (5mm)	.197 (5mm)	M3x0.5	CC..060204
CC..09 (3/8" I.C.)	1.496 (38mm)	11.381.426	.630 (16mm)	.197 (5mm)	.787 (20mm)	.551 (14mm)	.354 (9mm)	.354 (9mm)	.276 (7mm)	M4x0.7	CC..09T308
CC..12 (1/2" I.C.)	1.890 (48mm)	11.381.446	.787 (20mm)	.236 (6mm)	.984 (25mm)	.630 (16mm)	.394 (10mm)	.472 (12mm)	.315 (8mm)	M6x1	CC..120408

\*Dimensions based on .016" nose radius for CC06 & CC09 inserts.  
CC12 & CC16 cartridges based on .031" nose radius.

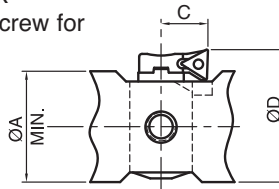
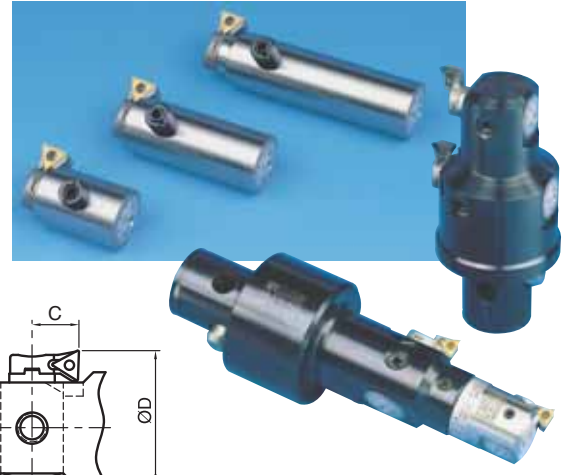
# PRECISION FINISH BORING

## CARTRIDGES WITH MICROMETER ADJUSTMENT FOR SPECIAL, MULTI-DIAMETER SOLUTIONS

Special tools with the requirement of high precision adjustment cartridges can be easily designed and manufactured. Three cartridges, offered with either inch (.0005"/div.) or metric (0.01mm/div.) graduated dials cover the diameter work range from 0.91-4.21" by application of two different insert holders.

Cartridges are made with a highly accurate and ground micrometer spindle and tool carrier locking system which will not change diameter setting. Cartridges easily assemble into a precision bore and lock securely into place with a threaded locating screw. The locking screw for the tool carrier is an integral part of the locating screw.

Two insert holders for each cartridge are offered and use ISO standard type inserts. Insert holders can be assembled for either forward or back boring without rotating the cartridges. A grease fitting is also provided to ensure long lasting and accurate diameter setting.



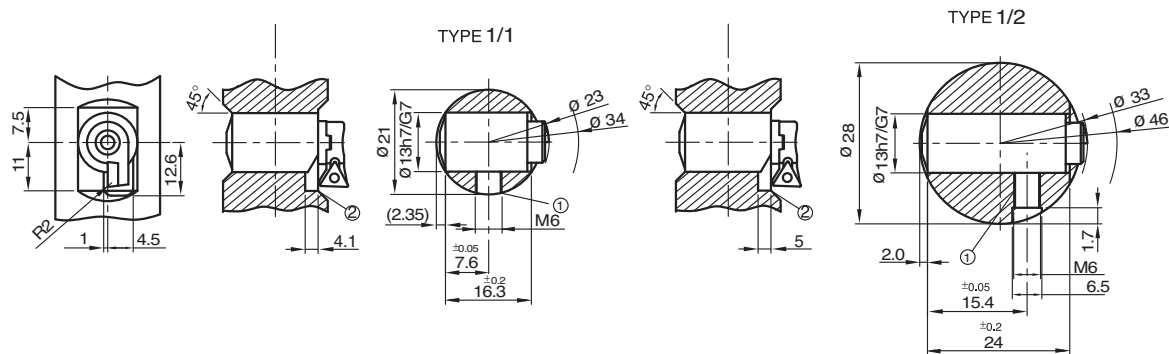
INCH CARTRIDGES Ø0.91-4.21, 1 DIV.=.0005" ON DIAMETER

CATALOG NUMBER	TYPE	D Bore Range		ØA Min	C LENGTH	Insert Holder Number	Insert Type & Size
		Min	Max				
10.456.011	1/1	0.906	1.142	0.827	0.433	10.626.111	TP..07
		1.102	1.339				
10.456.012	1/2	1.299	1.654	1.102	0.433	10.626.111	TP..07
		1.496	1.811				
10.456.013	2/1	1.772	2.283	1.535	0.650	10.626.141	TC..11
		2.126	2.638				
10.456.014	2/2	2.559	3.071	2.362	0.650	10.626.141	TC..11
		2.913	3.425				
10.456.015	2/3	3.346	3.858	3.150	0.650	10.626.141	TC..11
		3.701	4.216				

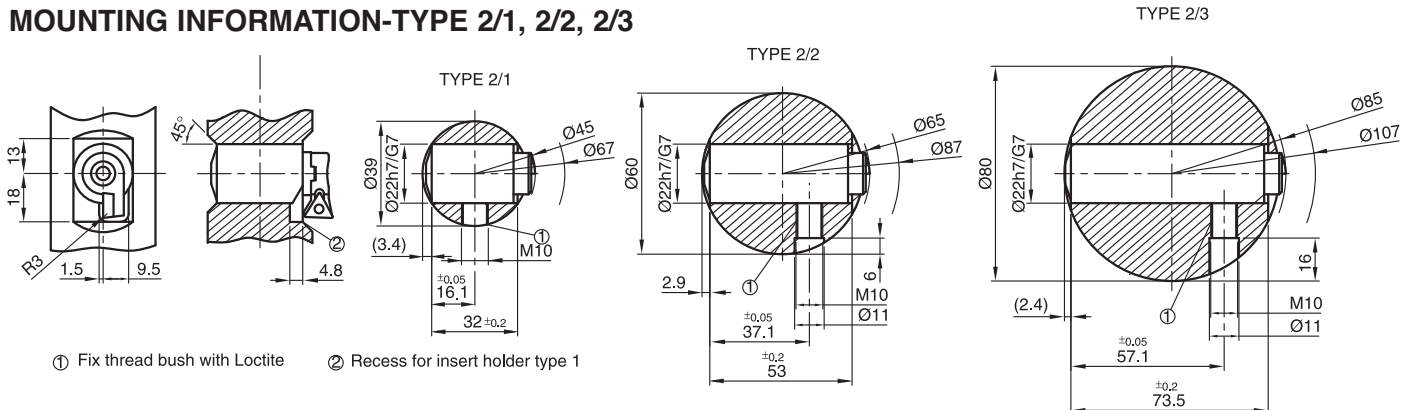
METRIC CARTRIDGES Ø23-107, 1 DIV.=.01MM ON DIAMETER

CATALOG NUMBER	TYPE	D Bore Range		ØA Min	C LENGTH	Insert Holder Number	Insert Type & Size
		Min	Max				
10.456.001	1/1	23	29	21	11.0	10.626.111	TP..07
		28	34				
10.456.002	1/2	33	42	28	11.0	10.626.111	TP..07
		38	46				
10.456.003	2/1	45	58	39	16.5	10.626.141	TC..11
		54	67				
10.456.004	2/2	65	78	60	16.5	10.626.141	TC..11
		74	87				
10.456.005	2/3	85	98	80	16.5	10.626.141	TC..11
		94	107				

## MOUNTING INFORMATION-TYPE EP1/1, EP1/2

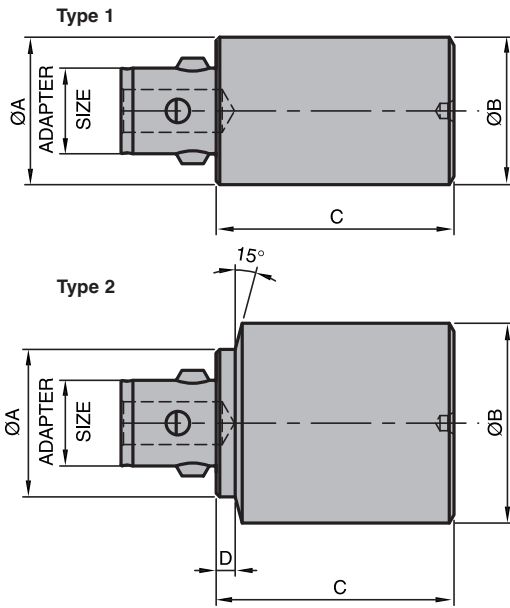


## MOUNTING INFORMATION-TYPE 2/1, 2/2, 2/3



## HARDENED AND GROUND STEEL KAB ADAPTER. STEEL BLANK MACHINABLE RC28-32.

Aluminum blank made from 7075 alloy for high tensile strength with reduced tool weight.



CATALOG NUMBER	DESIGNATION	TYPE	ADAPTER SIZE	ØA	ØB	C	D	MATERIAL
10.335.531	KA3xB1.2xC2.5	1	KAB3	1.220	1.220	2.560	—	STEEL
10.335.532	KA3xB1.6xC1.9	2	KAB3	1.220	1.654	1.968	.157	STEEL
10.335.541	KA4xB1.6xC3.1	1	KAB4	1.535	1.535	3.150	—	STEEL
10.335.542	KA4xB2.1xC1.9	2	KAB4	1.535	2.125	1.968	.157	STEEL
11.335.551	KA5xB1.9xC3.9	1	KAB5	1.968	1.968	3.937	—	STEEL
10.335.552	KA5xB2.7xC2.3	2	KAB5	1.968	2.756	2.360	.197	STEEL
11.335.553	KA5xB3.0xC6.0	2	KAB5	1.968	3.000	6.000	.197	STEEL
11.335.561	KA6xB2.5xC4.7	1	KAB6	2.520	2.520	4.725	—	STEEL
11.335.562	KA6xB3.8xC2.7	2	KAB6	2.520	3.820	2.760	.394	STEEL
11.335.563	KA6xB2.5xC8.8	1	KAB6	2.520	2.520	8.858	—	STEEL
11.335.564	KA6xB4.0xC8.0	2	KAB6	2.520	4.000	8.000	.394	STEEL
11.335.565	KA6xB2.5xC10.2	1	KAB6	2.520	2.520	10.24	—	STEEL
11.335.566	KA6xB4.0xC8.0	2	KAB6	2.520	4.000	8.000	.394	ALUMINUM
11.335.567	KA6xB4.7xC6.3	2	KAB6	2.520	4.724	6.300	.394	ALUMINUM
11.335.571	KA7xB3.5xC7.0	1	KAB7	3.543	3.543	7.087	—	STEEL
11.335.572	KA7xB4.5xC8.0	2	KAB7	3.543	4.500	8.000	.394	STEEL
10.335.573	KA7xB6.1xC8.6	2	KAB7	3.543	6.100	8.661	.394	STEEL

## APPLICATION EXAMPLES - SPECIAL TOOLS

①- Rough Boring & Semi-Finish Boring & Chamfer- Programs “TSM” & “FSM”

②- Rough Boring & Finish Boring - Programs “TSM” & “EWN”

③- Finish Boring 2 Precision Bores -Program “EWN”

④- Rough Boring & Chamfering Multiple Diameters with Aluminum head for Reduced Tool Weight - Programs “ASM” & “FSM”

