

Laydown Grooving

For Shallow Grooves



INCH

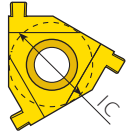

Laydown Grooving Ordering Code System

Grooving Insert



See it in action

5	L	I	R	1.1	-	D472	-	1.3	VKP
1	2	3	4	5	6	7	6	8	9

1 - Insert Size 5.0L - IC5.0L 2 - IC1/4" 3 - IC3/8" 4 - IC1/2" 5 - IC5/8" 	2 - Insert Style L 	3 - Type of Insert E - External I - Internal	4 - RH / LH Insert R - Right Hand Insert L - Left Hand Insert
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5 - Groove Std. Width .03 - .08 (inch)	6 - Profile Style C - Full Profile	7 - Groove Standard DIN 471 Partial DIN 471 DIN 472 Partial DIN 472 DIN 7993 Partial DIN 7993 DIN 76 ST, DIN 76 SH DIN 3770 CIR - CIRCLIP	8 - Groove Depth .013 - .079 (inch)	9 - Carbide Grade VTX VKP (for Mini) VHX (for Mini) VKX
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External Toolholders

A	L	32	-	4	5	6
1	2	3		4	5	6

1 - Anvil A - Anvil required N - No Anvil required O - Miniature holder	2 - Holder Style L - External V - Miniature Square Shank VR - Miniature Round Shank	3 - Shank Square [inch] 0375, 050, 0625, 075, 100, 125, 150, 200	4 - Insert Size 2 - IC1/4" 3 - IC3/8" 4 - IC1/2" 5 - IC5/8"	5 - Clamping C - With Clamp	6 - RH/LH Holder None - Right Hand LH - Left Hand
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Internal Toolholders

C	A	VR	C	20	-	3	8	9
1	2	3	4	5	6	7	8	9

1 - Shank Type B - Anti Vibration System C - Carbide Shank S - Mini Holders	2 - Anvil A - Anvil required N - No Anvil required O - Miniature holder	4 - Cooling C - With Coolant Channel	6 - Holder Length (Mini Holders) U - Ultra Short S - Short M - Medium L - Long T - Adjustable	7 - Insert Size 5L - IC5.0L mm 4.0K - IC4.0 mm 6.0 - IC6.0 mm 2 - IC1/4" 3 - IC3/8" 4 - IC1/2" 5 - IC5/8"	8 - Clamping C - With Clamp
	3 - Tool Type VR - Internal Round shank	5 - Shank Front Dia 0375, 050, 075, 100, 100D, 125, 150, 200, 250 6.2 Mini 5L			9 - RH/LH Holder None - Right Hand LH - Left Hand

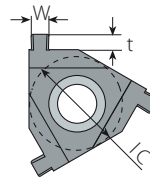
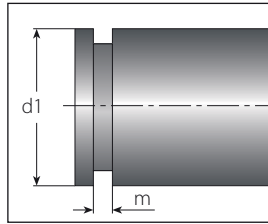
Adjustable Toolholders (Sleeves)

S	M	C	16	-	3
1	2	3	4		5

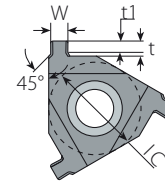
1 - Holder Shape S - Sleeve (Double Ended)	2 - Holder Type V - Adjustable Holders	3 - Cooling C - Coolant Channel	4 - Holder Dia. 0625	5 - Holder Bore Size Adjustable Holders 6.2
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DIN 471 Retaining Ring Grooves for Shafts

External



Standard
(Partial Profile)



Standard
(Full Profile)

Standard (Partial Profile)



Insert Size	Ordering Code	Groove Std.	Dimensions Inch		Anvil	Holder
IC	RH	m (H13)	W	t		
3/8"	3ER1.10-D471-1.3...	.043	.047	.051	YE3M-1.5N	AL..-3
	3ER1.30-D471-1.5...	.051	.055	.059		
	3ER1.60-D471-1.85...	.063	.067	.071		
	3ER1.85-D471-2.0...	.073	.076	.079		

Range of profiles also available on IC 1/4", 1/2" and 5/8", inserts on request.

Standard (Full Profile)

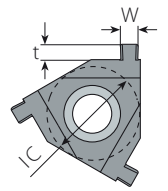
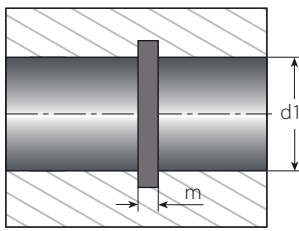


Insert Size	Ordering Code	Groove Std.	Dimensions Inch			Anvil	Holder	
IC	RH	m(H13)	d1	W	t1	t		
3/8"	3ER1.10C-D471-.35...	.043	.59	.047	.013	.014	YE3M-1.5N	AL..-3
	3ER1.10C-D471-.4...	.043	.63-.67	.047	.014	.016		
	3ER1.30C-D471-.5...	.051	.71-.87	.055	.017	.020		
	3ER1.30C-D471-.55...	.051	.94-1.02	.055	.018	.022		
	3ER1.60C-D471-.7...	.063	1.1-1.18	.067	.024	.028		
	3ER1.60C-D471-.85...	.063	1.26-1.34	.067	.030	.033		
	3ER1.60C-D471-1.0...	.063	1.38	.067	.033	.039		
	3ER1.85C-D471-1.0...	.073	1.42-1.50	.076	.033	.039		
	3ER1.85C-D471-1.25...	.073	1.57-1.89	.076	.043	.049		
	3ER2.15C-D471-1.5...	.085	1.97-2.48	.088	.053	.059		

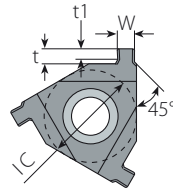
Range of profiles also available on IC 1/4", 1/2" and 5/8", inserts on request.

DIN 472 Retaining Ring Grooves for Bores

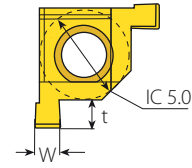
Internal



**Standard
(Partial Profile)**



**Standard
(Full Profile)**



**Mini-L
(Partial Profile)**

Standard (Partial Profile)



Insert Size	Ordering Code	Groove Std.	Dimensions Inch			Anvil	Holder
IC		m (H13)	W	t			
3/8"	3IR1.10-D472-1.3...	.043	.047	.051	Y13M-1.5N	AVR...-3 NVR - 3	
	3IR1.30-D472-1.5...	.051	.055	.059			
	3IR1.60-D472-1.8...	.063	.067	.071			
	3IR1.85-D472-2.0...	.073	.076	.079			

Range of profiles also available on IC 1/4", 1/2" and 5/8", inserts on request.
For minimum bore diameters, refer to page 11.

Standard (Full Profile)



Insert Size	Ordering Code	Groove Std.	Dimensions Inch				Anvil	Holder
IC		m (H13)	d1	W	t1	t		
3/8"	3IR1.10C-D472-5...	.043	.71 - .87	.047	.014	.020	Y13M-1.5N	AVR...-3 NVR - 3
	3IR1.30C-D472-6...	.051	.94 - 1.02	.055	.017	.024		
	3IR1.30C-D472-7...	.051	1.10 - 1.18	.055	.024	.028		
	3IR1.30C-D472-85...	.051	1.22 - 1.34	.055	.030	.033		
	3IR1.60C-D472-85...	.063	1.34	.067	.030	.033		
	3IR1.60C-D472-1.0...	.063	1.38 - 1.50	.067	.033	.039		
	3IR1.85C-D472-1.25...	.073	1.57 - 1.89	.076	.043	.049		
	3IR2.15C-D472-1.5...	.085	1.97 - 2.48	.088	.053	.059		

Range of profiles also available on IC 1/4", 1/2" and 5/8", inserts on request.
For minimum bore diameters, refer to page 11.

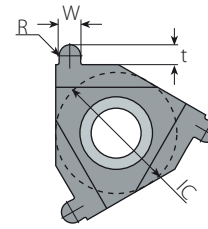
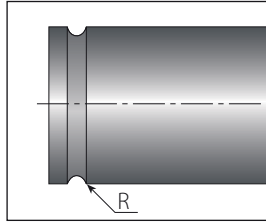
Mini-L (Partial Profile)



Insert Size	Ordering Code	Groove Std.	Dimensions Inch		Min. Bore dia. (inch)	Holder
IC		m (H13)	W	t		
5.0L	5LIR.9-D472-7...	.035	.039	.028	.315	.NVR...-5L
	5LIR1.1-D472-1....	.043	.047	.039		
	5LIR1.3-D472-1.5...	.051	.055	.051		

DIN 7993 Snap Ring Grooves

External



Standard
(Partial Profile)

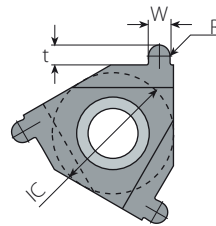
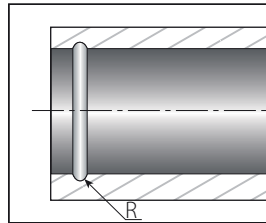
Standard (Partial Profile for Shafts)



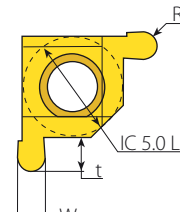
Insert Size	Ordering Code	Dimensions Inch			Anvil	Holder
IC	RH	R	W	t		
3/8"	3ER.40-D7993-6...	.015	.031	.024	YE3M-1.5N	AL...-3
	3ER.60-D7993-8...	.023	.047	.031		
	3ER.90-D7993-1.1...	.035	.071	.043		
	3ER1.00-D7993-1.2...	.039	.079	.047		

Range of profiles also available on IC 1/4", 1/2" and 5/8", inserts on request.

Internal



Standard
(Partial Profile)



Mini-L
(Partial Profile)

Standard (Partial Profile for Bores)



Insert Size	Ordering Code	Dimensions Inch			Anvil	Holder
IC	RH	R	W	t		
3/8"	3IR.60-D7993-8...	.023	.047	.031	Y13M-1.5N	AVR...-3 NVR - 3
	3IR.90-D7993-1.1...	.035	.071	.043		
	3IR1.00-D7993-1.2...	.039	.079	.047		

Range of profiles also available on IC 1/4", 1/2" and 5/8" inserts on request.
For minimum bore diameters, refer to page 9.

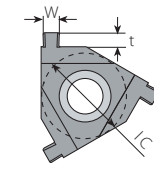
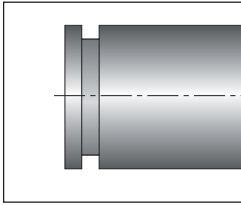
Mini-L (Partial Profile for Bores)



Insert Size	Ordering Code	Dimensions Inch			Min. Bore dia.	Holder
IC	RH	R	W	t	inch	
5.0L	5LIR.4-D7993-8...	.016	.031	.031	.315	.NVR...-5L
	5LIR.6-D7993-1....	.024	.047	.039		

CIRCLIP Inch Standard

External



Standard
(Partial Profile)

Standard (Partial Profile)

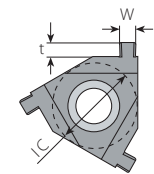
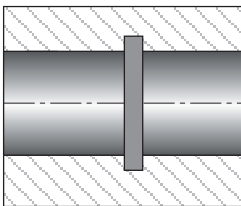


Insert Size	Ordering Code	Dimensions Inch		Anvil	Holder
IC		W	t		
3/8"	3ER.031-CIRC-.05	.031	.05	YE3M-1.5N	AL.-3
	3ER.041-CIRC-.07	.041	.07		
	3ER.047-CIRC-.07	.047	.08		
	3ER.058-CIRC-.08	.058	.08		
	3ER.062-CIRC-.08	.062	.08		
	3ER.072-CIRC-.08	.072	.08		
	3ER.078-CIRC-.08	.078	.08		

Range of profiles also available on IC 1/4", 1/2" and 5/8", inserts on request.

CIRCLIP Inch Standard

Internal



Standard
(Partial Profile)

Standard (Partial Profile)



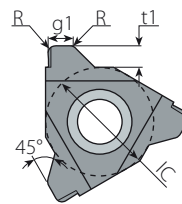
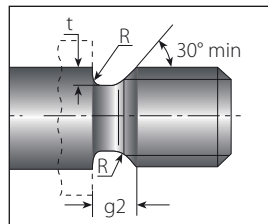
Insert Size	Ordering Code	Dimensions Inch		Anvil	Holder
IC		W	t		
3/8"	3IR.031-CIRC-.05	.031	.05	YI3M-1.5N	AVR.-3* NVR - 3
	3IR.041-CIRC-.07	.041	.07		
	3IR.047-CIRC-.07	.047	.07		
	3IR.058-CIRC-.08	.058	.08		
	3IR.062-CIRC-.08	.062	.08		
	3IR.072-CIRC-.08	.072	.08		
	3IR.078-CIRC-.08	.078	.08		

Range of profiles also available on IC 1/4", 1/2" and 5/8", inserts on request.

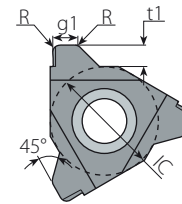
* For minimum bore diameters, refer to page 11.

DIN 76 Thread Undercuts (For ISO Metric Threads in Accordance with DIN 13)

External



Normal - Type A



Short - Type B

Standard (Normal - Type A)



Insert Size	Ordering Code	Pitch	Dimensions Inch					Anvil	Holder
IC	RH	(mm)	R	g1	g2	t	t1		
3/8"	3ER.50-D76ST-4...	.50	.008	.043	.059	.016	.098	YE3M-1.5N	AL...-3
	3ER.60-D76ST-5...	.60	.015	.051	.071	.020	.094		
	3ER.70-D76ST-55...	.70	.015	.061	.083	.022	.087		
	3ER.80-D76ST-65...	.80	.015	.069	.094	.026	.083		
	3ER1.00-D76ST-8...	1.00	.023	.087	.118	.031	.075		
5/8"	5ER1.25-D76ST-1.0...	1.25	.023	.110	.150	.039	.142	YE5M-1.5N	AL...-5
	5ER1.50-D76ST-1.15...	1.50	.031	.132	.177	.045	.130		
	5ER1.75-D76ST-1.3...	1.75	.039	.157	.209	.051	.118		
	5ER2.00-D76ST-1.5...	2.00	.039	.177	.236	.059	.106		

Standard (Short - Type B)

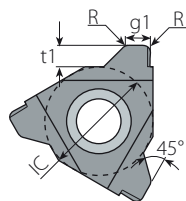
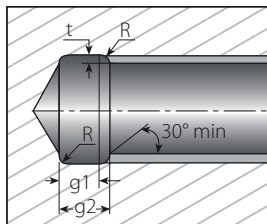


Insert Size	Ordering Code	Pitch	Dimensions Inch					Anvil	Holder
IC	RH	(mm)	R	g1	g2	t	t1		
3/8"	3ER1.00-D76SH-8...	1.00	.023	.047	.079	.031	.098	YE3M-1.5N	AL...-3
	3ER1.25-D76SH-1.0...	1.25	.023	.059	.098	.039	.091		
	3ER1.50-D76SH-1.15...	1.50	.031	.073	.118	.045	.083		
	3ER1.75-D76SH-1.3...	1.75	.039	.087	.138	.051	.075		
5/8"	5ER2.00-D76SH-1.5...	2.00	.039	.098	.157	.059	.150	YE5M-1.5N	AL...-5
	5ER2.50-D76SH-1.8...	2.50	.047	.126	.197	.071	.138		
	5ER3.00-D76SH-2.2...	3.00	.063	.150	.236	.087	.122		

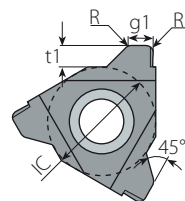
Range of profiles also available on IC 1/4" and 1/2" inserts on request.

DIN 76 Thread Undercuts (For ISO Metric Threads in Accordance with DIN 13)

Internal



Normal - Type C



Short - Type D

Standard (Normal - Type C)



Insert Size	Ordering Code	Pitch	Dimensions Inch					Anvil	Holder
IC	RH	(mm)	R	g1	g2	t	t1		
3/8"	3IR.50-D76ST-4...	.50	.008	.043	.059	.016	.098	Y13M-1.5N	AVR...- 3 NVR...- 3
	3IR.60-D76ST-5...	.60	.015	.051	.071	.020	.094		
	3IR.70-D76ST-55...	.70	.015	.061	.083	.022	.087		
	3IR.80-D76ST-65...	.80	.015	.069	.094	.026	.083		
	3IR1.00-D76ST-8...	1.00	.023	.087	.118	.031	.075		

Range of profiles also available on IC 1/4", 1/2" and 5/8" inserts on request.
For minimum bore diameters, refer to page 11.

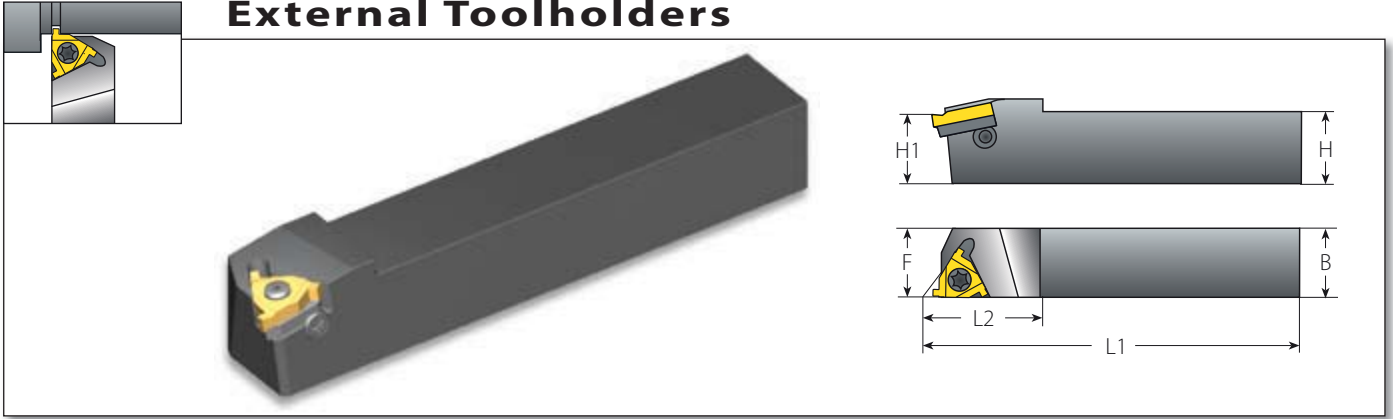
Standard (Short - Type D)



Insert Size	Ordering Code	Pitch	Dimensions Inch					Anvil	Holder
IC	RH	(mm)	R	g1	g2	t	t1		
3/8"	3IR1.00-D76SH-8...	1.00	.023	.047	.079	.031	.098	Y13M-1.5N	AVR...- 3 NVR...- 3
	3IR1.25-D76SH-1.0...	1.25	.023	.059	.098	.039	.091		
	3IR1.50-D76SH-1.15...	1.50	.031	.073	.118	.045	.083		
	3IR1.75-D76SH-1.3...	1.75	.039	.087	.138	.051	.075		





Range of profiles also available on IC 1/4", 1/2" and 5/8" inserts on request.
For minimum bore diameters, refer to page 11.

External Toolholders

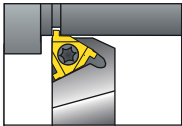


Standard

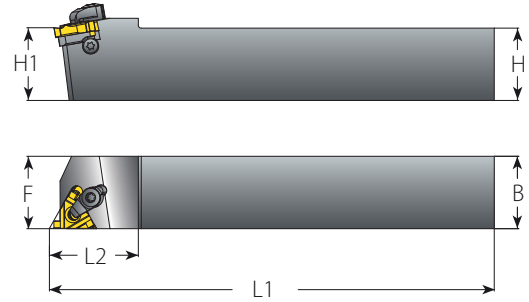
Spare Parts

Insert Size	Ordering Code	EDP No.	Dimensions Inch							 *
IC	RH		H=H1=B	F	L1	L2	Insert Screw	Anvil Screw	Torx Key	Anvil RH
1/4"	NL031-2	66214	.31	.43	5.37	.69	SN2T	-	K2T	-
3/8"	AL3/8-3	66091	.37	.63	2.45	.76	SA3T	SY3T	K3T	YE3M-1.5N
	AL050-3	66000	.50	.63	3.27	.87				
	AL0625-3	66005	.63	.63	5.00	1.02				
	AL075-3	66007	.75	.75	5.00	1.02				
	AL100-3	66016	1.00	1.00	6.00	1.20				
1/2"	AL125-3	66036	1.25	1.25	7.00	1.18	SA4T	SY4T	K4T	YE4M-1.5N
	AL100-4	66024	1.00	1.00	6.00	1.42				
	AL150-4	66066	1.50	1.50	8.00	1.42				
5/8"	AL100-5	66034	1.00	1.25	6.00	1.57	SA5T	SY5T	K5T	YE5M - 1.5N
	AL125-5	66051	1.25	1.25	7.00	1.57				
	AL150-5	66073	1.50	1.50	8.00	1.57				
	AL200-5	66085	2.00	2.00	1.00	1.57				

* The toolholders are supplied with standard anvils. For Grooving, please use the anvils indicated in the table above. For ordering code see page 2.



External Toolholders



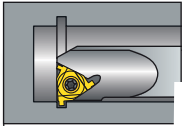
Standard with Clamp

(Dual System, Screw or Clamp)

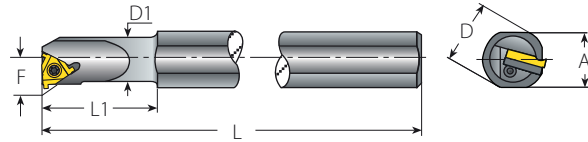
Spare Parts

Insert Size	Ordering Code	EDP No.	Dimensions Inch				Spare Parts				
IC	RH		H=H1=B	F	L1	L2	Insert Screw	Anvil Screw	Clamp	Torx Key	Anvil RH
3/8"	AL075-3C	66008	.75	.75	5.00	1.20					
	AL100-3C	66017	1.00	1.00	6.00	1.20	3A3T	SY3T	C3	K3CT	YE3M -1.5N
	AL125-3C	66031	1.25	1.25	7.00	1.20					
1/2"	AL100-4C	66330	1.00	1.00	6.00	1.42					
	AL125-4C	66222	1.25	1.25	7.00	1.42	SA4T	SY4T	C4	K4T	YE4M-1.5N
	AL150-4C	66223	1.50	1.50	8.00	1.42					
5/8"	AL100-5C	66327	1.00	1.25	6.00	1.57					
	AL125-5C	66224	1.25	1.25	7.00	1.57					
	AL150-5C	66225	1.50	1.50	8.00	1.57	SA5T	SY5T	C5	K5T	YE5M - 1.5N
	AL200-5C	66230	2.00	2.00	1.00	1.57					

* The toolholders are supplied with standard anvils. For Grooving, please use the anvils indicated in the table above. For ordering code see page 2.




Internal Toolholders

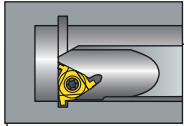


Standard

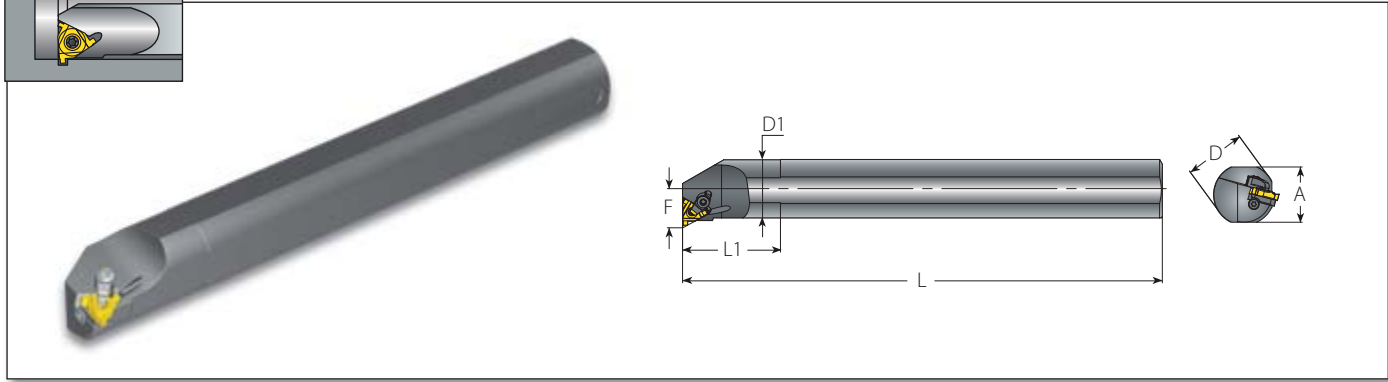
Spare Parts

Insert Size	Ordering Code	EDP No.	Dimensions Inch							Min. Bore dia.				
IC	RH		A	L	L1	D	D1	F	inch	Insert Screw	Anvil Screw	Torx Key	Anvil RH	
1/4"	NVRC0375-2	66234	.67	7.00	1.00	.75	.37	.28	.50	SN2T	-	K2T	-	
	NVRC050-2	66236	.67	7.00	1.25	.75	.50	.37	.65					
	NVRC050-3	66238	.67	7.00	1.25	.75	.50	.40	.67					
3/8"	NVRC0625-3	66240	.67	7.00	1.50	.75	.62	.46	.80	SN3T	-	K3T	-	
	NVRC0625D-3	66242	.58	6.00	1.25	.62	.62	.46	.80					
	AVRC075-3	66098	.67	7.00	1.50	.75	.75	.51	.90					
	AVRC100-3	66100	1.12	1.00	2.50	1.25	1.00	.65	1.20	SA3T	SY3T	K3T	YI3M-1.5N	
	AVRC100D-3	66104	.90	8.00	1.75	1.00	1.00	.65	1.20					
	AVRC125-3	66108	1.12	1.00	2.50	1.25	1.25	.77	1.45					
	AVRC150-3	66114	1.34	12.00	2.50	1.50	1.50	.90	1.65					
	NVRC075-4	66244	.67	7.00	2.00	.75	.75	.59	1.00	SN4T	-	K4T	-	
1/2"	AVRC100-4	66102	1.12	1.00	2.50	1.25	1.00	.71	1.25					
	AVRC100D-4	66106	.88	8.00	1.75	1.00	1.00	.71	1.25	SA4T	SY4T	K4T	YI4M-1.5N	
	AVRC125-4	66110	1.12	1.00	2.50	1.25	1.25	.85	1.50					
	AVRC150-4	66116	1.34	12.00	2.50	1.50	1.50	.98	1.75					
5/8"	AVRC125-5	66112	1.12	1.00	2.50	1.25	1.25	.88	1.55	SN5T	SY5T	K5T	YI5M-1.5N	
	AVRC150-5	66118	1.34	12.00	2.50	1.50	1.50	1.00	1.80					
	AVRC200-5	66120	1.80	14.00	3.00	2.00	2.00	1.25	2.30	SA5T	SY5T	K5T	YI5M-1.5N	
	AVRC250-5	66123	2.26	16.00	3.00	2.50	2.50	1.50	2.80					

* The toolholders are supplied with standard anvils. For Grooving, please use the anvils indicated in the table above. Holders with coolant channel available as standard. For ordering code see page 2.



Internal Toolholders



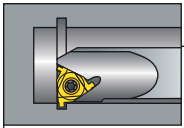
Standard with Clamp

(Dual System, Screw or Clamp)

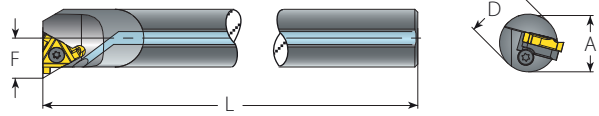
Spare Parts

Insert Size	Ordering Code	EDP No.	Dimensions Inch							Min. Bore dia.	Spare Parts				
			IC	RH	A	L	L1	D	D1		F	inch	Insert Screw	Anvil Screw	Clamp
3/8"	AVR075-3C	66130	.67	7.00	2.00	.75	.75	.51	.94						
	AVR100-3C	66397	1.12	1.00	2.50	1.25	1.00	.65	1.20	SA3T	SY3T	C3	K3CT	Y13M-1.5N	
	AVR100D-3C	66132	.90	8.00	1.75	1.00	1.00	.65	1.20						
	AVR125-3C	66398	1.12	1.00	2.50	1.25	1.25	.77	1.45						
	AVR150-3C	66399	1.34	12.00	2.50	1.50	1.50	.90	1.65						
1/2"	AVR100-4C	66400	1.12	1.00	2.50	1.25	1.00	.71	1.25						
	AVR100D-4C	66401	.90	8.00	1.75	1.00	1.00	.71	1.25	SA4T	SY4T	C4	K4T	Y14M-1.5N	
	AVR125-4C	66402	1.12	1.00	2.50	1.25	1.25	.85	1.50						
	AVR150-4C	66403	1.34	12.00	2.50	1.50	1.50	.98	1.75						
5/8"	AVR125-5C	66404	1.12	1.00	2.50	1.25	1.25	.88	1.55	SN5T	SY5T	C5	K5T	Y15M-1.5N	
	AVR150-5C	66405	1.34	12.00	2.50	1.50	1.50	1.00	1.80						
	AVR200-5C	66406	1.80	14.00	3.00	2.00	2.00	1.25	2.30	SA5T	SY5T	C5	K5T	Y15M-1.5N	
	AVR250-5C	66407	2.26	16.00	3.00	2.50	2.50	1.50	2.80						

* The toolholders are supplied with standard anvils. For Grooving, please use the anvils indicated in the table above. Holders with coolant channel available as standard. For ordering code see page 2.



Internal Toolholders



Standard with Carbide Shank

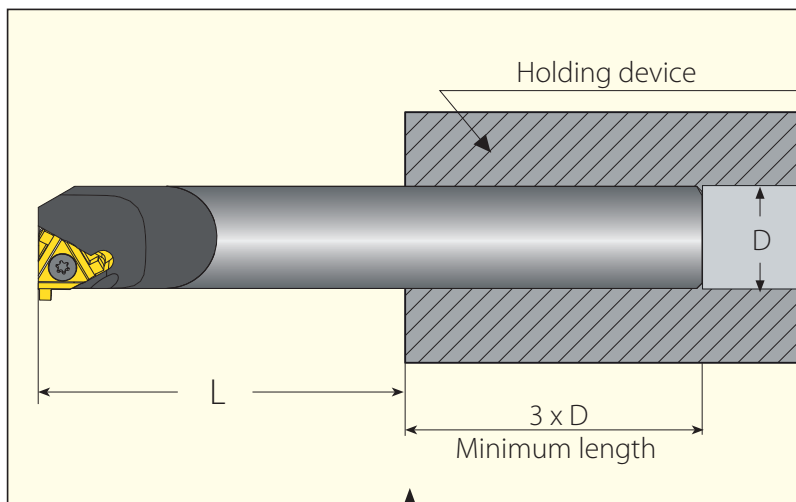
Spare Parts

Insert Size	Ordering Code	EDP No.	Dimensions Inch							Min. Bore dia.	Spare Parts			
IC	RH		A	L	L1	D	D1	F	inch		Insert Screw	Anvil Screw	Torx Key	Anvil RH
1/4"	CNVRC0375-2	66196	.35	6.00	-	.37	.37	.28	.50		SN2T	-	K2T	-
	CNVRC050-2	66197	.48	7.00	-	.50	.50	.35	.60					
3/8"	CNVRC050-3	66199	.48	7.00	-	.50	.50	.40	.67					
	CNVRC0625-3	66200	.60	8.00	-	.62	.62	.45	.80		SN3T	-	K3T	-
	CAVRC075-3	66194	.73	1.00	-	.75	.75	.51	.90		SA3T	SY3T	K3T	Y13M-1.5N
1/2"	CNVRC075-4	66202	.73	1.00	-	.75	.75	.59	1.00		SN4T	-	K4T	-

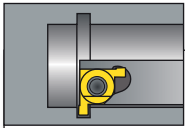
The above toolholders have 1.5° helix angle. For other helix angles see page 127.

Toolholders with prefix "CN" cannot be used with an anvil. The above Toolholders have coolant channel as standard.

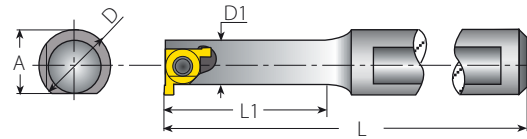
Carbide Shank toolholders should be used when extra accuracy is required or when the bar length to bar diameter ratio exceeds 3:1.



The overhang to bar diameter ratio should be as small as possible to eliminate the chance of chatter (vibration). The minimum length inside a holding device should be 3 times the diameter of the bar shank.

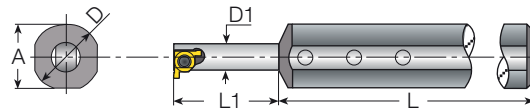
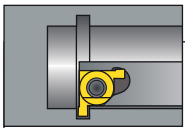


Internal Toolholders



Mini-L

Insert Size	Ordering Code	EDP No.	Dimensions Inch					Anti-Vibration System	Spare Parts	
			A	L	L1	D	D1		Insert Screw	Torx Key
5.0L	SNVR 0375U-5L	67336	.36	3.19	.63	.37	.24	No	SN5LT	K5LT
	BNVR 0375S-5L	67306	.36	3.43	.87	.37	.24	Carbide Implanted		
	BNVR 0375M-5L	67302	.36	3.82	1.22	.37	.24	Carbide Implanted		
	BNVR 0375L-5L	67300	.36	4.29	1.69	.37	.24	Carbide Implanted		
5.0L	SNVR 050U-5L	67340	.49	3.19	.63	.50	.24	No		
	BNVR 050S-5L	67315	.49	3.43	.87	.50	.24	Carbide Implanted		
	BNVR 050M-5L	67311	.49	3.82	1.22	.50	.24	Carbide Implanted		
	BNVR 050L-5L	67309	.49	4.29	1.69	.50	.24	Carbide Implanted		



Mini-L - Adjustable



Insert Size	Ordering Code	EDP No.	EDP No.	Dimensions Inch					Spare Parts				
				A	L	L1	D	D1	Insert Screw	Torx Key for Insert Screw	Holder Screw x 3	Key for Holder Screw	
5.0L	SV0625-6.2	67343	BNVR6.2T-5L	67324	.584	4	.315-1.73	.625	.244	SN5LT	K5LT	S4.0	K2.0



GROOVING Technical Data

Recommended Grades, Cutting Speeds Vc [ft/min] and Feed f [inch/rev]

Material Group	Vargus No.	Material	Hardness Brinell HB	Vc [ft/min]			Feed [inch/rev]	
				Coated				
				VTX	VKP/VKX	VHX		
P Steel	1	Unalloyed steel	Low carbon (C=.1-.25%)	125	459 - 656	459 - 656	66 - 164	.0118
	2		Medium carbon (C=.25-.55%)	150	393 - 590	393 - 590	49 - 131	.0059
	3		High Carbon (C=.55-.85%)	170	361 - 590	361 - 590	49 - 98	.002
	4	Low alloy steel (alloying elements ≤ 5%)	Non hardened	180	328 - 508	328 - 508	66 - 148	.0098
	5		Hardened	275	295 - 475	295 - 475	33 - 82	.0039
	6		Hardened	350	262 - 443	262 - 443	33 - 82	.002
	7	High alloy steel (alloying elements >5%)	Annealed	200	229 - 377	213 - 377		.0079
	8		Hardened	325	164 - 328	164 - 328		.002
	9	Cast steel	Low alloy (alloying elements <5%)	200	98 - 164	98 - 164	82 - 164	.0079
	10		High alloy (alloying elements >5%)	225	66 - 131	82 - 131	66 - 131	.002
M Stainless Steel	11	Stainless steel Ferritic	Non hardened	200	229 - 393	262 - 393		.0079
	12		Hardened	330	197 - 311	180 - 311		.002
	13	Stainless steel Austenitic	Austenitic	180	229 - 328	197 - 328		.0079
	14		Super Austenitic	200	131 - 295	164 - 295		.002
	15	Stainless steel Cast ferritic	Non hardened	200	262 - 361	197 - 262		.0079
	16		Hardened	330	213 - 361	148 - 213		.002
	17	Cast austenitic	Austenitic	200	279 - 328	164 - 229		.0079
	18		Hardened	330	197 - 328	131 - 197		.002
K Cast Iron	28	Malleable Cast iron	Ferritic (short chips)	130	229 - 393	197 - 262		.0079
	29		Pearlitic (long chips)	230	229 - 393	197 - 262		.0059
	30	Grey cast iron	Low tensile strength	180	229 - 393	197 - 262		.0079
	31		High tensile strength	260	197 - 328	131 - 229		.0039
	32	Nodular SG iron	Ferritic	160	164 - 262	197 - 262		.0079
	33		Pearlitic	260	197 - 295	229 - 295		.0039
N(K) Non-Ferrous Metals	34	Aluminium alloys Wrought	Non aging	60	328 - 787	262 - 787	98 - 197	.0157
	35		Aged	100	262 - 557	328 - 557	82 - 164	.0039
	36	Aluminium alloys Cast	Cast	75	328 - 492	328 - 492	82 - 164	.0098
	37		Cast & aged	90	262 - 393	197 - 328	66 - 131	.0059
	38	Aluminium alloys Cast Si 13-22%	130	328 - 492	328 - 492	49 - 98	.0059	
	39	Copper and copper alloys	Brass	90	262 - 656	262 - 656	49 - 115	.0079
	40		Bronze and non leaded copper	100	262 - 656	262 - 656	49 - 115	.0059
S(M) Heat Resistant Material	19	High temperature alloys	Annealed (Iron based)	200	148 - 197	82 - 148		.0079
	20		Aged (Iron based)	280	115 - 164	66 - 98		.002
	21		Annealed (Nickel or Cobalt based)	250	66 - 98	49 - 66		.002
	22		Aged (Nickel or Cobalt based)	350	49 - 82	33 - 49		.002
	23	Titanium alloys	Pure 99.5 Ti	400Rm	459 - 557	197 - 328		.0039
	24		α+β alloys	1050Rm	164 - 229	131 - 164		.002
H(K) Hardened Material	25	Extra hard steel	Hardened & tempered	45-50HRc	148 - 197	66 - 131		.0008
	26			51-55HRc	131 - 164	66 - 115		.0008

Grades and Their Application

Grade	Application Type	Sample
VTX	General use carbide grade. A tough sub-micron substrate with TiAlN coating. Provides good fracture toughness and excellent wear resistance.	
VKX	Superior general purpose grade, excellent in steels and stainless steels, recommended for rigid cutting conditions TiN coated.	

Grade	Application Type	Sample
VKP	General use carbide grade. TiN coated	
VHX	General use HSS grade For machining at low cutting speed. TiN coated	



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