



# API Ring Groover



**The Most Economical Way to Make API Ring Grooves**

**Ideal for high pressure and high temperature applications  
in the oil, gas, and petrochemical industries**

**Free cutting geometry with adjustable cartridges and  
reliable repeatability giving you lower costs per cut**



# API Ring Groover

Kyocera is the only choice for economical ring groovers.

Featuring an integral shank for maximum rigidity, Kyocera's API Ring Groovers are the most versatile ring grooving tools on the market.

## 1 Advantages

Create ring grooves per API Spec 6A for BX, R, and RX style grooves

Roughout and finish of inlay of API Ring Grooves

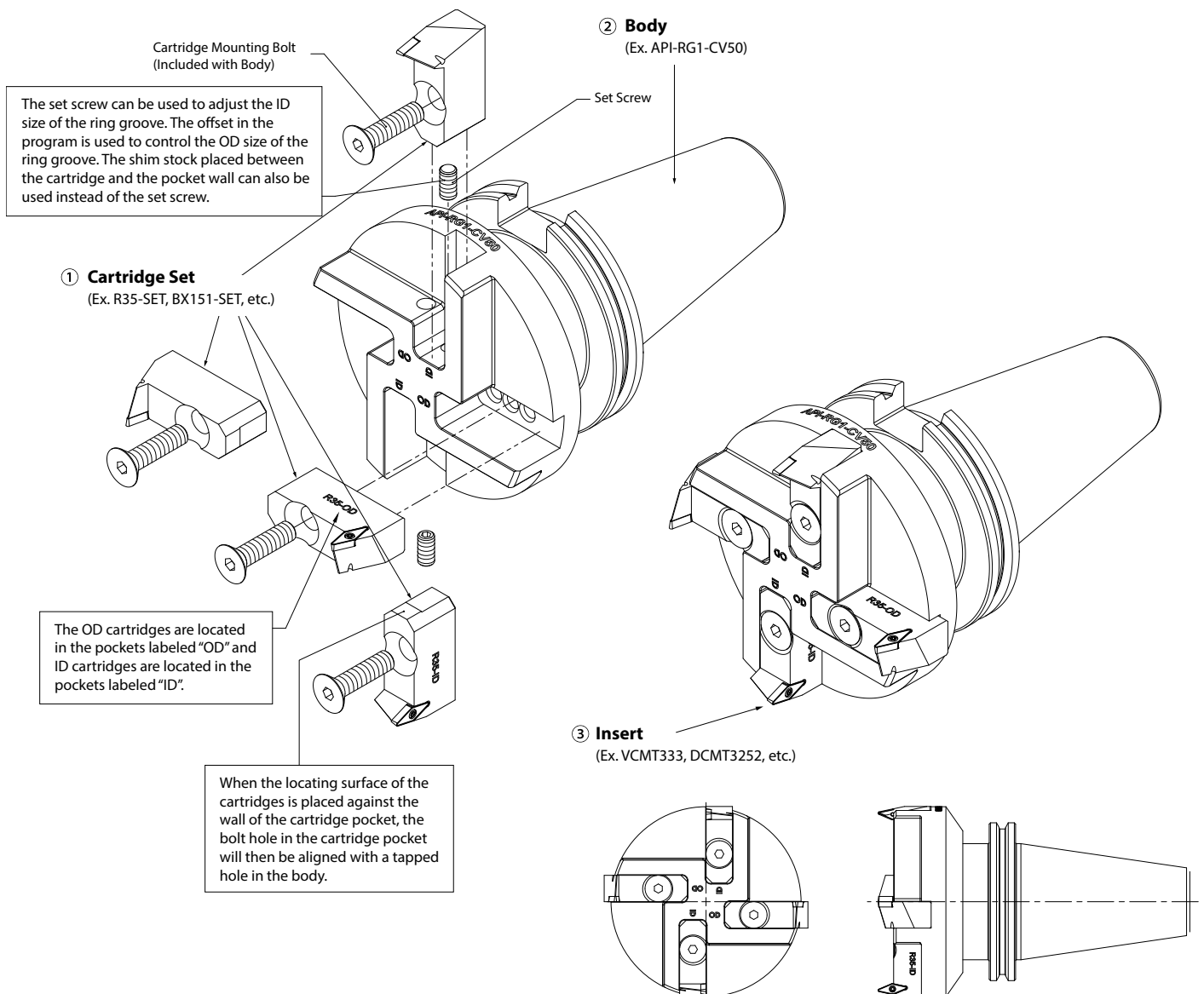
Replaceable cartridges allow a single cutter body to produce multiple size API grooves

Integral shank, multiple sizes and styles available

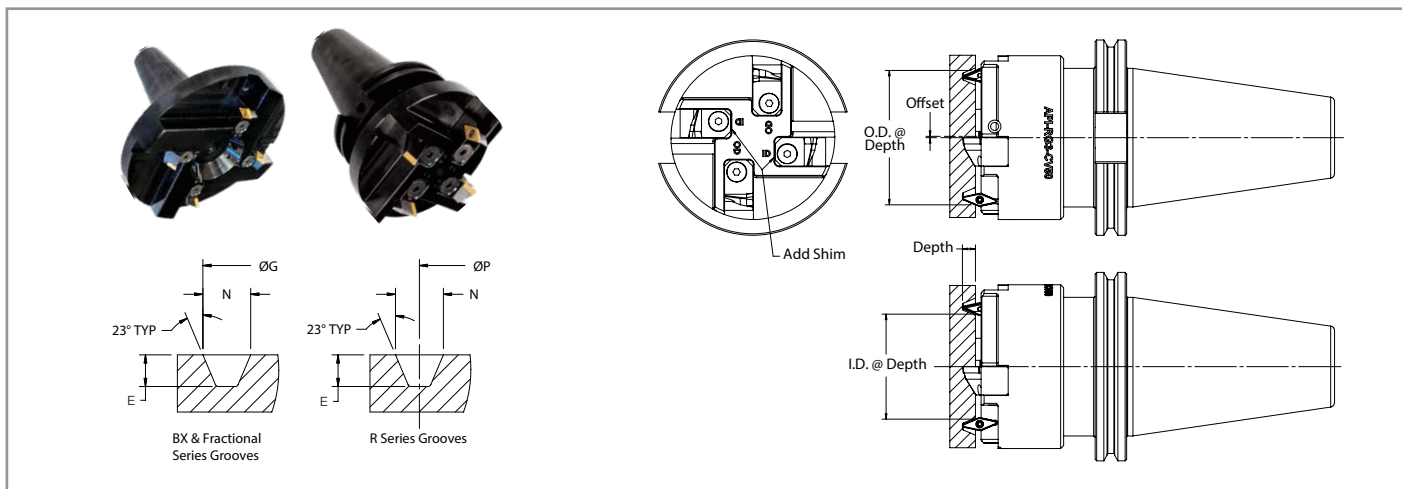
## 2 How to Order

### 3 Line Items, Ordered Separately

- ① Choose Cartridge Set (2 OD & 2 ID)
- ② Choose Body
- ③ Choose Inserts



# API Ring Groover (Body & Cartridges)



## Ring / Cartridge Set Dimensions

Ring Specification	Cartridge Set Part Number (Choose Set)	Stock	No. of Inserts	No. of Flutes	Dimensions (in)							Roughout Cartridges	Applicable Body Part Number
					Offset	Pitch	OD	Width	Depth	OD	ID		
						P	G	N	E	Depth	Depth		
BX-150	BX150-SET	●	4	2	0.061	-	2.893	0.450	0.220	2.771	2.115	-	API-RG-3-CV40 API-RG-3-CV50 API-RG-3-BT50 API-RG-3-DIN-69871
BX-150-R	BX150-R-SET	●	4	1	0.097	-	3.341	0.841	0.485	3.147	1.853	Yes	API-RG-1-CV40 API-RG-1-CV50 API-RG-1-BT50 API-RG-1-BT40 API-RG-1-DIN-69871
BX-151	BX151-SET	●	4	2	0.065	-	3.062	0.466	0.220	2.932	2.260	-	API-RG-3-CV40 API-RG-3-CV50 API-RG-3-BT50 API-RG-3-DIN-69871
BX-151-R	BX151-R-SET	●	4	1	0.097	-	3.496	0.846	0.485	3.302	1.998	Yes	API-RG-1-CV40 API-RG-1-CV50 API-RG-1-BT50 API-RG-1-BT40 API-RG-1-DIN-69871
BX-152	BX152-SET	●	4	2	0.069	-	3.395	0.498	0.230	3.257	2.537	-	API-RG-3-CV40 API-RG-3-CV50 API-RG-3-BT50 API-RG-3-DIN-69871
BX-152-R	BX152-R-SET	●	4	1	0.091	-	3.826	0.876	0.505	3.644	2.256	Yes	API-RG-1-CV40 API-RG-1-CV50 API-RG-1-BT50 API-RG-1-BT40 API-RG-1-DIN-69871
BX-153	BX153-SET	●	4	2	0.077	-	4.046	0.554	0.270	3.892	3.092	-	API-RG-3-CV40 API-RG-3-CV50 API-RG-3-BT50 API-RG-3-DIN-69871
BX-153-R	BX153-R-SET	●	4	1	0.110	-	4.486	0.936	0.535	4.266	2.834	Yes	API-RG-1-CV40 API-RG-1-CV50 API-RG-1-BT50 API-RG-1-BT40 API-RG-1-DIN-69871
BX-154	BX154-SET	●	4	2	0.083	-	4.685	0.606	0.300	4.519	3.639	-	API-RG-2-CV50 API-RG-2-BT50 API-RG-2-DIN-69871
BX-154-R	BX154-R-SET	●	4	1	0.112	-	5.116	0.971	0.570	4.892	3.398	Yes	API-RG-1-CV40 API-RG-1-CV50 API-RG-1-BT50 API-RG-1-BT40 API-RG-1-DIN-69871
BX-155	BX155-SET	●	4	2	0.100	-	5.930	0.698	0.330	5.730	4.734	-	API-RG-4-CV50 API-RG-4-BT50 API-RG-4-DIN-69871
BX-155-R	BX155-R-SET	●	4	1	0.223	-	6.366	1.076	0.595	5.920	4.660	Yes	API-RG-2-CV50 API-RG-2-BT50 API-RG-2-DIN-69871
BX-156	BX156-SET	●	4	2	0.132	-	9.521	0.921	0.440	9.257	7.943	-	API-RG-3-CV40 API-RG-3-CV50 API-RG-3-BT50 API-RG-3-DIN-69871
BX-156-R	BX156-R-SET	●	4	1	0.166	-	9.956	1.306	0.710	9.624	7.676	Yes	API-RG-1-CV40 API-RG-1-CV50 API-RG-1-BT50 API-RG-1-BT40 API-RG-1-DIN-69871
BX-169	BX169-SET	●	4	2	0.081	-	6.955	0.666	0.380	6.793	5.785	-	API-RG-2-CV50 API-RG-2-BT50 API-RG-2-DIN-69871
R-16	R16-SET	●	4	2	0.026	2.000	-	0.344	0.250	2.292	1.708	-	API-RG-3-CV40 API-RG-3-CV50 API-RG-3-BT50 API-RG-3-DIN-69871
R-18	R18-SET	●	4	2	0.026	2.375	-	0.344	0.250	2.667	2.083	-	API-RG-1-CV40 API-RG-1-CV50 API-RG-1-BT50 API-RG-1-BT40 API-RG-1-DIN-69871
R-20	R20-SET	●	4	2	0.026	2.688	-	0.344	0.250	2.980	2.396	-	API-RG-2-CV50 API-RG-2-BT50 API-RG-2-DIN-69871
R-23	R23-SET	●	4	2	0.046	3.250	-	0.469	0.310	3.627	2.873	-	API-RG-3-CV40 API-RG-3-CV50 API-RG-3-BT50 API-RG-3-DIN-69871
R-23-R	R23-R-SET	●	4	1	0.081	3.300	-	0.856	0.575	3.994	2.606	Yes	API-RG-1-CV40 API-RG-1-CV50 API-RG-1-BT50 API-RG-1-BT40 API-RG-1-DIN-69871
R-24	R24-SET	●	4	2	0.046	3.750	-	0.469	0.310	4.127	3.373	-	API-RG-2-CV50 API-RG-2-BT50 API-RG-2-DIN-69871
R-24-R	R24-R-SET	●	4	1	0.077	3.800	-	0.871	0.590	4.517	3.083	Yes	API-RG-1-CV40 API-RG-1-CV50 API-RG-1-BT50 API-RG-1-BT40 API-RG-1-DIN-69871
R-26	R26-SET	●	4	2	0.046	4.000	-	0.469	0.310	4.377	3.623	-	API-RG-3-CV40 API-RG-3-CV50 API-RG-3-BT50 API-RG-3-DIN-69871
R-27	R27-SET	●	4	2	0.046	4.250	-	0.469	0.310	4.627	3.873	-	API-RG-2-CV50 API-RG-2-BT50 API-RG-2-DIN-69871
R-31	R31-SET	●	4	2	0.044	4.875	-	0.469	0.310	5.256	4.494	-	API-RG-1-CV40 API-RG-1-CV50 API-RG-1-BT50 API-RG-1-BT40 API-RG-1-DIN-69871
R-31-R	R31-R-SET	●	4	1	0.072	4.920	-	0.856	0.575	5.632	4.208	Yes	API-RG-3-CV40 API-RG-3-CV50 API-RG-3-BT50 API-RG-3-DIN-69871
R-35	R35-SET	●	4	2	0.046	5.375	-	0.469	0.310	5.752	4.998	-	API-RG-2-CV50 API-RG-2-BT50 API-RG-2-DIN-69871
R-35-R	R35-R-SET	●	4	1	0.081	5.420	-	0.856	0.575	6.114	4.726	Yes	API-RG-1-CV40 API-RG-1-CV50 API-RG-1-BT50 API-RG-1-BT40 API-RG-1-DIN-69871
R-37	R37-SET	●	4	2	0.046	5.875	-	0.469	0.310	6.252	5.498	-	API-RG-3-CV40 API-RG-3-CV50 API-RG-3-BT50 API-RG-3-DIN-69871
R-39	R39-SET	●	4	2	0.046	6.375	-	0.469	0.310	6.752	5.998	-	API-RG-2-CV50 API-RG-2-BT50 API-RG-2-DIN-69871
R-39-R	R39-R-SET	●	4	1	0.081	6.420	-	0.856	0.575	7.114	5.726	Yes	API-RG-1-CV40 API-RG-1-CV50 API-RG-1-BT50 API-RG-1-BT40 API-RG-1-DIN-69871
R-41	R41-SET	●	4	2	0.046	7.125	-	0.469	0.310	7.502	6.748	-	API-RG-3-CV40 API-RG-3-CV50 API-RG-3-BT50 API-RG-3-DIN-69871
R-44	R44-SET	●	4	2	0.046	7.625	-	0.469	0.310	8.002	7.248	-	API-RG-2-CV50 API-RG-2-BT50 API-RG-2-DIN-69871
R-44-R	R44-R-SET	●	4	1	0.071	7.670	-	0.856	0.575	8.384	6.956	Yes	API-RG-1-CV40 API-RG-1-CV50 API-RG-1-BT50 API-RG-1-BT40 API-RG-1-DIN-69871
R-45	R45-SET	●	4	2	0.046	8.313	-	0.469	0.310	8.690	7.936	-	API-RG-3-CV40 API-RG-3-CV50 API-RG-3-BT50 API-RG-3-DIN-69871
R-46	R46-SET	●	4	2	0.048	-	0.531	0.380	8.748	7.878	-	API-RG-2-CV50 API-RG-2-BT50 API-RG-2-DIN-69871	
R-46-R	R46-R-SET	●	4	1	0.082	8.360	-	0.916	0.645	9.112	7.608	Yes	API-RG-1-CV40 API-RG-1-CV50 API-RG-1-BT50 API-RG-1-BT40 API-RG-1-DIN-69871
1-13/16	1-13/16-SET	●	4	2	0.034	-	4.373	0.377	0.258	4.305	3.687	-	API-RG-3-CV40 API-RG-3-CV50 API-RG-3-BT50 API-RG-3-DIN-69871
2-1/16-10K	2-1/16-10K-SET	●	4	2	0.034	-	4.623	0.377	0.258	4.555	3.937	-	API-RG-2-CV50 API-RG-2-BT50 API-RG-2-DIN-69871
2-9/16-15K	2-9/16-15K-SET	□	4	2	0.034	-	5.873	0.377	0.258	5.805	5.187	-	API-RG-1-CV40 API-RG-1-CV50 API-RG-1-BT50 API-RG-1-BT40 API-RG-1-DIN-69871
3-1/16-10K	3-1/16-10K-SET	●	4	2	0.034	-	5.748	0.377	0.258	5.680	5.062	-	API-RG-3-CV40 API-RG-3-CV50 API-RG-3-BT50 API-RG-3-DIN-69871
4-1/16-10K	4-1/16-10K-SET	●	4	2	0.034	-	7.123	0.377	0.258	7.055	6.437	-	API-RG-2-CV50 API-RG-2-BT50 API-RG-2-DIN-69871
5-1/8-10K	5-1/8-10K-SET	●	4	2	0.034	-	8.748	0.377	0.258	8.680	8.062	-	API-RG-1-CV40 API-RG-1-CV50 API-RG-1-BT50 API-RG-1-BT40 API-RG-1-DIN-69871

## Applicable Body Stock

Body Part Number (Choose Body)	Stock	Shank	Body Spare Parts	
			Mounting Bolt	Set Screw
API-RG-1-CV40	●	CAT40		
API-RG-1-CV50	●	CAT50		
API-RG-1-BT50	●	BT50	01-05	01-08
API-RG-1-BT40	□	BT40		
API-RG-1-DIN-69871	□	DIN69871		
API-RG-2-CV40	●	CAT40		
API-RG-2-CV50	●	CAT50		
API-RG-2-BT50	●	BT50	01-05	01-08
API-RG-2-DIN-69871	□	DIN69871		
API-RG-3-CV40	●	CAT40		
API-RG-3-CV50	●	CAT50		
API-RG-3-BT50	□	BT50	01-06	01-09
API-RG-3-DIN-69871	□	DIN69871		
API-RG-4-CV50	●	CAT50		
API-RG-4-BT50	□	BT50	01-07	01-10
API-RG-4-DIN-69871	□	DIN69871		



### Note



The OD and ID dimensions are to set the cut diameter of a given cartridge set using a presetter. The dimensions are the cut diameter of the tool at the depth of the ring groove. By setting zero at the nose radius then moving the presetter to the depth of the API groove the OD and ID can be preset to the dimensions shown.

See illustration on **Page 2**

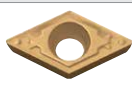


# API Ring Groover (Cartridge Spare Parts & Applicable Inserts)

## Cartridge Set Spare Parts & Applicable Inserts

Ring Specification	Cartridge Set Part Number	Spare Parts		③ Applicable Inserts Choose Inserts		
		Clamp Screw 	Wrench 			
BX-150	BX150-SET	SCR-02	T15	DCMT3252		
BX-150-R	BX150-R-SET			DCMT3253		
BX-151	BX151-SET			DCMT3252		
BX-151-R	BX151-R-SET			DCMT3253		
BX-152	BX152-SET			DCMT3252		
BX-152-R	BX152-R-SET			DCMT3253		
BX-153	BX153-SET			DCMT3252		
BX-153-R	BX153-R-SET			DCMT3253		
BX-154	BX154-SET			DCMT3252		
BX-154-R	BX154-R-SET			DCMT3253		
BX-155	BX155-SET			DCMT3252		
BX-155-R	BX155-R-SET			VCMT333		
BX-156	BX156-SET			VCMT332		
BX-156-R	BX156-R-SET			VCMT333		
BX-169	BX169-SET			VCMT332		
R-16	R16-SET			SCR-01	T7	VCMT222
R-18	R18-SET					VCMT222
R-20	R20-SET					VCMT222
R-23	R23-SET			SCR-02	T15	DCMT3252
R-23-R	R23-R-SET	VCMT333				
R-24	R24-SET	DCMT3252				
R-24-R	R24-R-SET	VCMT333				

Ring Specification	Cartridge Set Part Number	Spare Parts		③ Applicable Inserts Choose Inserts		
		Clamp Screw 	Wrench 			
R-26	R26-SET	SCR-02	T15	DCMT3252		
R-27	R27-SET			DCMT3252		
R-31	R31-SET			DCMT3252		
R-31-R	R31-R-SET			VCMT333		
R-35	R35-SET			DCMT3252		
R-35-R	R35-R-SET			VCMT333		
R-37	R37-SET			DCMT3252		
R-39	R39-SET			DCMT3252		
R-39-R	R39-R-SET			VCMT333		
R-41	R41-SET			DCMT3252		
R-44	R44-SET			DCMT3252		
R-44-R	R44-R-SET			VCMT333		
R-45	R45-SET			DCMT3252		
R-46	R46-SET			VCMT333		
R-46-R	R46-R-SET			VCMT333		
1-13/16	1-13/16-SET			SCR-01	T7	VCMT222
2-1/16-10K	2-1/16-10K-SET					VCMT222
2-9/16-15K	2-9/16-15K-SET					VCMT222
3-1/16-10K	3-1/16-10K-SET					VCMT222
4-1/16-10K	4-1/16-10K-SET					VCMT222
5-1/8-10K	5-1/8-10K-SET	VCMT222				

## Applicable Inserts

Insert (Right-hand Shown)	ANSI Part Number	ISO Part Number	Dimensions (in)			Angle (°)	Insert Grades						
			I.C. (A)	T	ød		rε	CVD Coated Carbide			MEGACOAT Coated Carbide		PVD Coated Carbide
								CA525	CA5525	CA6525	PR1225	PR1425	PR660
	DCMT 3252HQ	DCMT 11T308HQ	3/8	5/32	0.173	1/32	7°	●	●	●		●	●
								DCMT 3253CQ	DCMT 11T312CQ	3/8	5/32	0.173	3/64
	VCMT 222HQ	VCMT 110308HQ	1/4	1/8	0.110	1/32	7°					●	
	VCMT 332HQ	VCMT 160408HQ	3/8	3/16	0.173	1/32	7°	●	●	●			●
	VCMT 333HQ	VCMT 160412HQ	3/8	3/16	0.173	3/64	7°					●	

## Sample CNC Program for the API Ring Groover

● : U.S. Stock

<p>Sample is shown without cutter comp.          N10 (Incremental Program)          N20 G00 X (As required) Y (As required) Z.100 M03 S (As required)          N30 G01 Z0.0 F100          N40 G91 -Y (Offset) Z-.100 F (As required)          N50 G03 J (Offset) Z-.100 F (As required)          N60 G03 J (Offset) Z-.100          Continue to Depth          Last Pass          N90 G03 J (Offset) Z0.00</p>	<p>Use 0.03 Depth in Z for Inconel and          0.04 Depth in Z for Steel</p>
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### KYOCERA Precision Tools

102 Industrial Park Road  
 Hendersonville, NC 28792  
 Customer Service | 800.823.7284 - Option 1  
 Technical Support | 800.823.7284 - Option 2



Official Website | [www.kyoceraprecisiontools.com](http://www.kyoceraprecisiontools.com)  
 Distributor Website | [mykpti.kyocera.com](http://mykpti.kyocera.com)  
 Email | [cuttingtools@kyocera.com](mailto:cuttingtools@kyocera.com)