

THE NEW VALUE FRONTIER



Ring groover | **API**

API Ring groover



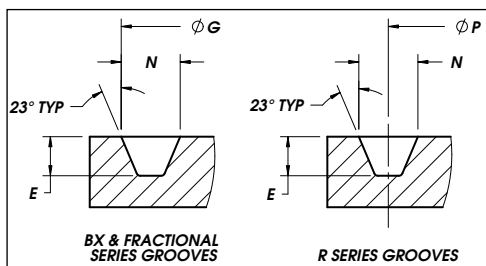
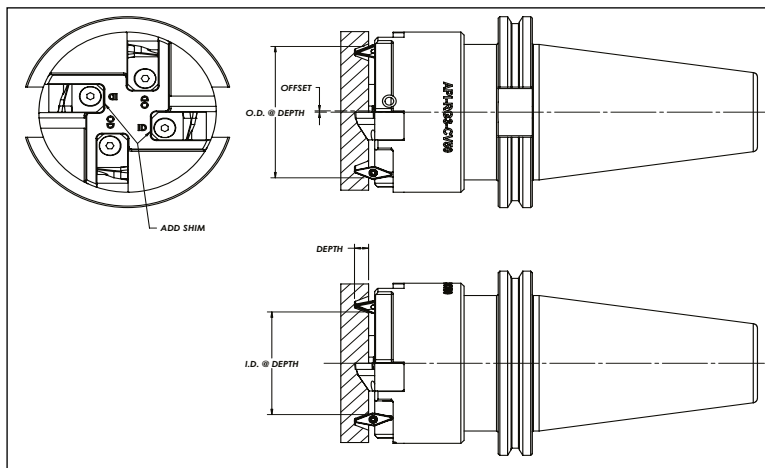
The most economical way to make API ring grooves

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



API Ring groovers

Kyocera is the only choice for economical ring grooves, having the most versatile ring grooving tools on the market, like integral shank for maximum rigidity.



Body part numbers	Shank
API-RG-1-BT40	BT 40
API-RG-1-BT50	BT 50
API-RG-1-CV40	CAT 40
API-RG-1-CV50	CAT 50
API-RG-1-DIN-69871	DIN69871
API-RG-1-NMTB50	NMTB50
API-RG-2-BT50	BT 50
API-RG-2-CV50	CAT 50
API-RG-2-DIN-69871	DIN69871
API-RG-3-BT50	BT 50
API-RG-3-CV40	CAT 40
API-RG-3-CV50	CAT 50
API-RG-3-DIN-69871	DIN69871
API-RG-3-NMTB50	NMTB50
API-RG-4-BT50	BT 50
API-RG-4-CV50	CAT 50
API-RG-4-DIN-69871	DIN69871

API ring groovers

Ring groove	Part #	Offset	Body	Pitch P	OD G	Width N	Depth E	Insert	Screw	Effective flutes	OD @ DEPTH	ID @ DEPTH	Mounting bolts / cart
BX-150	BX150-SET	0.061	RG-3		2.893	0.450	0.220	DCMT 3252	SCR-02	2	2.771	2.115	1
BX-150-R	BX150-R-SET	0.097	RG-3		3.341	0.841	0.485	DCMT 3253	SCR-02	1	3.147	1.853	1
BX-151	BX151-SET	0.065	RG-1		3.062	0.466	0.220	DCMT 3252	SCR-02	2	2.932	2.260	1
BX-151-R	BX151-R-SET	0.097	RG-3		3.496	0.846	0.485	DCMT 3253	SCR-02	1	3.302	1.998	1
BX-152	BX152-SET	0.069	RG-1		3.395	0.498	0.230	DCMT 3252	SCR-02	2	3.257	2.537	1
BX-152-R	BX152-R-SET	0.091	RG-1		3.826	0.876	0.505	DCMT 3253	SCR-02	1	3.644	2.256	1
BX-153	BX153-SET	0.077	RG-1		4.046	0.554	0.270	DCMT 3252	SCR-02	2	3.892	3.092	1
BX-153-R	BX153-R-SET	0.110	RG-1		4.486	0.936	0.535	DCMT 3253	SCR-02	1	4.266	2.834	1
BX-154	BX154-SET	0.083	RG-1		4.685	0.606	0.300	DCMT 3252	SCR-02	2	4.519	3.639	1
BX-154-R	BX154-R-SET	0.112	RG-1		5.116	0.971	0.570	DCMT 3253	SCR-02	1	4.892	3.398	1
BX-155	BX155-SET	0.100	RG-2		5.930	0.698	0.330	DCMT 3252	SCR-02	2	5.730	4.734	1
BX-155-R	BX155-R-SET	0.223	RG-2		6.366	1.076	0.595	VCMT 333	SCR-02	1	5.920	4.660	2
BX-156	BX156-SET	0.132	RG-4		9.521	0.921	0.440	VCMT 332	SCR-02	2	9.257	7.943	2
BX-156-R	BX156-R-SET	0.166	RG-4		9.956	1.306	0.710	VCMT 333	SCR-02	1	9.624	7.676	2
BX-169	BX169-SET	0.081	RG-2		6.955	0.666	0.380	VCMT 332	SCR-02	2	6.793	5.785	1
R-16	R16-SET	0.026	RG-3	2.000		0.344	0.250	VCMT 222	SCR-01	2	2.292	1.708	1
R-18	R18-SET	0.026	RG-3	2.375		0.344	0.250	VCMT 222	SCR-01	2	2.667	2.083	1

API ring groovers

Ring groove	Part #	Offset	Body	Pitch P	OD G	Width N	Depth E	Insert	Screw	Effective flutes	OD @ DEPTH	ID @ DEPTH	Mounting bolts / cart
R-19	R19-SET	0.026	RG-3	2.563		0.344	0.250	VCMT 222	SCR-01	2	2.855	2.271	1
R-20	R20-SET	0.026	RG-3	2.688		0.344	0.250	VCMT 222	SCR-01	2	2.980	2.396	1
R-23	R23-SET	0.046	RG-1	3.250		0.469	0.310	DCMT 3252	SCR-02	2	3.627	2.873	1
R-23-R	R23-R-SET	0.081	RG-1	3.300		0.856	0.575	VCMT 333	SCR-02	1	3.994	2.606	1
R-24	R24-SET	0.046	RG-1	3.750		0.469	0.310	DCMT 3252	SCR-02	2	4.127	3.373	1
R-24-R	R24-R-SET	0.077	RG-1	3.800		0.871	0.590	VCMT 333	SCR-02	1	4.517	3.083	1

"-R" in part numbers indicates "Roughout" cartridges.

API ring groovers

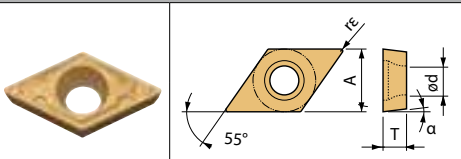
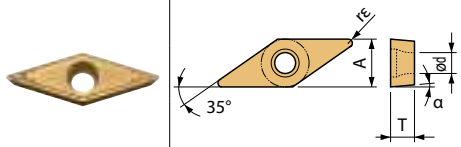
Ring groove	OTM part #	Offset	Body	Pitch P	OD G	Width N	Depth E	Insert	Screw	Effective flutes	OD @ DEPTH	ID @ DEPTH	Mounting bolts / cart
R-26	R26-SET	0.046	RG-1	4.000		0.469	0.310	DCMT 3252	SCR-02	2	4.377	3.623	1
R-27	R27-SET	0.046	RG-1	4.250		0.469	0.310	DCMT 3252	SCR-02	2	4.627	3.873	1
R-31	R31-SET	0.044	RG-2	4.875		0.469	0.310	DCMT 3252	SCR-02	2	5.256	4.494	1
R-31-R	R31-R-SET	0.072	RG-2	4.920		0.856	0.575	VCMT 333	SCR-02	1	5.632	4.208	1
R-35	R35-SET	0.046	RG-2	5.375		0.469	0.310	DCMT 3252	SCR-02	2	5.752	4.998	1
R-35-R	R35-R-SET	0.081	RG-2	5.420		0.856	0.575	VCMT 333	SCR-02	1	6.114	4.726	1
R-37	R37-SET	0.046	RG-2	5.875		0.469	0.310	DCMT 3252	SCR-02	2	6.252	5.498	1
R-39	R39-SET	0.046	RG-2	6.375		0.469	0.310	DCMT 3252	SCR-02	2	6.752	5.998	1
R-39-R	R39-R-SET	0.081	RG-2	6.420		0.856	0.575	VCMT 333	SCR-02	1	7.114	5.726	1
R-41	R41-SET	0.046	RG-2	7.125		0.469	0.310	DCMT 3252	SCR-02	2	7.502	6.748	2
R-44	R44-SET	0.046	RG-2	7.625		0.469	0.310	DCMT 3252	SCR-02	2	8.002	7.248	2
R-44-R	R44-R-SET	0.071	RG-2	7.670		0.856	0.575	VCMT 333	SCR-02	1	8.384	6.956	2
R-45	R45-SET	0.046	RG-2	8.313		0.469	0.310	DCMT 3252	SCR-02	2	8.690	7.936	2
R-46	R46-SET	0.048	RG-2	8.313		0.531	0.380	VCMT 333	SCR-02	2	8.748	7.878	2
R-46-R	R46-R-SET	0.082	RG-2	8.360		0.916	0.645	VCMT 333	SCR-02	1	9.112	7.608	2
1-13/16	1-13/16-SET	0.034	RG-1		4.373	0.377	0.258	VCMT 222	SCR-01	2	4.305	3.687	1
2-1/16-10K	2-1/16-10K-SET	0.034	RG-1		4.623	0.377	0.258	VCMT 222	SCR-01	2	4.555	3.937	1
2-9/16-15K	2-9/16-15K-SET	0.034	RG-2		5.873	0.377	0.258	VCMT 222	SCR-01	2	5.805	5.187	1
3-1/16-10K	3-1/16-10K-SET	0.034	RG-2		5.748	0.377	0.258	VCMT 222	SCR-01	2	5.680	5.062	1
4-1/16-10K	4-1/16-10K-SET	0.034	RG-2		7.123	0.377	0.258	VCMT 222	SCR-01	2	7.055	6.437	2
5-1/8-10K	5-1/8-10K-SET	0.034	RG-2		8.748	0.377	0.258	VCMT 222	SCR-01	2	8.680	8.062	2

"-R" in part numbers indicates "Roughout" cartridges.

Ring Groove Body	Mounting Bolts	Set Screws
RG-1	01-05	01-08
RG-2	01-05	01-08
RG-3	01-06	01-09
RG-4	01-07	01-10

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.

Available inserts (inch)

Insert	Description (ANSI)	Dimensions (inch)				Angle	Cermet		Coated carbide				
		A	T	ød	rε	α	-	MEGACOAT	CVD		MEGACOAT		PVD
							TN60	PV7025	CA5525	CA6525	PR1225	PR1425	PR660
	DCMT 3252HQ	3/8	5/32	0.173	1/32	7°	●	●	●	●		●	●
	DCMT 3253CQ	3/8	5/32	0.173	3/64	7°	●		●	●			●
	VCMT 222HQ	1/4	1/8	0.110	1/32	5°					●		
	VCMT 332HQ	3/8	3/16	0.173	1/32	7°	●		●	●			●
	VCMT 333HQ	3/8	3/16	0.173	3/64	7°					●		

● Available

Sample CNC program for the OTM API ring groover

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-0.03 F (as required)

N50 G03 -J (offset) Z-0.03 F

N60 G03 -J (offset) Z-0.03

Continue to depth

Last pass

N90 G03 -J (offset) Z0.00

N100 G02 -J (offset) Z0.00 (this line is used to improve the circularity of the groove)

Use 0.03 depth in Z
for inconel and 0.04
depth in Z for steel