



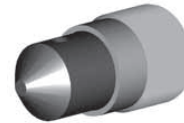
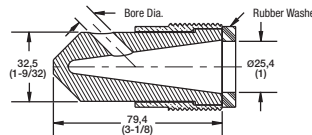
Angle Nozzles
Tungsten Carbide

Tungsten Carbide

These nozzles are excellent for getting inside tight places like bridge lattice, behind flanges or inside pipe. Many operators waste abrasive and time waiting for ricochet to get the job done. No nozzle tool chest should be without an angle nozzle. These nozzles are available in tungsten carbide, boron carbide, and ROCTEC® featuring long life blast outputs between 0° and 125° relative to the input openings. Available with single, double, triple, or quadruple outlets. **We have the capability to manufacture additional angle nozzle designs. Please contact us to discuss your requirements.**

Dimensions below are shown in millimeters and (inches).

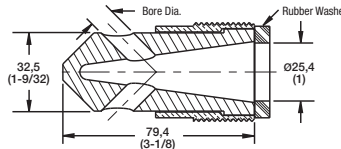
- Thread style: 1-1/4 – 11-1/2 N.P.S.M.
- Brass threads.



■ T045 Series • Single Outlet 45°

order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
2939649	B1904530	T045-3	4,8	3/16	79,4	3-1/8
2939641	B1904540	T045-4	6,4	1/4	79,4	3-1/8
2939632	B1904550	T045-5	7,9	5/16	79,4	3-1/8
2939623	B1904560	T045-6	9,5	3/8	79,4	3-1/8
3576844	B1904570	T045-7	11,1	7/16	79,4	3-1/8
2939614	B1904580	T045-8	12,7	1/2	79,4	3-1/8

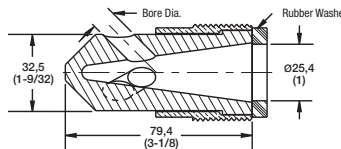
- Thread style: 1-1/4 – 11-1/2 N.P.S.M.
- Brass threads.



■ T045 Series • Double Outlet 45°

order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
2939647	B1904532	T045-32	4,8	3/16	79,4	3-1/8
2939639	B1904542	T045-42	6,4	1/4	79,4	3-1/8
2939630	B1904552	T045-52	7,9	5/16	79,4	3-1/8
2939621	B1904562	T045-62	9,5	3/8	79,4	3-1/8
2939613	B1904582	T045-82	12,7	1/2	79,4	3-1/8

- Thread style: 1-1/4 – 11-1/2 N.P.S.M.
- Brass threads.



■ T045 Series • Triple Outlet 45°

order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
2939646	B1904533	T045-33	4,8	3/16	79,4	3-1/8
2939638	B1904543	T045-43	6,4	1/4	79,4	3-1/8
2939629	B1904553	T045-53	7,9	5/16	79,4	3-1/8
2939620	B1904563	T045-63	9,5	3/8	79,4	3-1/8
2939612	B1904583	T045-83	12,7	1/2	79,4	3-1/8

**Contact your Kennametal representative or customer service for quote.*

Angle Nozzles
Tungsten Carbide



VENTURI NOZZLES

SPECIAL VENTURI NOZZLES

STRAIGHT BORE NOZZLES

ANGLE NOZZLES

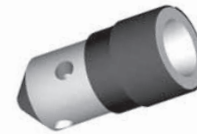
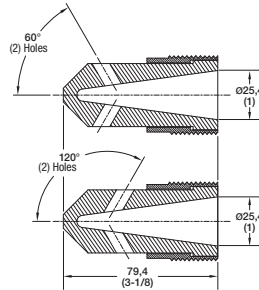
WET BLAST NOZZLES

ABRASIVE BLASTING GUNS

ACCESSORIES

Dimensions below are shown in millimeters and (inches).

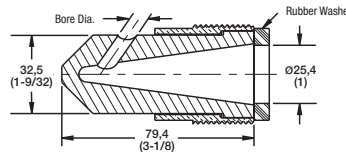
- Thread style: 1-1/4 – 11-1/2 N.P.S.M.
- Brass threads.
- Four outlets, two at 60° and two at 120°



T045 Series • Quad Outlet 60°/120°

order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
2939607	B1904599	T045-2.5 60/120	4	5/32	79,4	3-1/8
2939633	B1904549	T045-4 60/120	6,4	1/4	79,4	3-1/8
3660505	B1904559	T045-5 60/120	7,9	5/16	79,4	3-1/8
2939615	B1904569	T045-6 60/120	9,5	3/8	79,4	3-1/8

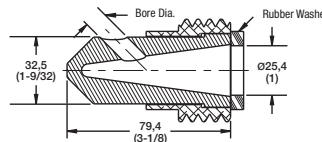
- Thread style: 1-1/4 – 11-1/2 N.P.S.M.
- Brass threads.
- Single, double, or triple outlets.



T045 Series • Reverse Outlet 125°

order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
2939648	B1904530R	T045-3R	4,8	3/16	79,4	3-1/8
2939640	B1904540R	T045-4R	6,4	1/4	79,4	3-1/8
2939637	B1904543R	T045-43R	6,4 x 3	1/4 x 3	79,4	3-1/8
2939631	B1904553R	T045-53R	7,9 x 3	5/16 x 3	79,4	3-1/8
2939628	B1904560R	T045-6R	9,5	3/8	79,4	3-1/8
2939622	B1904580R	T045-8R	12,7	1/2	79,4	3-1/8

- Thread style: 50mm.
- Aluminum threads.



T045 50mm Contractor Series • Single Outlet 45°

order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
3553884	B1904534	T045-350	4,8	3/16	79,4	3-1/8
2939636	B1904544	T045-450	6,4	1/4	79,4	3-1/8
2939627	B1904554	T045-550	7,9	5/16	79,4	3-1/8
2939619	B1904564	T045-650	9,5	3/8	79,4	3-1/8
3640404	B1904574	T045-750	11,1	7/16	79,4	3-1/8
2939611	B1904584	T045-850	12,7	1/2	79,4	3-1/8

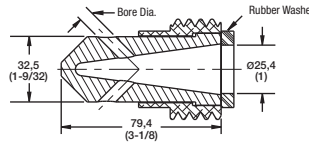
*Contact your Kennametal representative or customer service for quote.



Angle Nozzles
Tungsten Carbide

Dimensions below are shown in millimeters and (inches).

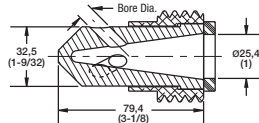
- Thread style: 50mm.
- Aluminum threads.



■ **T045 50mm Contractor Series • Double Outlet 45°**

order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
5048345	B1904535	T045-32-50mm	4,8	3/16	79,4	3-1/8
3046871	B1904545	T045-42-50mm	6,4	1/4	79,4	3-1/8
2939626	B1904555	T045-52-50mm	7,9	5/16	79,4	3-1/8
2939618	B1904565	T045-62-50mm	9,5	3/8	79,4	3-1/8
2954301	B1904585	T045-82-50mm	12,7	1/2	79,4	3-1/8

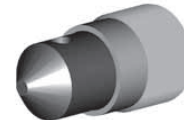
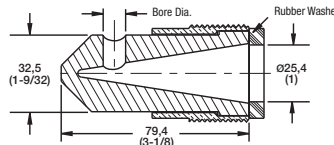
- Thread style: 50mm.
- Aluminum threads.



■ **T045 50mm Contractor Series • Triple Outlet 45°**

order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
2939644	B1904536	T045-33-50mm	4,8	3/16	79,4	3-1/8
2939635	B1904546	T045-43-50mm	6,4	1/4	79,4	3-1/8
2939625	B1904556	T045-53-50mm	7,9	5/16	79,4	3-1/8
2939617	B1904566	T045-63-50mm	9,5	3/8	79,4	3-1/8

- Thread style: 1-1/4 – 11-1/2 N.P.S.M.
- Brass threads.



■ **T090 Series • Single Outlet 90°**

order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
2939605	B1909030	T090-3	4,8	3/16	79,4	3-1/8
2939603	B1909040	T090-4	6,4	1/4	79,4	3-1/8
2939598	B1909050	T090-5	7,9	5/16	79,4	3-1/8
2939594	B1909060	T090-6	9,5	3/8	79,4	3-1/8
4120022	B1909070	T090-7	11,1	7/16	79,4	3-1/8
2939589	B1909080	T090-8	12,7	1/2	79,4	3-1/8

*Contact your Kennametal representative or customer service for quote.

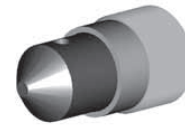
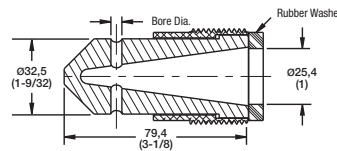
Angle Nozzles
Tungsten Carbide



VENTURI NOZZLES

Dimensions below are shown in millimeters and (inches).

- Thread style: 1-1/4 – 11-1/2 N.P.S.M.
- Brass threads.



■ **T090 Series • Double Outlet 90°**

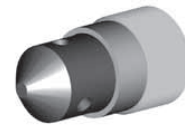
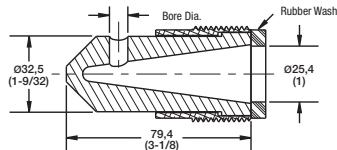
order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
3088735	B1909032	T090-32	4,8	3/16	79,4	3-1/8
2939602	B1909042	T090-42	6,4	1/4	79,4	3-1/8
2939597	B1909052	T090-52	7,9	5/16	79,4	3-1/8
2939593	B1909062	T090-62	9,5	3/8	79,4	3-1/8
2939588	B1909082	T090-82	12,7	1/2	79,4	3-1/8

SPECIAL VENTURI NOZZLES

STRAIGHT BORE NOZZLES

ANGLE NOZZLES

- Thread style: 1-1/4 – 11-1/2 N.P.S.M.
- Brass threads.

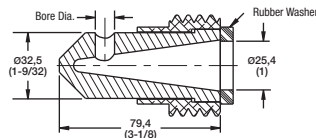


■ **T090 Series • Triple Outlet 90°**

order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
2939604	B1909033	T090-33	4,8	3/16	79,4	3-1/8
2939601	B1909043	T090-43	6,4	1/4	79,4	3-1/8
2939596	B1909053	T090-53	7,9	5/16	79,4	3-1/8
2939592	B1909063	T090-63	9,5	3/8	79,4	3-1/8
2939583	B1909083	T090-83	12,7	1/2	79,4	3-1/8

WET BLAST NOZZLES

- Thread style: 50mm.
- Aluminum threads.



■ **T090 50mm Contractor Series • Single Outlet 90°**

order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
3735700	B1909034	T090-350	4,8	3/16	79,4	3-1/8
2939600	B1909044	T090-450	6,4	1/4	79,4	3-1/8
2939595	B1909054	T090-550	7,9	5/16	79,4	3-1/8
2939591	B1909064	T090-650	9,5	3/8	79,4	3-1/8
2939586	B1909084	T090-850	12,7	1/2	79,4	3-1/8

ABRASIVE BLASTING GUNS

ACCESSORIES

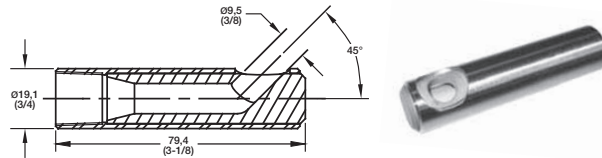
*Contact your Kennametal representative or customer service for quote.



Angle Nozzles
Tungsten Carbide

Dimensions below are shown in millimeters and (inches).

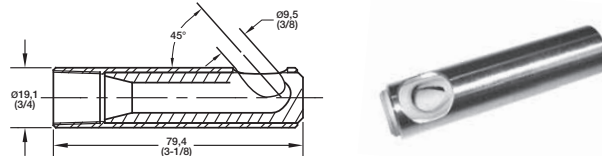
- Thread style: Female 3/8 – 18 N.P.T.
- Steel jacket.
- Steel threads.



■ **T144 Series • 45°**

order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
2939495	B1914460	T144-6	9,5	3/8	79,4	3-1/8
2939493	B1914462	T144-62	9,5 x 2	3/8 x 2	79,4	3-1/8

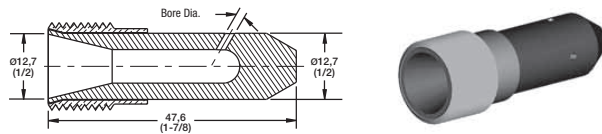
- Thread style: Female 3/8 – 18 N.P.T.
- Steel jacket.
- Steel threads.



■ **T144 Series • Reverse 135°**

order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
2939494	B1914460R	T144-6R	9,5	3/8	79,4	3-1/8

- Thread style: 3/8 – 18 N.P.S.M.
- Brass threads.
- Single, double, triple, or quad outlets.



■ **T145 Series • 60°**

order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
2939492	B1914520	T145-2	3,2	1/8	47,6	1-7/8
2939491	B1914522	T145-22	3,2 x 2	1/8 x 2	47,6	1-7/8
2939490	B1914523	T145-23	3,2 x 3	1/8 x 3	47,6	1-7/8
2939489	B1914524	T145-24	3,2 x 4	1/8 x 4	47,6	1-7/8
2939486	B1914530	T145-3	4,8	3/16	47,6	1-7/8
2939485	B1914540	T145-4	6,4	1/4	47,6	1-7/8
2939484	B1914542	T145-42	6,4 x 2	1/4 x 2	47,6	1-7/8

*Contact your Kennametal representative or customer service for quote.

VENTURI NOZZLES

SPECIAL VENTURI NOZZLES

STRAIGHT BORE NOZZLES

ANGLE NOZZLES

WET BLAST NOZZLES

ABRASIVE BLASTING GUNS

ACCESSORIES

Angle Nozzles
Tungsten Carbide

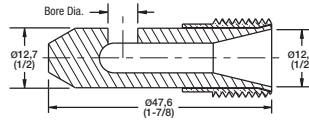


VENTURI NOZZLES

Dimensions below are shown in millimeters and (inches).

SPECIAL VENTURI NOZZLES

- Thread style: 3/8 – 18 N.P.S.M.
- Brass threads.
- Single, triple, or quad outlets.



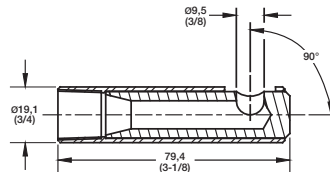
■ **T190 Series • 90°**

order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
2939463	B1919020	T190-2	3,2	1/8	47,6	1-7/8
2939462	B1919023	T190-23	3,2 x 3	1/8 x 3	47,6	1-7/8
2939461	B1919024	T190-24	3,2 x 4	1/8 x 4	47,6	1-7/8
2939460	B1919030	T190-3	4,8	3/16	47,6	1-7/8
2939459	B1919040	T190-4	6,4	1/4	47,6	1-7/8

STRAIGHT BORE NOZZLES

ANGLE NOZZLES

- Thread style: Female 3/8 – 18 N.P.T.
- Steel jacket.
- Steel threads.



■ **T194 Series • 90°**

order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
2939457	B1919460	T194-6	9,5	3/8	79,4	3-1/8

WET BLAST NOZZLES

ABRASIVE BLASTING GUNS

ACCESSORIES

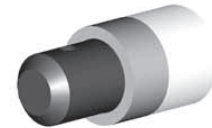
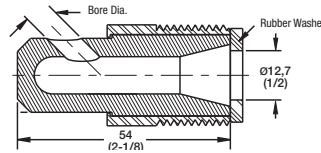
*Contact your Kennametal representative or customer service for quote.



Angle Nozzles
Tungsten Carbide

Dimensions below are shown in millimeters and (inches).

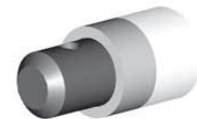
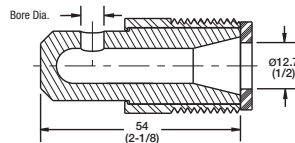
- Thread style: 3/4 – 14 N.P.S.M.
- Steel threads.
- Single, double, or triple outlets.



■ **T245 Series • 45°**

order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
2939446	B1924521	T245-2	3,2	1/8	54	2-1/8
2939445	B1924523	T245-23	3,2 x 3	1/8 x 3	54	2-1/8
2939443	B1924531	T245-3	4,8	3/16	54	2-1/8
2575727	B1924533	T245-33	4,8 x 3	3/16 x 3	54	2-1/8
2939442	B1924541	T245-4	6,4	1/4	54	2-1/8
2575728	B1924542	T245-42	6,4 x 2	1/4 x 2	54	2-1/8
2939439	B1924551	T245-5	7,9	5/16	54	2-1/8
2939438	B1924561	T245-6	9,5	3/8	54	2-1/8
5199639	B1924562	T245-62	9,5 x 2	3/8 x 2	54	2-1/8

- Thread style: 3/4 – 14 N.P.S.M.
- Steel threads.
- Single, double, triple, or quad outlets.



■ **T290 Series • 90°**

order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
2939437	B1929021	T290-2	3,2	1/8	54	2-1/8
2939436	B1929022	T290-22	3,2 x 2	1/8 x 2	54	2-1/8
2939435	B1929031	T290-3	4,8	3/16	54	2-1/8
2939434	B1929033	T290-33	4,8 x 3	3/16 x 3	54	2-1/8
2939433	B1929041	T290-4	6,4	1/4	54	2-1/8
2939431	B1929042	T290-42	6,4 x 2	1/4 x 2	54	2-1/8
3879301	B1929043	T290-43	6,4 x 3	1/4 x 3	54	2-1/8
2939430	B1929044	T290-44	6,4 x 4	1/4 x 4	54	2-1/8
2939429	B1929051	T290-5	7,9	5/16	54	2-1/8
2939428	B1929061	T290-6	9,5	3/8	54	2-1/8

*Contact your Kennametal representative or customer service for quote.

Angle Nozzles
Hozzle Angle Nozzles



VENTURI NOZZLES

SPECIAL VENTURI NOZZLES

STRAIGHT BORE NOZZLES

ANGLE NOZZLES

WET BLAST NOZZLES

ABRASIVE BLASTING GUNS

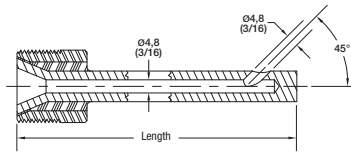
ACCESSORIES

Hozzle Angle Nozzles

Hozzle nozzles are excellent for aerospace, aviation and automotive component-related applications where minimal access or clearance are an issue. **We have the capability to manufacture other hozzle nozzle designs. Please contact us to discuss your requirements.**

Dimensions below are shown in millimeters and (inches).

- Thread style: 3/4 – 14 N.P.S.M.
- 7/16" O.D. insert.
- Steel threads.

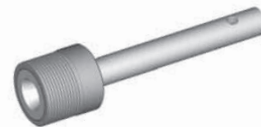
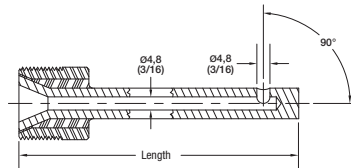


■ **Hozzle Nozzle Series • 45°**

order number	catalog number	Bore Diameter		Length	
		mm	in	mm	in
4063486	B2008477	4,8	3/16	101,6	4
4063487	B2008479	4,8	3/16	152,4	6
2958531	B1900007	4,8	3/16	254	10

We have the capability to manufacture other hozzle nozzle sizes. Please contact us to discuss your requirements.

- Thread style: 3/4 – 14 N.P.S.M.
- 7/16" O.D. insert.
- Steel threads.

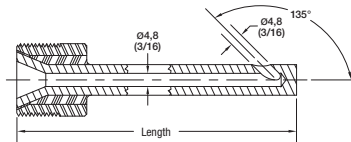


■ **Hozzle Nozzle Series • 90°**

order number	catalog number	Bore Diameter		Length	
		mm	in	mm	in
5115971	B2728840	4,8	3/16	101,6	4
5115973	B2728842	4,8	3/16	152,4	6
3056789	B1900003	4,8	3/16	254	10

We have the capability to manufacture other hozzle nozzle sizes. Please contact us to discuss your requirements.

- Thread style: 3/4 – 14 N.P.S.M.
- 7/16" O.D. insert.
- Steel threads.



■ **Hozzle Nozzle Series • 135°**

order number	catalog number	Bore Diameter		Length	
		mm	in	mm	in
5136723	B2748600	4,8	3/16	101,6	4
5136724	B2748602	4,8	3/16	152,4	6
5034182	B2005186	4,8	3/16	254	10

We have the capability to manufacture other hozzle nozzle sizes. Please contact us to discuss your requirements.

*Contact your Kennametal representative or customer service for quote.

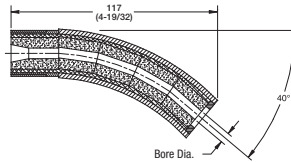


Angle Nozzles
Boron Carbide

Boron Carbide

Dimensions below are shown in millimeters and (inches).

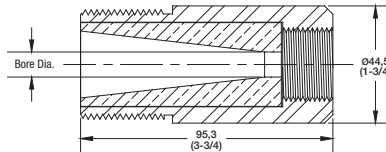
- Thread style: 3/4 – 14 N.P.S.M.
- Metal jacket.
- Metal threads.



■ **40° Banana Series**

order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
2911312	B1502510	6mm Banana Nozzle	6	.236	117	4.6
2940259	B1502515	8mm Banana Nozzle	8	.315	117	4.6
2940258	B1502520	10mm Banana Nozzle	10	.374	117	4.6

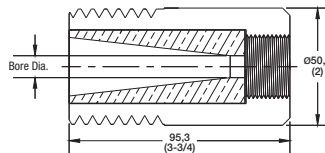
- Adapter: 1-1/4" – 3/4" N.P.S.M.
- Boron Carbide lined.



■ **1-1/4" to 3/4" Adapter**

order number	catalog number	model number
2958539	B1502501	1502501

- Thread style: 50mm.
- Adapter: 50mm – 3/4" N.P.S.M.
- Boron Carbide lined.



■ **50mm to 3/4" Adapter**

order number	catalog number	model number
3092894	B1502500	1502500

VENTURI NOZZLES
SPECIAL VENTURI NOZZLES
STRAIGHT BORE NOZZLES
ANGLE NOZZLES
WET BLAST NOZZLES
ABRASIVE BLASTING GUNS
ACCESSORIES

*Contact your Kennametal representative or customer service for quote.

Angle Nozzles
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VENTURI NOZZLES

SPECIAL VENTURI NOZZLES

STRAIGHT BORE NOZZLES

ANGLE NOZZLES

WET BLAST NOZZLES

ABRASIVE BLASTING GUNS

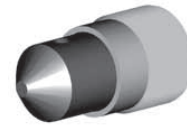
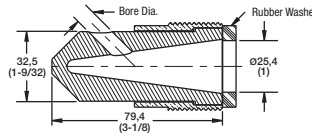
ACCESSORIES

ROCTEC®

These nozzles provide 15 to 25 times longer service life than standard tungsten carbide versions when used with aggressive abrasives like aluminum oxide or silicon carbide.

Dimensions below are shown in millimeters and (inches).

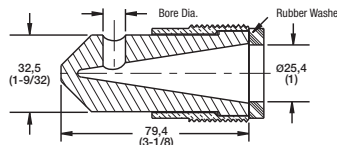
- Thread style: 1-1/4 – 11-1/2 N.P.S.M.
- Brass threads.
- Single, double, or triple outlets.



■ **R045 Series • 45°**

order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
5299575	B19504530	R045-3	4,8	3/16	79,4	3-1/8
*	B19504532	R045-32	4,8 x 2	3/16 x 2	79,4	3-1/8
*	B19504533	R045-33	4,8 x 3	3/16 x 3	79,4	3-1/8
2939421	B19504540	R045-4	6,4	1/4	79,4	3-1/8
2938793	B19504542	R045-42	6,4 x 2	1/4 x 2	79,4	3-1/8
3758177	B19504543	R045-43	6,4 x 3	1/4 x 3	79,4	3-1/8
3863621	B19504550	R045-5	7,9	5/16	79,4	3-1/8
*	B19504552	R045-52	7,9 x 2	5/16 x 2	79,4	3-1/8
3642697	B19504553	R045-53	7,9 x 3	5/16 x 3	79,4	3-1/8
2939420	B19504560	R045-6	9,5	3/8	79,4	3-1/8
*	B19504562	R045-62	9,5 x 2	3/8 x 2	79,4	3-1/8
3642698	B19504563	R045-63	9,5 x 3	3/8 x 3	79,4	3-1/8
2938791	B19504580	R045-8	12,7	1/2	79,4	3-1/8

- Thread style: 1-1/4 – 11-1/2 N.P.S.M.
- Brass threads.
- Single, double, or triple outlets.



■ **R090 Series • 90°**

order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
3960775	B19509030	R090-3	4,8	3/16	79,4	3-1/8
*	B19509032	R090-32	4,8 x 2	3/16 x 2	79,4	3-1/8
*	B19509033	R090-33	4,8 x 3	3/16 x 3	79,4	3-1/8
5026895	B19509040	R090-4	6,4	1/4	79,4	3-1/8
2939417	B19509042	R090-42	6,4 x 2	1/4 x 2	79,4	3-1/8
2939416	B19509043	R090-43	6,4 x 3	1/4 x 3	79,4	3-1/8
3951369	B19509050	R090-5	7,9	5/16	79,4	3-1/8
5402829	B19509052	R090-52	7,9 x 2	5/16 x 2	79,4	3-1/8
5402890	B19509053	R090-53	7,9 x 3	5/16 x 3	79,4	3-1/8
2939413	B19509060	R090-6	9,5	3/8	79,4	3-1/8
4119670	B19509062	R090-62	9,5 x 2	3/8 x 2	79,4	3-1/8
5068390	B19509063	R090-63	9,5 x 3	3/8 x 3	79,4	3-1/8
3596824	B19509080	R090-8	12,7	1/2	79,4	3-1/8

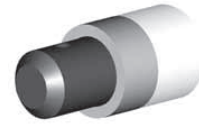
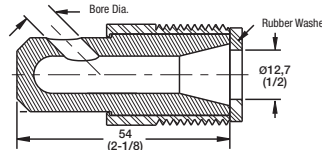
*Contact your Kennametal representative or customer service for quote.



Angle Nozzles
ROCTEC®

Dimensions below are shown in millimeters and (inches).

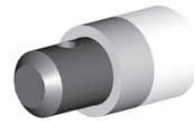
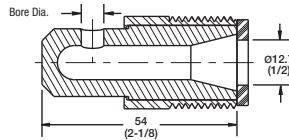
- Thread style: 3/4 – 14 N.P.S.M.
- Steel threads.
- Single, double, or triple outlets.



■ R245 Series • 45°

order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
3387778	B19524530	R245-3	4,8	3/16	54	2-1/8
3898619	B19524532	R245-32	4,8 x 2	3/16 x 2	54	2-1/8
3387779	B19524533	R245-33	4,8 x 3	3/16 x 3	54	2-1/8
2938664	B19524540	R245-4	6,4	1/4	54	2-1/8
2938666	B19524542	R245-42	6,4 x 2	1/4 x 2	54	2-1/8
3396156	B19524550	R245-5	7,9	5/16	54	2-1/8
3582392	B19524560	R245-6	9,5	3/8	54	2-1/8

- Thread style: 3/4 – 14 N.P.S.M.
- Steel threads.
- Single, double, or triple outlets.



■ R290 Series • 90°

order number	catalog number	model number	bore diameter		length	
			mm	in	mm	in
3898620	B19529030	R290-3	4,8	3/16	54	2-1/8
3898622	B19529032	R290-32	4,8 x 2	3/16 x 2	54	2-1/8
3752938	B19529033	R290-33	4,8 x 3	3/16 x 3	54	2-1/8
3451518	B19529040	R290-4	6,4	1/4	54	2-1/8
4091645	B19529042	R290-42	6,4 x 2	1/4 x 2	54	2-1/8
3396157	B19529050	R290-5	7,9	5/16	54	2-1/8
2938662	B19529060	R290-6	9,5	3/8	54	2-1/8

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