



Dimensional Specifications for Casing Shoes / Rod Shoes

Set Diameters for Casing Shoes and Rod Shoes

The term “set diameter” refers to the dimension of the outside or inside diameter of the matrix body on a casing shoe or rod shoe crown on which diamonds and/or tungsten-carbide elements have been physically set in order to preserve this dimension during drilling. The specifications for set diameter tolerances to which Dimatec manufactures casing shoes and rod shoes are given in the tables below.

Product Availability

Dimatec is capable of manufacturing any casing shoe or rod shoe listed in the tables below. Casing shoe or rod shoe sizes not listed or those with non-standard set diameters may be available on request. The range of product availability by casing shoe or rod shoe type is given in the tables below.

The key to the “Availability by cutting media type” columns are as follows:

- “D” represents **“D-Series” impregnated diamond type**
- “R” represents **“Super Duty” impregnated diamond type**
- “S” represents **surface-set diamond type**
- “C” represents **tungsten-carbide chip type**
- “T” represents **tungsten-carbide saw-tooth type**

Standard Casing Shoes									
Size	Outside Set Diameter		Inside Set Diameter		Availability by cutting media type				
	Inch	mm	Inch	mm	D	R	S	C	T
RW*	1.475	37.46	1.188	30.18	Yes	No	No	No	No
	1.465	37.21	1.183	30.05					
EW*	1.880	47.75	1.497	38.02	Yes	No	Yes	Yes	No
	1.870	47.50	1.492	37.90					
AW*	2.350	59.69	1.902	48.31	Yes	Yes	Yes	Yes	Yes
	2.340	59.44	1.897	48.18					
BW	2.970	75.44	2.377	60.38	Yes	Yes	Yes	Yes	Yes
	2.960	75.19	2.367	60.12					
NW*	3.620	91.95	2.997	76.12	Yes	Yes	Yes	Yes	Yes
	3.610	91.70	2.987	75.87					
HW** (CDDA)	4.632	117.65	3.930	99.82	Yes	Yes	Yes	Yes	Yes
	4.617	117.27	3.920	99.57					
HW* (DCDMA)	4.632	117.65	3.980	101.09	Yes	Yes	Yes	Yes	Yes
	4.617	117.27	3.970	100.84					
HWT	4.632	117.65	3.930	99.82	Yes	Yes	Yes	Yes	Yes
	4.617	117.27	3.920	99.57					
PW**	5.660	143.76	4.865	123.57	Yes	Yes	Yes	Yes	Yes
	5.640	143.26	4.850	123.19					
PWT	5.660	143.76	4.865	123.57	Yes	Yes	Yes	Yes	Yes
	5.640	143.26	4.850	123.19					
SW*	6.800	172.72	5.948	151.08	Yes	Yes	Yes	No	Yes
	6.780	172.21	5.933	150.70					
UW*	7.815	198.50	6.916	175.67	Yes	Yes	Yes	No	Yes
	7.785	197.74	6.896	175.16					
ZW*	8.825	224.15	7.987	202.87	Yes	Yes	Yes	No	Yes
	8.795	223.40	7.967	202.36					

*Conforms to DCDMA Standard.

**Conforms to CDDA Standard (CSA Standard 253.1 – M1981).

Metric Casing Shoes									
Size	Outside Set Diameter		Inside Set Diameter		Availability by cutting media type				
	Inch	mm	Inch	mm	D	R	S	C	T
46mm	1.818	46.18	1.462	37.13	Yes	No	Yes	No	No
	1.808	45.92	1.452	36.88					
56mm	2.210	56.13	1.855	47.12	Yes	No	Yes	Yes	No
	2.200	55.88	1.845	46.87					
66mm	2.603	66.12	2.249	57.12	Yes	No	Yes	Yes	Yes
	2.593	65.87	2.239	56.87					
76mm	2.997	76.12	2.643	67.13	Yes	No	Yes	Yes	Yes
	2.987	75.87	2.633	66.88					
86mm	3.391	86.13	3.037	75.14	Yes	No	Yes	Yes	Yes
	3.381	85.88	3.027	76.89					
101mm	3.985	101.22	3.460	87.88	Yes	No	Yes	Yes	Yes
	3.970	100.84	3.445	87.50					
116mm	4.575	116.20	4.063	103.20	Yes	No	Yes	Yes	Yes
	4.560	115.82	4.048	102.82					
131mm	5.165	131.19	4.700	119.38	Yes	No	Yes	No	Yes
	5.150	130.81	4.685	119.00					
146mm	5.755	146.18	5.244	133.20	Yes	No	Yes	No	Yes
	5.740	145.80	5.229	132.81					

Wide-Kerf Casing Bits (For use with DCDMA and CDDA Standard Casing)									
Size	Outside Set Diameter		Inside Set Diameter		Availability by cutting media type				
	Inch	mm	Inch	mm	D	R	S	C	T
BW(NQ) ¹	2.970	75.44	1.880	47.75	Yes	Yes	Yes	Yes	Yes
	2.960	75.19	1.870	47.50					
NW(HQ) ²	3.770	95.76	2.505	63.63	Yes	Yes	Yes	Yes	Yes
	3.755	95.38	2.495	63.38					
HW(PQ) ³	4.815	122.30	3.350	85.09	Yes	Yes	Yes	Yes	Yes
	4.795	121.80	3.340	84.84					

¹The BW(NQ) Casing Bit is supplied with a BW Casing Box thread connection.

²The NW(HQ) Casing Bit is supplied with an NW Casing Box thread connection.

³The HW(PQ) Casing Bit is supplied with an HW Casing Box thread connection.

Standard Casing Bits (For use with DCDMA and CDDA Standard Casing)									
Size	Outside Set Diameter		Inside Set Diameter		Availability by cutting media type				
	Inch	mm	Inch	mm	D	R	S	C	T
BW	2.970	75.44	2.220	56.39	Yes	Yes	Yes	Yes	Yes
	2.960	75.19	2.210	56.13					
NW	3.620	91.95	2.845	72.26	Yes	Yes	Yes	Yes	Yes
	3.610	91.70	2.835	72.00					
HW	4.632	117.65	3.782	96.06	Yes	Yes	Yes	Yes	Yes
	4.617	117.27	3.772	95.81					

Rod Shoes (For use with Wireline Drill Rods)									
Size	Outside Set Diameter		Inside Set Diameter		Availability by cutting media type				
	Inch	mm	Inch	mm	D	R	S	C	T
BQ, BT	2.350	59.69	1.785	45.34	Yes	Yes	Yes	Yes	Yes
	2.340	59.44	1.775	45.09					
NQ, NT	2.970	75.44	2.377	60.38	Yes	Yes	Yes	Yes	Yes
	2.960	75.19	2.367	60.12					
HQ, HT	3.620	91.95	2.997	76.12	Yes	Yes	Yes	Yes	Yes
	3.610	91.70	2.987	75.87					
HWQ	4.632	117.65	3.782	96.06	Yes	Yes	Yes	Yes	Yes
	4.617	117.27	3.772	95.81					

British Standard BS879 Water Well Casing Shoes									
Size	Outside Set Diameter		Inside Set Diameter		Availability by cutting media type				
	Inch	mm	Inch	mm	D	R	S	C	T
4 Inch	4.635	117.73	3.824	97.13	Yes	Yes	Yes	Yes	Yes
	4.615	117.22	3.809	96.75					
5 Inch	5.660	143.76	4.833	122.75	Yes	Yes	Yes	Yes	Yes
	5.640	143.26	4.813	122.25					
6 Inch	6.800	172.72	5.833	148.15	Yes	Yes	Yes	Yes	Yes
	6.780	172.21	5.818	147.75					
8 Inch	8.835	224.41	7.835	199.01	Yes	Yes	Yes	Yes	Yes
	8.815	223.90	7.815	198.50					
10 Inch	10.940	277.88	9.825	249.56	Yes	Yes	Yes	Yes	Yes
	10.920	277.37	9.805	249.05					

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The technical application data in this document is intended as a basic guideline for the selection of the appropriate tools for your job. As drilling conditions and the capabilities of drilling equipment vary considerably from site to site, it is impossible to define absolute parameters for the application of our drilling tools. Some experimentation on the part of the end user may be required as parameters outside those recommended in Dimatec's product literature may be applicable. Every effort has been made to ensure the accuracy of the data contained in this document. Dimatec Inc. cannot accept any liability due to errors or omissions in the data we provide. Dimatec Inc. is constantly working to improve our products and therefore reserve the right to make changes to materials, specifications, prices and technical data without prior notice.

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