

# DRILLING (BRAZED TYPE)

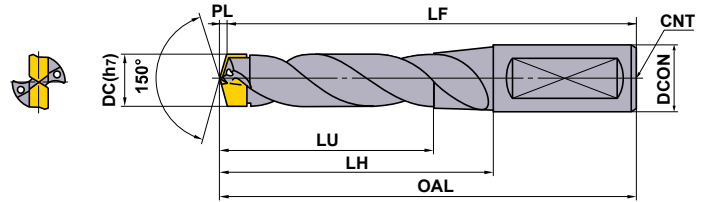
# BRS

- Excellent cutting sharpness and chip discharge due to high rake type insert.
- High efficiency, high accuracy machining.
- Suitable for stainless steel and mild steel cutting. Possible for general steel cutting. (l/d=3)



$.5000 \leq DC \leq .7031$ "	$.7188 \leq DC \leq 1.1719$ "	DC=1.1875"
14 < DC ≤ 18mm	18 < DC ≤ 30mm	
$0$	$0$	$0$
-.00071	-.00083	-.00098
(inch)		

L/D=3  
Internal Coolant



Helix Angle : 30°

## INCH STANDARD

Order Number	Stock	Dimensions (inch)								
	UP20M	DC	LU	LH	OAL	LF	PL	DCON	CNT	
BRS0032	●	.5000	2.207	2.801	4.676	4.609	.067	.625	1/8	
BRS0033	●	.5156	2.209	2.803	4.678	4.609	.069	.625	1/8	
BRS0034	●	.5313	2.211	2.805	4.680	4.609	.071	.625	1/8	
BRS0035	●	.5469	2.370	3.010	4.885	4.812	.073	.625	1/8	
BRS0036	●	.5625	2.372	3.012	4.887	4.812	.075	.625	1/8	
BRS0037	●	.5781	2.531	3.218	5.093	5.015	.078	.625	1/8	
BRS0038	●	.5938	2.533	3.220	5.220	5.140	.080	.750	1/8	
BRS0039	●	.6094	2.535	3.222	5.222	5.140	.082	.750	1/8	
BRS0040	●	.6250	2.693	3.412	5.412	5.328	.084	.750	1/8	
BRS0041	●	.6406	2.695	3.414	5.414	5.328	.086	.750	1/8	
BRS0042	●	.6563	2.853	3.634	5.634	5.546	.088	.750	1/8	
BRS0043	●	.6719	2.855	3.636	5.636	5.546	.090	.750	1/8	
BRS0044	●	.6875	2.857	3.638	5.638	5.546	.092	.750	1/8	
BRS0045	●	.7031	3.015	3.828	5.828	5.734	.094	.750	1/8	
BRS0046	●	.7188	3.018	3.831	6.081	5.984	.097	1.000	1/8	
BRS0047	●	.7344	3.207	4.051	6.301	6.203	.098	1.000	1/8	
BRS0048	●	.7500	3.209	4.053	6.303	6.203	.100	1.000	1/8	
BRS0049	●	.7656	3.212	4.056	6.306	6.203	.103	1.000	1/8	
BRS0050	●	.7813	3.370	4.245	6.495	6.390	.105	1.000	1/8	
BRS0051	●	.7969	3.372	4.247	6.497	6.390	.107	1.000	1/8	
BRS0052	●	.8125	3.530	4.468	6.718	6.609	.109	1.000	1/8	
BRS0053	●	.8281	3.532	4.470	6.720	6.609	.111	1.000	1/8	
BRS0054	●	.8438	3.534	4.472	6.722	6.609	.113	1.000	1/8	

Order Number	Stock	Dimensions (inch)								
	UP20M	DC	LU	LH	OAL	LF	PL	DCON	CNT	
BRS0055	●	.8594	3.693	4.661	6.911	6.796	.115	1.000	1/8	
BRS0056	●	.8750	3.695	4.663	6.913	6.796	.117	1.000	1/8	
BRS0057	●	.8906	3.853	4.884	7.134	7.015	.119	1.000	1/8	
BRS0058	●	.9063	3.855	4.886	7.136	7.015	.121	1.000	1/8	
BRS0059	●	.9219	3.858	4.889	7.139	7.015	.124	1.000	1/8	
BRS0060	●	.9375	4.016	5.079	7.454	7.328	.126	1.250	1/4	
BRS0061	●	.9531	4.018	5.081	7.456	7.328	.128	1.250	1/4	
BRS0062	●	.9688	4.176	5.301	7.676	7.546	.130	1.250	1/4	
BRS0063	●	.9844	4.178	5.303	7.678	7.546	.132	1.250	1/4	
BRS0100	●	1.0000	4.180	5.305	7.680	7.546	.134	1.250	1/4	
BRS0101	●	1.0156	4.339	5.495	7.870	7.734	.136	1.250	1/4	
BRS0102	●	1.0313	4.341	5.497	7.872	7.734	.138	1.250	1/4	
BRS0103	●	1.0469	4.499	5.718	8.093	7.953	.140	1.250	1/4	
BRS0104	●	1.0625	4.502	5.721	8.096	7.953	.143	1.250	1/4	
BRS0105	●	1.0781	4.504	5.723	8.098	7.953	.145	1.250	1/4	
BRS0106	●	1.0938	4.662	5.912	8.287	8.140	.147	1.250	1/4	
BRS0107	●	1.1094	4.664	5.914	8.289	8.140	.149	1.250	1/4	
BRS0108	●	1.1250	4.822	6.135	8.510	8.359	.151	1.250	1/4	
BRS0109	●	1.1406	4.824	6.137	8.512	8.359	.153	1.250	1/4	
BRS0110	●	1.1563	4.826	6.139	8.514	8.359	.155	1.250	1/4	
BRS0111	●	1.1719	4.985	6.329	8.703	8.546	.157	1.250	1/4	
BRS0112	●	1.1875	4.987	6.331	8.705	8.546	.159	1.250	1/4	

DRILLING

## METRIC STANDARD

Order Number	Stock	Dimensions (mm)						
	UP20M	DC	LU	LH	OAL	LF	PL	DCON
BRS1400S16	★	14.0	53.9	67.9	115.9	114	1.9	16
BRS1450S16	★	14.5	53.9	67.9	115.9	114	1.9	16
BRS1500S20	★	15.0	63.0	78.0	128.0	126	2.0	20
BRS1550S20	★	15.5	63.1	78.1	128.1	126	2.1	20
BRS1600S20	★	16.0	67.1	83.1	133.1	131	2.1	20
BRS1650S20	★	16.5	67.2	83.2	133.2	131	2.2	20
BRS1700S20	★	17.0	71.3	88.3	138.3	136	2.3	20
BRS1750S20	★	17.5	71.3	88.3	138.3	136	2.3	20
BRS1800S20	★	18.0	75.4	93.4	143.4	141	2.4	20
BRS1850S20	★	18.5	75.5	93.5	143.5	141	2.5	20
BRS1900S25	★	19.0	79.5	103.5	159.5	157	2.5	25
BRS1950S25	★	19.5	79.6	103.6	159.6	157	2.6	25
BRS2000S25	★	20.0	83.7	103.7	159.7	157	2.7	25
BRS2050S25	★	20.5	83.7	103.7	159.7	157	2.7	25
BRS2100S25	★	21.0	82.8	103.8	159.8	157	2.8	25
BRS2150S25	★	21.5	82.9	103.9	159.9	157	2.9	25
BRS2200S25	★	22.0	86.9	108.9	164.9	162	2.9	25

Order Number	Stock	Dimensions (mm)						
	UP20M	DC	LU	LH	OAL	LF	PL	DCON
BRS2250S25	★	22.5	87.0	109.0	165.0	162	3.0	25
BRS2300S25	★	23.0	86.1	109.1	165.1	162	3.1	25
BRS2350S25	★	23.5	86.1	109.1	165.1	162	3.1	25
BRS2400S32	★	24.0	90.2	114.2	174.2	171	3.2	32
BRS2450S32	★	24.5	90.3	114.3	174.3	171	3.3	32
BRS2500S32	★	25.0	89.3	114.3	174.3	171	3.3	32
BRS2550S32	★	25.5	89.4	114.4	174.4	171	3.4	32
BRS2600S32	★	26.0	93.5	119.5	179.5	176	3.5	32
BRS2650S32	★	26.5	93.6	119.6	179.6	176	3.6	32
BRS2700S32	★	27.0	92.6	119.6	179.6	176	3.6	32
BRS2750S32	★	27.5	92.7	119.7	179.7	176	3.7	32
BRS2800S32	★	28.0	96.8	124.8	184.8	181	3.8	32
BRS2850S32	★	28.5	96.8	124.8	184.8	181	3.8	32
BRS2900S32	★	29.0	100.9	129.9	189.9	186	3.9	32
BRS2950S32	★	29.5	101.0	130.0	190.0	186	4.0	32
BRS3000S32	★	30.0	100.0	130.0	190.0	186	4.0	32

## RECOMMENDED CUTTING CONDITIONS

Work Material	DC	φ.5000" - φ.7813" φ 14.0 - φ 20.0mm		φ.7969" - φ 1.1875" φ 20.5 - φ 30.0mm	
	Hardness	Cutting Speed (SFM)	Feed (inch/rev)	Cutting Speed (SFM)	Feed (inch/rev)
P Mild Steel	≤ 180HB	210 (165-245)	.012 (.008-.016)	230 (180-280)	.014 (.008-.018)
	180-280HB	195 (145-230)	.010 (.004-.014)	210 (145-260)	.012 (.006-.014)
Carbon Steel Alloy Steel	280-350HB	180 (130-210)	.008 (.006-.014)	195 (145-230)	.010 (.006-.014)
	≤ 200HB	230 (165-295)	.012 (.008-.016)	260 (195-330)	.012 (.008-.016)
M Stainless Steel (Austenitic)	≤ 200HB	230 (165-295)	.012 (.008-.016)	260 (195-330)	.012 (.008-.016)
K Gray Cast Iron	Tensile Strength ≤ 350MPa	245 (195-360)	.012 (.008-.016)	260 (195-330)	.014 (.010-.020)
Ductile Cast Iron	Tensile Strength ≤ 450MPa	245 (195-330)	.012 (.008-.016)	260 (195-330)	.014 (.008-.018)
	Tensile Strength 500-800MPa	230 (180-295)	.010 (.006-.014)	245 (180-295)	.012 (.006-.016)

(Note) Above conditions are for general cutting.

The cutting conditions need to be modified depending on power, rigidity of the machine and workpiece shape.