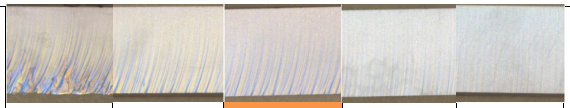
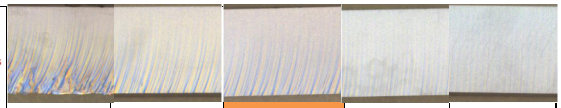
Shenyang Head Science & Technology Corporation Limited

HEAD Waterjet Cutting Speed Reference List（mm/min）

NO	Cutting Surface Quality	Pressure Mpa	Thickness mm	Q1	Q2	Q3	Q4	Q5	Pressure Mpa	Thickness mm	Q1	Q2	Q3	Q4	Q5
				Q1 is described as a "separation cut". While Q1 does not produce a high quality edge, it will give you very fast cutting speeds and can be used for roughing out parts. It is a rough cut and the edge has more pronounced lines, called striations or coining effect.	Q2 is a medium rough cut. The coining effects are less noticeable than in a Q1 edge and cutting speed is a bit slower than Q1.	Q3 is a standard machining cut. The quality is very acceptable with striations on the bottom half of the cut. This quality takes more time to achieve than Q2 and is the most commonly used for acceptable edge quality.	Q4 is a very high quality finish. It is very precise and with minimum taper. Q4 will produce the most accurate edge quality before Q5.	Q5 is the best quality finish. It is the most precise and with minimum taper. Q5 will produce the most accurate edge quality on your waterjet machine.			Q1 is described as a "separation cut". While Q1 does not produce a high quality edge, it will give you very fast cutting speeds and can be used for roughing out parts. It is a rough cut and the edge has more pronounced lines, called striations or coining effect.	Q2 is a medium rough cut. The coining effects are less noticeable than in a Q1 edge and cutting speed is a bit slower than Q1.	Q3 is a standard machining cut. The quality is very acceptable with striations on the bottom half of the cut. This quality takes more time to achieve than Q2 and is the most commonly used for acceptable edge quality.	Q4 is a very high quality finish. It is very precise and with minimum taper. Q4 will produce the most accurate edge quality before Q5.	Q5 is the best quality finish. It is the most precise and with minimum taper. Q5 will produce the most accurate edge quality on your waterjet machine.
1	copper	420	2	3616	2455	1858	1495	1251	380	2	3092	2099	1589	1278	1069
			3	2266	1501	1123	898	748		3	1932	1283	961	768	639
			5	1249	799	587	464	383		5	1068	683	502	397	328
			6	1011	636	463	365	301		6	865	543	396	312	257
			8	724	442	318	248	204		8	619	378	272	212	174
			10	559	332	236	183	150		10	478	284	202	157	128
			15	349	197	137	105	86		15	299	169	117	90	73
			20	250	136	93	71	57		20	214	116	80	61	49
			30	156	81	54	41	33		30	134	69	46	35	28
			40	112	56	37	28	22		40	96	48	32	24	19
			50	86	42	28	21	16.5		50	74	36	24	17.6	14.1
			60	70	33	22	16.2	12.9		60	60	28	18.7	13.9	11.1
			80	50	23	15.1	11.2	8.9		80	43	19.8	12.9	9.6	7.6
			100	39	17.6	11.4	8.4	6.7		100	33	15.1	9.7	7.2	5.7
2	aluminum	420	2	7491	5086	3856	3097	2590	380	2	6406	4349	3292	2648	2215
			3	4680	3109	2327	1860	1549		3	4002	2658	1990	1590	1324
			5	2588	1654	1216	961	794		5	2213	1414	1039	882	679
			6	2095	1316	960	755	623		6	1791	1126	821	646	532
			8	1500	915	658	514	422		8	1283	782	563	440	361
			10	1158	688	490	380	310		10	990	589	419	325	265
			15	724	408	285	218	177		15	619	349	243	187	151
			20	518	282	193	147	119		20	443	241	165	126	102
			30	324	167	112	85	68		30	277	143	96	72	58
			40	232	115	77	57	46		40	198	99	66	49	39
			50	179	87	57	43	34		50	153	74	49	37	29
			60	145	69	45	34	27		60	124	59	39	29	23
			80	104	48	31	23	18.4		80	89	41	27	19.8	15.7
			100	80	36	24	17.4	13.8		100	69	31	20	14.9	11.8
3	stainless steel	420	2	2325	1578	1195	961	804	380	2	1988	1350	1022	822	687
			3	1453	965	722	577	481		3	1242	825	618	493	411
			5	803	513	377	298	247		5	687	439	323	255	211
			6	650	409	298	234	193		6	556	349	255	200	165
			8	466	284	204	160	131		8	398	243	175	136	112
			10	359	214	152	118	96		10	307	183	130	101	82
			15	225	127	88	68	55		15	192	108	76	58	47
			20	161	87	60	46	37		20	138	75	51	39	32
			30	100	52	35	26	21		30	86	44	30	22	18
			40	72	36	24	17.8	14.3		40	62	31	20	15.3	12.2
			50	56	27	17.8	13.3	10.6		50	48	23	15.2	11.3	9
			60	45	21	14	10.4	8.3		60	38	18.3	12	8.9	7.1
			80	32	14.9	9.7	7.2	5.7		80	28	12.8	8.3	6.2	4.89
			100	25	11.3	7.3	5.4	4.29		100	21	9.7	6.3	4.63	3.67
4	acrylic acid	420	2	25830	17530	13270	10670	8932	380	2	22080	14990	11350	9131	7638
			3	16130	10710	8024	6412	5340		3	13800	9166	6862	5483	4566
			5	8924	5704	4192	3313	2739		5	7631	4877	3584	2833	2342
			6	7223	4539	3310	2604	2147		6	6176	3882	2830	2227	1836
			8	5173	3155	2270	1773	1454		8	4424	2698	1941	1516	1243
			10	3993	2374	1689	1310	1071		10	3415	2030	1444	1121	915
			15	2499	1409	981	753	611		15	2134	1204	839	644	522
			20	1787	971	667	507	410		20	1528	830	570	434	350
			30	1117	575	387	292	234		30	955	492	331	250	200
			40	800	398	265	198	158		40	684	340	226	169	136
			50	617	299	197	147	118		50	528	256	169	126	101
			60	500	238	156	116	92		60	427	203	133	99	79
			80	358	166	108	80	64		80	306	142	92	68	54
			100	276	126	81	60	48		100	236	108	70	51	41
NO	Cutting Surface Quality	Pressure Mpa	Thickness mm	Q1	Q2	Q3	Q4	Q5	Pressure Mpa	Thickness mm	Q1	Q2	Q3	Q4	Q5
5	glass	420	2	12910	8768	6637	5339	4466	380	2	11040	7498	5675	4566	3819
			3	8070	5360	4012	3206	2670		3	6900	4583	3431	2742	2283
			5	4462	2852	2096	1657	1370		5	3815	2439	1792	1417	1171
			6	3611	2270	1655	1302	1073		6	3088	1941	1415	1113	918
			8	2587	1578	1135	886	727		8	2212	1349	970	758	622
			10	1997	1187	844	655	535		10	1707	1015	722	560	458
			15	1248	704	491	376	305		15	1067	602	420	322	261
			20	894	485	333	254	205		20	764	415	285	217	175
			30	558	288	194	146	117		30	477	246	166	125	100
			40	400	199	132	99	79		40	342	170	113	85	68
			50	309	150	99	74	59		50	264	128	84	63	50
			60	250	119	78	58	46		60	214	102	67	50	39
			80	179	83	54	40	32		80	153	71	46	34	27
			100	138	63	41	30	24		100	118	54	35	26	20
6	marble	420	2	16530	11220	8496	6834	5717	380	2	14130	9597	7265	5844	4888
			3	10320	6860	5136	4104	3417		3	8832	5866	4391	3509	2922
			5	5711	3651	2683	2120	1753		5	4884	3122	2294	1813	1499
			6	4622	2905	2118	1667	1374		6	3953	2484	1811	1425	1175
			8	3311	2019	1453	1134	931		8	2831	1717	1242	970	796
			10	2556	1519	1081	839	685		10	2185	1299	924	717	586
			15	1597	902	628	482	391		15	1365	771	537	412	334
			20	1144	621	427	325	262		20	978	531	365	278	224
			30	715	368	248	187	150		30	611	315	212	160	128
			40	512	254	169	127	101		40	438	218	145	108	87
			50	395	192	126	94	75		50	338	164	108	81	64
			60	320	152	100	74	59		60	273	130	85	63	51
			80	229	106	69	51	41		80	196	91	59	44	35
			100	177	80	53	39	31		100	151	69	45	33	26
7	alloy	420	2	2067	1403	1062	854	715	380	2	1767	1200	908	731	611
			3	1291	858	642	513	427		3	1104	733	549	439	365
			5	714	456	335	265	219		5	610	390	287	227	187
			6	578	363	265	208	172		6	494	311	226	178	147
			8	414	252	182	142	116		8	354	216	155	121	99
			10	319	190	135	105	86		10	273	162	116	90	73
			15	200	113	79	60	49		15	171	96	67	52	42
			20	143	78	53	41	33		20	122	66	46	35	28
			30	89	46	31	23	18.7		30	76	39	26	20	16
			40	64	32	21	15.9	12.7		40	55	27	18.1	13.6	10.8
			50	49	24	15.8	11.8	9.4		50	42	20	13.5	10.1	8
			60	40	19	12.5	9.3	7.4		60	34	16.3	10.7	7.9	6.3
			80	29	13.3	8.6	6.4	5.1		80	24	11.3	7.4	5.5	4.34
			100	22	10.1	6.5	4.81	3.82		100	18.9	8.6	5.6	4.12	3.26
8	Granite hard	420	2	6458	4384	3319	2670	2233	380	2	5522	3749	2838	2283	1909
			3	4035	2680	2006	1603	1335		3	3450	2292	1715	1371	1141
			5	2231	1426	1048	828	685		5	1908	1219	896	708	586
			6	1806	1135	827	651	537		6	1544	970	708	557	459
			8	1293	789	567	443	363		8	1106	675	485	379	311
			10	998	593	422	328	268		10	854	507	361	280	229
			15	624	352	245	188	153		15	533	301	210	161	131
			20	447	243	167	127	102		20	382	208	142	108	88
			30	279	144	97	73	59		30	239	123	83	62	50
			40	200	99	66	50	40		40	171	85	57	42	34
			50	154	75	49	37	29		50	132	64	42	32	25
			60	125	59	39	29	23		60	107	51	33	25	19.7
			80	89	41	27	20	15.9		80	77	35	23	17.1	13.6
			100	69	31	20	15	11.9		100	59	27	17.4	12.9	10.2

NO	Cutting Surface Quality	Pressure Mpa	Thickness mm						Pressure Mpa	Thickness mm					
				Q1	Q2	Q3	Q4	Q5			Q1	Q2	Q3	Q4	Q5
9	Granite soft	420	2	15490	10520	7965	6407	5359	380	2	13250	8997	6810	5479	4583
			3	9684	6432	4815	3847	3204		3	8280	5500	4117	3290	2740
			5	5354	3422	2515	1988	1643		5	4578	2926	2151	1700	1405
			6	4334	2724	1986	1563	1288		6	3706	2329	1698	1336	1101
			8	3104	1893	1362	1064	872		8	2654	1619	1165	909	746
			10	2396	1424	1013	786	642		10	2049	1218	886	672	549
			15	1497	845	589	452	366		15	1280	723	503	386	313
			20	1072	583	400	304	246		20	917	498	342	260	210
			30	670	345	232	175	141		30	573	295	199	150	120
			40	480	239	159	119	95		40	410	204	136	102	81
			50	370	180	118	88	71		50	317	154	101	76	60
			60	300	143	94	70	55		60	256	122	80	60	47
			80	215	99	65	48	38		80	184	85	55	41	33
			100	166	75	49	36	29		100	142	65	42	31	24
10	brass	420	2	3616	2455	1858	1495	1251	380	2	3092	2099	1589	1278	1069
			3	2260	1501	1123	898	748		3	1932	1283	961	768	639
			5	1249	799	587	454	383		5	1068	683	502	397	328
			6	1011	636	463	365	301		6	865	543	396	312	257
			8	724	442	318	248	204		8	619	378	272	212	174
			10	559	332	236	183	150		10	478	284	202	157	128
			15	349	197	137	105	86		15	299	169	117	90	73
			20	250	136	93	71	57		20	214	116	80	61	49
			30	156	81	54	41	33		30	134	69	46	35	28
			40	112	56	37	28	22		40	96	48	32	24	19
			50	86	42	28	21	16.5		50	74	36	24	17.6	14.1
			60	70	33	22	16.2	12.9		60	60	28	18.7	13.9	11.1
			80	50	23	15.1	11.2	8.9		80	43	19.8	12.9	9.6	7.6
			100	39	17.6	11.4	8.4	6.7		100	33	15.1	9.7	7.2	5.7
11	titanium	420	2	3616	2455	1858	1495	1251	380	2	3092	2099	1588	1278	1065
			3	2260	1501	1123	898	748		3	1932	1283	961	768	639
			5	1249	799	587	464	383		5	1068	683	502	397	328
			6	1011	636	463	365	301		6	865	543	396	312	257
			8	724	442	318	248	204		8	619	378	272	212	174
			10	559	332	236	183	150		10	478	284	202	157	128
			15	349	197	137	105	86		15	299	169	117	90	73
			20	250	136	93	71	57		20	214	116	80	61	49
			30	156	81	54	41	33		30	134	69	46	35	28
			40	112	56	37	28	22		40	96	48	32	24	19
			50	86	42	28	21	16.5		50	74	36	24	17.6	14.1
			60	70	33	22	16.2	12.9		60	60	28	18.7	13.9	11.1
			80	50	23	15.1	11.2	8.9		80	43	19.8	12.9	9.6	7.6
			100	39	17.6	11.4	8.4	6.7		100	33	15.1	9.7	7.2	5.7