

# Metric Optimization Chart

jet speed (m/s)	coolant nozzle pressure (bar)			flowrate (l/min) for listed nozzle diameters (mm) and areas (mm <sup>2</sup> )								area diam
	water	miner. oil	ester oil	0.8	3.1	7.1	13	28	50	79	113	
	SG=1.0	SG=0.87	SG=0.93	1	2	3	4	6	8	10	12	
20	2	2	2	0.9	3.5	8.1	15	33	57	90	129	
30	5	4	4	1.4	5.3	12	22	49	86	134	193	
40	8	7	7	1.8	7.1	16	29	64	115	179	258	
50	13	11	12	2.2	9.0	20	36	80	144	224	322	
60	18	16	17	2.6	11	24	43	97	172	268	386	
80	32	28	30	3.6	14	32	57	129	229	358	516	
100	50	44	47	4.4	18	40	72	162	287	448	645	
120	72	63	67	5.3	21	49	86	193	344	537	774	
140	98	85	91	6.2	25	56	100	226	401	627	903	
160	128	111	119	7.1	28	64	115	259	458	716	1031	
180	162	141	151	8.0	33	73	129	290	516	805	1160	
200	200	174	186	8.9	35	81	144	323	573	895	1289	

**Metric Flowrate Chart for a Nozzle with a Coefficient of Discharge of 0.95**

Cool-Grind Technologies LLC