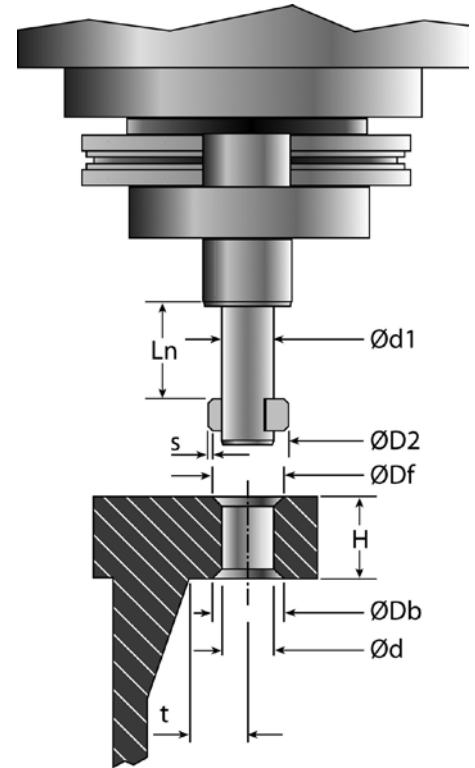


## Cutting Data

Material	Hardness BHN	IPR mm/rev	IPR mm/rev
Carbon Steels	100-250	.001-.003	100-260
		.03-.08	30-79
Free Machining Alloy	125-250	.001-.003	140-200
	125-340	.03-.08	43-61
High Alloy Steel	250-350	.001-.003 .03-.08	100-130 30-40
Stainless Steel	140-250	.001-.003 .03-.08	100-150 30-46
Grey Cast Iron	150-250 200-330	.001-.003 .03-.08	140-240 43-73
Nodular Cast Iron	140-220 220-310	.001-.003 .03-.08	140-210 43-64
Aluminum Alloys	30-180	.001-.003 .03-.08	300-400 91-122
Nickel-based Alloys	140-220	.0008-.0015	20-80
	220-310	.02-.04	6-24
Titanium		.0008-.0015 .02-.04	60-100 18-30
Copper-Brass-Bronze	80-85	.001-.003	240-315
	135-202	.03-.08	73-96



**NOTE:** All listed cutting data are standard values only. In case of hard-to-machine materials or uneven bore edges, we recommend applying cutting speeds that are at the lower end of the range.

### Key Terms

- Ød1** Blade Housing diameter
- ØD2** Over-the-blade diameter setting
- ØD** Chamfer diameter
- ØD(f) – Front chamfer diameter
- ØD(b) – Back chamfer diameter
- Ød** Hole diameter (in process)
- s** Definition surface width (non-cutting portion)
- Ln** Working Length
- H** Workpiece thickness
- t** Clearance from interferences

### Formulas and Guidelines

- ØD2 = ØD + [2 x 's']**
- ØD <** Maximum chamfer diameter is shown for each tool size. DO NOT EXCEED THIS VALUE!
- H < Ln** (use shortest standard Ln value possible)
- t > ØD2/2**
- Recommended (for materials above 28 Rc):
- min: **Ød1 = Ød (mean) - .006"**
- max: **Ød1 = Ød - .012"**