ADR-SUS/ADRL-SUS

Work Materials	Stainless Steels Austenitic 304, 316		Stainless Steels Martensitic Ferritic 420, 440, 430		Stainless Steels Precipitation 17-4PH		Nickel Alloys Inconel/Hasteroy		Nickel Alloys Kovar	
Drill Diameter (mm)	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR	Speed RPM	Feed IPR
Ø0.10~0.29	10,000	0.00001~0.00004	12,500~11,200	0.00002~0.00004	7,100	0.00001~0.00003	4,300	0.00001~0.00003	9,500	0.00001~0.00003
Ø0.30~0.49	8,500~7,900	0.00006~0.00012	10,500~10,000	0.00006~0.00012	6,400~6,000	0.00004~0.00008	3,900~3,600	0.00004~0.00008	8,500~7,900	0.00006~0.00012
Ø0.50~0.79	7,600~6,800	0.00016~0.0004	9,600~9,100	0.00016~0.0004	5,700~5,100	0.00014~0.0003	4,900~4,400	0.00012~0.00024	7,600~6,800	0.00016~0.0004
Ø0.80~1.49	6,800~6,400	0.0006~0.0008	8,800~8,000	0.0006~0.0008	5,100~4,800	0.0004~0.0006	3,100~2,900	0.00028~0.0004	6,800~6,400	0.0006~0.0008
Ø1.50~2.09	4,300~3,200	0.0008~0.0012	5,300~4,000	0.0012 0.002	3,200~2,400	0.0008~0.0012	2,000~1,500	0.0008~0.0012	4,300~3,200	0.0012~0.002
Ø2.10~3.00	2,700	0.0012~0.002	3,200	0.0028	2,000	0.0016	1,200	0.0016	2,700	0.0028

Work Materials	Titanium Alloys Ti-6Al-4V	
Drill Diameter (mm)	Speed RPM	Feed IPR
Ø0.10~0.29	7,400	0.00001~0.00003
Ø0.30~0.49	6,600~6,200	0.00004~0.00008
Ø0.50~0.79	5,900~5,300	0.00012~0.00024
Ø0.80~1.49	5,300~5,000	0.00028~0.0004
Ø1.50~2.09	3,400~2,500	0.0008~0.0012
Ø2.10~3.00	2,000	0.0016

Drill Diameter	Pecking Distance
Ø0.10~Ø0.49	10% of drill diameter
Ø0.50~Ø1.00	20% of drill diameter
Above Ø1.00	*25-50% of drill diameter

*Start at 25% and increase if needed, to 50%

Remarks:

1) Guide-holes are necessary when drilling under Ø1.0mm (0.0394"). Guide-hole prevents chippings and tool breakage during initial drilling.
2) Runout (with drill in spindle) should be less than 0.003mm (0.00012").
3) If your machine cannot meet the recommended rotation speed, please use the higher speed and adjust the feed rate appropriately.
4) For drills under Ø0.5mm (0.0197"), set machine/spindle at the most stable speed rather than following the recommended conditions shown in table.