YG

Being the best through innovation

## HSS-PM

# MULTI-1 DRILLS

- Premium HSS-PM Drills
- For Wide Range of Applications Particularly Stainless Steels and Titanium

# MULTI-1 DRILLS

## RECOMMENDED CUTTING CONDITIONS

## CDRA05, CDRA06, CDRA07 SERIES

## MULTI-1 DRILLS

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

| ISO | VDI 3323 | Material Description | SFM | Drill Diameter | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | METRIC | 2.0 | 3.0 | - | 4.0 | - | 5.0 | 6.0 | - | - | 8.0 | - | 10.0 | 12.0 | - |
| | | | | FRACTIONAL | - | - | 1/8 | - | 3/16 | - | - | 1/4 | 5/16 | - | 3/8 | - | | 1/2 |
| | | | | DECIMAL | .0787 | .1181 | .1250 | .1575 | .1875 | .1969 | .2362 | .2500 | .3125 | .3150 | .3750 | .3937 | | .5000 |
| P | 1 | Non-alloy steel | 130 | RPM | 6370 | 4240 | | 3180 | 2550 | | 2120 | | 1590 | | 1270 | | 1060 | |
| | | | | FEED | .0012 - .0024 | .0031 - .0047 | | .0035 - .0059 | .0047 - .0071 | | .0055 - .0079 | | .0071 - .0094 | | .0071 - .0110 | | .0079 - .0118 | |
| | 2 | | 120 | RPM | 5570 | 3710 | | 2790 | 2230 | | 1860 | | 1390 | | 1110 | | 930 | |
| | | | | FEED | .0012 - .0024 | .0031 - .0047 | | .0035 - .0059 | .0047 - .0071 | | .0055 - .0079 | | .0071 - .0094 | | .0071 - .0110 | | .0079 - .0118 | |
| | 3 | | 120 | RPM | 5570 | 3710 | | 2790 | 2230 | | 1860 | | 1390 | | 1110 | | 930 | |
| | | | | FEED | .0012 - .0024 | .0031 - .0047 | | .0035 - .0059 | .0047 - .0071 | | .0055 - .0079 | | .0071 - .0094 | | .0071 - .0110 | | .0079 - .0118 | |
| | 6 | Low alloy steel | 120 | RPM | 5570 | 3710 | | 2790 | 2230 | | 1860 | | 1390 | | 1110 | | 930 | |
| | | | | FEED | .0012 - .0024 | .0031 - .0047 | | .0035 - .0059 | .0047 - .0071 | | .0055 - .0079 | | .0071 - .0094 | | .0071 - .0110 | | .0079 - .0118 | |
| | 7 | | 100 | RPM | 4770 | 3180 | | 2390 | 1910 | | 1590 | | 1190 | | 950 | | 800 | |
| | | | | FEED | .0012 - .0020 | .0024 - .0039 | | .0028 - .0051 | .0039 - .0063 | | .0047 - .0071 | | .0055 - .0079 | | .0055 - .0094 | | .0063 - .0102 | |
| | 8 | | 80 | RPM | 3980 | 2650 | | 1990 | 1590 | | 1330 | | 990 | | 800 | | 660 | |
| | | | | FEED | .0008 - .0020 | .0012 - .0028 | | .0016 - .0039 | .0024 - .0047 | | .0028 - .0051 | | .0039 - .0079 | | .0047 - .0087 | | .0055 - .0094 | |
| | 9 | | 70 | RPM | 3180 | 2120 | | 1590 | 1270 | | 1060 | | 800 | | 640 | | 530 | |
| | | | | FEED | .0008 - .0020 | .0012 - .0028 | | .0016 - .0039 | .0024 - .0047 | | .0028 - .0051 | | .0039 - .0079 | | .0047 - .0087 | | .0055 - .0094 | |
| M | 12 | Stainless steel | 70 | RPM | 3180 | 2120 | | 1590 | 1270 | | 1060 | | 800 | | 640 | | 530 | |
| | | | | FEED | .0012 - .0028 | .0020 - .0035 | | .0024 - .0047 | .0035 - .0059 | | .0047 - .0071 | | .0071 - .0094 | | .0079 - .0118 | | .0102 - .0142 | |
| | 14 | | 50 | RPM | 2390 | 1590 | | 1190 | 950 | | 800 | | 600 | | 480 | | 400 | |
| | | | | FEED | .0008 - .0020 | .0012 - .0028 | | .0016 - .0039 | .0024 - .0047 | | .0028 - .0051 | | .0039 - .0079 | | .0047 - .0087 | | .0055 - .0094 | |
| K | 15 | Grey cast iron | 130 | RPM | 6370 | 4240 | | 3180 | 2550 | | 2120 | | 1590 | | 1270 | | 1060 | |
| | | | | FEED | .0016 - .0039 | .0028 - .0051 | | .0035 - .0059 | .0047 - .0071 | | .0051 - .0075 | | .0071 - .0094 | | .0079 - .0118 | | .0087 - .0126 | |
| N | 21 | Aluminum-wrought alloy | 300 | RPM | 14320 | 9550 | | 7160 | 5730 | | 4770 | | 3580 | | 2860 | | 2390 | |
| | | | | FEED | .0051 - .0067 | .0091 - .0106 | | .0106 - .0130 | .0130 - .0154 | | .0157 - .0181 | | .0177 - .0201 | | .0201 - .0240 | | .0248 - .0287 | |
| | 22 | | 300 | RPM | 14320 | 9550 | | 7160 | 5730 | | 4770 | | 3580 | | 2860 | | 2390 | |
| | | | | FEED | .0051 - .0067 | .0091 - .0106 | | .0106 - .0130 | .0130 - .0154 | | .0157 - .0181 | | .0177 - .0201 | | .0201 - .0240 | | .0248 - .0287 | |
| | 23 | Aluminum-cast, alloyed | 260 | RPM | 12730 | 8490 | | 6370 | 5090 | | 4240 | | 3180 | | 2550 | | 2120 | |
| | | | | FEED | .0051 - .0067 | .0091 - .0106 | | .0106 - .0130 | .0130 - .0154 | | .0157 - .0181 | | .0177 - .0201 | | .0201 - .0240 | | .0248 - .0287 | |
| | 24 | | 230 | RPM | 11140 | 7430 | | 5570 | 4460 | | 3710 | | 2790 | | 2230 | | 1860 | |
| | | | | FEED | .0039 - .0055 | .0059 - .0075 | | .0079 - .0102 | .0094 - .0118 | | .011 - .0134 | | .0118 - .0142 | | .0134 - .0173 | | .0142 - .0181 | |
| S | 36 | Titanium Alloys | 20 | RPM | 800 | 530 | | 400 | 320 | | 270 | | 200 | | 160 | | 130 | |
| | | | | FEED | .0008 - .0020 | .0012 - .0028 | | .0016 - .0031 | .0024 - .0047 | | .0028 - .0051 | | .0035 - .0059 | | .0047 - .0087 | | .0055 - .0094 | |