

# 16mm Series Recommended Parameters

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| Style | Grade | Coating   | Speed / Feed | Low-Carbon Steel | Alloy Steel      | Tool Steels      | Medium Hardened Steel (36-48 Rc) | Hardened Steel (> 48 Rc) | Austenitic Stainless | Ferritic / Martensitic Stainless | Tough PH Stainless | Gray Cast Iron  | Ductile / Malleable | Ni Co-Based Alloys | 9 Series Inconel | Titanium | Copper Alloys | Aluminum Alloys / Non-Ferrous |  |  |
|-------|-------|-----------|--------------|------------------|------------------|------------------|----------------------------------|--------------------------|----------------------|----------------------------------|--------------------|-----------------|---------------------|--------------------|------------------|----------|---------------|-------------------------------|--|--|
| APET  | DMP35 | TCI       | Speed        | <b>500-800</b>   | <b>400-700</b>   | 250-550          |                                  |                          |                      |                                  |                    | 500-800         | 400-700             |                    |                  |          |               |                               |  |  |
|       |       |           | Feed         | <b>.005-.012</b> | <b>.005-.012</b> | .005-.010        |                                  |                          |                      |                                  |                    |                 |                     | .005-.012          | .005-.012        |          |               |                               |  |  |
|       |       | GLH       | Speed        | <b>700-1000</b>  | <b>500-800</b>   | 250-550          |                                  |                          |                      |                                  |                    |                 |                     | 600-1000           | 500-900          |          |               |                               |  |  |
|       |       |           | Feed         | <b>.005-.012</b> | <b>.005-.012</b> | .005-.010        |                                  |                          |                      |                                  |                    |                 |                     | .005-.012          | .005-.012        |          |               |                               |  |  |
|       |       | HM        | Speed        | 700-1000         | 500-800          | 250-550          |                                  |                          |                      |                                  |                    |                 |                     | 600-1000           | 500-900          |          |               |                               |  |  |
|       |       |           | Feed         | .005-.012        | .005-.012        | .005-.010        |                                  |                          |                      |                                  |                    |                 |                     | .005-.012          | .005-.012        |          |               |                               |  |  |
|       | DMP30 | HP        | Speed        | 500-900          | 400-800          | 350-550          | 300-450                          |                          |                      |                                  |                    |                 | 600-900             | 500-800            |                  |          |               |                               |  |  |
|       |       |           | Feed         | .005-.012        | .005-.012        | .005-.010        | .004-.008                        |                          |                      |                                  |                    |                 |                     | .005-.012          | .005-.012        |          |               |                               |  |  |
|       |       | TCI       | Speed        | <b>500-900</b>   | <b>400-800</b>   | 350-550          | 300-450                          |                          |                      |                                  |                    |                 |                     | 600-900            | <b>500-800</b>   |          |               |                               |  |  |
|       |       |           | Feed         | <b>.005-.012</b> | <b>.005-.012</b> | .005-.010        | .004-.008                        |                          |                      |                                  |                    |                 |                     | .005-.012          | <b>.005-.012</b> |          |               |                               |  |  |
|       |       | GLH       | Speed        | <b>700-1200</b>  | <b>500-900</b>   | <b>350-650</b>   | <b>300-500</b>                   |                          |                      |                                  |                    |                 |                     | 600-1000           | <b>500-900</b>   |          |               |                               |  |  |
|       |       |           | Feed         | <b>.005-.012</b> | <b>.005-.012</b> | <b>.005-.010</b> | <b>.004-.008</b>                 |                          |                      |                                  |                    |                 |                     | .005-.012          | <b>.005-.012</b> |          |               |                               |  |  |
| HM    | Speed | 700-1200  | 500-900      | <b>350-650</b>   | <b>300-500</b>   |                  |                                  |                          |                      |                                  |                    | 600-1000        | <b>500-900</b>      |                    |                  |          |               |                               |  |  |
|       | Feed  | .005-.012 | .005-.012    | <b>.005-.010</b> | <b>.004-.008</b> |                  |                                  |                          |                      |                                  |                    | .005-.012       | <b>.005-.012</b>    |                    |                  |          |               |                               |  |  |
| DMK25 | TCI   | Speed     | 500-900      | 400-800          | 350-550          | 300-450          |                                  |                          |                      |                                  |                    | <b>600-1000</b> | <b>600-900</b>      |                    |                  |          |               |                               |  |  |
|       |       | Feed      | .004-.010    | .004-.009        | .004-.008        | .003-.007        |                                  |                          |                      |                                  |                    |                 | <b>.005-.012</b>    | <b>.005-.012</b>   |                  |          |               |                               |  |  |
|       | GLH   | Speed     | 700-1200     | 500-900          | 350-650          | <b>300-500</b>   | <b>250-450</b>                   |                          |                      |                                  |                    |                 | <b>700-1200</b>     | <b>600-900</b>     |                  |          |               |                               |  |  |
|       |       | Feed      | .004-.010    | .004-.009        | .004-.008        | <b>.003-.007</b> | <b>.003-.006</b>                 |                          |                      |                                  |                    |                 | <b>.005-.012</b>    | <b>.005-.012</b>   |                  |          |               |                               |  |  |
|       | HM    | Speed     | 700-1200     | 500-900          | 350-650          | <b>300-500</b>   | <b>250-450</b>                   |                          |                      |                                  |                    |                 | <b>700-1200</b>     | <b>600-900</b>     |                  |          |               |                               |  |  |
|       |       | Feed      | .004-.010    | .004-.009        | .004-.008        | <b>.003-.007</b> | <b>.003-.006</b>                 |                          |                      |                                  |                    |                 | <b>.005-.012</b>    | <b>.005-.012</b>   |                  |          |               |                               |  |  |

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- › The parameters provided are suggested starting operating parameters.
- › See page IM-155 for insert grade and coating selection.

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| Style    | Grade  | Coating        | Speed / Feed     | Low-Carbon Steel | Alloy Steel      | Tool Steels      | Medium Hardened Steel (36-48 Rc) | Hardened Steel (> 48 Rc) | Austenitic Stainless | Ferritic / Martensitic Stainless | Tough PH Stainless | Gray Cast Iron   | Ductile / Malleable | Ni Co-Based Alloys | 9 Series Inconel | Titanium         | Copper Alloys    | Aluminum Alloys / Non-Ferrous |                  |                  |
|----------|--------|----------------|------------------|------------------|------------------|------------------|----------------------------------|--------------------------|----------------------|----------------------------------|--------------------|------------------|---------------------|--------------------|------------------|------------------|------------------|-------------------------------|------------------|------------------|
| XPET     | DMK35  | HM             | Speed            |                  |                  |                  |                                  |                          | 250-500              |                                  | <b>250-500</b>     |                  |                     | <b>55-90</b>       | <b>35-65</b>     | <b>120-180</b>   |                  |                               |                  |                  |
|          |        |                | Feed             |                  |                  |                  |                                  |                          | .003-.008            |                                  | <b>.003-.007</b>   |                  |                     | <b>.002-.006</b>   | <b>.002-.005</b> | <b>.003-.007</b> |                  |                               |                  |                  |
|          |        | IN             | Speed            |                  |                  |                  |                                  |                          |                      | 300-600                          |                    | <b>250-500</b>   |                     |                    | <b>55-90</b>     | <b>35-65</b>     | <b>120-180</b>   |                               |                  |                  |
|          |        |                | Feed             |                  |                  |                  |                                  |                          |                      | .003-.008                        |                    | <b>.003-.007</b> |                     |                    | <b>.002-.006</b> | <b>.002-.005</b> | <b>.003-.007</b> |                               |                  |                  |
|          |        | TS             | Speed            |                  |                  |                  |                                  |                          |                      | 300-600                          |                    | <b>250-500</b>   |                     |                    | <b>55-90</b>     | <b>35-65</b>     | <b>120-180</b>   |                               |                  |                  |
|          |        |                | Feed             |                  |                  |                  |                                  |                          |                      | .003-.008                        |                    | <b>.003-.007</b> |                     |                    | <b>.002-.006</b> | <b>.002-.005</b> | <b>.003-.007</b> |                               |                  |                  |
|          | DMP35  | TCI            | Speed            | <b>500-800</b>   | 400-700          | 250-450          |                                  |                          | 300-500              | <b>400-800</b>                   | 250-450            | 500-800          | 400-700             |                    |                  |                  |                  |                               | 400-900          |                  |
|          |        |                | Feed             | <b>.003-.010</b> | .003-.009        | .003-.007        |                                  |                          | .003-.008            | <b>.003-.010</b>                 | .003-.007          | .003-.010        | .003-.009           |                    |                  |                  |                  |                               | .003-.009        |                  |
|          |        | GLH            | Speed            | <b>700-1000</b>  | 500-900          | 250-550          |                                  |                          | <b>300-600</b>       | <b>500-900</b>                   | <b>250-500</b>     | 600-1000         | 500-900             | <b>55-90</b>       | <b>35-65</b>     | <b>120-180</b>   | 400-900          |                               |                  |                  |
|          |        |                | Feed             | <b>.003-.010</b> | .003-.009        | .003-.007        |                                  |                          | <b>.003-.008</b>     | <b>.003-.010</b>                 | <b>.003-.007</b>   | .003-.010        | .003-.009           | <b>.002-.006</b>   | <b>.002-.005</b> | <b>.003-.007</b> | .003-.009        |                               |                  |                  |
|          |        | HM             | Speed            | 700-1000         | 500-900          | 250-550          |                                  |                          | <b>300-600</b>       | 500-900                          | <b>250-500</b>     | 600-1000         | 500-900             | <b>55-90</b>       | <b>35-65</b>     | <b>120-180</b>   |                  |                               |                  |                  |
|          |        |                | Feed             | .003-.010        | .003-.009        | .003-.007        |                                  |                          | <b>.003-.008</b>     | .003-.010                        | <b>.003-.007</b>   | .003-.010        | .003-.009           | <b>.002-.006</b>   | <b>.002-.005</b> | <b>.003-.007</b> |                  |                               |                  |                  |
|          |        | IN             | Speed            |                  |                  |                  |                                  |                          |                      |                                  |                    | 250-500          |                     |                    | 55-90            | 35-65            | 120-180          |                               |                  |                  |
|          |        |                | Feed             |                  |                  |                  |                                  |                          |                      |                                  |                    | .003-.007        |                     |                    | .002-.006        | .002-.005        | .003-.007        |                               |                  |                  |
|          | DMK30  | TCI            | Speed            | 500-900          | 400-800          | 350-550          |                                  |                          | 300-500              | 400-800                          | 250-450            | <b>500-900</b>   | <b>500-800</b>      |                    |                  |                  |                  |                               | <b>400-900</b>   |                  |
|          |        |                | Feed             | .003-.008        | .003-.007        | .003-.007        |                                  |                          | .003-.007            | .003-.008                        | .003-.006          | <b>.003-.009</b> | <b>.003-.008</b>    |                    |                  |                  |                  |                               | <b>.003-.009</b> |                  |
|          |        | GLH            | Speed            | 700-1000         | 500-900          | <b>250-650</b>   |                                  |                          | 300-600              | 500-900                          | 250-500            | <b>600-1000</b>  | <b>500-900</b>      |                    |                  |                  |                  |                               | <b>400-900</b>   |                  |
|          |        |                | Feed             | .003-.008        | .003-.007        | <b>.003-.007</b> |                                  |                          | .003-.007            | .003-.008                        | .003-.006          | <b>.003-.009</b> | <b>.003-.008</b>    |                    |                  |                  |                  |                               | <b>.003-.009</b> |                  |
|          |        | HM             | Speed            | 700-1000         | 500-900          | <b>250-650</b>   |                                  |                          | 300-600              | 500-900                          | 250-500            | <b>600-1000</b>  | <b>500-900</b>      |                    |                  |                  |                  |                               |                  |                  |
|          |        |                | Feed             | .003-.008        | .003-.007        | <b>.003-.007</b> |                                  |                          | .003-.007            | .003-.008                        | .003-.006          | <b>.003-.009</b> | <b>.003-.008</b>    |                    |                  |                  |                  |                               |                  |                  |
|          | DMP30  | HP             | Speed            | 500-900          | 400-800          | 350-550          | 300-450                          |                          |                      |                                  |                    |                  | 500-900             | 500-800            |                  |                  |                  |                               |                  |                  |
|          |        |                | Feed             | .003-.009        | .003-.008        | .003-.007        | .003-.006                        |                          |                      |                                  |                    |                  |                     | .003-.009          | .003-.008        |                  |                  |                               |                  |                  |
|          |        | TCI            | Speed            | <b>500-900</b>   | <b>400-800</b>   | 350-550          | 300-450                          |                          |                      |                                  |                    |                  |                     | 600-900            | 500-800          |                  |                  |                               |                  |                  |
|          |        |                | Feed             | <b>.003-.009</b> | <b>.003-.008</b> | .003-.007        | .003-.006                        |                          |                      |                                  |                    |                  |                     | .003-.009          | .003-.008        |                  |                  |                               |                  |                  |
| GLH      |        | Speed          | <b>700-1200</b>  | <b>500-900</b>   | 350-650          | 300-500          |                                  |                          |                      |                                  |                    |                  | 600-1000            | 500-900            |                  |                  |                  |                               |                  |                  |
|          |        | Feed           | <b>.003-.009</b> | <b>.003-.008</b> | .003-.007        | .003-.006        |                                  |                          |                      |                                  |                    |                  | .003-.009           | .003-.008          |                  |                  |                  |                               |                  |                  |
| HM       |        | Speed          | 700-1200         | 500-900          | 350-650          | 300-500          |                                  |                          |                      |                                  |                    |                  | 600-1000            | 500-900            |                  |                  |                  |                               |                  |                  |
|          |        | Feed           | .003-.009        | .003-.008        | .003-.007        | .003-.006        |                                  |                          |                      |                                  |                    |                  | .003-.009           | .003-.008          |                  |                  |                  |                               |                  |                  |
| DMK25    | TCI    | Speed          |                  |                  |                  |                  |                                  |                          |                      |                                  |                    | <b>500-900</b>   | 500-800             |                    |                  |                  |                  | <b>400-900</b>                |                  |                  |
|          |        | Feed           |                  |                  |                  |                  |                                  |                          |                      |                                  |                    |                  | <b>.003-.009</b>    | .003-.008          |                  |                  |                  | <b>.003-.009</b>              |                  |                  |
|          | GLH    | Speed          |                  |                  |                  |                  |                                  |                          |                      |                                  |                    |                  | <b>600-1000</b>     | 500-900            |                  |                  |                  | <b>400-900</b>                |                  |                  |
|          |        | Feed           |                  |                  |                  |                  |                                  |                          |                      |                                  |                    |                  | <b>.003-.009</b>    | .003-.008          |                  |                  |                  | <b>.003-.009</b>              |                  |                  |
|          | HM     | Speed          |                  |                  |                  |                  |                                  |                          |                      |                                  |                    |                  | <b>600-1000</b>     | 500-900            |                  |                  |                  | <b>400-900</b>                |                  |                  |
|          |        | Feed           |                  |                  |                  |                  |                                  |                          |                      |                                  |                    |                  | <b>.003-.009</b>    | .003-.008          |                  |                  |                  | <b>.003-.009</b>              |                  |                  |
| DL       | Speed  |                |                  |                  |                  |                  |                                  |                          |                      |                                  |                    |                  |                     |                    |                  |                  |                  | <b>1000+ (cast)</b>           |                  |                  |
|          | Feed   |                |                  |                  |                  |                  |                                  |                          |                      |                                  |                    |                  |                     |                    |                  |                  |                  | <b>.007-.015</b>              |                  |                  |
| XPET-ALU | DMK25  | GLH            | Speed            |                  |                  |                  |                                  |                          |                      |                                  |                    |                  |                     |                    |                  |                  |                  |                               | 1500+            |                  |
|          |        |                | Feed             |                  |                  |                  |                                  |                          |                      |                                  |                    |                  |                     |                    |                  |                  |                  |                               | .010-.025        |                  |
|          |        | DL             | Speed            |                  |                  |                  |                                  |                          |                      |                                  |                    |                  |                     |                    |                  |                  |                  |                               |                  | <b>1500+</b>     |
|          |        |                | Feed             |                  |                  |                  |                                  |                          |                      |                                  |                    |                  |                     |                    |                  |                  |                  |                               |                  | <b>.010-.025</b> |
|          |        | Uncoated       | Speed            |                  |                  |                  |                                  |                          |                      |                                  |                    |                  |                     |                    |                  |                  |                  |                               |                  | <b>1500+</b>     |
|          |        |                | Feed             |                  |                  |                  |                                  |                          |                      |                                  |                    |                  |                     |                    |                  |                  |                  |                               |                  | <b>.010-.025</b> |
|          | PCD225 | Diamond-Tipped | Speed            |                  |                  |                  |                                  |                          |                      |                                  |                    |                  |                     |                    |                  |                  |                  |                               |                  | <b>1500+</b>     |
|          |        |                | Feed             |                  |                  |                  |                                  |                          |                      |                                  |                    |                  |                     |                    |                  |                  |                  |                               |                  | <b>.003-.015</b> |

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