

Magnetic Properties of Net-shape Pressed Magnets



Magnetic properties of sintered Nd-Fe-B permanent magnets at room temperature (20 °C)
Single Pressing Process

| No. | Material | B_r | | $H_{cJ,min}$ | | $H_{cB,min}$ | | $(BH)_{max}$ | | T_{max} (°C) |
|-----|----------|-------------|---------------|--------------|-----|--------------|------|-----------------|-----------|----------------|
| | Grade | T | kGs | kA/m | kOe | kA/m | kOe | kJ/m^3 | MGOe | |
| 1 | 45SH | 1.33 - 1.38 | 13.30 - 13.80 | 1592 | 20 | 1003 | 12,6 | 338 - 366 | 42.5 - 46 | 150°C |
| 2 | G48SH | 1.37 - 1.43 | 13.65 - 14.25 | 1592 | 20 | 1027 | 12,9 | 358 - 390 | 45 - 49 | 150°C |
| 3 | 40UH | 1.26 - 1.30 | 12.60 - 13.00 | 1990 | 25 | 947 | 11,9 | 302 - 326 | 38 - 41 | 180°C |
| 4 | G42UH | 1.29 - 1.34 | 12.85 - 13.35 | 1990 | 25 | 963 | 12,1 | 318 - 342 | 40 - 43 | 180°C |
| 5 | 38EH | 1.22 - 1.27 | 12.20 - 12.70 | 2388 | 30 | 923 | 11,6 | 287 - 314 | 36 - 39.5 | 200°C |
| 6 | G40EH | 1.26 - 1.31 | 12.55 - 13.05 | 2388 | 30 | 939 | 11,8 | 302 - 326 | 38 - 41 | 200°C |
| 7 | 33TH | 1.14 - 1.19 | 11.35 - 11.85 | 2786 | 35 | 852 | 10,7 | 247 - 271 | 31 - 34 | 240°C |
| 8 | G35TH | 1.17 - 1.22 | 11.70 - 12.20 | 2786 | 35 | 891 | 11,2 | 263 - 287 | 33 - 36 | 240°C |

Note: G refers to the grain boundary diffusion – GBD material grades.