



1. Dimension and Weight

| Model | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) | G (mm) | H (mm) | Weight (kg) |
|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------------|
| Qz-0.1 | 132 | 84 | 125 | 125 | 60 | 72 | 46 | 32 | 5 |
| Qz-0.3 | 206 | 160 | 172 | 220 | 100 | 110 | 52 | 52 | 12 |
| Qz-0.6 | 285 | 222 | 208 | 250 | 134 | 120 | 60 | 78 | 26 |
| Qz-1.0 | 325 | 260 | 258 | 330 | 164 | 158 | 76 | 78 | 46 |
| Qz-2.0 | 412 | 348 | 300 | 480 | 202 | 195 | 83 | 98 | 78 |
| QZ-3.0 | 485 | 420 | 432 | 560 | 250 | 242 | 158 | 52 | 175 |
| QZ-5.0 | 600 | 520 | 520 | 720 | 295 | 289 | 190 | 60 | 320 |
| QZ-6.0 | 636 | 556 | 520 | 720 | 295 | 289 | 190 | 60 | 340 |

2. Other Technical Specification

| Model | Max. Lifting Capacity (kg) | | Object Thickness (mm) | Object Diameter (mm) | Object Length (mm) | Pull-off Force (kg. f) | Working Temperature (°C) |
|--------|----------------------------|-------|-----------------------|----------------------|--------------------|------------------------|----------------------------|
| | Plate | Round | | | | | |
| Qz-0.1 | 100 | 50 | >10 | 80-150 | <1500 | 350 | <80 |
| Qz-0.3 | 300 | 150 | >15 | 100-200 | <2000 | 1050 | |
| Qz-0.6 | 600 | 300 | >20 | 120-250 | <2500 | 2100 | |
| Qz-1.0 | 1000 | 500 | >25 | 150-350 | <3000 | 3500 | |
| Qz-2.0 | 2000 | 1000 | >35 | 200-450 | <3500 | 7000 | |
| QZ-3.0 | 3000 | / | >45 | / | <3700 | 9000 | |
| QZ-5.0 | 5000 | / | >50 | / | <4000 | 15000 | |
| QZ-6.0 | 6000 | / | >50 | / | <4000 | 18000 | |

3. Model selection

The correct model choosing should be depend on area and coarseness of contacting surface, gap between the hoisted object and permanent magnet jack, weight balancing, piece thickness, weight and material of object etc, and the diameter of object if we are lifting a round one.

3.1 The relation between steel plate thickness and lifting capacity:

| Tx | Object Thickness (mm) | Ratio of Rated Lifting Capacity | | | | | | |
|-----|-----------------------|---------------------------------|--------|--------|--------|--------|--------|--------|
| | | Qz-5.0 | Qz-3.0 | Qz-2.0 | Qz-1.0 | Qz-0.6 | Qz-0.3 | Qz-0.1 |
| T1 | Up 65 | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| T2 | 60 | 95% | 100% | | | | | |
| T3 | 55 | 90% | 95% | | | | | |
| T4 | 50 | 85% | 90% | | | | | |
| T5 | 45 | 75% | 85% | | | | | |
| T6 | 40 | 70% | 80% | | | | | |
| T7 | 35 | 60% | 70% | | | | | |
| T8 | 30 | 55% | 60% | 65% | 80% | 90% | 90% | |
| T9 | 25 | 45% | 50% | 55% | 70% | | | |
| T10 | 20 | 35% | 40% | 45% | 60% | | | |
| T11 | 15 | 25% | 30% | 35% | 50% | 60% | 70% | 70% |
| T12 | 10 | 15% | 20% | 25% | 35% | 45% | 50% | |
| T13 | 5 | 5% | 10% | 15% | 20% | 25% | 30% | 40% |

3.2 The relation between surface coarseness and lifting capacity

| | 0 | 50% | 100% | 125% |
|----|---|----------|------|------|
| F1 | | 1.6 μ m | | 125% |
| F2 | | 6.3 μ m | | 100% |
| F3 | | 12.6 μ m | | 90% |
| F4 | | ~ | | 80% |

3.3 The relation between hoisting capability and material of object

| | 0 | 50% | 100% |
|----|---|-----------------------|------|
| M1 | | Low carbon steel | 100% |
| M2 | | Mild carbon steel | 95% |
| M3 | | High carbon steel | 85% |
| M4 | | Low metal alloy steel | 75% |
| M5 | | Cast iron | 60% |

3.4 Conversion equation of safety lifting capacity (Lf)

$$L_f = T_x * F_x * M_x * \text{rated lifting capacity}$$

3.5 For example

Object condition: T9, F1, M3, 1000Kg (Qz -1.0)

$$L_f = 70\% * 125\% * 85\% * 1000 = 744\text{Kg}$$

3.6 In lifting a round object within stipulated diameter range, the safe lifting capacity is 35%----50% of capacity of lifting a plate shape object. The lifter will output stronger lifting capacity when the object is with bigger diameter.