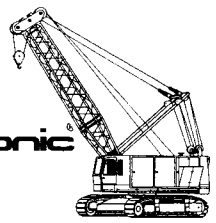
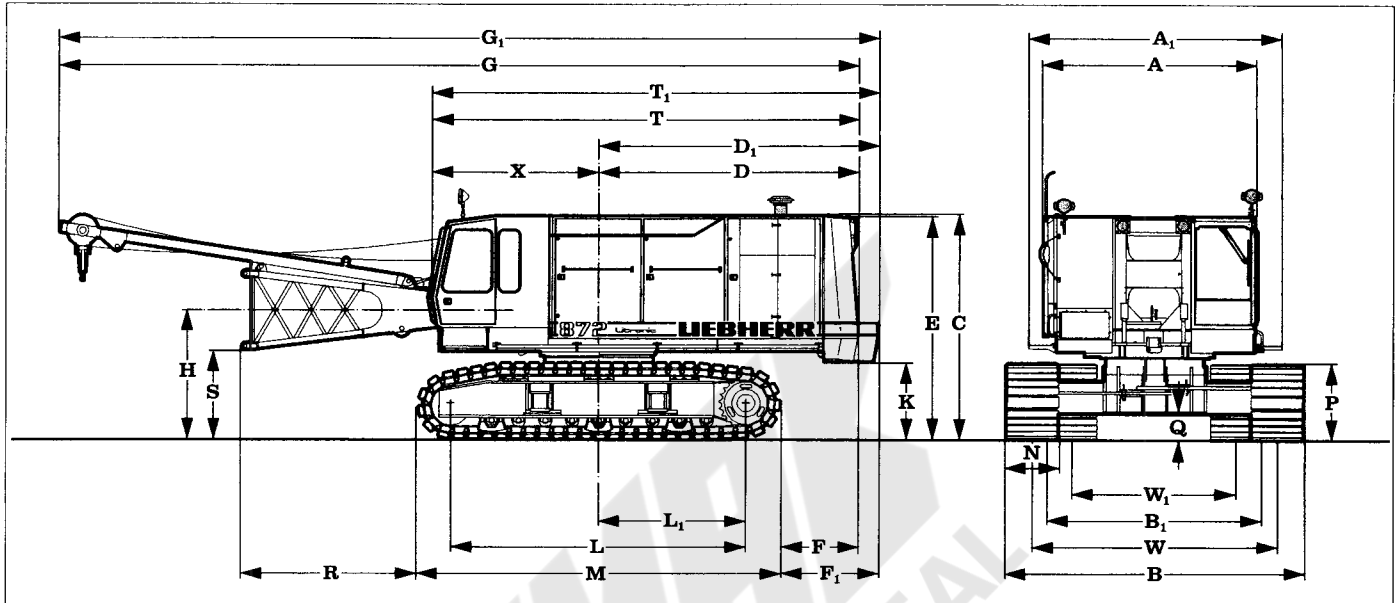


Technical Data Hydraulic Cable Excavator HS 872 HD Litronic



Basic Machine



Dimensions

| | mm | | | | |
|----------------|--|-----------|----------------|---|---------------------|
| A | Width of superstructure | 3300/3480 | R | Distance of horizontal boom foot to crawler | 2243 |
| A ₁ | Width of superstructure with walk way | 4040 | S | Ground clearance of horizontal boom foot | 1370 |
| C | Clearance height of basic machine | 3607 | T | Length of basic machine | 8337 |
| D | Tail reach | 5100 | T ₁ | Length of basic machine with add. counterweight of 4.5 mt | 8697 |
| | Tail swing radius | 5150 | X | Distance from centre of rotation to end of cab | 2625 |
| D ₁ | Tail reach with add. counterweight of 4.5 mt | 5460 | | | |
| | Tail swing radius with add. counterweight of 4.5 mt | 5510 | N | Width of track shoes | 700 800 900 1000 |
| E | Height over counterweight | 3516 | W ₁ | Track width retracted | 2980 2980 2980 2980 |
| F | Distance between rear end of crawler and outside of counterweight | 1880 | W | Track width extended | 3900 3900 3900 3900 |
| F ₁ | Distance between rear end of crawler and outside of add. counterweight | 2240 | B ₁ | Crawler width retracted | 4000 4000 4000 4000 |
| G | Overall length of superstructure with lowered A-frame | 13780 | B | Crawler width extended | 4600 4700 4800 4900 |
| G ₁ | Overall length of superstructure with lowered A-frame and add. counterweight | 14140 | | | |
| H | Ground clearance of boom foot pivot | 2090 | | | |
| K | Clearance under superstructure to ground level | 1260 | | | |
| L | Wheel base (center idler to center tumbler) | 5312 | | | |
| L ₁ | Distance from center of rotation to center of tumbler | 2656 | | | |
| M | Length of crawlers | 6444 | | | |
| P | Height of crawlers | 1278 | | | |
| Q | Ground clearance of crawler | 523 | | | |

Operating Weight and Ground Pressure

The operating weight includes the basic machine with B8 crawler tracks, 2 main winches and 11 m HD-boom, consisting of A-frame, boom foot (4 m), boom head section (6.4 m), boom head (0.6 m) and 19.6 mt basic counterweight + 4.5 mt add. counterweight.

| | |
|--------------------------------|-----------------------------------|
| with 700 mm flat track shoes: | 94.1 mt - 1.15 kg/cm ² |
| with 800 mm flat track shoes: | 95.1 mt - 1.02 kg/cm ² |
| with 900 mm flat track shoes: | 96.1 mt - 0.91 kg/cm ² |
| with 1000 mm flat track shoes: | 97.1 mt - 0.83 kg/cm ² |
| with 700 mm 3-web shoes: | 92.2 mt - 1.18 kg/cm ² |
| with 800 mm 3-web shoes: | 93.0 mt - 1.04 kg/cm ² |
| with 900 mm 3-web shoes: | 93.8 mt - 0.94 kg/cm ² |
| with 1000 mm 3-web shoes: | 94.6 mt - 0.85 kg/cm ² |

LIEBHERR

The Better Machine.



Engine

Mercedes-Benz, watercooled V-8 diesel, turbocharged with intercooler. Power rating according DIN 6271: Model OM 442 LA with 297 kW (404 HP) or Model OM 444 LA with 448 kW (609 HP) at 1900 RPM. Fuel tank: 920 l continuous fuel consumption indication with emergency tank level indication at approx. 40 l.



Hydraulic System

Four main pumps are driven by a distributor gear box. The axial piston displacement pumps work in a closed circuit supplying oil only when needed. A low loss pressure cut-off takes care of the pumps and saves energy. Winch 1 and 2: Axial piston displacement pumps (swash plate design) 565 l/min. each. Slewing gear: Axial piston displacement pump (swash plate design) 203 l/min. Boom hoist: Axial piston displacement pump (swash plate design) 203 l/min. Max. working pressure: 340 bar Hydraulic oil tank: 500 l capacity. Optional: Possibility of re-direction boom pump flow to the slewing gear for higher speed. Extended hydraulic system to drive external equipment with hydrostatic power. Oil tank of 1200 l.



Winches 1 and 2

| Winch options: | 16 mt | 20 mt | 25 mt |
|-----------------------------|--------|---------|---------|
| Line pull (nominal load): | 160 kN | 200 kN | 250 kN |
| Rope diameter: | 26 mm | 30 mm | 34 mm |
| Rope drum diameter: | 550 mm | 640 mm | 750 mm |
| Line speed 1st layer m/min. | 0 - 93 | 0 - 74 | 0 - 62 |
| Line speed fast gear m/min. | | 0 - 124 | 0 - 115 |

Planetary gearbox in oil bath. Load support by hydraulic system. Additional security through spring loaded multi disc brake (parking brake). In the freefall mode the clutch and brake function is realized by a separate ample dimensioned multi disc working brake. The hoist and drag winches use variable oil motors controlled by high pressure. This allows the complete utilisation of the installed motorpower with partial loads through speed adaption. In clamshell operation the oilmotors distribute the load on both winches and compensate speed when working in different cable layers. Optional: Auxiliary winch: 50 kN (5 mt) Crane winch: 160 kN (16 mt) - with multi-disc brake but without free fall device.



Swing Drive

Single row ball bearing with external toothing for lower tooth flank pressure. Fixed axial piston oil motor, planetary gearbox, spring loaded and hydraulically released multi disc brake, swing gear pinion. A precision swing gear allows variable speed control within 3 selectable speed ranges, swing speed 0 - 3.3 RPM; freewheel moment control of superstructure, therefore almost wearless. Moment force sustained by diesel engine. Optional: Second swing gear.



Boom Hoist Drive

Twin drum with internally located planetary gearbox, axial piston oil motor, hydraulically released spring-loaded multi-disc brake. Max. line pull 2 x 70 kN (2 x 7 mt). Rope diameter 20 mm, line speed 0 - 27 m/min. Optional: Pre selection switch for 2 speed ranges.



Crawler

Propulsion through axial piston motor, hydraulically released spring-loaded multi-disc brake, planetary gear box, maintenance free crawler tracks, hydraulic-type chain tensioning device, flat track- or 3-web shoes. Driving speed 0 - 2.4 km/h. Optional: 2 speed oil motor for higher driving speeds.



Control System

Electric control impulses are prepared for hydraulic control in the programmable electronic part. The specially treated electronic components are designed for the hard environment for this type of machine. Master control lever (cross movement) for swing and boom movements, double T-lever for winch 1 and 2 or crawlers. Electro-hydraulic continuous proportioning control for work and displacement motions. Dragline only: Interlock control. Cinematic reversal energy for drag winch is transmitted to the hoist winch, when lifting full bucket to dump, thus saving brakes and energy. Please ask for details of our patented automatic free fall device.



Equipment

- Tubular HD boom up to 50 m.
- Multi sheave HD boom head or dragline boom head.
- Dragline, clamshell or crane equipment.
- Attachments are possible for piling, drilling, oscillating equipment etc.
- For dragline operation a fairlead is attached to the boom foot to minimize cable wear out.

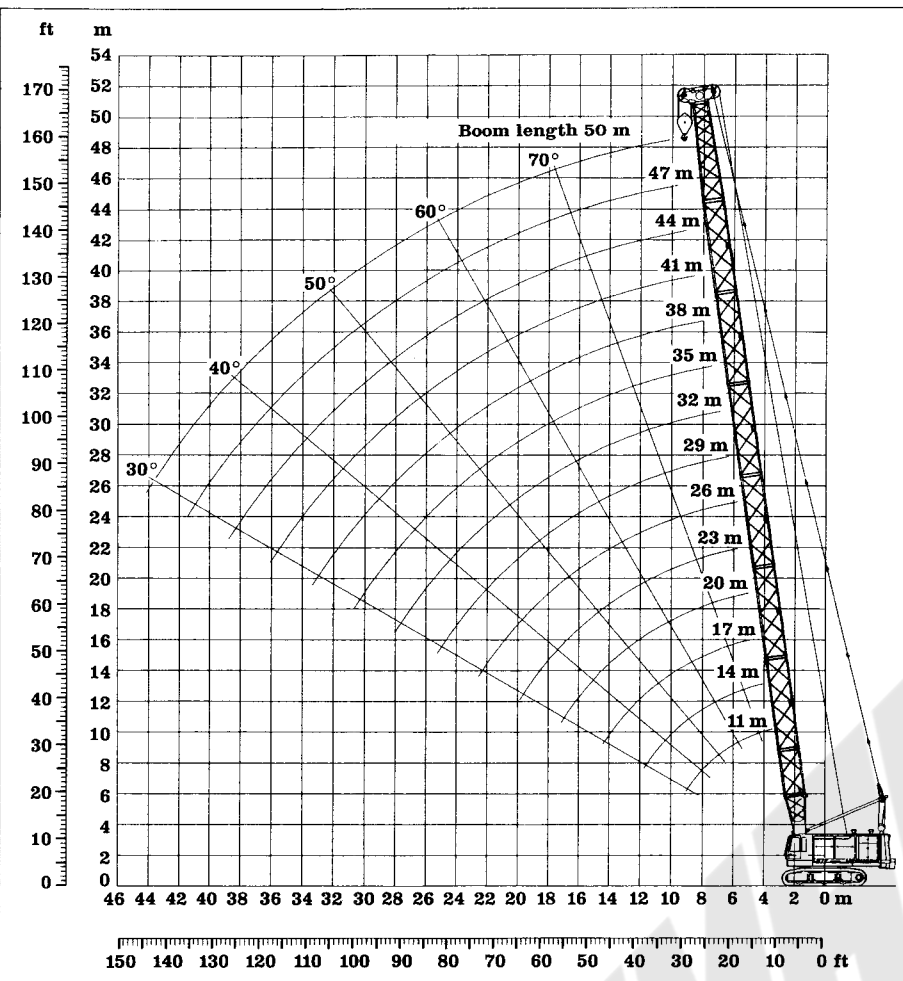
19.6 mt Counterweight

Scope of Delivery:

- Basic machine with corresponding track shoes
- A-frame
- Boom foot
- Boom extension 3 m, tubular steel
- Boom extension 6 m, tubular steel
- Boom head extension 6.4 m
- Boom head
- Stay ropes according to boom length
- Main winches according to specification
- Corresponding hook block
- Load moment limiter

Remarks:

1. The lifting capacities with multi sheave boom head are valid for wide track.
2. The lifting capacities stated do not exceed 75 % of the tipping load.
3. The lifting capacities are indicated in metric tons with unlimited swing (360 degrees).
4. The weight of the lifting device must be deducted to arrive at the net load lifting capacity.
5. Working radii are measured from center of swing.
6. Machine standing on firm, level and uniform ground.
7. Max. loads without windload.



| Radius m | Boom length m | | | | | | | | | | | | | |
|-------------|---------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 11 | 14 | 17 | 20 | 23 | 26 | 29 | 32 | 35 | 38 | 41 | 44 | 47 | 50 |
| 4 | 90.0 | | | | | | | | | | | | | |
| 4.5 | 80.0 | 71.3 | | | | | | | | | | | | |
| 5 | 71.8 | 68.6 | 64.2 | | | | | | | | | | | |
| 5.5 | 61.1 | 64.1 | 61.0 | 58.2 | | | | | | | | | | |
| 6 | 53.1 | 53.0 | 53.0 | 52.9 | 52.7 | | | | | | | | | |
| 6.5 | 46.8 | 46.8 | 46.7 | 46.6 | 46.5 | 46.4 | | | | | | | | |
| 7 | 41.9 | 41.9 | 41.8 | 41.6 | 41.5 | 41.4 | 41.2 | 40.5 | | | | | | |
| 7.5 | 37.8 | 37.8 | 37.7 | 37.6 | 37.4 | 37.3 | 37.1 | 37.0 | 36.8 | | | | | |
| 8 | 34.4 | 34.4 | 34.3 | 34.2 | 34.0 | 33.9 | 33.7 | 33.6 | 33.4 | 33.2 | | | | |
| 9 | 29.1 | 29.1 | 29.0 | 28.9 | 28.7 | 28.6 | 28.4 | 28.2 | 28.0 | 27.8 | 27.7 | 20.6 | | |
| 10 | 25.1 | 25.1 | 25.0 | 24.9 | 24.7 | 24.6 | 24.4 | 24.2 | 24.0 | 23.8 | 23.6 | 19.0 | 15.1 | 12.2 |
| 11 | 22.0 | 22.0 | 21.9 | 21.8 | 21.6 | 21.5 | 21.3 | 21.1 | 20.9 | 20.7 | 20.5 | 17.5 | 13.9 | 11.2 |
| 12 | 19.4 | 19.5 | 19.4 | 19.3 | 19.2 | 19.0 | 18.8 | 18.6 | 18.4 | 18.2 | 18.0 | 16.2 | 12.8 | 10.4 |
| 13 | | 17.5 | 17.4 | 17.3 | 17.1 | 16.9 | 16.8 | 16.6 | 16.4 | 16.2 | 16.0 | 15.0 | 12.0 | 9.6 |
| 14 | | 15.8 | 15.7 | 15.6 | 15.4 | 15.3 | 15.1 | 14.9 | 14.7 | 14.5 | 14.3 | 13.9 | 11.2 | 8.9 |
| 15 | | 14.3 | 14.3 | 14.2 | 14.0 | 13.8 | 13.6 | 13.4 | 13.2 | 13.0 | 12.8 | 12.6 | 10.4 | 8.2 |
| 16 | | | 13.0 | 12.9 | 12.8 | 12.6 | 12.4 | 12.2 | 12.0 | 11.8 | 11.6 | 11.4 | 9.7 | 7.6 |
| 17 | | | 11.9 | 11.9 | 11.7 | 11.5 | 11.3 | 11.1 | 10.9 | 10.7 | 10.5 | 10.3 | 9.1 | 7.1 |
| 18 | | | 11.0 | 10.9 | 10.8 | 10.6 | 10.4 | 10.2 | 10.0 | 9.8 | 9.6 | 9.4 | 8.5 | 6.6 |
| 19 | | | | 10.1 | 9.9 | 9.8 | 9.6 | 9.4 | 9.2 | 9.0 | 8.8 | 8.6 | 8.0 | 6.1 |
| 20 | | | | 9.3 | 9.2 | 9.0 | 8.9 | 8.7 | 8.5 | 8.2 | 8.0 | 7.8 | 7.5 | 5.7 |
| 22 | | | | | 7.9 | 7.8 | 7.6 | 7.4 | 7.2 | 7.0 | 6.8 | 6.6 | 6.3 | 4.9 |
| 24 | | | | | 6.9 | 6.7 | 6.6 | 6.4 | 6.2 | 6.0 | 5.7 | 5.5 | 5.2 | 4.2 |
| 26 | | | | | | 5.9 | 5.7 | 5.5 | 5.3 | 5.1 | 4.8 | 4.6 | 4.3 | 3.6 |
| 28 | | | | | | | 5.0 | 4.8 | 4.5 | 4.3 | 4.0 | 3.8 | 3.5 | 3.0 |
| 30 | | | | | | | 4.2 | 4.1 | 3.8 | 3.6 | 3.4 | 3.1 | 2.9 | 2.5 |
| 32 | | | | | | | | 3.5 | 3.3 | 3.0 | 2.8 | 2.5 | 2.3 | 2.0 |
| 34 | | | | | | | | | 2.7 | 2.5 | 2.3 | 2.0 | 1.8 | 1.5 |
| 36 | | | | | | | | | | 2.1 | 1.8 | 1.6 | 1.3 | 1.1 |
| 38 | | | | | | | | | | | 1.4 | 1.2 | 0.9 | 0.7 |

Lifting Capacity with Multi Sheave HD Boom Head

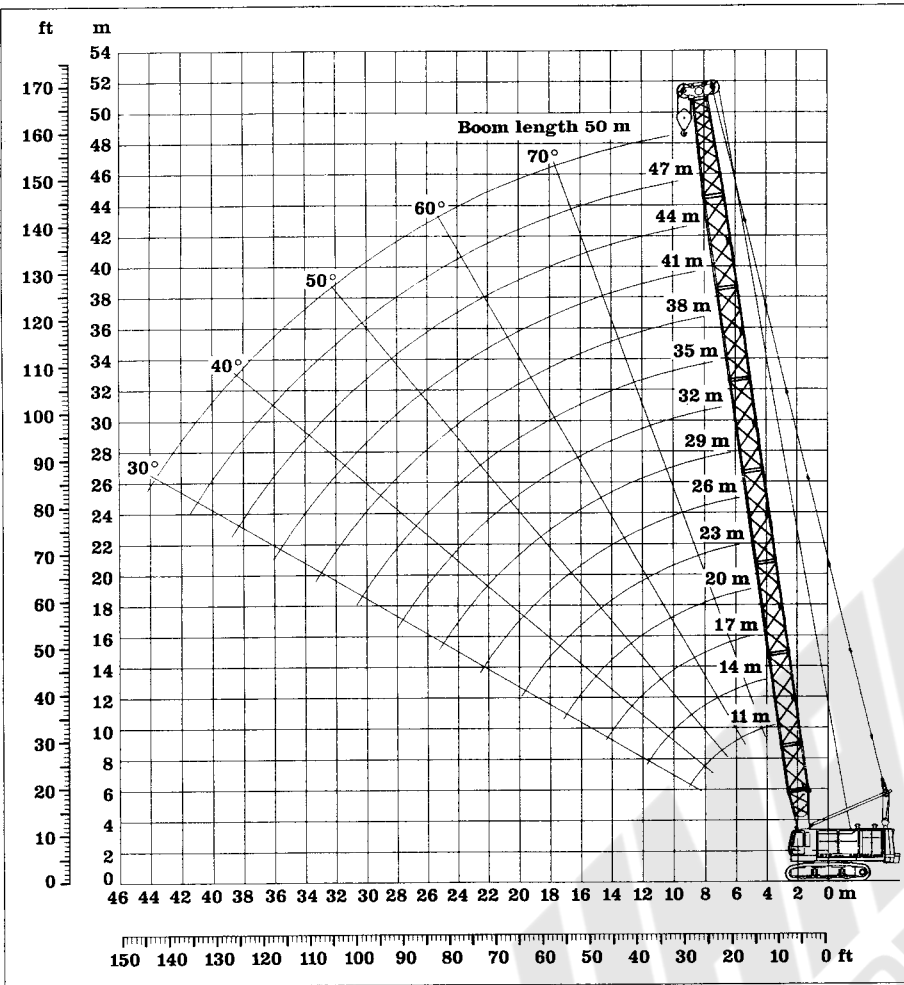
19.6 mt Counterweight + 4.5 mt Add. Counterweight

Scope of Delivery:

- Basic machine with corresponding track shoes
- Add. counterweight of 4.5 mt
- A-frame
- Boom foot
- Boom extension 3 m, tubular steel
- Boom extension 6 m, tubular steel
- Boom head extension 6.4 m.
- Boom head
- Stay ropes according to boom length
- Main winches according to specs
- Corresponding hook block
- Load moment limiter

Remarks:

1. The lifting capacities with multi sheave boom head are valid for wide track.
2. The lifting capacities stated do not exceed 75 % of the tipping load.
3. The lifting capacities are indicated in metric tons with unlimited swing (360 degrees).
4. The weight of the lifting device must be deducted to arrive at the net load lifting capacity.
5. Working radii are measured from center of swing.
6. Machine standing on firm, level and uniform ground.
7. Max. loads without windload.



| Radius m | Boom length m | | | | | | | | | | | | | |
|----------|---------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 11 | 14 | 17 | 20 | 23 | 26 | 29 | 32 | 35 | 38 | 41 | 44 | 47 | 50 |
| 4 | 90.0 | | | | | | | | | | | | | |
| 4.5 | 80.0 | 71.3 | | | | | | | | | | | | |
| 5 | 73.6 | 68.2 | 64.2 | | | | | | | | | | | |
| 5.5 | 68.1 | 66.2 | 62.0 | 58.2 | | | | | | | | | | |
| 6 | 59.2 | 59.2 | 59.1 | 56.3 | 52.9 | | | | | | | | | |
| 6.5 | 52.3 | 52.3 | 52.2 | 52.1 | 51.3 | 46.9 | | | | | | | | |
| 7 | 46.8 | 46.8 | 46.7 | 46.6 | 46.4 | 45.6 | 43.0 | 40.5 | | | | | | |
| 7.5 | 42.3 | 42.3 | 42.2 | 42.0 | 41.9 | 41.7 | 41.6 | 39.4 | 37.1 | | | | | |
| 8 | 38.5 | 38.5 | 38.4 | 38.3 | 38.1 | 38.0 | 37.8 | 37.6 | 36.2 | 34.1 | | | | |
| 9 | 32.6 | 32.6 | 32.5 | 32.4 | 32.2 | 32.1 | 31.9 | 31.7 | 31.5 | 31.3 | 28.4 | 20.6 | | |
| 10 | 28.2 | 28.2 | 28.1 | 27.9 | 27.8 | 27.6 | 27.4 | 27.3 | 27.1 | 26.9 | 23.6 | 19.0 | 15.1 | 12.2 |
| 11 | 24.7 | 24.7 | 24.6 | 24.5 | 24.3 | 24.2 | 24.0 | 23.8 | 23.6 | 23.4 | 21.9 | 17.5 | 13.9 | 11.2 |
| 12 | 21.9 | 22.0 | 21.9 | 21.8 | 21.6 | 21.4 | 21.2 | 21.1 | 20.9 | 20.7 | 20.4 | 16.2 | 12.8 | 10.4 |
| 13 | | 19.7 | 19.6 | 19.5 | 19.3 | 19.2 | 19.0 | 18.8 | 18.6 | 18.4 | 18.2 | 15.0 | 12.0 | 9.6 |
| 14 | | 17.8 | 17.8 | 17.6 | 17.5 | 17.3 | 17.1 | 16.9 | 16.7 | 16.5 | 16.3 | 13.9 | 11.2 | 8.9 |
| 15 | | 16.1 | 16.2 | 16.0 | 15.9 | 15.7 | 15.5 | 15.3 | 15.1 | 14.9 | 14.7 | 13.0 | 10.4 | 8.2 |
| 16 | | | 14.8 | 14.7 | 14.5 | 14.3 | 14.2 | 14.0 | 13.8 | 13.6 | 13.3 | 12.2 | 9.7 | 7.6 |
| 17 | | | 13.6 | 13.5 | 13.3 | 13.2 | 13.0 | 12.8 | 12.6 | 12.4 | 12.2 | 11.5 | 9.1 | 7.1 |
| 18 | | | 12.5 | 12.4 | 12.3 | 12.1 | 11.9 | 11.7 | 11.5 | 11.3 | 11.1 | 10.8 | 8.5 | 6.6 |
| 19 | | | | 11.5 | 11.4 | 11.2 | 11.0 | 10.8 | 10.6 | 10.4 | 10.2 | 10.0 | 8.0 | 6.1 |
| 20 | | | | 10.7 | 10.6 | 10.4 | 10.2 | 10.0 | 9.8 | 9.6 | 9.4 | 9.2 | 7.5 | 5.7 |
| 22 | | | | | 9.2 | 9.0 | 8.8 | 8.6 | 8.4 | 8.2 | 8.0 | 7.8 | 6.6 | 4.9 |
| 24 | | | | | 8.0 | 7.9 | 7.7 | 7.5 | 7.3 | 7.1 | 6.9 | 6.7 | 5.8 | 4.2 |
| 26 | | | | | | 6.9 | 6.7 | 6.5 | 6.3 | 6.1 | 5.9 | 5.6 | 5.1 | 3.6 |
| 28 | | | | | | | 5.9 | 5.7 | 5.5 | 5.3 | 5.0 | 4.8 | 4.5 | 3.0 |
| 30 | | | | | | | 5.1 | 5.0 | 4.8 | 4.5 | 4.3 | 4.0 | 3.8 | 2.5 |
| 32 | | | | | | | | 4.3 | 4.1 | 3.9 | 3.7 | 3.4 | 3.1 | 2.1 |
| 34 | | | | | | | | | 3.6 | 3.3 | 3.1 | 2.8 | 2.6 | 1.7 |
| 36 | | | | | | | | | | 2.8 | 2.6 | 2.3 | 2.1 | 1.3 |
| 38 | | | | | | | | | | | 2.1 | 1.9 | 1.6 | 1.0 |
| 40 | | | | | | | | | | | | 1.7 | 1.5 | 0.7 |