

Pile driving capacity table (M115DS)

| Hammer  |        |            |                      | Auger              |          |              |              |                          | Leader | Pile   |        | Straight pile driving stability |            |                              |            | Total machine weight |              | Average ground pressure |              | Maximum ground pressure |              |
|---------|--------|------------|----------------------|--------------------|----------|--------------|--------------|--------------------------|--------|--------|--------|---------------------------------|------------|------------------------------|------------|----------------------|--------------|-------------------------|--------------|-------------------------|--------------|
| Type    | Weight | Cap weight | Pile center distance | Drilling mechanism |          | Screw        |              | Drilling center distance | Length | Length | Weight | With pile (during travel)       |            | Without pile (during travel) |            | With pile            | Without pile | With pile               | Without pile | With pile               | Without pile |
| (Class) | t      | t          | mm                   | Type (Class)       | Weight t | Length m     | Weight t     | mm                       | m      | m      | t      | Front-back                      | Left-right | Front-back                   | Left-right | t                    | t            | kPa(kgf/cm²)            | kPa(kgf/cm²) | kPa(kgf/cm²)            | kPa(kgf/cm²) |
| NH-100  | 22.5   | 3.5        | 800                  | —                  | —        | —            | —            | —                        | 39     | 29     | 10     | 5.5°                            | 9.8°       | 13.0°                        | 18.2°      | 155.2                | 145.2        | 169.2 (1.73)            | 158.3 (1.62) | 384.1 (3.92)            | 289.5 (2.95) |
| NH-115B | 27.5   | 3.5        | 950                  | —                  | —        | —            | —            | —                        | 36     | 26     | 10     | 5.0°                            | 10.2°      | 13.0°                        | 20.3°      | 158.1                | 148.1        | 172.4 (1.76)            | 161.5 (1.65) | 435.1 (4.44)            | 334.2 (3.41) |
| NH-150B | 33.5   | 3.5        | 1050                 | —                  | —        | —            | —            | —                        | 30     | 20     | 10     | 5.0°                            | 11.7°      | 13.5°                        | 23.6°      | 161.0                | 151.0        | 175.6 (1.79)            | 164.7 (1.68) | 489.6 (5.00)            | 381.8 (3.90) |
| NH-70   | 14.3   | 0.5        | 0.75                 | D-150NP            | 8.2      | 35.7         | 9.0          | 655                      | 39     | 33     | 10     | 5.0°                            | 8.5°       | 8.5°*                        | 11.6°      | 163.2                | 153.2        | 178.0 (1.82)            | 167.1 (1.71) | 411.9 (4.20)            | 319.1 (3.26) |
| —       | —      | —          | —                    | D-240HP            | 16.5     | 28.0         | 14.8         | 1000                     | 33     | 26     | 10     | 5.5°                            | 11.6°      | 7.2°***                      | 11.8°      | 160.4                | 150.4        | 174.9 (1.78)            | 164.0 (1.67) | 452.0 (4.61)            | 349.6 (3.57) |
| —       | —      | —          | —                    | SMD-150HP          | 16.2     | 24.3<br>24.0 | 10.8<br>10.1 | 1000                     | 30     | 22     | 10     | 5.3°                            | 12.6°      | 7.1°***                      | 12.8°      | 163.4                | 153.4        | 178.1 (1.82)            | 167.2 (1.71) | 497.5 (5.08)            | 390.8 (3.99) |
| —       | —      | —          | —                    | SMD-240HP          | 17.3     | 21.3<br>21.0 | 12.5<br>11.8 | 1000                     | 27     | 19     | 10     | 5.2°                            | 13.8°      | 7.0°***                      | 14.0°      | 166.4                | 156.4        | 181.5 (1.85)            | 170.6 (1.74) | 545.6 (5.57)            | 431.5 (4.40) |
| —       | —      | —          | —                    | MAC150-3J          | 9.5      | ★<br>34.5    | ★<br>17.1    | 900                      | 39     | —      | —      | 7.3°                            | 11.3°      | 7.3°***                      | 11.3°      | 149.7                | 149.7        | 163.2 (1.67)            | 163.2 (1.67) | 327.2 (3.34)            | 327.2 (3.34) |
| —       | —      | —          | —                    | MAC240-3J          | 11.3     | ★<br>30.8    | ★<br>20.9    | 900                      | 36     | —      | —      | 7.0°                            | 12.0°      | 7.0°***                      | 12.0°      | 153.9                | 153.9        | 167.9 (1.71)            | 167.9 (1.71) | 376.2 (3.84)            | 376.2 (3.84) |
| —       | —      | —          | —                    | ☆SDA240HWP         | 17.8     | 25.8<br>23.0 | 9.7<br>8.5   | 1000                     | 30     | —      | —      | 7.1°                            | 12.4°      | 7.1°***                      | 12.4°      | 153.4                | 153.4        | 167.3 (1.71)            | 167.3 (1.71) | 377.0 (3.85)            | 377.0 (3.85) |
| —       | —      | —          | —                    | ☆SDA270HWP         | 23.1     | 19.0<br>16.0 | 7.1<br>7.5   | 1250                     | 24     | —      | —      | 7.1°                            | 14.9°      | 7.1°***                      | 14.9°      | 156.4                | 156.4        | 170.5 (1.74)            | 170.5 (1.74) | 443.1 (4.52)            | 443.1 (4.52) |

CAUTION

1. This table shows the capacity with standard counterweights installed on horizontal firm ground. The leader is vertical specification. Please contact Nippon Sharyo for working conditions other than those in this table or special construction method work.
2. Types marked with ☆ indicate the capacity of load balanced type top sheave specification. ★ mark in auger screw column includes rod length and weight. Working conditions with two-row entries in the auger screw column show upper row: screw, lower row: casing.
3. For working conditions marked with \*\*\*, \*\*\*, \*\*\*\*\* in the without pile (during travel) stability column, travel with leader tilted backward to ensure travel stability. [\*1-2 degree leader backward tilt, \*\*2-3 degree leader backward tilt, \*\*\*3-4 degree leader backward tilt]
4. Maximum allowable total weight during travel is 162 t.
5. The torque of mountable augers is maximum 294 kN-m (30 tf-m).
6. Please use auger and other lifting ropes with safety factor of 6 or more. (Example: With ø20 mm rope (IWRC6×Fi(29)C type) 12-line rigging, 588 kN (60 tf) is maximum.)
7. A pile lifting rope can lift piles up to 5 t with ø20 mm×1 line and up to 10 t with 2 lines. This must be observed. For other rope diameters or when using 3 or 4 lines, please contact Nippon Sharyo.
8. Leader self-standing when using front jacks is possible up to 27 m leader length for standard specification and simple back tensioner specification, and up to 21 m leader length for load balanced type back tensioner specification.  
For raising and lowering work with leaders longer than the above, crane hoist assistance is required. (Refer to the instruction manual for auxiliary lifting capacity.)
9. Allowable auger extraction load (load applied to leader) is maximum 735 kN (75 tf) for standard specification and simple back tensioner specification, and maximum 1,176 kN (120 tf) for load balanced type back tensioner specification.  
Auger extraction load includes the weight of the front attachment related to the auger, soil, and extraction resistance, etc. To protect the machine, always use the front jacks if the auger extraction load exceeds 588 kN (60 tf).  
Allowable auger extraction load may be limited below the above maximum values depending on leader length and drilling center distance. (For details refer to "Allowable Auger Extraction Load Nameplate" and the operation manual.)

Equipment list ● : Standard equipped ○ : Optional

|                                                       |   |                                                                                   |
|-------------------------------------------------------|---|-----------------------------------------------------------------------------------|
| <b>Main unit related</b>                              |   |                                                                                   |
| 1. Drum: Main drum, aux. drum, 3rd, 4th, leader hoist | ● | 30. Operator's cab storage shelf                                                  |
| 2. 4th drum semi-clutch                               | ○ | 31. Tool storage box                                                              |
| 3. Brake pedal rearrangement(main drum to aux. drum)  | ○ | 32. Counterweight (21.9 t)                                                        |
| 4. Brake pedal rearrangement (aux. drum to 3rd)       | ○ | 33. Outtrigger cylinder                                                           |
| 5. Fine speed control                                 | ○ | 34. Undercover                                                                    |
| 6. Inner excavation hydraulic source outlet           | ● | 35. Control panel mount (upper left inside operator's cab)                        |
| 7. Piling work management machine (Seko Master)       | ○ | 36. Generator mount                                                               |
| 8. OK monitor                                         | ● | 37. Hydraulic unit mount                                                          |
| 9. 10-valve control valve & 8-valve front piping      | ● | 38. Auger control panel mount                                                     |
| 10. Headlights 70W×2                                  | ● | 39. Inner excavation method air piping                                            |
| 11. Interior light (fluorescent)                      | ● | 40. Included tools                                                                |
| 12. Wiper (roof, front)                               | ● | 41. Transport parts                                                               |
| 13. Air conditioner                                   | ● | 42. Drum: Main drum, 3rd (grooveless type)                                        |
| 14. Powerful heater                                   | ○ |                                                                                   |
| 15. Cigarette lighter (24 V DC)                       | ● | <b>Safety devices</b>                                                             |
| 16. AM/FM radio with clock                            | ○ | 1. Swing warning lamp & buzzer                                                    |
| 17. Microphone & speaker                              | ○ | 2. Swing brake & warning lamp (inside operator's cab)                             |
| 18. Window washer                                     | ○ | 3. Swing lock & warning lamp (inside operator's cab)                              |
| 19. Sun visora                                        | ○ | 4. Swing voice alarm                                                              |
| 20. Fuel supply device                                | ● | 5. Travel voice alarm                                                             |
| 21. Spirit level                                      | ● | 6. Brake disengagement prevention alarm (operator's cab)                          |
| 22. Rear-view mirrors (1 each, left and right)        | ● | 7. Each drum mode switching & indicator lamp                                      |
| 23. Floor mat                                         | ● | 8. Free fall switching                                                            |
| 24. House lifting ladder (left and right 1 each)      | ● | 9. Each drum pawl lock                                                            |
| 25. Non-slip sheet (upper house surface)              | ● | 10. Drum lock indicator rotating light                                            |
| 26. Side frame access step                            | ● | 11. Automatic over-winding stop (main drum/3rd winch, when using ø101.6 guide)    |
| 27. Gantry access step                                | ○ | 12. Leader/main unit inclinometer with alarm function                             |
| 28. House upper handrail installation                 | ○ | 13. Auger extraction load meter with alarm function                               |
| 29. Folding steps around house                        | ○ | 14. Roof guard (heavy-duty type)                                                  |
|                                                       |   | 15. Gate lock                                                                     |
|                                                       |   |                                                                                   |
|                                                       |   | 16. Engine emergency stop switch (inside operator's cab, front left of main unit) |
|                                                       |   | 17. Fire extinguisher (inside operator's cab, inside left house)                  |
|                                                       |   | 18. Lever lock                                                                    |
|                                                       |   |                                                                                   |
|                                                       |   | <b>Front related</b>                                                              |
|                                                       |   | 1. 21 m leader                                                                    |
|                                                       |   | 2. Extension leader (3 m, 6 m)* Including stay and pendant                        |
|                                                       |   | 3. Front jack                                                                     |
|                                                       |   | 4. Front jack bellows                                                             |
|                                                       |   | 5. Leader lifting bracket                                                         |
|                                                       |   | 6. 21 m stay (ø457.2 mm)                                                          |
|                                                       |   | 7. Stay lifting bracket                                                           |
|                                                       |   | 8. Front jack lifting bracket                                                     |
|                                                       |   | 9. Cabtyre hanging                                                                |
|                                                       |   | 10. Top sheave modification for various construction methods                      |
|                                                       |   | 11. Weight balanced type separate auger top sheave                                |
|                                                       |   | 12. Weight balanced top sheave adapter                                            |
|                                                       |   | 13. Front jack open/close device                                                  |
|                                                       |   | 14. Press-fit brackets for various construction methods                           |
|                                                       |   | 15. Wedge type revolver lock                                                      |
|                                                       |   | 16. Leader optional lock for multi-axis construction method                       |
|                                                       |   | 17. Holder lock (during transport)                                                |
|                                                       |   | 18. Holder lock for lock auger construction method                                |
|                                                       |   | 19. LG200T(L) lifting work surface                                                |
|                                                       |   | 20. Weight balanced back tensioner                                                |
|                                                       |   | 21. Simple back tensioner                                                         |
|                                                       |   | 22. Separate auger extraction load meter with alarm function                      |
|                                                       |   | 23. Leader upper protection device pole                                           |
|                                                       |   | 24. Leader bracket automatic attachment/detachment                                |
|                                                       |   | 25. Lower leader (with lower leader mounting device)                              |



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- Specifications in this catalog are subject to change without notice.  
- Please be sure to observe the precautions in the operation manual when operating this machine.  
- Modifications to this machine or addition of other equipment/materials by the customer are outside our warranty scope. Please contact Nippon Sharyo.

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The values marked with \* vary depending on the load.  
The figures in parenthesis indicate the minimum value of fine speed control.