

# Franna AT-18

PICK & CARRY CRANE · LOAD CHART 16C1204- · CASTLE CRANES PTY LTD

18 T

MAX RATED CAPACITY

|              |            |                 |                |            |                    |           |
|--------------|------------|-----------------|----------------|------------|--------------------|-----------|
| MAX CAPACITY | MAX RADIUS | MAX HOOK HEIGHT | WINCH (3-PART) | SLEW ARC   | LIFT & CARRY SPEED | CHART REF |
| 18,000 kg    | 15.80 m    | 16.75 m         | 12,600 kg      | 80° (±40°) | Max 2 km/h         | 16C1204-  |

⚠ **IMPORTANT:** Deduct weight of hook block, slings & all lifting tackle from SWL. SWL based on 66.7% stability & strength on firm level ground. Lift & carry: minimum boom length, load as close to ground as possible, max 2 km/h. Always refer to the in-cab certified load chart before any lift.

☐ GREEN

rows – SWL for slew ≤10° either side of straight ahead (Green LED on dash)

☐ WHITE

rows – SWL for slew >10° either side of straight ahead (Yellow LED on dash)

☐ YELLOW

cells – Manual Extension / Fly Jib capacities

☐ RED

cells – Structural (above bold red line)

Main Boom on Winch — Manual Extension Retracted

BOOM PIVOT TO HEAD SHEAVES · RADIUS IN METRES · SWL IN KILOGRAMS

| BOOM<br>ANGLE | BOOM PIVOT TO HEAD SHEAVES – MANUAL EXTENSION RETRACTED |        |        |        |        |        |        |        |        |        |       |       |       |       |       |       |       |       | MAN<br>EXT | FLY JIB |       |
|---------------|---------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|------------|---------|-------|
|               | 5.67                                                    | 6.00   | 6.50   | 7.00   | 7.50   | 8.00   | 8.50   | 9.00   | 9.50   | 10.00  | 10.50 | 11.00 | 11.50 | 12.00 | 12.50 | 13.00 | 13.50 | 13.85 | 17.90      | 0°      | 12.5° |
| 60°<br>≤10°   | —                                                       | 12,600 | 12,600 | 12,600 | 12,600 | 12,600 | 12,600 | 11,850 | 11,200 | 10,600 | 8,950 | 7,800 | 7,200 | 6,700 | 6,250 | 5,800 | 5,550 | 2,550 | 1,500      | 1,500   | 1,300 |
|               | —                                                       | 12,600 | 12,600 | 12,600 | 12,600 | 12,600 | 12,600 | 11,850 | 10,700 | 9,750  | 8,950 | 7,800 | 7,200 | 6,700 | 6,250 | 5,800 | 5,550 | 2,550 | 1,500      | 1,500   | 1,300 |
| 50°<br>≤10°   | —                                                       | —      | 12,600 | 12,600 | 12,600 | 11,500 | 10,150 | 9,050  | 8,150  | 7,400  | 6,800 | 6,250 | 5,750 | 5,350 | 5,000 | 4,650 | 4,350 | 4,100 | 2,250      | 1,200   | 1,120 |
|               | —                                                       | —      | 12,600 | 12,600 | 12,600 | 11,500 | 10,150 | 9,050  | 8,150  | 7,400  | 6,800 | 6,250 | 5,750 | 5,350 | 5,000 | 4,650 | 4,350 | 4,100 | 2,250      | 1,200   | 1,120 |
| 40°<br>≤10°   | —                                                       | —      | —      | 12,600 | 10,750 | 9,350  | 8,250  | 7,350  | 6,600  | 6,000  | 5,500 | 5,050 | 4,650 | 4,300 | 4,000 | 3,750 | 3,500 | 3,300 | 2,050      | 970     | 920   |
|               | —                                                       | —      | —      | 12,600 | 10,750 | 9,350  | 8,250  | 7,350  | 6,600  | 6,000  | 5,500 | 5,050 | 4,650 | 4,300 | 4,000 | 3,750 | 3,500 | 3,300 | 2,050      | 970     | 920   |
| 30°<br>≤10°   | 10,950                                                  | 9,850  | 8,500  | 7,450  | 6,600  | 5,950  | 5,350  | 4,900  | 4,450  | 4,100  | 3,800 | 3,500 | 3,250 | 3,050 | 2,850 | 2,700 | 2,500 | 2,400 | 1,900      | 850     | 820   |
|               | 10,950                                                  | 9,850  | 8,500  | 7,450  | 6,600  | 5,950  | 5,350  | 4,900  | 4,450  | 4,100  | 3,800 | 3,500 | 3,250 | 3,050 | 2,850 | 2,700 | 2,500 | 2,400 | 1,900      | 850     | 820   |
| 20°<br>≤10°   | 9,350                                                   | 8,400  | 7,300  | 6,450  | 5,750  | 5,150  | 4,650  | 4,250  | 3,900  | 3,600  | 3,300 | 3,050 | 2,850 | 2,650 | 2,500 | 2,350 | 2,200 | 2,100 | 1,700      | 770     | 770   |
|               | 9,350                                                   | 8,400  | 7,300  | 6,450  | 5,750  | 5,150  | 4,650  | 4,250  | 3,900  | 3,600  | 3,300 | 3,050 | 2,850 | 2,650 | 2,500 | 2,350 | 2,200 | 2,100 | 1,700      | 770     | 770   |
| 10°<br>≤10°   | 8,500                                                   | 7,700  | 6,700  | 5,900  | 5,300  | 4,750  | 4,300  | 3,950  | 3,600  | 3,300  | 3,050 | 2,850 | 2,650 | 2,450 | 2,300 | 2,150 | 2,000 | 1,900 | 1,550      | 750     | 750   |
|               | 8,500                                                   | 7,700  | 6,700  | 5,900  | 5,300  | 4,750  | 4,300  | 3,950  | 3,600  | 3,300  | 3,050 | 2,850 | 2,650 | 2,450 | 2,300 | 2,150 | 2,000 | 1,900 | 1,550      | 750     | 750   |
| 0°<br>≤10°    | 8,200                                                   | 7,450  | 6,500  | 5,750  | 5,100  | 4,600  | 4,200  | 3,800  | 3,500  | 3,200  | 2,950 | 2,750 | 2,550 | 2,400 | 2,200 | 2,100 | 1,950 | 1,850 | 1,500      | 750     | 750   |
|               | 8,200                                                   | 7,450  | 6,500  | 5,750  | 5,100  | 4,600  | 4,200  | 3,800  | 3,500  | 3,200  | 2,950 | 2,750 | 2,550 | 2,400 | 2,200 | 2,100 | 1,950 | 1,850 | 1,500      | 750     | 750   |

18T Lug

► At 3.36 m radius (boom pivot to 18T lug): SWL = 18,000 kg (STRUCTURAL)

Boom Pivot to Inner Lug — 1st Extension, Manual Ext Retracted

RADIUS IN METRES · SWL IN KILOGRAMS

| BOOM<br>ANGLE | BOOM PIVOT TO INNER LUG · 1ST EXTENSION · MANUAL EXTENSION RETRACTED |        |        |        |        |        |        |        |        |        |
|---------------|----------------------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|               | 4.16                                                                 | 4.50   | 5.00   | 5.50   | 6.00   | 6.50   | 7.00   | 7.50   | 8.00   | 8.25   |
| 60°<br>≤10°   | —                                                                    | —      | —      | —      | —      | 16,000 | 15,150 | 14,000 | 13,000 | 12,550 |
|               | —                                                                    | —      | —      | —      | —      | 16,000 | 15,150 | 14,000 | 13,000 | 12,550 |
| 50°<br>≤10°   | —                                                                    | —      | —      | 16,000 | 16,000 | 15,900 | 14,550 | 12,600 | 10,950 | 9,600  |
|               | —                                                                    | —      | —      | 16,000 | 16,000 | 15,900 | 13,350 | 11,350 | 9,850  | 8,650  |
| 40°<br>≤10°   | 16,000                                                               | 16,000 | 16,000 | 16,000 | 14,700 | 12,250 | 10,400 | 9,000  | 7,850  | 6,950  |
|               | 16,000                                                               | 16,000 | 16,000 | 13,300 | 11,050 | 9,350  | 8,050  | 7,050  | 6,200  | 5,850  |
| 30°<br>≤10°   | 16,000                                                               | 16,000 | 14,050 | 11,500 | 9,650  | 8,300  | 7,200  | 6,300  | 5,600  | 5,300  |
|               | 16,000                                                               | 16,000 | 12,700 | 10,400 | 8,700  | 7,450  | 6,450  | 5,650  | 4,950  | 4,700  |
| 20°<br>≤10°   | 16,000                                                               | 14,950 | 11,950 | 9,850  | 8,300  | 7,150  | 6,200  | 5,450  | 4,850  | 4,550  |
|               | 16,000                                                               | 13,550 | 10,800 | 8,900  | 7,450  | 6,400  | 5,550  | 4,850  | 4,250  | 4,050  |
| 10°<br>≤10°   | 16,000                                                               | 13,600 | 10,950 | 9,050  | 7,650  | 6,550  | 5,700  | 5,000  | 4,450  | 4,200  |
|               | 14,700                                                               | 12,300 | 9,850  | 8,150  | 6,850  | 5,850  | 5,100  | 4,450  | 3,900  | 3,700  |
| 0°<br>≤10°    | 15,750                                                               | 13,200 | 10,650 | 8,800  | 7,450  | 6,400  | 5,550  | 4,900  | 4,300  | 4,050  |
|               | 14,250                                                               | 11,950 | 9,600  | 7,900  | 6,650  | 5,700  | 4,950  | 4,300  | 3,800  | 3,600  |

Outer Lug — 1st Extension, Manual Ext Retracted

READ OFF INNER LUG INDICATOR SCALE (RED) · RADIUS IN METRES · SWL IN KILOGRAMS

| BOOM<br>ANGLE | OUTER LUG · 1ST EXTENSION · MANUAL EXT RETRACTED · READ OFF INNER LUG INDICATOR (RED) |        |        |        |        |        |        |        |        |        |
|---------------|---------------------------------------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|               | 4.16                                                                                  | 4.50   | 5.00   | 5.50   | 6.00   | 6.50   | 7.00   | 7.50   | 8.00   | 8.25   |
| 60°<br>≤10°   | —                                                                                     | —      | —      | —      | 16,000 | 16,000 | 15,300 | 14,150 | 13,100 | 11,950 |
|               | —                                                                                     | —      | —      | —      | 16,000 | 16,000 | 15,300 | 14,150 | 13,100 | 11,200 |
| 50°<br>≤10°   | 16,000                                                                                | 16,000 | 16,000 | 16,000 | 13,750 | 11,900 | 10,400 | 9,200  | 8,250  | 7,800  |
|               | 16,000                                                                                | 16,000 | 16,000 | 14,750 | 12,450 | 10,750 | 9,400  | 8,300  | 7,400  | 7,000  |
| 40°<br>≤10°   | 16,000                                                                                | 16,000 | 13,550 | 11,450 | 9,850  | 8,600  | 7,550  | 6,750  | 6,050  | 5,750  |
|               | 16,000                                                                                | 15,000 | 12,300 | 10,350 | 8,900  | 7,750  | 6,800  | 6,050  | 5,400  | 5,100  |
| 30°<br>≤10°   | 14,900                                                                                | 12,900 | 10,750 | 9,150  | 7,900  | 6,900  | 6,100  | 5,450  | 4,900  | 4,650  |
|               | 13,550                                                                                | 11,700 | 9,700  | 8,250  | 7,100  | 6,200  | 5,450  | 4,850  | 4,350  | 4,100  |
| 20°<br>≤10°   | 12,700                                                                                | 11,050 | 9,300  | 7,900  | 6,850  | 6,000  | 5,300  | 4,750  | 4,250  | 4,000  |
|               | 11,550                                                                                | 10,000 | 8,400  | 7,150  | 6,150  | 5,400  | 4,750  | 4,200  | 3,750  | 3,550  |
| 10°<br>≤10°   | 11,650                                                                                | 10,150 | 8,550  | 7,300  | 6,350  | 5,550  | 4,900  | 4,350  | 3,900  | 3,700  |
|               | 10,550                                                                                | 9,200  | 7,700  | 6,600  | 5,700  | 4,950  | 4,350  | 3,850  | 3,450  | 3,250  |
| 0°<br>≤10°    | 11,350                                                                                | 9,900  | 8,350  | 7,100  | 6,150  | 5,400  | 4,800  | 4,250  | 3,800  | 3,600  |
|               | 10,300                                                                                | 8,950  | 7,500  | 6,400  | 5,550  | 4,850  | 4,250  | 3,750  | 3,350  | 3,150  |

# Boom 1 Lugs — SWL Summary

STRUCTURAL CAPACITIES · RADIUS IN METRES · SWL IN KILOGRAMS

| ARTICULATION | 1.8 m  | 3 m    | 4 m   | 5 m   | 6 m   | 7 m   | 8 m   | 9 m   | 10 m  | 11 m  |
|--------------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 10° Artic    | 16,000 | 11,000 | 8,000 | 6,200 | 5,000 | 4,200 | 3,500 | 2,650 | 2,300 | 2,100 |
| 40° Artic    | 16,000 | 10,000 | 7,250 | 5,600 | 4,500 | 3,750 | 3,150 | 2,700 | 2,350 | 2,050 |

## Boom 1 Lug Notes

- ▶ 18T LUG at 3.36 m: SWL = 18,000 kg (structural)
- ▶ Boom 1 lugs are STRUCTURAL capacities – not based on stability
- ▶ Inner lug (shorter radius) vs outer lug (longer radius) – refer to full lug charts for extended boom configurations

# Winch Safe Working Loads & Accessories

FRANNA AT-18 · LOAD CHART 16C1204-

| Winch Safe Working Loads |           |
|--------------------------|-----------|
| Single Part              | 4,200 kg  |
| Two Parts                | 8,400 kg  |
| Three Parts              | 12,600 kg |

| Boom Head Mounted Rhino Hook    |                                       |
|---------------------------------|---------------------------------------|
| Max SWL (above bold black line) | 10,000 kg                             |
| Below bold black line           | Per chart – boom length indicator + 0 |
|                                 |                                       |

| Manbasket |        |
|-----------|--------|
| Max SWL   | 275 kg |
|           |        |

# Spreader Bar Load Chart 16C1107B

APPROVAL NUMBER E2255 · MAX ANGLE OF LIFTING SLINGS OR CHAINS MUST NOT EXCEED 90°

| Lug Centres | Centre Lift SWL |
|-------------|-----------------|
| 2,250 mm    | 3.40 t          |
| 2,510 mm    | 3.05 t          |
| 2,910 mm    | 2.60 t          |
| 3,310 mm    | 2.30 t          |
| 3,690 mm    | 2.05 t          |

| Configuration                         | Max Lift SWL |
|---------------------------------------|--------------|
| 2,255–3,690 mm lug centres (overhead) | 12.0 t       |
| Max centre lift SWL                   | 3.40 t       |
|                                       |              |

# Hoist Rope

|                    |                                             |
|--------------------|---------------------------------------------|
| Diameter           | Nominal 14 mm                               |
| Construction       | 35W × 7NR Compak                            |
| Min. Breaking Load | 165 kN                                      |
| End Fitting        | Machine splice & thimble eye (one end only) |
| Length             | 65 m                                        |



# General Notes & Operational Requirements

LOAD CHART 16C1204- · FRANNA CRANES PTY LTD

## General SWL Notes

- ▶ SWL are based on 66.7% stability & strength
- ▶ SWL above bold red line are STRUCTURAL
- ▶ SWL on 18T lug are STRUCTURAL
- ▶ SWL are based on firm level ground with tyres inflated as per chart
- ▶ Weight of hooks, blocks, slings & other load handling devices shall be ADDED to the weight of the load
- ▶ Lift & Carry – the SWL shall be carried with the minimum boom length & as close to the ground as possible at speeds NOT IN EXCESS OF 2 km/h

## Tyre Pressures

- ▶ Front: 12.00 × 20 / 20 PLY – inflated to 125 PSI (Dual)
- ▶ Rear: 12.00 × 20 / 20 PLY – inflated to 90 PSI (Dual)

## ⚠ Warning

- ▶ DO NOT LEAVE KEY "ON" – EMERGENCY STEERING WILL ACTIVATE
- ▶ This document is a reference copy only. Always refer to the original certified in-cab load chart plate before attempting any lift.

| KEY SPECIFICATIONS |                               |
|--------------------|-------------------------------|
| Engine             | Hino H07C-T · 162 kW · 647 Nm |
| Transmission       | Allison MT643 4-speed auto    |
| Drive              | 4×4 · air-lock front diff     |
| GVM (un-laden)     | 19,000 kg                     |
| Turning Circle     | 7.4 m (outside wheels)        |
| Max Travel Speed   | 85 km/h                       |
| SLI                | Robway 1502                   |