ENGINE:
GM 3.0L, 4 cylinder, 56 Kw (75 hp) propane engine

PUMP:
Sundstrand 40 series drive pump

CONTROL SYSTEM:
CARL (Computer Assisted Remote Lifting) Control System. Monitors Boom Angle, Boom Extension, Pressure, Counterweight Load Pin. Automatic Shutdown for overload conditions. Large easy to read display screen with push button navigation and dial adjustment.

CONTROLS:
Separate controls for each function. Combination of foot pedal, joystick, and push button controls allows for multiple functions to be performed at the same time.

DRIVE:
Rockwell planetary drive axle. Full hydrostatic system with spring applied brakes.

WHEELS:
- Front: qty. (4)
  - Diameter: 711mm
  - Width: 305mm
- Rear: qty. (2)
  - Diameter: 711mm
  - Width: 305mm
Replaceable polyurethane composition

OSCILLATING REAR STEERING BOX:
Keeps all steering wheels in contact with ground.

GRADABILITY:
Unloaded maximum grade is 26%
Loaded maximum grade is 15%
18,000 lbs of draw bar pull unloaded

TRAVEL SPEED UNLOADED:
- High Gear: 4.42 km/h
- Low Gear: 1.20 km/h

TELESCOPING COUNTERWEIGHT:
Standard counterweight section telescopes 1220mm using a hydraulic cylinder. Push button control.

HYDRAULIC RESERVOIR:
340 liters (90 gallons)

BOOM:
High strength two section telescoping boom. Replaceable wear pads on all sliding sections.

BOOM LIFT CYLINDER:
Single cylinder capable of lifting and lowering with a full load. Integral safety holding valve. Spherical bearing ensures constant alignment with the boom.

BOOM TELESCOPE CYLINDER:
Single cylinder capable of telescoping the boom in and out with a full load. Integral safety holding valve.

FORKS:
2,438mm self leveling forks. Tilt angle controlled from operating station.

WEIGHT:
14,530 kg base unit
Standard “A” counterweight included

COUNTERWEIGHTS:
“A” - non-removable counterweight installed in unit
Four (4) additional counterweights plates included with fork lift loops standard. Weight of each plate is 2,497 kg.
Total of additional counterweight is 9,988 kg.

TIE DOWN / LIFTING EYES:
Tie down / lifting eyes installed for securing unit during transport and for lifting of the unit.

DRIVER PROTECTION GUARD:
Structural overhead guard for operator protection.

OTHER STANDARD FEATURES:
Back up alarm, horn, strobe light, operator seat complete with safety belt and electric switch.

RIGGERS BOOM:
Hydraulic riggers boom attaches to fork attachment with the forks removed.

MOBILIFT BOOM:
2,133mm boom pins on end of power section in place of fork attachment. Requires winch and block.

WINCH:
High performance hydraulic winch. Integral, full load brake. 76m of high capacity 15.875mm wire rope standard.

BLOCK:
27 tonne block standard. Low profile with swivel hook.

ANTI-TWO-BLOCK DEVICE:
Safety device installed to prevent hook block from contacting boom.

RADIO REMOTE CONTROL:

JIB EXTENSION:
Consult factory for available capacities
TF45/60
AS A FORKLIFT

LOAD CHARTS FOR FORKLIFT WITH COUNTERWEIGHT EXTENDED

* These capacities are based upon structural competence not machine stability

TF15/60
COUNTERWEIGHT EXTENDED
LOAD CENTER - 914 mm
LOADS ARE BASED UPON 85% OF TIPPING

LOAD CHARTS FOR FORKLIFT WITH COUNTERWEIGHT RETRACTED

TF45/60
COUNTERWEIGHT RETRACTED
LOAD CENTER - 914 mm
LOADS ARE BASED UPON 85% OF TIPPING
TF45/60
WITH RIGGERS BOOM OPTION

RANGE DIAGRAM / LOAD CHART WITH COUNTERWEIGHT EXTENDED

LOAD RADIUS

LOAD RADIUS IN METERS FROM BOOM FACE

POWER BOOM EXTENSION (METERS)

<table>
<thead>
<tr>
<th>LOAD RADIUS</th>
<th>POWER BOOM EXTENSION</th>
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</thead>
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<tr>
<td>IN METERS</td>
<td>0.00</td>
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<tr>
<td>FROM BOOM FACE</td>
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</tr>
<tr>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>0.30</td>
<td>27.20</td>
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<td>1.52</td>
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<tr>
<td>1.83</td>
<td>14.60</td>
</tr>
<tr>
<td>2.00</td>
<td>13.10</td>
</tr>
</tbody>
</table>

SEE NOTE "D" BELOW

NOTES:
A) ALL RATINGS ABOVE THE BOLD LINE ARE STABILITY LIMITS. STABILITY IS BASED ON 85% OF TIPPING.
B) ALL RATINGS BELOW THE BOLD LINE ARE BASED ON STRUCTURAL COMPETENCE AND NOT ON MACHINE STABILITY (TIPPING CONDITIONS).
C) ALL CAPACITIES ARE IN KILOGRAMS.
D) TELESCOPE CYLINDER MUST BE FULLY RETRACTED AND AGAINST STOPS.

CAUTION!
DO NOT EXTEND OR RETRACT COUNTERWEIGHT WITH ANY LOAD SUSPENDED ON HOOK!
TF45/60
WITH RIGGERS BOOM OPTION

RANGE DIAGRAM / LOAD CHART WITH COUNTERWEIGHT RETRACTED

LOAD RADIUS

LOAD RADIUS IN METERS FROM BOOM FACE

<table>
<thead>
<tr>
<th>POWER BOOM EXTENSION (METERS)</th>
<th>0</th>
<th>0.30</th>
<th>0.61</th>
<th>0.91</th>
<th>1.22</th>
<th>1.52</th>
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<td></td>
<td></td>
<td></td>
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<td>17,100</td>
<td>15,000</td>
<td>13,200</td>
<td>11,700</td>
</tr>
<tr>
<td>0.61</td>
<td>20,300</td>
<td>17,500</td>
<td>15,200</td>
<td>13,500</td>
<td>12,000</td>
<td>10,700</td>
</tr>
<tr>
<td>0.91</td>
<td>17,800</td>
<td>15,600</td>
<td>13,700</td>
<td>12,200</td>
<td>11,000</td>
<td>9,900</td>
</tr>
<tr>
<td>1.22</td>
<td>15,900</td>
<td>14,000</td>
<td>12,500</td>
<td>11,200</td>
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<tr>
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<td>12,700</td>
<td>11,400</td>
<td>10,300</td>
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<td>8,500</td>
</tr>
<tr>
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<td>10,600</td>
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<td>8,700</td>
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<td>9,000</td>
<td>8,200</td>
<td>7,500</td>
</tr>
</tbody>
</table>

SEE NOTE "D" BELOW

NOTES:
A) ALL RATINGS ABOVE THE BOLD LINE ARE STABILITY LIMITS. STABILITY IS BASED ON 85% OF TIPPING.
B) ALL RATINGS BELOW THE BOLD LINE ARE BASED ON STRUCTURAL COMPETENCE AND NOT ON MACHINE STABILITY (TIPPING CONDITIONS).
C) ALL CAPACITIES ARE IN KILOGRAMS.
D) TELESCOPE CYLINDER MUST BE FULLY RETRACTED AND AGAINST STOPS.

CAUTION!
DO NOT EXTEND OR RETRACT COUNTERWEIGHT WITH ANY LOAD SUSPENDED ON HOOK!
TF45/60
WITH MOBILIFT BOOM OPTION
DIMENSIONAL DATA

1480mm
[4'10 1/4"]

2765mm
[9'-7/8"]

3558mm
[11'-1/16"]

2949mm
[9'-8-1/16"]

Ø711mm
[2'4"]

R4356mm
[14'-3 1/2"]
NOTE

1. The above chart is for reference purposes only.
2. Never use the above chart for lift planning calculations.
3. Lift plan calculations are to be determined solely by the load charts and range diagrams that are issued for the specific serial numbered machine that is to be used for the specific planned lift.
### LOAD CHART WITH COUNTERWEIGHT EXTENDED

#### TF45/60 LOAD CHART
FOR USE WITH MOBILIFT BOOM AND HOOK BLOCK ONLY
STANDARD COUNTERWEIGHT
COUNTERWEIGHT FULLY EXTENDED

| LOAD RADIUS IN METERS FROM FRONT OF TIRE | 0 | 0.30 | 0.61 | 0.30 | 0.61 | 0.30 | 0.61 | 0.30 | 0.61 | 0.30 | 0.61 | 0.30 | 0.61 |
|------------------------------------------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 0.61                                     | 52 | 27,200 | 47 | 27,200 | 52 | 27,200 | 47 | 27,200 | 52 | 27,200 |
| 0.91                                     | 47 | 27,200 | 50 | 27,200 | 52 | 27,200 | 51 | 27,200 | 53 | 26,800 |
| 1.22                                     | 43 | 27,200 | 46 | 27,200 | 49 | 27,200 | 48 | 26,900 | 50 | 26,000 |
| 1.52                                     | 38 | 27,200 | 42 | 27,200 | 45 | 27,200 | 44 | 25,100 | 46 | 24,200 |
| 1.83                                     | 33 | 27,200 | 37 | 27,200 | 41 | 26,900 | 40 | 25,100 | 42 | 24,200 |
| 2.13                                     | 27 | 26,500 | 32 | 26,500 | 36 | 25,100 | 35 | 24,200 | 36 | 23,300 |
| 2.44                                     | 19 | 23,600 | 26 | 23,500 | 31 | 23,500 | 31 | 22,000 | 32 | 21,400 |
| 2.74                                     | 15 | 20,900 | 19 | 21,000 | 26 | 21,000 | 31 | 21,100 | 31 | 21,100 |
| 3.05                                     | 18 | 18,000 | 18 | 19,000 | 25 | 19,100 | 30 | 19,100 | 30 | 19,100 |
| 3.35                                     | 0  | 17,300 | 18 | 17,400 | 24 | 17,400 | 29 | 17,400 |
| 3.66                                     | 0  | 15,600 | 19 | 15,700 | 24 | 15,600 | 29 | 15,700 |
| 3.96                                     | 0  | 14,900 | 17 | 15,000 | 24 | 14,800 | 29 | 15,000 |
| 4.27                                     | 0  | 13,000 | 18 | 13,100 | 24 | 13,200 | 29 | 13,200 |

**NOTES:**
A) CAPACITIES ABOVE BOLD LINE ARE BASED ON STRUCTURAL COMPETENCE AND NOT STABILITY (TIPPING CONDITIONS).
B) CAPACITIES BELOW BOLD LINE ARE BASED ON 85% STABILITY LIMITS.
C) ALL CAPACITIES ARE IN KILOGRAMS.
D) TELESCOPE CYLINDER MUST BE FULLY RETRACTED AND AGAINST STOPS.

### CAUTION!
DO NOT EXTEND OR RETRACT COUNTERWEIGHT WITH ANY LOAD SUSPENDED ON HOOK OR FORKS.

### LOAD CHART WITH COUNTERWEIGHT RETRACTED

#### TF45/60 LOAD CHART
FOR USE WITH MOBILIFT BOOM AND HOOK BLOCK ONLY
STANDARD COUNTERWEIGHT
COUNTERWEIGHT FULLY RETRACTED

| LOAD RADIUS IN METERS FROM FRONT OF TIRE | 0 | 0.30 | 0.61 | 0.30 | 0.61 | 0.30 | 0.61 | 0.30 | 0.61 | 0.30 | 0.61 | 0.30 | 0.61 |
|------------------------------------------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 0.61                                     | 52 | 27,200 | 47 | 27,200 | 52 | 27,200 | 47 | 27,200 | 47 | 27,200 |
| 0.91                                     | 47 | 27,200 | 50 | 27,200 | 52 | 27,200 | 51 | 27,200 | 53 | 26,800 |
| 1.22                                     | 43 | 27,200 | 46 | 27,200 | 49 | 27,200 | 48 | 26,900 | 50 | 26,000 |
| 1.52                                     | 38 | 27,200 | 42 | 27,200 | 45 | 27,200 | 44 | 25,100 | 46 | 24,200 |
| 1.83                                     | 33 | 27,200 | 37 | 27,200 | 41 | 26,900 | 40 | 25,100 | 42 | 24,200 |
| 2.13                                     | 27 | 26,500 | 32 | 26,500 | 36 | 25,100 | 35 | 24,200 | 36 | 23,300 |
| 2.44                                     | 19 | 23,600 | 26 | 23,500 | 31 | 23,500 | 31 | 22,000 | 32 | 21,400 |
| 2.74                                     | 15 | 20,900 | 19 | 21,000 | 26 | 21,000 | 31 | 21,100 | 31 | 21,100 |
| 3.05                                     | 18 | 18,000 | 18 | 19,000 | 25 | 19,100 | 30 | 19,100 | 30 | 19,100 |
| 3.35                                     | 0  | 17,300 | 18 | 17,400 | 24 | 17,400 | 29 | 17,400 |
| 3.66                                     | 0  | 15,600 | 19 | 15,700 | 24 | 15,600 | 29 | 15,700 |
| 3.96                                     | 0  | 14,900 | 17 | 15,000 | 24 | 14,800 | 29 | 15,000 |
| 4.27                                     | 0  | 13,000 | 18 | 13,100 | 24 | 13,200 | 29 | 13,200 |

**NOTES:**
A) ALL RATINGS BELOW THE BOLD LINE ARE STABILITY LIMITS. STABILITY IS BASED ON 85% OF TIPPING.
B) ALL RATINGS ABOVE THE BOLD LINE ARE BASED ON 85% MULTIPLE LOADS: 175% AND UNMACHINE STABILITY (TIPPING CONDITIONS).
C) ALL CAPACITIES ARE IN KILOGRAMS.
D) TELESCOPE CYLINDER MUST BE FULLY RETRACTED AND AGAINST STOPS.

### CAUTION!
DO NOT EXTEND OR RETRACT COUNTERWEIGHT WITH ANY LOAD SUSPENDED ON HOOK!