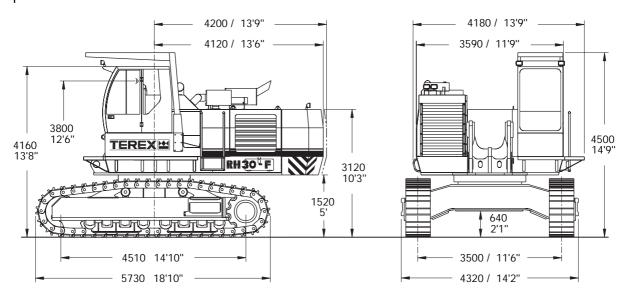
# **RH 30-F**

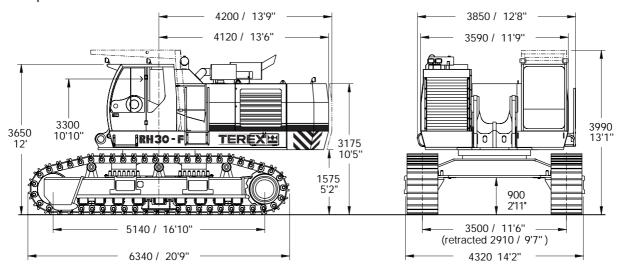
- Мощность двигателя: SAE J 1995......380 кВт.

- Низкоэмиссионный дизельный двигатель
- Два типа шасси для прямой и обратной лопаты
- 3-контурная гидравлическая система
- Насос с регулируемой производительностью
- Гидравлическая система контроля разгона и торможения при повороте платформы.
- Независимая система охлаждения
- Уникальная кинематическая схема работы экскаваторного оборудования "TriPower-Plus"
- Автоматическая, централизованная система смазки

# Тип прямая лопата с шасси HD.



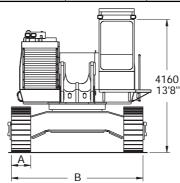
# Тип обратная лопата с шасси HD - RLC



# Операционный вес

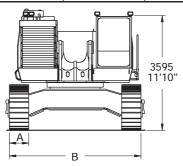
# Экскаватор типа прямая лопата с шасси HD

|  | . A            | . В               | _                        |                                    |
|--|----------------|-------------------|--------------------------|------------------------------------|
|  |                |                   | Операционный вес         | Давление на грунт                  |
| RH 30-F - 500 мм. трак (по требованию) | 500 mm<br>1'8" | 4000 mm<br>13'1"  | 84 700 kg<br>186730 lbs  | 16.8 N/cm²<br>24.3 psi             |
| RH 30-F - 600 мм. трак                 | 600 mm<br>2'   | 4100 mm<br>13'5"  | 85 400 kg<br>188 270 lbs | 14.1 N/cm <sup>2</sup><br>20.3 psi |
| RH 30-F - 750 мм. трак (по требованию) | 750 mm<br>2'6" | 4250 mm<br>13'11" | 86400 kg<br>190480 lbs   | 11.4 N/cm <sup>2</sup><br>16.6 psi |



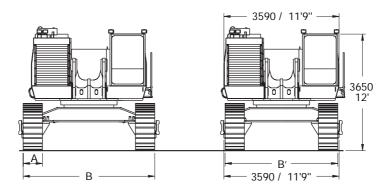
# Экскаватор типа обратная лопата с шасси HD

|  | А               | В                 | Операционный вес         | Давление на грунт      |
|--|-----------------|-------------------|--------------------------|------------------------|
| RH 30-F - 600 мм. трак                 | 600 mm<br>2'    | 4100 mm<br>13'5"  | 84 700 kg<br>186 730 lbs | 13.9 N/cm²<br>20.2 psi |
| RH 30-F - 750 мм. трак                 | 750 mm<br>2'6"  | 4250 mm<br>13'11" | 85 700 kg<br>188 930 lbs | 11.3 N/cm²<br>16.5 psi |
| RH 30-F - 900 мм. трак (по требованию) | 900 mm<br>2'11" | 4400 mm<br>14'5"  | 86 700 kg<br>191 140 lbs | 9.6 N/cm²<br>13.8 psi  |



# Экскаватор типа обратная лопата с шасси HD-RLC

|  | А      | В       | B'      | Операционный вес | Давление на грунт      |
|--|--------|---------|---------|------------------|------------------------|
| RH 30-F - 600 мм. трак                 | 600 mm | 4100 mm | 3510 mm | 88100 kg         | 13.0 N/cm <sup>2</sup> |
|  | 2'     | 13'5"   | 11'6"   | 194230 lbs       | 18.8 psi               |
| RH 30-F - 750 мм. трак                 | 750 mm | 4250 mm | 3660 mm | 89200 kg         | 10.5 N/cm <sup>2</sup> |
|  | 2'6"   | 13'11"  | 12'     | 196650 lbs       | 15.2 psi               |
| RH 30-F - 900 мм. трак (по требованию) | 900 mm | 4400 mm | 3810 mm | 90300 kg         | 8.8 N/cm <sup>2</sup>  |
|  | 2'11"  | 14'5"   | 12'6"   | 199080 lbs       | 12.8 psi               |





| •••                                     | Cummins QSX 15                                 |
|---|--|
| · · · · · · · · · ISO 3046              | 365 •• • (498 • .•) 1800 min <sup>-1</sup>     |
| ••••• SAE J 1349                        | 365 •• • (489 • .• .) 1800 min <sup>1</sup>    |
| • • • • • • • • • • SAE J1995           | 380 ••• (509 • .•.) 1800 min <sup>1</sup>      |
| Max. • • • • • • • SAE J 1995           | 448 • • • (600 • . • .) 2100 min <sup>-1</sup> |
| • | •        |
| ••••••                                  |  |
|   | 1050 • .                                       |
| •••••                                   | • 500 • /•                                     |

Microprocessed engine management
Automatic rev. reduction
Heavy duty air-filter STRATA 1 with automatic dust evacuation
Two-stage fuel filter and water separator
On-board voltage 24 Volt
2 High-performance batteries 2 x 12 V; 170 Ah



# Swing system

Swing drive with one axial piston motor and one compact planetary transmission with emergency and parking brake. Braking of the swing motion hydraulically by counteracting control. Closed-loop swing circuit with torque control for minimum energy consumption during acceleration, energy recycling during braking.

Superstructure and undercarriage connected by a totally enclosed triple-race swing roller bearing with internal gearing. Race ways and gearing supplied by the automatic central lubrication system.

Swing speed of superstructure:

max. 5.8 rpm



175 Amp

# Hydraulic cylinders

Robust cylinders with wiper rings, polyamide/polyurethane guide rings on pistons and on piston-rod guides. Seamless cylinder barrels. The roller-burnished internal surface ensures a maximum service life of piston seals and back up rings. All cylinders with end-of-stroke cushioning on piston and rod side. Pistons and piston rods of one-piece forged design.

Piston rods hardened, ground, fine-finished, hard-chromium-plated to size and polished to ensure maximum service life of seals and guide bushings.

Rod eye fastened to piston rod with a ring nut and high tensile bolts. In connection with the bolted guiding flange maintenance can be carried out quickly and easily.



Alternator

# Hydraulic system with PMS

Two swash-plate main pumps, one swash-plate swing pump, one oil cooling pump, one fan drive pump and one servo pump, each powered by the engine. Pump distribution transmission mounted to engine, transferring the output to the hydraulic pumps.

Main pumps controlled by electronic load limit regulation (**PMS - P** ump **M** anaging **S**ystem). PMS additionally effecting zero oil flow control and flow on demand for the main pumps, providing the required amount of oil, depending upon the joystick position and the load. Oil flow of pumps is automatically reduced when hydraulic oil temperature below +10°C or engine temperature respectively hydraulic oil temperature reach set maximum.

Pressure cut-off for main pumps. High degree of hydraulic efficiency ensured by the combined two systems.

Oil flow of main pumps  $2 \times 587$  l/min  $(2 \times 155$  US gal/min) Pressure, attachment and travel

Backhoe version
Shovel verison
Oil flow of swing pump
Pressure, swing
Total volume of hydraulic oil

Up to 32 MPa (320 bar) = 4624 psi
Up to 30 MPa (300 bar) = 4350 psi
1 x 307 l/min (1 x 81 US gal/min)
Up to 30 MPa (300 bar) = 4350 psi
approx. 1400 l (370 US gal)

Utilization of full engine output through electronic load limit governing and automatic double-flow for all cylinders.

#### Filters:

- 1) Full-flow high-pressure filters (100 µm) for the main pumps, installed behind each pump.
- High-pressure filter (20 μm) for the feed pump of the closed swing circuit.
- 3) 2 Full-flow filters (10 µm) for the complete return circuit.
- 4) High-pressure filter (20 µm) on the pump of servo circuit.

#### Hydraulic cooling:

Fully independent from main circuit. Hydraulic cooling by aluminium cooler. Fan drive and cooler supply temperature controlled.

Oil flow of cooling pump 496 l/min (131 US gal/min) Fan diameter 915 mm (3')



# Operator's cab

The sound-proofed operator's cab is elastically cushioned. It is designed to functional and ergonomic requirements and includes a comfortable, pneumatically adjustable and cushioned seat with integrated dual-lever joystick controls. Two pedals for track control; push-in lever for synchronous actuation on long distance travel. Combined airconditioning and heater system for cab ventilation. Clearly arranged instrument panel with warnings, instruments and indicators. Optimum panoramic view. Safety glass windows all around with armoured front windows. Windshield with parallel wiper/washer. Dead-man switch in seat cushion to switch off automatically the hydraulic servo controls when operator leaves the seat.

Internal dimensions of cab - Length - Width 1100 mm / 5'11" - Width 1100 mm / 4'3" - Height 1600 mm / 6'3"



### Heavy duty undercarriages

Two different types are available - HD and HD-RLC.

The shorter rigid frame HD undercarriage suits hard re-

The shorter rigid frame **HD** undercarriage suits hard rock and quarry applications. The crawler frames are welded to the centre part.

The Heavy Duty - Retractable Long Crawler undercarriage designed for heavy construction jobs provides higher stability, lower ground pressure and increased lifting capacity. The side frames are bolted to the main frame and can be retracted for transport purposes.

Number of bottom / support rollers

HD undercarriage 8 / 2 HD-RLC undercarriage 9 / 3



# Crawler unit (HD and HD-RLC)

Low-maintenance tractor-type undercarriage incorporates a fully hydraulic self-adjusting track tensioning system with membrane accumulator. Individual hydraulic drive for each crawler track by two-stage axial piston motor connected to a planetary gear. Sealed chains with track guides behind idler.

The crawler drive unit is built in a compact design, integrated within the protecting area of the track frame and pads. Automatic hydraulic retarder and suction valve to prevent overspeed on downhill travel. Travel brakes - adjustment free hydraulically operated emergency and parking brakes.

| Type of running geo  | ır                    | D9   |
|----------------------|-----------------------|--|
| Pin diameter         |                       | 57.2 mm (2½")<br>85.7 mm (3¾")                 |
| Bushing              |                       | 85.7 mm (3³/ <sub>8</sub> ")                   |
| Pitch                |                       | 260.4 mm (101/4")                              |
| Width of chain betw  | veen bottom           | of roller flanges 240.8 mm ( $9\frac{1}{2}$ ") |
| Travel speed         | 1 <sup>st</sup> stage | max. 3.1 km/h (1.93 <i>mph</i> )               |
|                      | 2 <sup>nd</sup> stage | max. 4.7 km/h (2.92 mph)                       |
| Max. tractive force: | 1 <sup>st</sup> stage | 588 kN (132180 lbs)                            |
|                      | 2 <sup>nd</sup> stage | 415 kN (93295 lbs)                             |
| Gradability:         |                       | approximately 76 %                             |
|                      |                       |  |



#### Shovel attachment

Shovel attachment with **TriPower Plus** system. On Terex / O&K's patented **TriPower** attachment, bucket crowd and boom cylinders are connected through a triangular rocker. As a further development of the well known **TriPower** system on the **TriPower Plus**-equipment the pivot point of the stick cylinder is located on the superstructure. This equipment geometry ensures following advantages:

- TriPower ensures automatic, constant-angle bucket guidance when crowding horizontally at any height or reach to win time and energy.
- TriPower ensures automatic, constant-angle bucket guidance when raising and lowering the attachment to win time and energy and to increase the bucket fill factor as well.
- 3. **TriPower** incorporates an automatic roll-back limiter that prevents the bucket being curled back too far to save a high bucket fill.
- 4. TriPower achieves approx. 50% more crowd force with comparable cylinder diameters and provides an increasing total crowd force throughout the whole crowd distance.
- TriPower achieves an increase of up to 40% lift force when lifting bucket out of pile with boom cylinders. Additionally there are 10% lift force assistance when lifting filled bucket.
- TriPower maintains constant boom moment throughout the whole lift arc to win energy avoiding an increase in boom cylinder pressure.
- TriPower ensures lifting forces equal to the stability of the excavator at all lifting positions for best possible utilization of hydraulic forces.
- TriPower Plus with the pivot point of the stick cylinder on the superstructure. The resulting additional moment increases the lifting capacity and the crowd force and allows a further increase of the working speed.

TriPower incorporates "float".

The "float" feature permits only minor vertical reaction forces being transferred to the basic machine during bucket crowd. This results in better overall machine life and less operator fatigue.

**TriPower** incorporates "pressure-free lowering".

"Pressure-free lowering" of boom with quick drop valve in the cylinder yield energy and fuel savings.

Boom and arm (stick) are robust, torsion free, close-welded box design of high-tensile steel with well dimensioned steel castings at pivot areas.

#### The bottom-dump bucket lip

is made of high-tensile steel, robust design with heavy castings for the pivot points. V-type cutting edge includes high-tensile ESCO tooth tips size 61 type SD and wear-resistant material between tooth tips. Bucket lip is designed and shaped for optimum material penetration and flow, providing best possible bucket fill factor.

#### The bottom dump bucket backwall

is designed to provide the ideal flow of forces between the various points of digging impact. High tensile structure through welded box design. Direct absorption of forces by the bucket crowd cylinders via integral heavy pivot points, evenly dispersed into the bucket backwall.

Various bottom-dump buckets are available for different applications.



#### **Backhoe attachment**

Monobooms and arms (sticks) are robust, torsion-free, close-welded box design of high-tensile steel with well-dimensioned steel castings at pivot areas. Various attachments are available for different applications. Backhoe bucket are made of high-tensile steel and welded box design for the bucket back. Wearstrips along bucket bottom. V-type cutting edge with high tensile ESCO tooth tips.

Various backhoes are available for different applications.



### Lubrication system

Automatic central lubrication system with electronic time-relay control. Electrically driven piston pump with down line distributors.

Connected to the lubrication system are the raceways and internal gearing of swing roller bearing as well as the pivot points of attachment and cylinders. The bearings of BH bucket and linkage are only connected on request.

Capacity of grease drum

10 I (2.6 US gal)

# **Optional equipment**

#### General

Seaworthy packing, disassembly Finishing other than O&K std. colours (O&K colour quality) Inscription as per customer's specification

#### Superstructure

Sound proofing acc. to EEC type examination certificate and GS (German safety approval) (compulsory for EC-countries)
Fuel preheating 24 V

Cooling water preheating 220 V / 1500 W

Engine oil preheating 220 V / 300 W

Barrel refuelling pump (loose) max. 100 l/min with 24 V socket (Diesel)

Refuelling system (fixed installed) max. 100 l/min

Automatic fire suppression system Hydraulic-fluid PANOLIN

VENIONI I: abtina

XENON lighting

Catwalk at right hand side engine compartment

Bekamax central lubrication system

#### Cab

FOPS guard above cab (standard on shovel version)
Cab elevation by 0.58 m (standard on shovel version)
Cab elevation by 1.0 m (= 0.42 m on shovel version)
Auxiliary heating with "7-days" timer
Hand extinguisher with holder (compulsory for France)
Radio with loudspeaker and antenna
Guards for upper and lower front window against rocks

#### **Equipment**

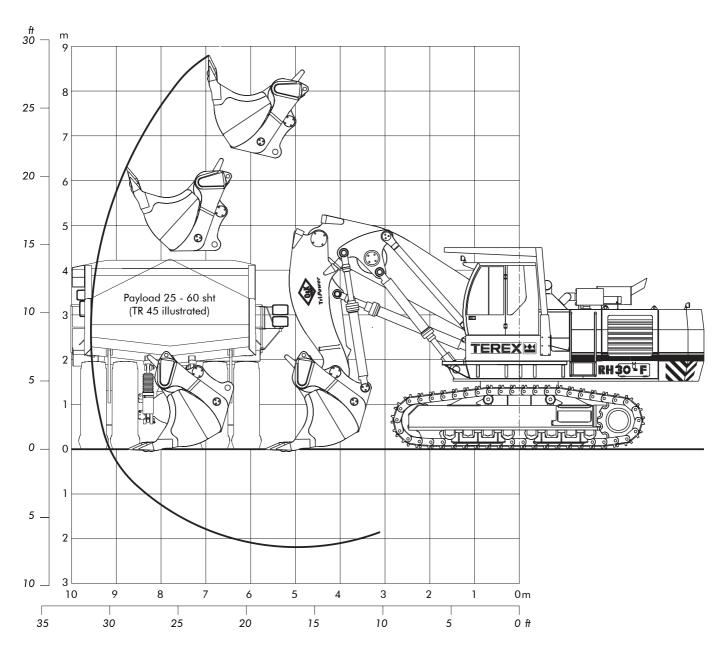
Various Esco teeth for buckets
Various hardfacing stages for buckets
Connection of BH bucket and linkage to central lub system
Heavy lifting system
Safe load indicator
Pipe burst protection devices for boom or arm cylinders

### Undercarriage

Additional track guide

Guard for boom cylinders

Futher optional equipment on request.



# **Digging forces**



Crowd force 400 kN <u>at ground level</u> 89890 lbs

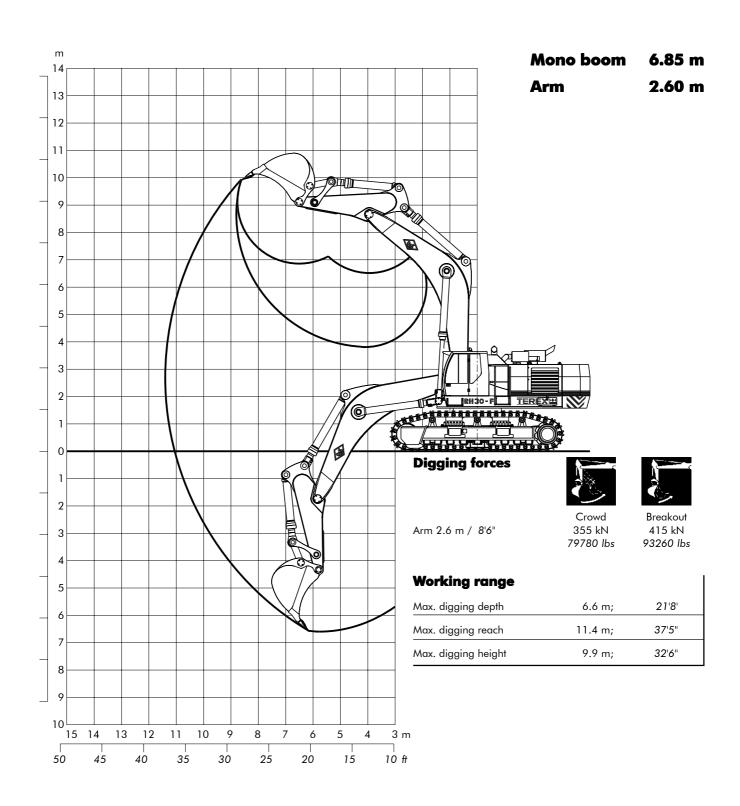
530 kN <u>max.</u> 119110 lbs



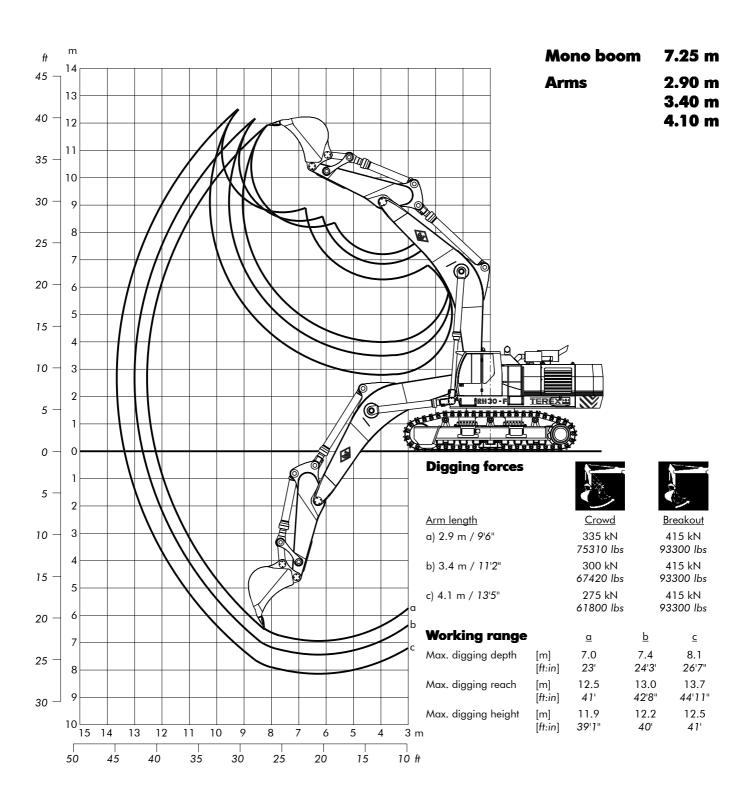
Breakout force 400 kN 89890 lbs

| working range           |        |        |
|-------------------------|--------|--------|
| Max. digging height     | 8.8 m; | 28'10" |
| Max. digging reach      | 9.6 m; | 31'6"  |
| Max. digging depth      | 2.3 m; | 7'7"   |
| Max. dumping height     | 6.7 m; | 22'    |
| Crowd distance on level | 3.1 m; | 10'2'  |

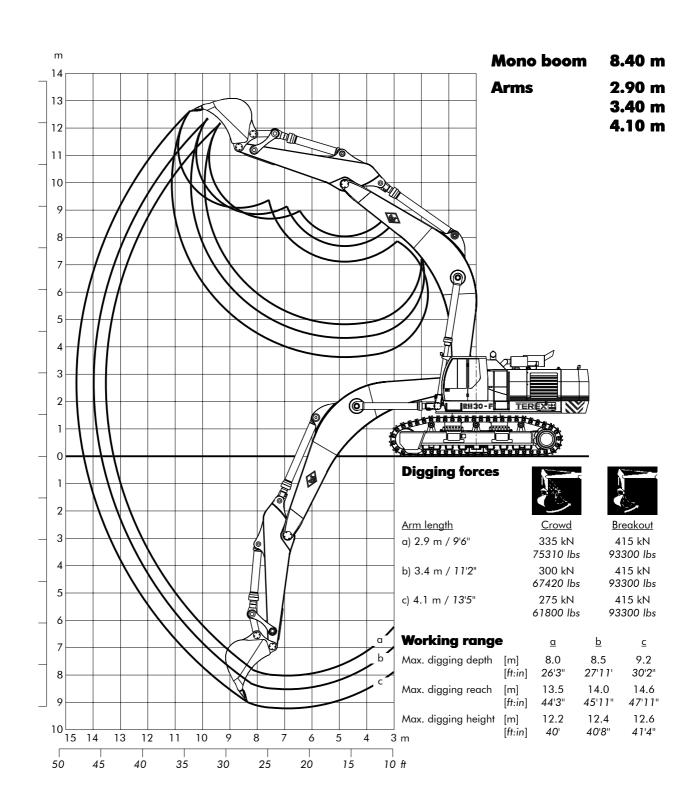
| Face shovels        | : shovels      |          |                   | Standard | rock bucket | Light load bucket |       |  |
|---------------------|----------------|----------|-------------------|----------|-------------|-------------------|-------|--|
|                     |                | ESCO tee | ESCO teeth V61 SD |          | eth V61 SD  | on request        |       |  |
| SAE / PCSA 1 : 1 r  | m³ cuyd        | 5.0      | 6.5               | 6.3      | 8.2         | 8.5               | 11.1  |  |
| SAE / CECE 2:1 r    | m³ <i>cuyd</i> | 4.3      | 5.5               | 5.5      | 7.2         | 7.4               | 9.7   |  |
| Contl r             | mm ft:in       | 2400     | 7'10"             | 2800     | 9'2"        | 3000              | 9'10" |  |
|                     | mm ft:in       | 1250     | 4'1"              | 1250     | 4'1"        | 1250              | 4'1"  |  |
|                     | ۷o.            | 5        |                   | 6        |             | 6                 |       |  |
| kg k                | g Ibs          | 8000     | 17640             | 8500     | 18740       | 7300              | 16090 |  |
|                     | /m³ lbs/cuyd   | 2.2      | 3710              | 1.8      | 3030        | 1.1               | 1850  |  |
| Standard hardfacing |                | staç     | ge 2              |          | -           |                   | -     |  |



| Backhoes |                |                | Mass ex        | cavation          | Mass excavation |                             | Mass excavation |                |  |
|----------|----------------|----------------|----------------|-------------------|-----------------|-----------------------------|-----------------|----------------|--|
|          |                |                | Esco teet      | th V59 SD         | Esco teet       | h V59 SD                    | Esco tee        | h V59 SD       |  |
|          | SAE 1:1        | m³ <i>cuyd</i> | 7.0            | 9.2               | 6.2             | 8.1                         | 5.5             | 7.2            |  |
|          | CECE 2:1       | m³ cuyd        | 6.2            | 8.1               | 5.4             | 7.1                         | 4.8             | 6.3            |  |
|          | struck         | m³ cuyd        | 5.3            | 6.9               | 4.6             | 6.0                         | 4.1             | 5.4            |  |
| CLAND V  |                | mm ft:in       | 3005           | 9′10″             | 2905            | 9′6"                        | 2705            | 8'10"          |  |
| 2        |                | No. of teeth   | 6              |                   | 6               |                             | 6               |                |  |
|          | kg<br>ibs      | kg Ibs         | 5500           | 12130             | 5350            | 11790                       | 5200            | 11460          |  |
|          |                | S              | buitable for m | aterial density ( | loose) of: [t/m | <sup>3</sup> / lbs/cuyd] (b | ackhoe witho    | ut hardfacing) |  |
|          | 5.85 m / 22'6" | 2.6 m / 8'6"   | 1.5            | 2530              | 1.8             | 3030                        | 2.1             | 3540           |  |



| Backhoes      |          |            |          | <b>excavation</b><br>eeth V59 SD |             | xcavation<br>eth V59 SD |            | <b>bucket</b><br>th V61 SD |           | <b>bucket</b><br>th V61 SD |
|---------------|----------|------------|----------|----------------------------------|-------------|-------------------------|------------|----------------------------|-----------|----------------------------|
|               | SAE 1:1  | m³ cuy     | d 5.5    | 7.2                              | 5.1         | 6.7                     | 4.6        | 6.0                        | 3.5       | 4.6                        |
|               | CECE 2:1 | m³ cuyo    | 4.8      | 6.3                              | 4.5         | 5.9                     | 4.1        | 5.4                        | 3.2       | 4.2                        |
| <b>_</b>      | struck   | m³ cuyo    | 4.1      | 5.4                              | 3.8         | 5.0                     | 3.5        | 4.6                        | 2.8       | 3.7                        |
| 00000         |          | mm ft:in   | 2705     | 8'10"                            | 2555        | 8'5"                    | 2275       | 7'6"                       | 1825      | 6'                         |
|               | i        | No. of tee | eth      | 6                                |             | 6                       |            | 5                          |           | 4                          |
| kg<br>/bs     |          | kg lbs     | 5200     | 11460                            | 5050        | 11130                   | 4800       | 10580                      | 4500      | 9920                       |
| .50           | l        |            | Suitable | for material                     | density (lo | ose) of: [t/m           | ³ / Ibs/cu | yd] (backha                | e without | hardfacing)                |
|               |          | 2.9 m /9'  | 5" 1.6   | 2700                             | 1.8         | 3030                    | 2.0        | 3370                       | 2.7       | 4550                       |
| 7.25 m / 23'9 |          | 3.4 m /1   | 1'2" 1.5 | 2530                             | 1.6         | 2700                    | 1.8        | 3030                       | 2.5       | 4210                       |
|               |          | 4.1 m /13  | 3'5" 1.2 | 2020                             | 1.3         | 2190                    | 1.5        | 2530                       | 2.0       | 3030                       |

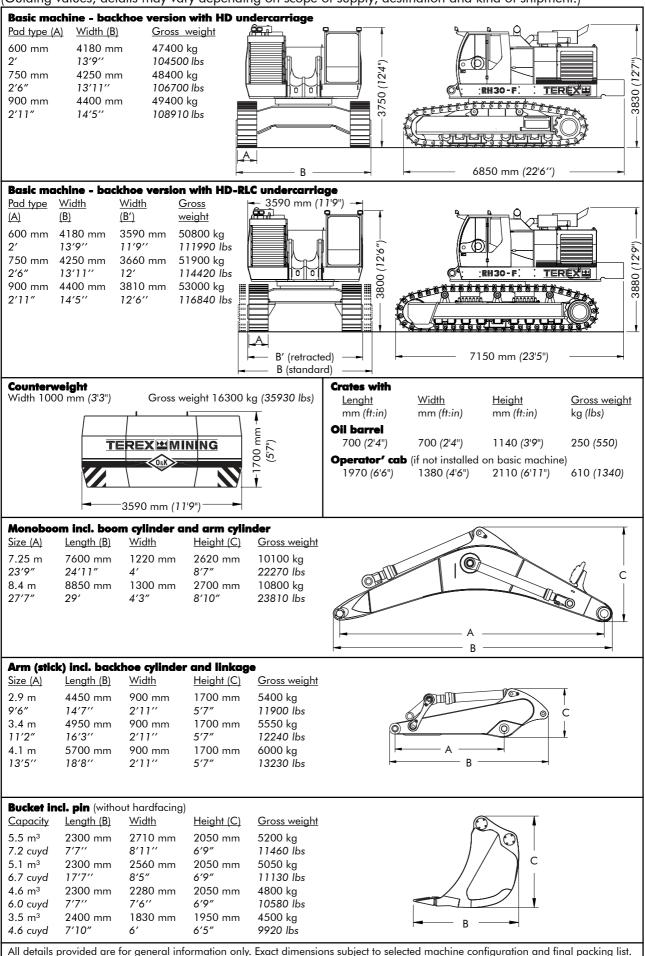


| Backhoes |           |       |          |             | cavation<br>th V59 SD |              | cavation<br>th V59 SD     |             | <b>bucket</b><br>h V61 SD | Rock b      | <b>Ducket</b><br>h V61 SD |
|----------|-----------|-------|----------|-------------|-----------------------|--------------|---------------------------|-------------|---------------------------|-------------|---------------------------|
|          | SAE 1:1   | m³    | cuyd     | 5.5         | 7.2                   | 5.1          | 6.7                       | 4.6         | 6.0                       | 3.5         | 4.6                       |
|          | CECE 2:1  | $m^3$ | cuyd     | 4.8         | 6.3                   | 4.5          | 5.9                       | 4.1         | 5.4                       | 3.2         | 4.2                       |
| <b>#</b> | struck    | $m^3$ | cuyd     | 4.1         | 5.4                   | 3.8          | 5.0                       | 3.5         | 4.6                       | 2.8         | 3.7                       |
| COATO 5/ |           | mm    | ft:in    | 2705        | 8'10"                 | 2555         | 8'5"                      | 2275        | 7'6"                      | 1825        | 6'                        |
|          |           | No.   | of teeth |             | 6                     |              | 6                         |             | 5                         | 2           | 1                         |
|          | kg<br>ibs | kg    | lbs      | 5200        | 11460                 | 5050         | 11130                     | 4800        | 10580                     | 4500        | 9920                      |
|          |           |       | S        | uitable for | material d            | ensity (loos | se) of: [t/m <sup>2</sup> | 3 / Ibs/cuy | d] (backho                | e without h | ardfacing)                |
|          |           | 2.9   | m /9'6"  | 1.2         | 2700                  | 1.3          | 2190                      | 1.5         | 2530                      | 2.0         | 3370                      |
| 8.4 m    |           | 3.4   | m /11'2" | 1.0         | 1690                  | 1.1          | 1850                      | 1.3         | 2190                      | 1.8         | 3030                      |
| 2/1/     |           | 4.1   | m /13'5" |             | -                     |              | -                         | 1.1         | 1850                      | 1.4         | 2360                      |

# **General packing list**

# **Backhoe configuration**

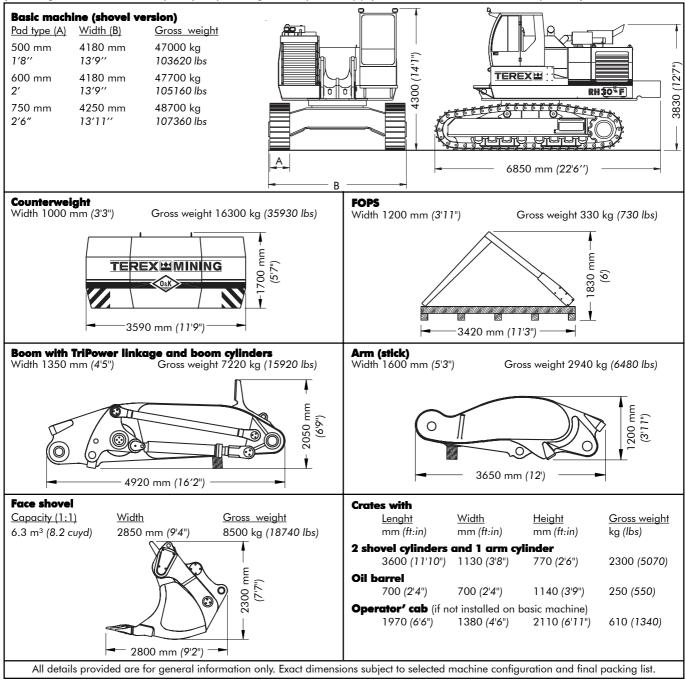
(Guiding values; details may vary depending on scope of supply, destination and kind of shipment.)



# **General packing list**

# **Shovel configuration**

(Guiding values; details may vary depending on scope of supply, destination and kind of shipment.)



Alterations without prior notice. The illustrations do not necessarily show the standard version of machine.



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