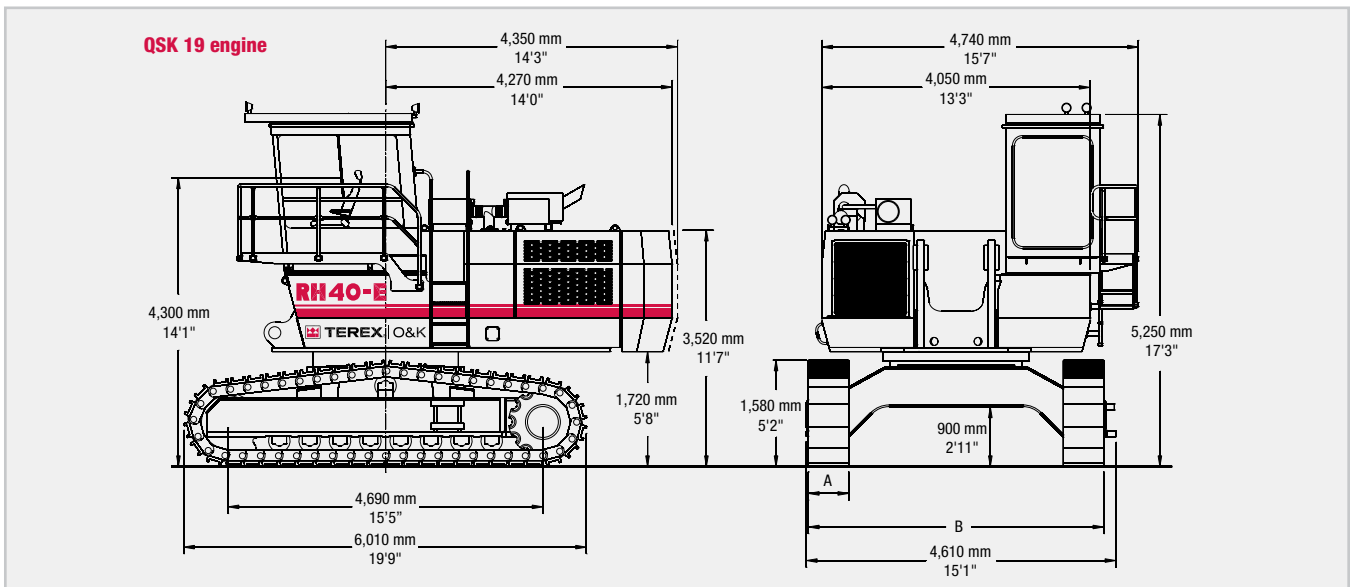
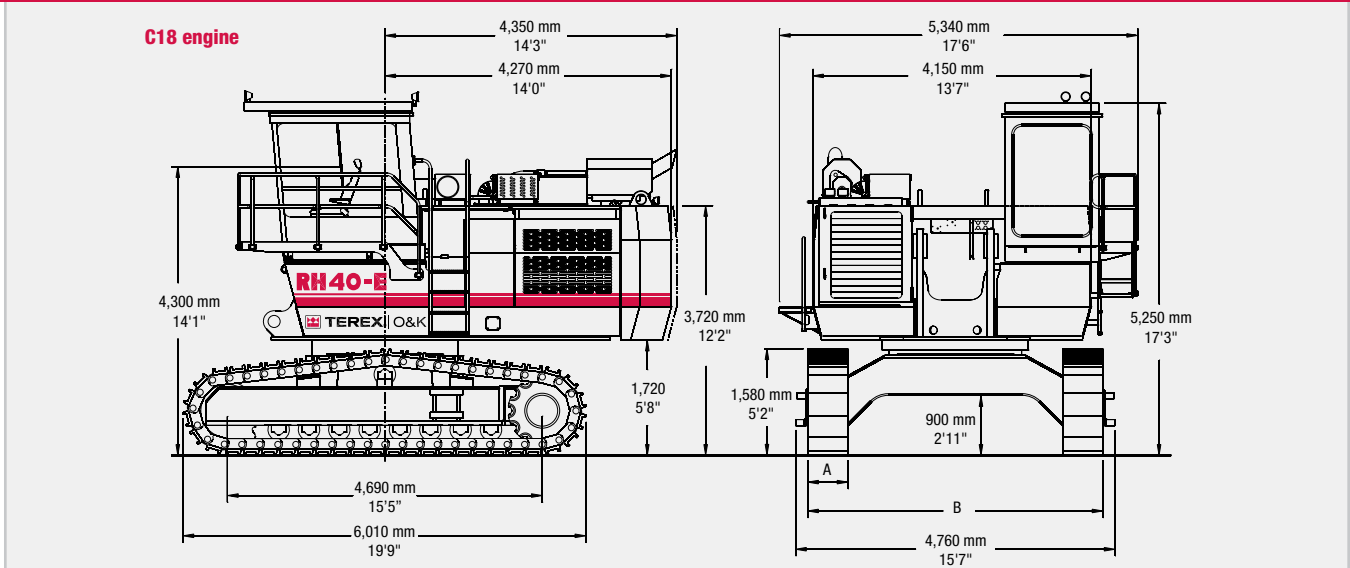


Hydraulic Mining Excavator | RH 40-E



RH 40-E

General Data:

Operating weight (with C18 engine)

Face Shovel	105 t	116 sht
Backhoe	105 t	116 sht

Engine output SAE J 1995

Caterpillar C18	522 kW	700 HP
Cummins QSK 19-C	477 kW	640 HP

Standard bucket capacity

Face Shovel (SAE 2:1)	7.0 m ³	9.2 yd ³
Std. rock backhoe (SAE 1:1)	6.0 m ³	7.8 yd ³
M.E. backhoe (SAE 1:1)	7.0 m ³	9.2 yd ³

Features:

- TriPower shovel attachment
- Independent oil cooling system
- 3-circuit-hydraulic system
- Torque control in closed-loop swing circuit
- Automatic central lubrication system
- Triple-race swing roller bearing

Operating Weights

with Caterpillar C18 engine

	Shovel unit				Backhoe unit	
	Pad width A	Width over pads B	Operating weight	Ground pressure	Operating weight	Ground pressure
Track pads option (on request)	500 mm 19 ½"	4,300 mm 14'1"	103,800 kg 228,840 lb	19.7 N/cm ² 28.6 psi	104,300 kg 229,940 lb	19.8 N/cm ² 28.7 psi
Standard track pads	600 mm 23 ½"	4,400 mm 14'5"	104,750 kg 230,930 lb	16.6 N/cm² 24.1 psi	105,250 kg 232,030 lb	16.7 N/cm² 24.2 psi
Track pads option	750 mm 29 ½"	4,550 mm 14'11"	106,300 kg 234,350 lb	13.5 N/cm ² 19.6 psi	106,800 kg 235,450 lb	13.5 N/cm ² 19.6 psi
Track pads option (on request)	900 mm 35 ½"	4,700 mm 15'5"	107,850 kg 237,770 lb	11.4 N/cm ² 16.5 psi	108,350 kg 238,870 lb	11.4 N/cm ² 16.5 psi

with Cummins QSK19 engine

	Shovel unit				Backhoe unit	
	Pad width A	Width over pads B	Operating weight	Ground pressure	Operating weight	Ground pressure
Track pads option (on request)	500 mm 19 ½"	4,300 mm 14'1"	101,200 kg 223,110 lb	19.2 N/cm ² 27.8 psi	101,700 kg 224,210 lb	19.3 N/cm ² 28.0 psi
Standard track pads	600 mm 23 ½"	4,400 mm 14'5"	102,150 kg 225,200 lb	16.2 N/cm² 23.5 psi	102,650 kg 226,300 lb	16.3 N/cm² 23.6 psi
Track pads option	750 mm 29 ½"	4,550 mm 14'11"	103,700 kg 228,620 lb	13.1 N/cm ² 19.0 psi	104,200 kg 229,720 lb	13.2 N/cm ² 19.1 psi
Track pads option (on request)	900 mm 35 ½"	4,700 mm 15'5"	105,250 kg 232,030 lb	11.1 N/cm ² 16.1 psi	105,250 kg 233,140 lb	11.2 N/cm ² 16.2 psi

Electrical System

System voltage	24V	
Version:	Caterpillar	Cummins
Batteries (12 V each) in series/parallel installation	2 x 244 Ah 244 Ah - 24 V	2 x 170 Ah 170 Ah - 24 V
Alternator	150 A	175 A
Working spot lights	6 x Halogen lights	
• Battery isolation relay		

Hydraulic Oil Cooling

Oil flow of cooling pump	467 l/min (123 US gal/min)
Diameter of fan	930 mm (3'1")
• Cooling system is fully independent of all main circuits, i.e. controlled cooling capacity is available whenever engine is running	
• Gear type cooling pump supplying high volume low pressure oil to fans and aluminium cooler	
• Variable axial piston pump supplying low volume high pressure oil to fan	
• Fan speed is thermostatically controlled	
• Extremely high cooling efficiency to ensure optimum oil temperature	

Diesel Engine

Engine features

- Microprocessed engine management
- Automatic rev. reduction
- Heavy duty air-filters, STRATA 1 with automatic dust evacuation
- Two-stage fuel filter incl. water separator

Version 1 - Caterpillar (Tier 3)

Make and model	Caterpillar C18
Total rated net power ISO 3046/1	496 kW (665 HP) 1,800 min ⁻¹
Total rated net power SAE J1349	496 kW (665 HP) 1,800 min ⁻¹
Total rated gross power SAE J1995	522 kW (700 HP) 1,800 min ⁻¹
No. of cylinders	6
Bore	145 mm (5.7 in)
Stroke	183 mm (7.2 in)
Displacement	18.1 l (1.105 in ³)
Aspiration	Turbocharged and charge air cooled
Max. altitude without deration	1,500 m (4,900 ft) a.s.l.
Emission certification	US EPA/CARB Tier 3; Europe NRMM Stage III A
Fuel tank capacity	1,300 l (343 US gal)

Version 2 - Cummins (Tier 1)

Make and model	Cummins QSK 19-C (Tier 1)
Total rated net power ISO 3046/1	453 kW (607 HP) 1,800 min ⁻¹
Total rated net power SAE J1349	453 kW (607 HP) 1,800 min ⁻¹
Total rated gross power SAE J1995	477 kW (640 HP) 1,800 min ⁻¹
No. of cylinders (each engine)	6
Bore	159 mm (6.25 in)
Stroke	159 mm (6.25 in)
Displacement	19 l (1,159 in ³)
Aspiration	Turbocharged and aftercooled
Max. altitude without deration	3,100 m (10,200 ft) a.s.l.
Emission certification	US EPA Tier 1; Eurpoe NRMM Tier 1
Fuel tank capacity	1,300 l (343 US gal)

Hydraulic System with PMS

Main pumps	2 x variable swash plate pumps
Max. oil flow	2 x 552 l/min (2 x 146 US gal/min)
Max. pressure, attachment	30 MPa = 300 bar (4,350 psi)
Swing pump	Reversible swash plate pump
Max. oil flow	287 l/min (76 US gal/min)
Max. pressure, swing circuit	35 MPa = 350 bar (5,080 psi)
Total volume of hydraulic oil	approx. 1,700 l (449 US gal)
Hydraulic tank capacity	approx. 1,300 l (343 US gal)
<ul style="list-style-type: none"> Pump Managing Systems (PMS) contains: <ul style="list-style-type: none"> Electronic load limit control Flow on demand from main pumps depending on joystick position Automatic regulation of main pumps to zero flow without demand Automatic rpm reduction of engine speed during working breaks Reduced oil flow of main pumps at high hydraulic oil temperature or at high engine temperature Pressure cut-off for main pumps Filters: <ul style="list-style-type: none"> Full-flow high-pressure filters (100 µm) for the main pumps, installed directly behind each pump Full-flow filters (10 µm) for the complete return circuit Full-flow filter (10 µm) for the cooling return circuit Pressure filter (40 µm) for servo circuit Pressure filter (40 µm) for the feed pump of the closed swing circuit 	

Undercarriage

Travel speed	Max. 2.34 km/h (1.45 mph)
Max. tractive force	650 kN (66 t = 146,070 lb)
Gradability of travel drives	Max. 70 %
Track pads (each side)	48
Bottom rollers (each side)	8
Support rollers (each side)	1
Travel drives (each side)	1 planetary transmission with 1 axial piston motor
Parking brake	Wet multiple disc brake, spring applied / hydraulically released
<ul style="list-style-type: none"> Rolled double-grouser track pads All running surfaces of sprockets, idlers, rollers and track links are hardened Fully hydraulic self-adjusting track tensioning system with membrane accumulator Automatic hydraulic retarder valve to prevent overspeed on downhill travel Acoustic travel alarm 	

Operator's Cab

Operator's eye level	approx. 4.3 m (14'1")	
Internal dimensions of cab	Length	1,800 mm (5'11")
	Width	1,300 mm (4'3")
	Height	1,900 mm (6'3")
<ul style="list-style-type: none"> Pneumatically cushioned and multi-adjustable comfort seat with lumbar support, seat heating, safety belt, head and arm rests Switch in seat cushion to neutralize automatically the hydraulic controls when operator leaves the seat Joystick controls integrated in independently adjustable seat consoles Fold-away auxiliary seat with safety belt FOPS (rock guard; approved acc. to DIN ISO 3449) integrated into cab structure All-round safety glass, armoured windshield and sliding side window Windshield with parallel intermittent wiper / washer Roller blind at windshield Robust instrument panel incl. large and easy to read instruments 		

Swing System

Swing drive	Compact planetary transmission with axial piston motor
Parking brake	Wet multiple disc brake, spring loaded / hydraulically released
Max. swing speed	5.6 rpm
Swing ring	Triple race roller bearing with sealed internal gearing
<ul style="list-style-type: none"> Closed-loop swing circuit with torque control Hydraulic braking of the swing motion by counteracting control All race ways of swing ring as well as grease bath for internal gearing supplied by automatic central lubrication system 	

Automatic Lubrication System

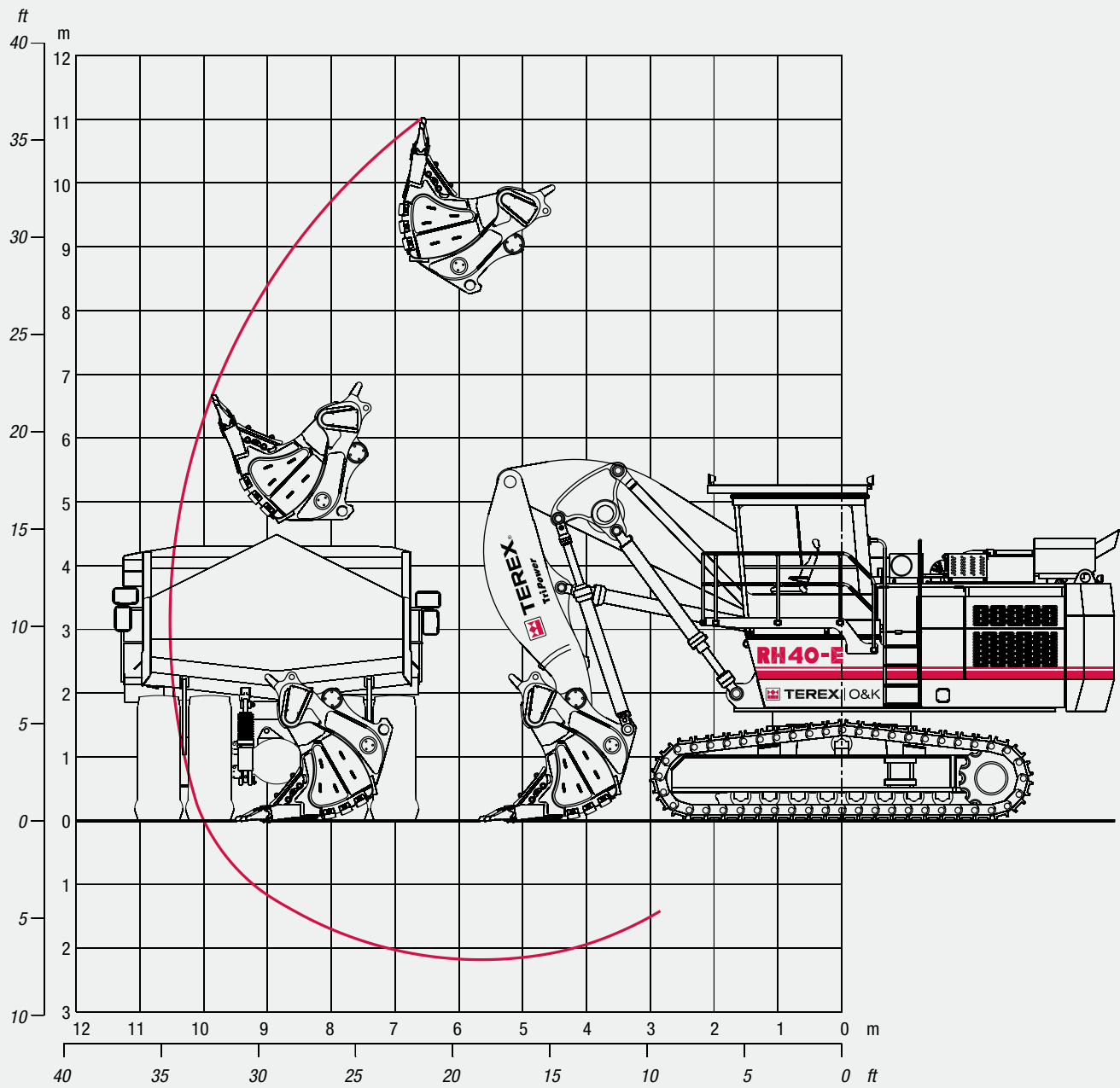
Capacity of grease drum	8 l (2.1 US gal)
<ul style="list-style-type: none"> Single line progressive automated lubrication system, electric motor driven and electronically controlled Connected to the lubrication system are the swing roller bearing with internal gearing and all pivot points of attachment, bucket and cylinders except backhoe bucket and linkage System failures displayed on control panel 	

Attachments

- Booms and sticks are torsion resistant, welded box design of high tensile steel with massive steel castings at pivot areas
- Booms and sticks are stress relieved after welding
- "Pressure-free lowering" of boom (FS) by means of a float valve
- Shovel attachment with Terex® O&K patented TriPower kinematics ensuring the following main features:
 - Horizontal automatic constant-angle bucket guidance
 - Vertical automatic constant-angle bucket guidance
 - Automatic roll-back limiter to prevent material spillage
 - Kinematic assistance to hydraulic forces
 - Constant boom momentum throughout the whole lift arc
 - Crowd force assistance
- All buckets (FS and BH) are equipped with a universal wear package suitable for all standard applications, which consists of:
 - Special liner material covering main wear areas inside and outside of bucket
 - Lip shrouds between teeth
 - Side edge protection
 - Heel shrouds at bottom edges
- Special wear packages for highly abrasive materials on request

TriPower Face Shovel Attachment (FS)

Working Diagram - Boom 5.05 m (16'7") - Stick 3.55 m (11'8")



Working Range

Max. digging height	11.0 m	36'1"
Max. digging reach	10.5 m	34'5"
Max. digging depth	2.2 m	7'3"
Max. dumping height	8.8 m	28'10"
Crowd distance on level	3.9 m	12'10"

Digging Forces

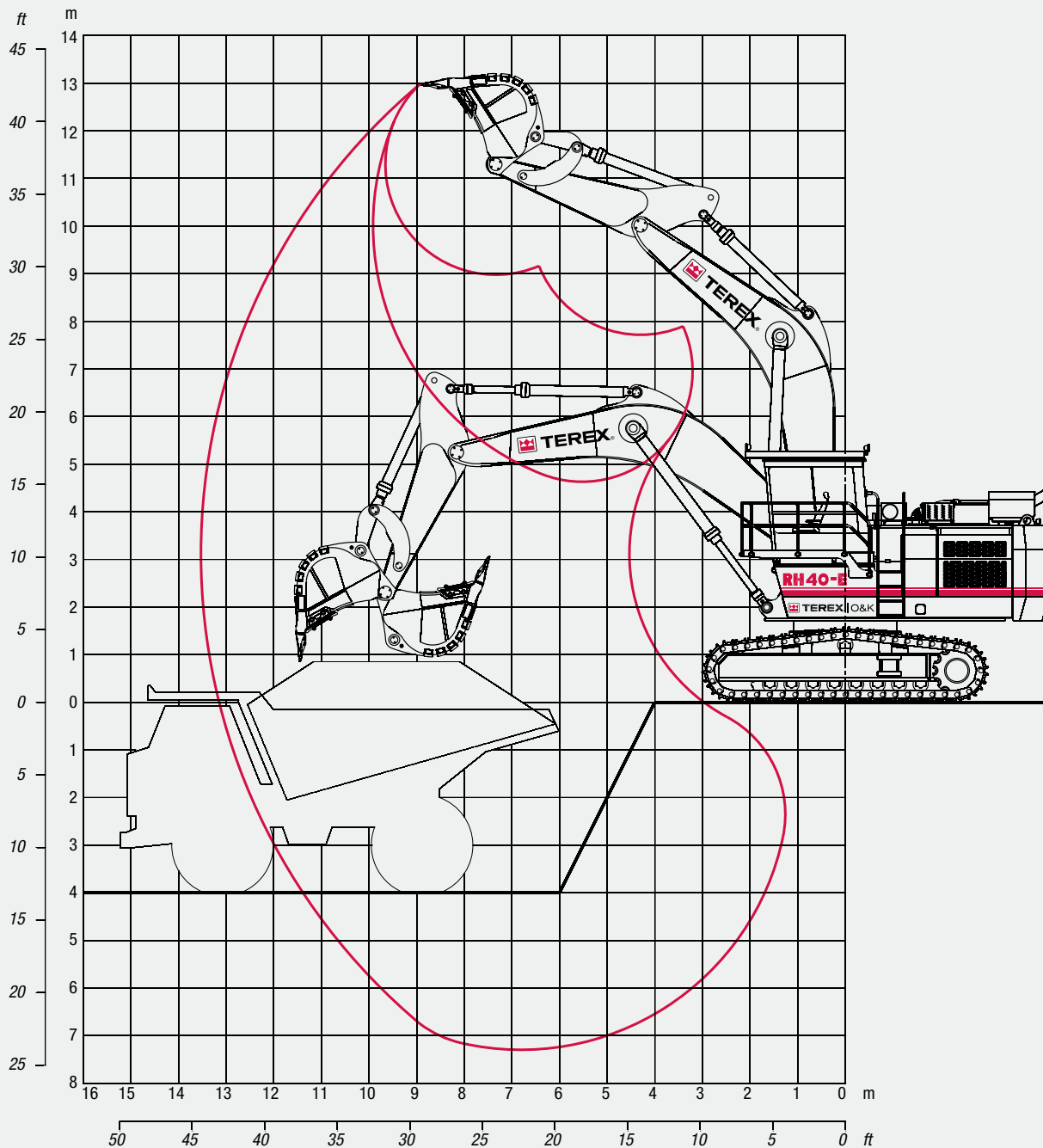
Max. crowd force	650 kN	146,070 lb
Max. crowd force at ground level	500 kN	112,370 lb
Max. breakout force	500 kN	112,370 lb

Face Shovels

Type	Heavy rock shovel	Standard rock shovel
Tooth system	ESCO V 69	ESCO V 69
Capacity SAE/PCSA 1:1	6.9 m ³ (9.0 yd ³)	8.1 m ³ (10.6 yd ³)
Capacity SAE/CECE 2:1	6.0 m³ (7.8 yd³)	7.0 m³ (9.2 yd³)
Total width	2,500 mm (8'2")	3,000 mm (9'10")
Inner width	2,300 mm (7'7")	2,800 mm (9'2")
Opening width	1,450 mm (4'9")	1,450 mm (4'9")
No. of teeth	5	6
Weight incl. universal wear kit	9,500 kg (20,940 lb)	10,100 kg (22,270 lb)
Max. material density (loose)	2.2 t/m ³ (3,710 lb/yd ³)	1.8 t/m ³ (3,030 lb/yd ³)

Standard Backhoe Attachment (BH)

Working Diagram - Boom 7.8 m (25'7") - Stick 3.3 m (10'10")



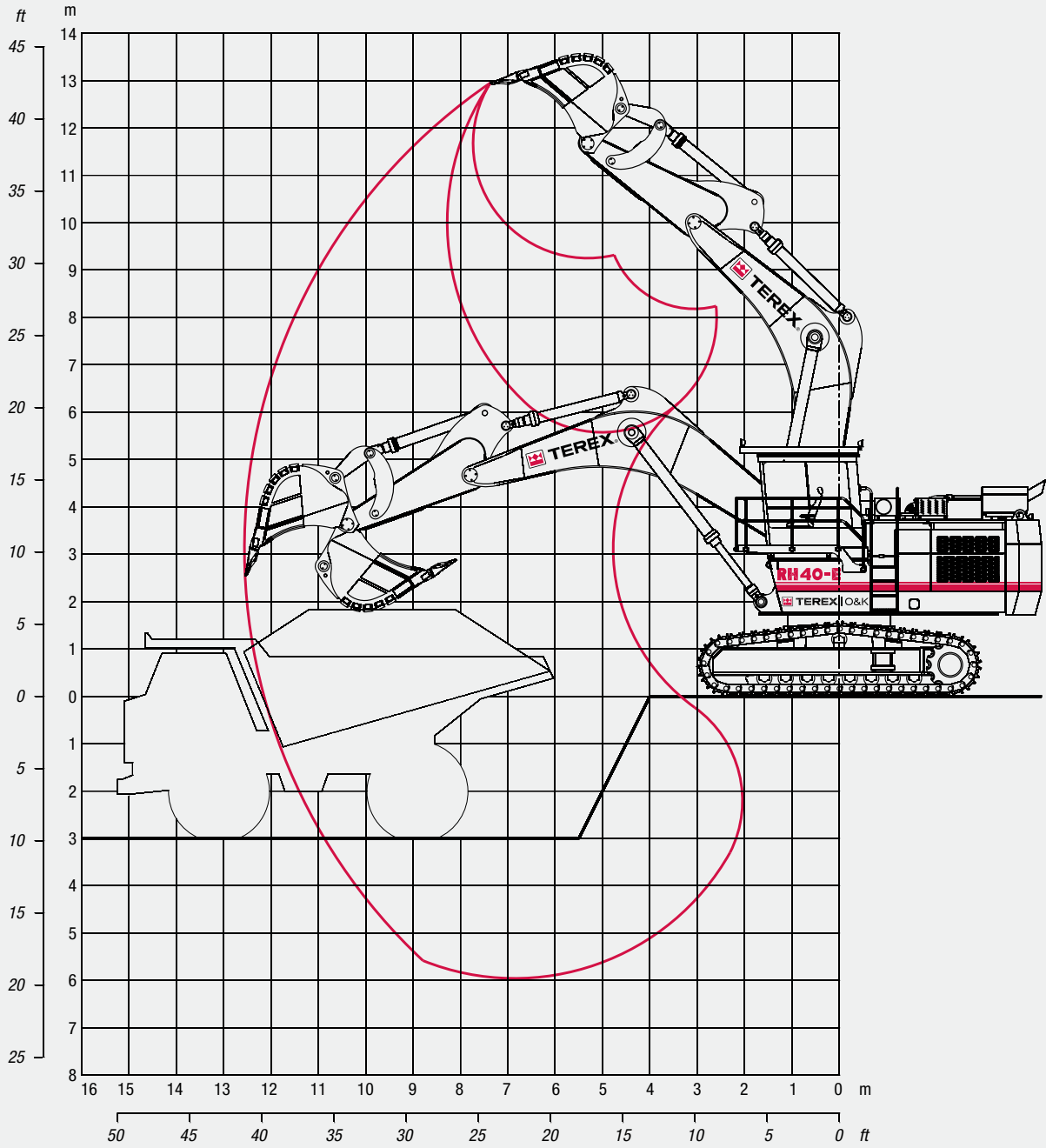
Backhoes			
Type	Heavy rock bucket	Standard rock bucket	Mass excavation bucket
Tooth system	ESCO V 69	ESCO V 61	ESCO V 61
Capacity SAE 1:1	4.6 m³ 6.0 yd³	6.0 m³ 7.8 yd³	7.0 m³ 9.2 yd³
Capacity CECE 2:1	4.1 m ³ 5.4 yd ³	5.2 m ³ 6.8 yd ³	6.1 m ³ 8.0 yd ³
Capacity struck	3.6 m ³ 4.7 yd ³	4.5 m ³ 5.9 yd ³	5.2 m ³ 6.8 yd ³
Total width	2,040 mm 6'8"	2,390 mm 7'10"	2,770 mm 9'
Inner width	1,840 mm 6'	2,220 mm 7'3"	2,600 mm 8'6"
No. of teeth	4	5	6
Weight incl. universal wear kit	6,200 kg 13,670 lb	6,200 kg 13,670 lb	6,600 kg 14,550 lb
Max. material density (loose)	2.4 t/m ³ 4,050 lb/yd ³	1.8 t/m ³ 3,030 lb/yd ³	1.4 t/m ³ 2,360 lb/yd ³

Working Range		
Max. digging depth	7.3 m	23'11"
Max. digging reach	13.5 m	44'3"
Max. digging height	13.0 m	42'8"

Digging Forces		
Max. crowd force	390 kN	87,640 lb
Max. breakout force	380 kN	85,400 lb

Mass Excavation Backhoe Attachment

Working Diagram - Boom 7.3 m (23'11") - Stick 2.8 m (9'2")



Backhoes			
Type	Heavy rock bucket	Standard rock bucket	Mass excavation bucket
Tooth system	ESCO V 69	ESCO V 61	ESCO V 61
Capacity SAE 1:1	4.6 m³	6.0 m³	7.0 m³
	6.0 yd³	7.8 yd³	9.2 yd³
Capacity CECE 2:1	4.1 m ³	5.2 m ³	6.1 m ³
	5.4 yd ³	6.8 yd ³	8.0 yd ³
Capacity struck	3.6 m ³	4.5 m ³	5.2 m ³
	4.7 yd ³	5.9 yd ³	6.8 yd ³
Total width	2,040 mm	2,390 mm	2,770 mm
	6'8"	7'10"	9'
Inner width	1,840 mm	2,220 mm	2,600 mm
	6'	7'3"	8'6"
No. of teeth	4	5	6
Weight incl. universal wear kit	6,200 kg	6,200 kg	6,600 kg
	13,670 lb	13,670 lb	14,550 lb
Max. material density (loose)	3.0 t/m ³	2.2 t/m ³	1.8 t/m ³
	5,060 lb/yd ³	3,710 lb/yd ³	3,030 lb/yd ³

Working Range		
Max. digging depth	6.0 m	19'8"
Max. digging reach	12.6 m	41'4"
Max. digging height	13.0 m	42'8"

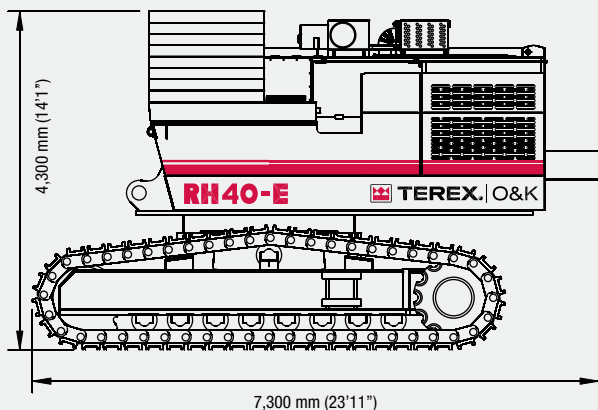
Digging Forces		
Max. crowd force	420 kN	94,390 lb
Max. breakout force	390 kN	87,640 lb

General Packing List

Basic unit with C18 engine

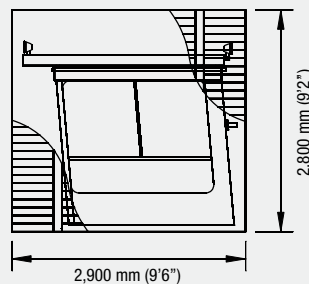
Pad width	Width	Gross weight*
500mm (19'½")	4,550 mm (14'11")	58,550 kg (129,080 lb)
600 mm (23'½")	4,550 mm (14'11")	59,500 kg (131,170 lb)
750 mm (29'½")	4,550 mm (14'11")	61,050 kg (134,590 lb)
900 mm (35'½")	4,700 mm (15'5")	62,600 kg (138,010 lb)

* Weights with QSK19 engine 600 kg / 1320 lb less



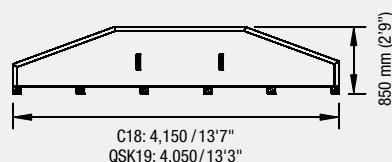
Crate with cabin and FOPS

Width 1,760 mm (5'9") Gross weight 1,650 kg (3,640 lb)



Pallet with counterweight

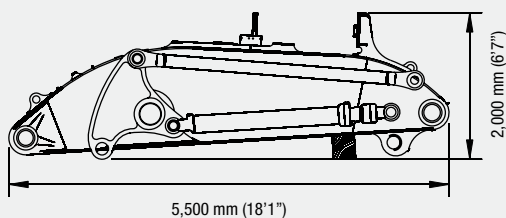
Width 2,400 mm (7'10") Gross weight C18: 18,000 kg (39,680 lb)
QSK19: 16,000 kg (35,270 lb)



TriPower Shovel Attachment

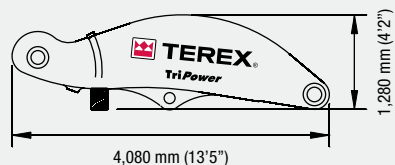
Boom with TriPower linkages, rods and boom cylinders

Width 1,420 mm (4'8") Gross weight 8,650 kg (19,070 lb)



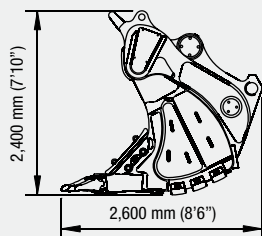
Stick

Width 1,160 mm (3'10") Gross weight 3,300 kg (7,280 lb)



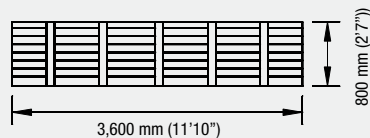
Face shovel incl. pin for stick

Capacity (2:1)	Width	Gross weight
6.0 m³ (7.8 yd³)	2,500 mm (8'2")	9,700 kg (21,380 lb)
7.0 m³ (9.2 yd³)	3,000 mm (9'10")	10,300 kg (22,710 lb)



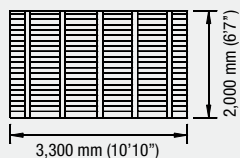
Crate with 1 stick and 2 bucket cylinders

Width 1,130 mm (3'8") Gross weight 2,330 kg (5,140 lb)



Crate with accessories

Width 800 mm (2'7") Gross weight 1,400 kg (3,090 lb)



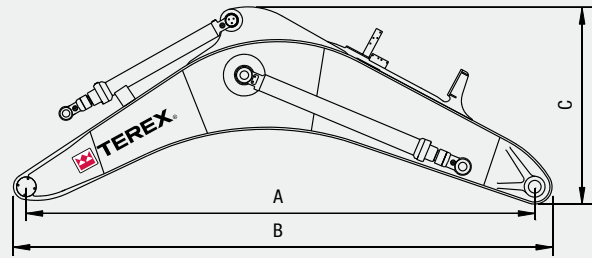
All details provided are for general information only. Exact dimensions subject to selected machine configuration and final packing list.

Backhoe Attachment

Monoboom with main valve block, boom and stick cylinders

Boom A	Length B	Width
7.3 m ³ (23'11")	7,750 mm (25'5")	1,580 mm (8'2")
7.8 m ³ (25'7")	8,250 mm (27'1")	1,620 mm (9'10")

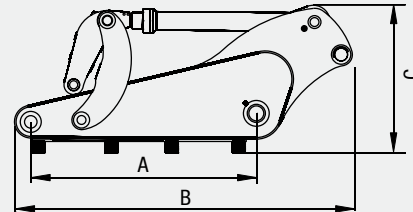
Boom A	Height C	Gross weight
7.3 m ³ (23'11")	2,900 mm (9'6")	12,100 kg (26,680 lb)
7.8 m ³ (25'7")	3,000 mm (9'10")	12,600 kg (27,780 lb)



Pallet with stick, linkage and bucket cylinders

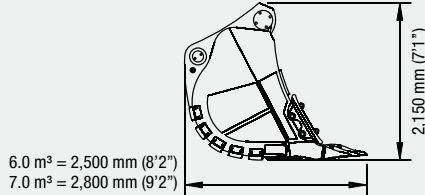
Stick A	Length B	Width
2.8 m ³ (9'2")	4,400 mm (14'5")	1,100 mm (3'7")
3.3 m ³ (10'10")	4,850 mm (15'11")	1,100 mm (3'7")

Stick A	Height C	Gross weight
2.8 m ³ (9'2")	1,900 mm (6'3")	5,000 kg (11,020 lb)
3.3 m ³ (10'10")	1,900 mm (6'3")	5,400 kg (11,900 lb)



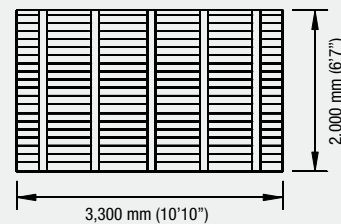
Backhoe bucket incl. pins for stick and linkage

Capacity (1:1)	Width	Gross weight
6.0 m ³ (7.8 yd ³)	2,400 mm (7'10")	6,400 kg (14,110 lb)
7.0 m ³ (9.2 yd ³)	2,800 mm (9'2")	6,800 kg (14,990 lb)



Crate with accessories

Width 800 mm (2'7") Gross weight 1,400 kg (3,090 lb)



Optional Equipment

General

- Export crating
- Finishing as per enduser's corporate colours
- Customizing of logos as per customer's specification

Superstructure

- Environmentally compatible hydraulic oil
- Xenon lighting
- High capacity water separator
- Fast filling connection for fuel
- Catwalk with access steps at engine module (standard on C18 version)
- Centrifuge for engine oil filtration
- Various cold weather packages

Cab

- Radio with loudspeaker and antenna
- On roof mounted airconditioning unit

Undercarriage

- Track pad width 500 mm, 750 mm or 900 mm
- Track guides
- HD-LC undercarriage

Attachment

- Xenon lighting on boom
- Special wear packages

- Further optional equipment on request

The technical specifications mentioned in this data sheet may vary according to the specific equipment/options installed.

Effective Date: April 2008. Product specifications and prices are subject to change without notice or obligation. The photographs and/or drawings in this brochure are for illustrative purposes only. Refer to the appropriate Operator's Manual for instructions on the proper use of this equipment. Failure to follow the appropriate Operator's Manual when using our equipment or to otherwise act irresponsibly may result in serious injury or death. The only warranty applicable to our equipment is the standard written warranty applicable to the particular product and sale and Terex makes no other warranty, express or implied. Products and services listed may be trademarks, service marks or trade-names of Terex Corporation and/or its subsidiaries in the USA and other countries and all rights are reserved. Terex is a registered trademark of Terex Corporation in the USA and many other countries. Copyright 2008 Terex Corporation. M 127.2 e / PDF 0408

Terex GmbH
Karl-Funke-Str. 36, D-44149 Dortmund, Germany
Tel +49 (0) 231 922 3 Fax +49 (0) 231 922 5800
info@terex-ok.com
www.terex-ok.com