Technical sheet:

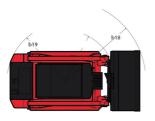
1650RT



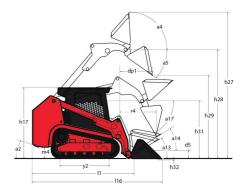


Capacities		Metric
Operating Weight		3638 kg
Unladen weight		3638 kg
Operating Capacity at 35% Tipping Load		748 kg
Operating Capacity At 50% Tipping Load		1069 kg
Tipping capacity		2139 kg
Weight and dimensions		
Overall Operating Height - Fully Raised	h27	4008 mm
Height to Hinge Pin - Fully Raised	h28	3038 mm
Dump reach - Full height	r6	641 mm
Dump angle at full height	a5	39 °
Dump Height - Fully Raised	h29	2329 mm
Maximum Rollback Angle - Fully Raised	a4	98 °
Overall Height to top of ROPS	h17	1969 mm
Overall length with bucket	l16	3205 mm
Overall Length without Bucket	11	2393 mm
Specified Height	h31	1638 mm
Reach at Specified Height	r4	559 mm
Dump angle at specified height	a17	73 °
Carry Position	d5	198 mm
Maximum Rollback Angle at Carry Position	a14	28 °
	h32	53 mm
Digging Position	1132	28 °
Angle of Departure with STD Counterweight Ground clearance		
	m4	185 mm
Frank Gauge	b10	1356 mm
Track Shoe Width	b20	320 mm
Crawler base	y2	1265 mm
Overall width less bucket	b1	1676 mm
Bucket Width	e1	1676 mm
Clearance Radius - Front with Bucket	b18	1979 mm
Angle of Approach	a3	90 °
Grouser Height		25 mm
Track Type / Track Rollers / Roller Type		Rubber / 3 / Steel
Performances		
Ground Speed - Single Speed		10.50 km/h
Ground Speed - Two Speed		16.10 km/h
Drawbar Pull/Tractive Effort		4345 kg
Bucket Breakout - Tilt Cylinder		1919 kg
Bucket Breakout - Lift Cylinder		2295 kg
Engine		
Engine brand		Yanmar
Engine model		4TNV98C-NMS2
Motor Type		Radial Piston
Gross Power / Power		51.70 kW @ 2500 rpm
Net Power / Power		51 kW / 2500 rpm
Max. torque		241 Nm
.C. Engine power rating		69.30 Hp
Battery voltage		12 V
Cold Cranking Amps at Temperature (CCA)		950 A
Alternator - Voltage / Ampere		12 V / 100 A
lydraulics		
Standard flow - Auxiliary hydraulics		71 l/min
ank capacities		
Dil Pan Capacity		9
lydraulic tank capacity		39 I
Fuel tank		62.50 I
		12.90
iduid cooling fank volume		
Liquid cooling tank volume Displacement / Number of cylinders		3.30 / 4

1650RT - Dimensional drawing







Equipment

Auxiliary Hydraulics Electronic Attachment Control - 14-Pin Connector Optional High-Flow Auxiliary Hydraulics Geal Tiax & automatic track tensioning system Power-A-Tach® Attachment Mounting System Optional Motorization/Power Combination Radiator & Hydraulic Oil Cooler Dual-Element Air Cleaner with Indicator Engine Auto-Shutdown System Standard Glowplugs Starts Assist Standard Steron-Controlled Hydrostatic Drive Two Speed Hydrostatic Drive Standard Operator station Air suspension seat Optional Air suspension seat Optional Foot Throttle Standard Pressurized Cab Enclosure with A/C Rearview Camera Optional SIGNSy/FOPS Level II Overhead Guard Silding Side Windows Standard Scelectable Self-Leveling Hydraulic Lift Action 4 Prezumatios Prezumatios Silding Side Undercarriage System Standard Single Flange Front/Dual Flange Rear Idlers Secontry Anti-Vandalism Lock Provisions Seack-Up Alarm Seack-Up Alarm Sage-C-Up Alarm	Lifting function	
Electronic Attachment Control - 14-Pin Connector ligh-Flow Auxiliary Hydraulics Optional dealTrax® automatic track tensioning system Optional Motorization/Power Combination Radiator & Hydraulic Oil Cooler Dual-Element Air Cleaner with Indicator Standard Dual-Element Air Cleaner with Indicator Standard Silomolugs Starts Assist Standard Serov-Controlled Hydrostatic Drive Standard Serov-Controlled Hydrostatic Drive Standard Derator station Air suspension seat Optional Foot Throttle Standard Standard Standard Standard Pressurized Cab Enclosure with A/C Rearview Camera ROPS/FOPS Level II Overhead Guard Siding Side Windows Standard Solder Side Self-Leveling Hydraulic Lift Action 4 Pheumatics Rubber Track Undercarriage System Standard Scendary functions Counterweight Counterweight Dedicated Undercarriage Standard Standard Standard Scendary functions Counterweight Standard Standard Standard Standard Standard Scendary functions Counterweight Standard Standard Standard Standard Scendary functions Scendary functions Scendary functions Standard Standard Standard Scendary functions Standard	All-Tach® Attachment Mounting System	Standard
High-Flow Auxiliary Hydraulics Optional dealTrax® automatic track tensioning system Standard Power-A-Tach® Attachment Mounting System Optional Motorization/Power Obtional Motorization/Power Standard Dual-Element Air Cleaner with Indicator Standard Dual-Element Air Cleaner with Indicator Standard Engine Auto-Shutdown System Standard Scero-Controlled Hydrostatic Drive Standard Scero-Controlled Hydrostatic Drive Standard Scero-Controlled Hydrostatic Drive Standard Operator station Standard Operator station Standard Operator station Standard Standard Operator station Standard Standard Standard Standard Operator station Standard Operator Standard S	Auxiliary Hydraulics	Standard
dealTrax® automatic track tensioning system Optional Power-A-Tach® Attachment Mounting System Optional Molotzation/Power Combination Radiator & Hydraulic Oil Cooler Standard Dual-Element Air Cleaner with Indicator Engine Auto-Shutdown System Standard Engine Auto-Shutdown System Standard Stervo-Controlled Hydrostatic Drive Standard Stervo-Controlled Hydrostatic Drive Standard Operator station Air suspension seat Optional Foot Throttle Standard Full-Suspension Seat Multi-Function Display Screen Perssurized Cab Enclosure with A/C Rearview Camera ROPS/FOPS Level II Overhead Guard Stiding Side Windows Standard Stiding Side Windows Standard Stelectable Self-Leveling Hydraulic Lift Action 4 Peneumatics Rubber Track Undercarriage System Standard Security Anti-Vandalism Lock Provisions Sack-Up Alarm Easky Manager Engine Alert System with Error Display Standard	Electronic Attachment Control - 14-Pin Connector	Optional
Power-A-Tach® Attachment Mounting System Motorization/Power Combination Radiator & Hydraulic Oil Cooler Dual-Element Air Cleaner with Indicator Engine Auto-Shutdown System Standard Glowplugs Starts Assist Standard Servo-Controlled Hydrostatic Drive Standard Two-Speed Hydrostatic Drive System Optional Air suspension seat Foot Throttle Standard Multi-Function Display Screen Pressurized Cab Enclosure with A/C Rearview Camera ROPS/FOPS Level II Overhead Guard Sliding Side Windows Standard Standard Siding Side Windows Standard Other options Selectable Self-Leveling Hydraulic Lift Action 4 Pheumatics Rount-Frack Undercarriage System Standard Secondary functions Counterweight Secondary functions Counterweight Standard Standard Standard Secondary functions Standard Standard Standard Standard Secondary functions Standard Standard Standard Standard Standard Standard Secondary functions Counterweight Standard Standard Standard Standard Secondary functions Standard Standard Standard Secondary functions Standard Standard Standard Secondary functions Standard Standard Secondary functions Standard Standard Secondary functions Standard Standard Secondary functions Standard Standard Secondary functions Standard S	High-Flow Auxiliary Hydraulics	Optional
Motorization/Power Combination Radiator & Hydraulic Oil Cooler Dual-Element Air Cleaner with Indicator Engine Auto-Shutdown System Standard Glowplugs Starts Assist Standard Servo-Controlled Hydrostatic Drive Standard Two-Speed Hydrostatic Drive System Operator station Air suspension seat Foot Throttle Standard Full-Suspension Seat Standard Multi-Function Display Screen Pressurized Cab Enclosure with A/C Rearriew Camera ROPS/FOPS Level II Overhead Guard Stiding Side Windows Standard Swing-out Cab Door Standard Swing-out Cab Door Standard Other options Seelectable Self-Leveling Hydraulic Lift Action 4 Presumatics Counterweight Standard Standard Standard Secondary functions Counterweight Standard Standard Scounterweight Standard Standard Standard Scounterweight Standard Standard Standard Standard Scounterweight Standard Standard Standard Standard Standard Scounterweight Standard Standard Scounterweight Standard Standard Scounterweight Standard Standard Standard Standard Standard	IdealTrax® automatic track tensioning system	Standard
Combination Radiator & Hydraulic Oil Cooler Dual-Element Air Cleaner with Indicator Engine Auto-Shutdown System Standard Slowplugs Starts Assist Standard Servo-Controlled Hydrostatic Drive Standard Servo-Controlled Hydrostatic Drive Standard Two-Speed Hydrostatic Drive System Standard Operator station Air suspension seat Optional Foot Throttle Standard Foot Throttle Standard Full-Suspension Seat Optional Rearview Camera Optional RoPSyFOPS Level II Overhead Guard Stiding Side Windows Standard Swing-out Cab Door Standard Other options Selectable Self-Leveling Hydraulic Lift Action 4 Pneumatics Rubber Track Undercarriage System Standard Single Flange Front/Dual Flange Rear Idlers Secondary functions Counterweight Secondary functions Counterweight Secondary Standard Secondary Stan	Power-A-Tach® Attachment Mounting System	Optional
Dual-Element Air Cleaner with Indicator Engine Auto-Shutdown System Standard Glowplugs Starts Assist Standard Servo-Controlled Hydrostatic Drive Standard TWo-Speed Hydrostatic Drive Standard TWo-Speed Hydrostatic Drive System Optional Air suspension seat Optional Foot Throttle Standard Multi-Function Display Screen Pressurized Cab Enclosure with A/C Rearview Camera Optional Rearview Camera Optional ROPS/FOPS Level II Overhead Guard Siding Side Windows Swing-out Cab Door Standard Other options Selectable Self-Leveling Hydraulic Lift Action 4 Peneumatics Rubber Track Undercarriage System Standard Single Flange Front/Dual Flange Rear Idlers Secondary functions Counterweight Oedicated Undercarriage Security Anti-Vandalism Lock Provisions Back-Up Alarm Optional Easy Manager Standard Engine Alert System with Error Display Standard Engine Alert System with Error Display	Motorization/Power	
Engine Auto-Shutdown System Glowplugs Starts Assist Standard Servo-Controlled Hydrostatic Drive Standard Two-Speed Hydrostatic Drive System Standard Operator station Air suspension seat Froot Throttle Standard Frull-Suspension Seat Multi-Function Display Screen Standard Pressurized Cab Enclosure with A/C Rearview Camera ROPS/FOPS Level II Overhead Guard Standard Stiding Side Windows Standard Other options Selectable Self-Leveling Hydraulic Lift Action 4 Pressurized Cab Enclosure with A/C Rearview Camera Optional Rops/FOPS Level II Overhead Guard Standard Other options Selectable Self-Leveling Hydraulic Lift Action 4 Presumatics Rubber Track Undercarriage System Standard Single Flange Front/Dual Flange Rear Idlers Secondary functions Counterweight Scandard Dedicated Undercarriage Standard Secondary functions Counterweight Standard Secondary Standard Secondary Standard Secondary Standard Secondary Standard Secondary Standard Secondary Standard Standard Secondary Standa	Combination Radiator & Hydraulic Oil Cooler	Standard
Standard Servo-Controlled Hydrostatic Drive Standard Two-Speed Hydrostatic Drive System Standard Operator station Air suspension seat Optional Foot Throttle Standard Multi-Function Display Screen Standard Multi-Function Display Screen Pressurized Cab Enclosure with A/C Rearview Camera Optional ROPS/FOPS Level II Overhead Guard Stiding Side Windows Standard Other options Selectable Self-Leveling Hydraulic Lift Action 4 Preumatics Counterweight Dedicated Undercarriage Secondary functions Counterweight Dedicated Undercarriage Secondary functions Seandard Secondary functions Counterweight Dedicated Undercarriage Secondary functions Standard Sta	Dual-Element Air Cleaner with Indicator	Standard
Servo-Controlled Hydrostatic Drive Standard Two-Speed Hydrostatic Drive System Standard Two-Speed Hydrostatic Drive System Operator station Operator station Standard Two-Speed Hydrostatic Drive System Optional Foot Throttle Standard Full-Suspension seat Standard Standard Full-Suspension Seat Standard Optional Standard Optional Standard Optional Standard Optional Standard Optional Reaview Camera Optional Reaview Camera Standard Standard Standard Standard Standard Standard Standard Standard Standard Optional Reaview Camera Standard Standar	Engine Auto-Shutdown System	Standard
Two-Speed Hydrostatic Drive System Operator station Air suspension seat Foot Throttle Foot Throttle Standard Full-Suspension Seat Standard Multi-Function Display Screen Pessurized Cab Enclosure with A/C Optional Rearview Camera Optional ROPS/FOPS Level II Overhead Guard Standard Stiding Side Windows Standard Other options Selectable Self-Leveling Hydraulic Lift Action 4 Preneumatics Rubber Track Undercarriage System Standard Secondary functions Counterweight Dedicated Undercarriage Standard Secondary functions Counterweight Dedicated Undercarriage Standard Secondary functions Standard Standard Secondary functions Standard Standard Secondary functions Standard Standard Secondary functions Standard Standard Standard Secondary functions Standard	Glowplugs Starts Assist	Standard
Operator station Optional Air suspension seat Optional Foot Throttle Standard Full-Suspension Seat Standard Multi-Function Display Screen Standard Pressurized Cab Enclosure with A/C Optional Rearview Camera Optional ROPS/FOPS Level II Overhead Guard Standard Sliding Side Windows Standard Swing-out Cab Door Standard Other options Standard Relectable Self-Leveling Hydraulic Lift Action 4 Optional Prevumatics Standard Rubber Track Undercarriage System Standard Single Flange Front/Dual Flange Rear Idlers Standard Secondary functions Standard Counterweight Standard Dedicated Undercarriage Standard Security Standard Anti-Vandalism Lock Provisions Standard Back-Up Alarm Optional Easy Manager Standard Engine Alert System with Error Display Standard	Servo-Controlled Hydrostatic Drive	Standard
Air suspension seat Foot Throttle Standard Foull-Suspension Seat Multi-Function Display Screen Standard Pressurized Cab Enclosure with A/C Pressurized Cab Enclosure with A/C Rearview Camera Optional ROPS/FOPS Level II Overhead Guard Stiding Side Windows Standard Swing-out Cab Door Standard Other options Selectable Self-Leveling Hydraulic Lift Action 4 Prenumatics Rubber Track Undercarriage System Single Flange Front/Dual Flange Rear Idlers Secondary functions Counterweight Dedicated Undercarriage Secondary functions Selectable Self-Leveling Hydraulic Standard Dedicated Undercarriage Secondary functions Counterweight Dedicated Vindercarriage Standard Secondary functions Secondary functions Counterweight Dedicated System Standard Secondary functions Standard Secondary functions Standard Dedicated System Standard Standard Secondary functions Standard Standard Secondary functions Standard Standard Standard Standard Standard	Two-Speed Hydrostatic Drive System	Standard
Foot Throttle Standard Full-Suspension Seat Standard Multi-Function Display Screen Standard Multi-Function Display Screen Standard Pressurized Cab Enclosure with A/C Optional Rearview Camera Optional ROPS/FOPS Level II Overhead Guard Standard Sliding Side Windows Standard Swing-out Cab Door Standard Other options Selectable Self-Leveling Hydraulic Lift Action 4 Optional Preumatics Rubber Track Undercarriage System Standard Single Flange Front/Dual Flange Rear Idlers Standard Secondary functions Counterweight Standard Dedicated Undercarriage Standard Secondary functions Counterweight Standard Dedicated Undercarriage Standard Security Anti-Vandalism Lock Provisions Standard Back-Up Alarm Optional Easy Manager Standard Engine Alert System with Error Display Standard	Operator station	
Full-Suspension Seat Multi-Function Display Screen Standard Pressurized Cab Enclosure with A/C Pressurized Cab Enclosure with A/C Rearview Camera Optional ROPS/FOPS Level II Overhead Guard Stiding Side Windows Standard Swing-out Cab Door Standard Other options Selectable Self-Leveling Hydraulic Lift Action 4 Preumatics Rubber Track Undercarriage System Standard Secondary functions Counterweight Secondary functions Counterweight Secondary functions Counterweight Secondary Standard Sec	Air suspension seat	Optional
Multi-Function Display Screen Pressurized Cab Enclosure with A/C Rearview Camera ROPS/FOPS Level II Overhead Guard Sliding Side Windows Standard Swing-out Cab Door Standard Other options Selectable Self-Leveling Hydraulic Lift Action 4 Prenumatics Rubber Track Undercarriage System Single Flange Front/Dual Flange Rear Idlers Secondary functions Counterweight Dedicated Undercarriage Secondary Secondary Second Standard Secondary Functions Counterweight Dedicated Undercarriage Standard Secondary	Foot Throttle	Standard
Pressurized Cab Enclosure with A/C Rearview Camera Optional ROPS/FOPS Level II Overhead Guard Sliding Side Windows Standard Swing-out Cab Door Standard Other options Selectable Self-Leveling Hydraulic Lift Action 4 Pneumatics Rubber Track Undercarriage System Standard Single Flange Front/Dual Flange Rear Idlers Scondary functions Counterweight Dedicated Undercarriage Security Anti-Vandalism Lock Provisions Back-Up Alarm Easy Manager Engine Alert System with Error Display Standard	Full-Suspension Seat	Standard
Reaview Camera Optional ROPS/FOPS Level II Overhead Guard Standard Sliding Side Windows Standard Other options Selectable Self-Leveling Hydraulic Lift Action 4 Optional Pneumatics Rubber Track Undercarriage System Standard Single Flange Front/Dual Flange Rear Idlers Standard Secondary functions Counterweight Standard Dedicated Undercarriage Standard Security Anti-Vandalism Lock Provisions Standard Back-Up Alarm Optional Easy Manager Standard Engine Alert System with Error Display Standard	Multi-Function Display Screen	Standard
ROPS/FOPS Level II Overhead Guard Standard Sliding Side Windows Standard Swing-out Cab Door Standard Other options Selectable Self-Leveling Hydraulic Lift Action 4 Pneumatics Rubber Track Undercarriage System Standard Single Flange Front/Dual Flange Rear Idlers Scondary functions Counterweight Standard Dedicated Undercarriage Standard Security Anti-Vandalism Lock Provisions Back-Up Alarm Easy Manager Engine Alert System with Error Display Standard	Pressurized Cab Enclosure with A/C	Optional
Sliding Side Windows Standard Swing-out Cab Door Standard Other options Selectable Self-Leveling Hydraulic Lift Action 4 Optional Pneumatics Rubber Track Undercarriage System Standard Single Flange Front/Dual Flange Rear Idlers Standard Secondary functions Counterweight Standard Dedicated Undercarriage Standard Security Anti-Vandalism Lock Provisions Standard Back-Up Alarm Optional Easy Manager Standard Engine Alert System with Error Display Standard	Rearview Camera	Optional
Standard Other options Selectable Self-Leveling Hydraulic Lift Action 4 Pneumatics Rubber Track Undercarriage System Single Flange Front/Dual Flange Rear Idlers Secondary functions Counterweight Standard Dedicated Undercarriage Security Anti-Vandalism Lock Provisions Standard Back-Up Alarm Optional Easy Manager Standard Engine Alert System with Error Display Standard	ROPS/FOPS Level II Overhead Guard	Standard
Other options Selectable Self-Leveling Hydraulic Lift Action 4 Optional Pneumatics Rubber Track Undercarriage System Single Flange Front/Dual Flange Rear Idlers Standard Secondary functions Counterweight Standard Dedicated Undercarriage Standard Security Anti-Vandalism Lock Provisions Standard Back-Up Alarm Optional Easy Manager Standard Engine Alert System with Error Display Standard	Sliding Side Windows	Standard
Selectable Self-Leveling Hydraulic Lift Action 4 Pneumatics Rubber Track Undercarriage System Standard Single Flange Front/Dual Flange Rear Idlers Scondary functions Counterweight Dedicated Undercarriage Standard Security Anti-Vandalism Lock Provisions Back-Up Alarm Easy Manager Engine Alert System with Error Display Optional	Swing-out Cab Door	Standard
Preumatics Rubber Track Undercarriage System Standard Single Flange Front/Dual Flange Rear Idlers Secondary functions Counterweight Standard Dedicated Undercarriage Security Anti-Vandalism Lock Provisions Back-Up Alarm Easy Manager Engine Alert System with Error Display Standard Standard Standard Standard Standard Standard Standard Standard Standard	Other options	
Rubber Track Undercarriage System Standard Single Flange Front/Dual Flange Rear Idlers Standard Secondary functions Undercarriage Counterweight Standard Dedicated Undercarriage Standard Security Standard Back-Up Alarm Optional Easy Manager Standard Engine Alert System with Error Display Standard	Selectable Self-Leveling Hydraulic Lift Action 4	Optional
Single Flange Front/Dual Flange Rear Idlers Standard Secondary functions Standard Counterweight Standard Dedicated Undercarriage Standard Security Standard Back-Up Alarm Optional Easy Manager Standard Engine Alert System with Error Display Standard	Pneumatics	
Secondary functions Standard Counterweight Standard Dedicated Undercarriage Standard Security Standard Back-Up Alarm Optional Easy Manager Standard Engine Alert System with Error Display Standard	Rubber Track Undercarriage System	Standard
Counterweight Standard Dedicated Undercarriage Standard Security Standard Anti-Vandalism Lock Provisions Standard Back-Up Alarm Optional Easy Manager Standard Engine Alert System with Error Display Standard	Single Flange Front/Dual Flange Rear Idlers	Standard
Dedicated Undercarriage Standard Security Standard Anti-Vandalism Lock Provisions Standard Back-Up Alarm Optional Easy Manager Standard Engine Alert System with Error Display Standard	Secondary functions	
Security Standard Anti-Vandalism Lock Provisions Standard Back-Up Alarm Optional Easy Manager Standard Engine Alert System with Error Display Standard	Counterweight	Standard
Anti-Vandalism Lock Provisions Standard Back-Up Alarm Optional Easy Manager Standard Engine Alert System with Error Display Standard	Dedicated Undercarriage	Standard
Back-Up Alarm Optional Easy Manager Standard Engine Alert System with Error Display Standard	Security	
Easy Manager Standard Engine Alert System with Error Display Standard	Anti-Vandalism Lock Provisions	Standard
Engine Alert System with Error Display Standard	Back-Up Alarm	Optional
3	Easy Manager	Standard
Mechanical Lift Cylinder Lock Standard	Engine Alert System with Error Display	Standard
	Mechanical Lift Cylinder Lock	Standard





Head Office

B.P. 249 - 430 rue de l'Aubinière 44150 Ancenis Cedex - France Tel: +33 (0)2 40 09 10 11 - Fax: +33 (0)2 40 09 10 97 www.manitou.com



This publication provides a description of the configuration versions and options for Manitou products, which may differ for equipment. The equipment presented in this brochure may be part of a series, as an option, or it may not be available, depending on the versions. Manitou reserves the right, at any time and without notice, to amend the specifications described and represented. The specifications provided do not bind the manufacturer. For more details, please contact your Manitou agent. This is not a contractually binding document. The presentation of the products is not contractually binding. List of specifications non-exhaustive. The logos as well as the visual identity of the company are owned by Manitou and cannot be used without authorisation. All rights reserved. The photos and diagrams contained in this brochure are only provided for consultation and information purposes.

MANITOU BF SA - Limited company with board of directors - Share capital: 39,668,399 euros - 857 802 508 RCS Nantes