

SECTION **8D**

SOIL AND TRASH COMPACTORS

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- **Komatsu's exclusive tapered-foot wheel design and patterning provides dynamic plus static compacting power.(WF22A-2)**
- **Same tiltdozer blade mechanism and strength as that on the job-proven bulldozer.(WF22A-2)**
- **Komatsu's exclusive triangular foot design and patterning provides a higher degree of compaction.(WF22T-2)**
- **Same tiltdozer blade mechanism as that on the job-proven bulldozer. The extension plate increases blade size to bulldozer a greater amount of material.(WF22T-2)**
- **Large output from the Cummins diesel engine ensures greater lugging strength at any speed.**
- **Center point articulation means a short turning radius for better maneuvering.**
- **TORQFLOW: smooth direction and speed changes are controlled by one lever. Dozer blade operation, lifting and tilting are also actuated by only one lever.**
- **Independent air brakes on front and rear wheels provide for fail-safe stops. Emergency air brake activates automatically should air pressure drop below standard safety level.**
- **Light-touch power steering and the completely enclosed operator's compartment make compacting operation more comfortable.**

Specifications

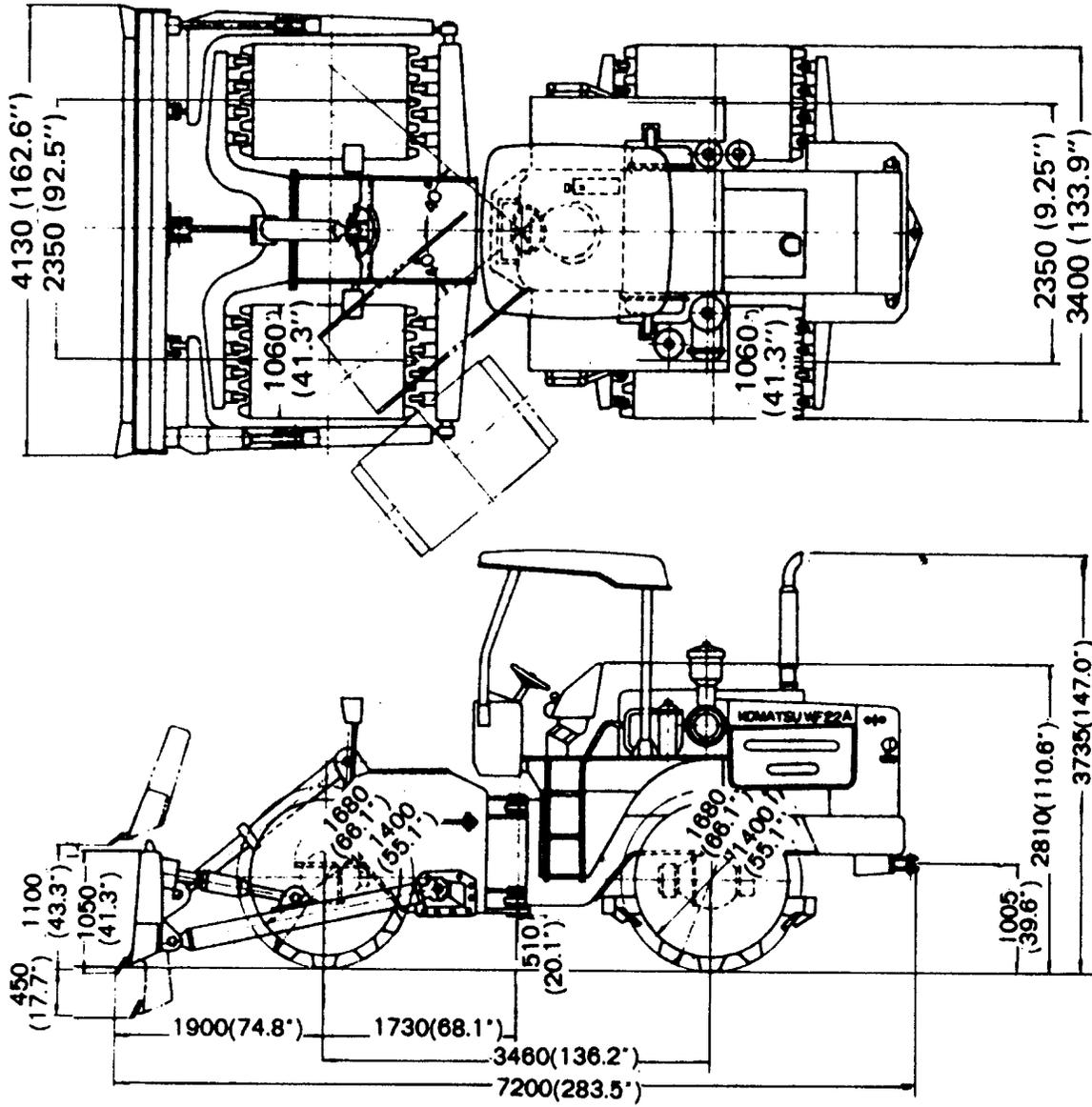
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Item	Model	WF22A-2	WF22T-2
Operating weight	kg(lb)	22400 (49,380)	21500 (47,400)
Flywheel horsepower	HP(kW)/RPM	230(172)/2000	230(172)/2000
PERFORMANCE:			
Travel speeds:	km/h(MPH)		
Forward 1st		6.0 (3.7)	5.7 (3.5)
2nd		11.1 (6.9)	10.9 (6.8)
3rd		19.5 (12.1)	19.3 (12.0)
Reverse 1st		7.2 (4.5)	7.1 (4.4)
2nd		13.3 (8.3)	13.1 (8.1)
3rd		23.3 (14.5)	22.7 (14.1)
Turning radius:	m(ft)		
Blade		7.2 (23.6)	7.2 (23.6)
Drum		6.35 (20.8)	6.35 (20.8)
Two pass compaction coverage		4.6 (15.1)	—
ENGINE:			
Model		CUMMINS NTC-743	CUMMINS NTC-743
No. of cylinders- Bore x Stroke	mm(in)	6-130.2 x 152.4 (5.125" x 6")	6-130.2 x 152.4 (5.125" x 6")
Piston displacement	ltr.(cu.in)	12.17 (743)	12.17 (743)
WHEELS:			
Total feet per wheel		60	24
No. of row		5	—
Max.ballast per wheel	ltr.(U.S.gal)	1000 (264)	1000 (264)

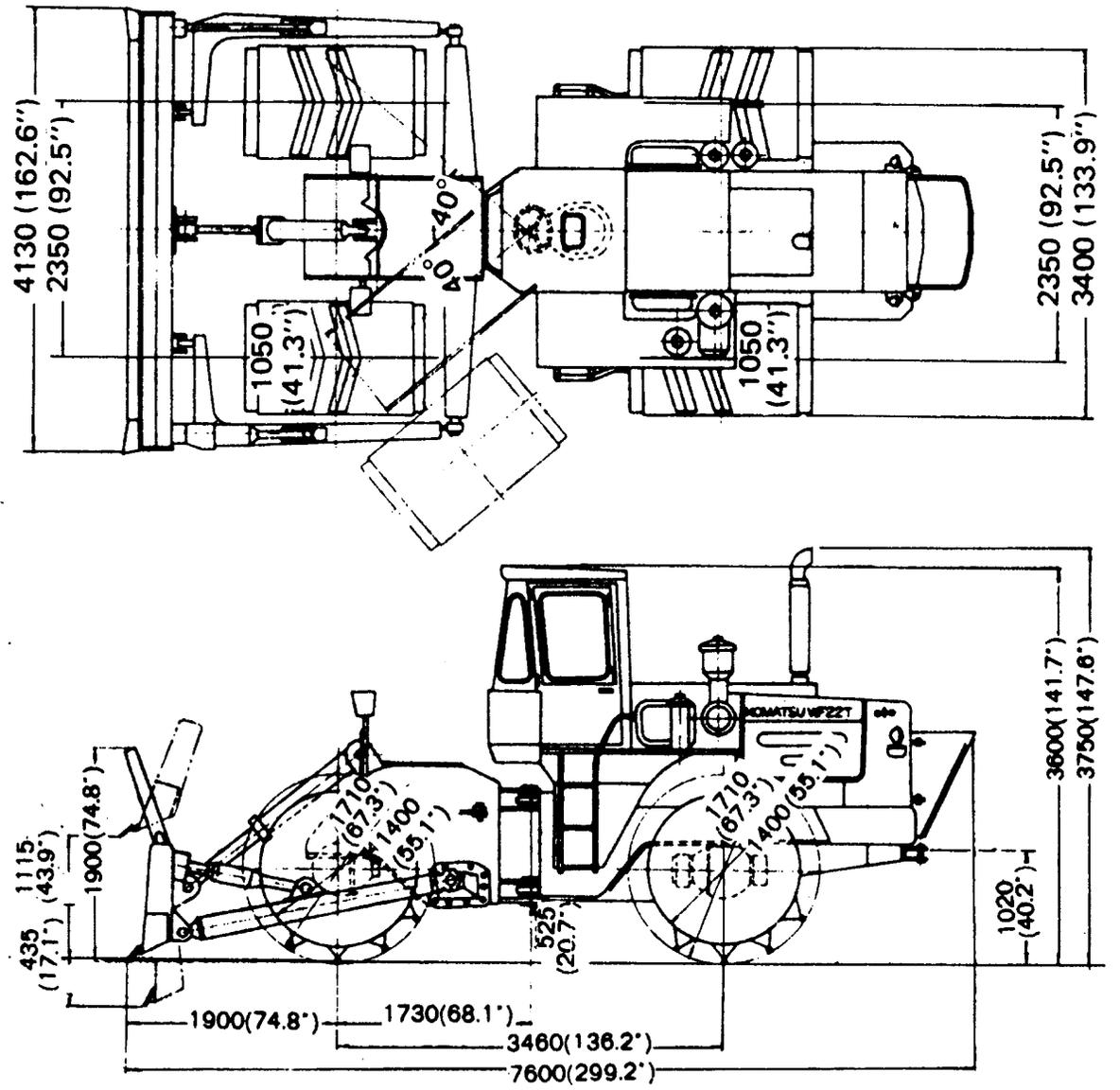
Dimensions

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WF22A-2

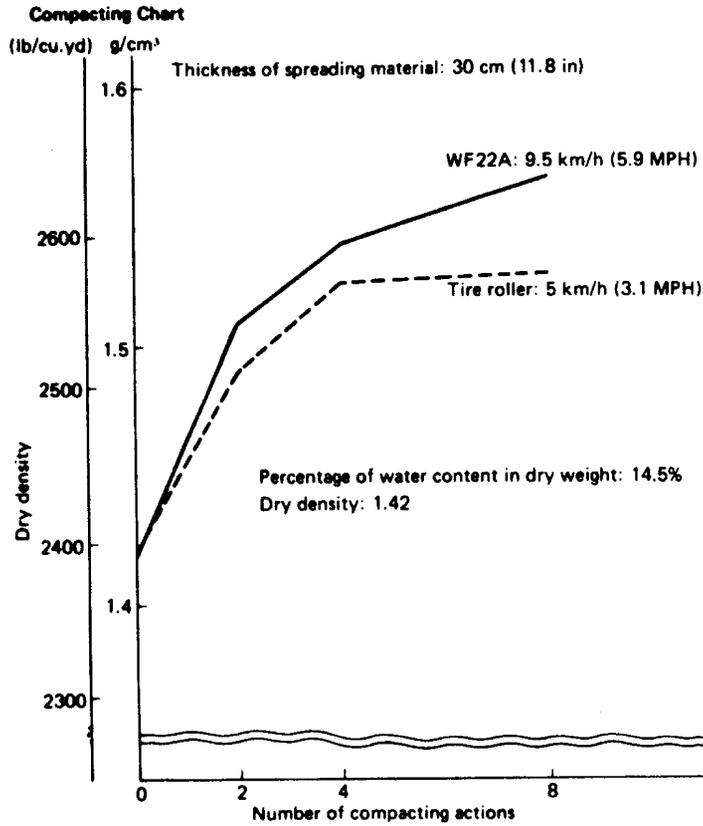


WF22T-2



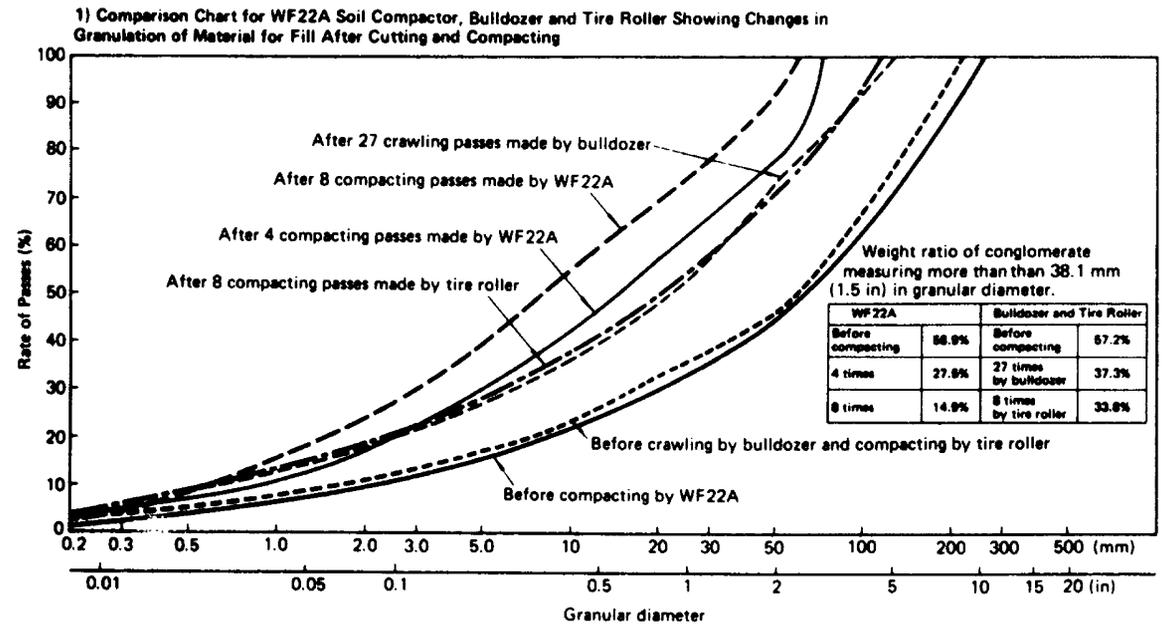
Compacting production

The WF22A Soil Compactor quickly and efficiently spreads more earth hauled by dump trucks or motor scrapers and compacts more of it in volume and in less number of actions than other compacting machines.



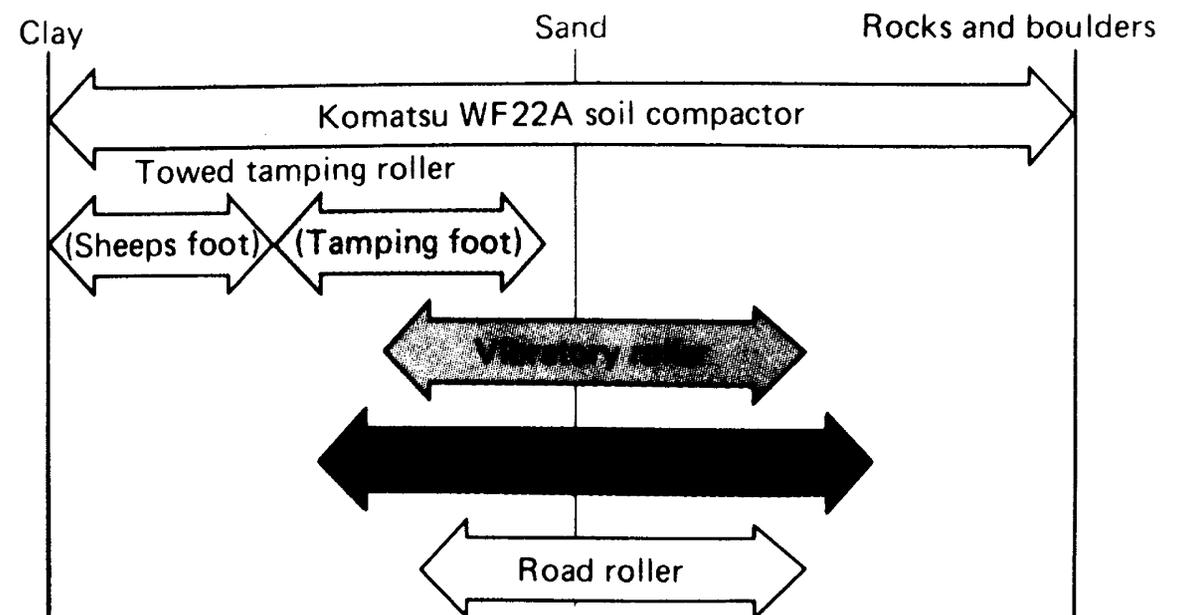
Note: Tire roller weighs 22.5 tons, including ballast.
 WF22A weighs 22.5 tons, excluding ballast.

The WF22A Soil Compactor cuts finely and compacts granules of mass materials and conglomerate soil.



Types of soil

The Komatsu WF22A-2 Soil Compactor can be applied to various types of soil in an efficient and speedy manner. This does away with the need for different types of compactors for different types of soil. Now one unit handles the bulk of soil types, as the chart below clearly demonstrates.



WF22A-2 Application

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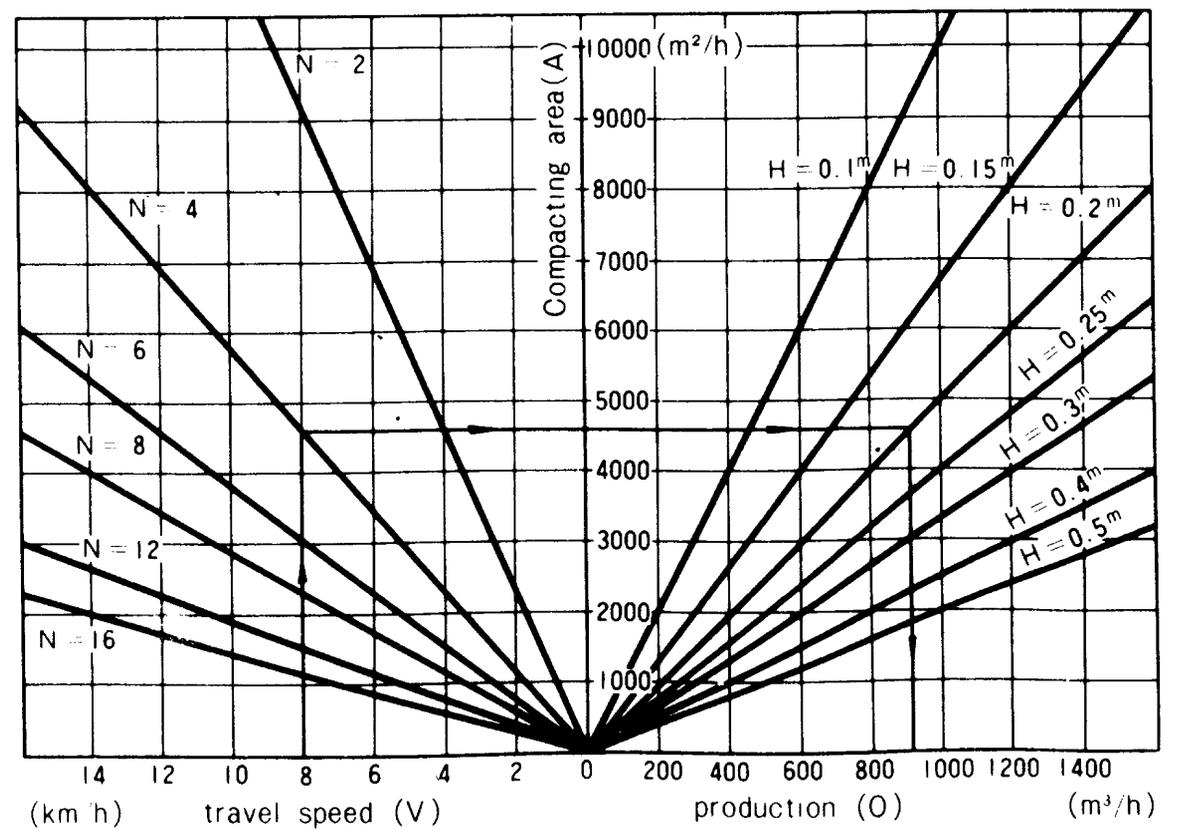
Production

Because of its high-speed compacting action of 7–10 km/h (4.5~6 MPH), the WF22A has a productivity about three times greater than other compacting machines.

The compacting production of the WF22A is derived as follows:

Draw a vertical line up to the point where it intersects the number of passes curve for the compacting area.

Draw a horizontal line up to where it intersects the volume thickness curve after compacting action for the compacting production.



Travel speed: 8 km/h (5.0 MPH)
Compacting number: 4 times

Compacting area: 4600 m²/h (5,500 sq.yd/h)
Volume thickness after compacting action: 0.2 m (0.66 ft)

Compacting production: 920 m³/h (1,200 cu.yd/h)

N: No. of passes
H: Volume thickness
after compacting

WF22T-2 Application

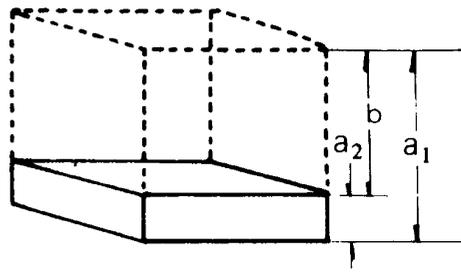
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Compacting volume

The optimum number of compacting passes made by the WF22T is 5 or 6 cycles, which is only about half the time for that performed by a 22-ton class bulldozer. The time varies slightly depending upon the trash type.

The compacting volume of the WF22T for a certain period of time is about four times more than that of the 22-ton class bulldozer.

* Spatial volume accomplished by compacting trash within a certain time.



$$b(\text{spatial volume}) = a_1 - a_2$$

Spreading thickness

Trash should be spread and compacted in thicknesses of 1.5 to 2 m (4.9 to 6.6 ft.) to build up to this level effectively. If a pile exceeds maximum height, it causes compaction deterioration because the unit's compactive energy is absorbed by the elasticity of the trash forming the pile.

After dense compaction is effected, earth should be spread over the compacted trash pile as it prevents insect breeding and fire hazards. The WF22T-2 Trash Compactor supplies twice the spreading and compacting efficiency of a bulldozer operating in an area of equal size.

Trash Compaction Rate Comparison Chart

