



RELIABLE.
POWERFUL.
ENVIRONMENT-FRIENDLY.

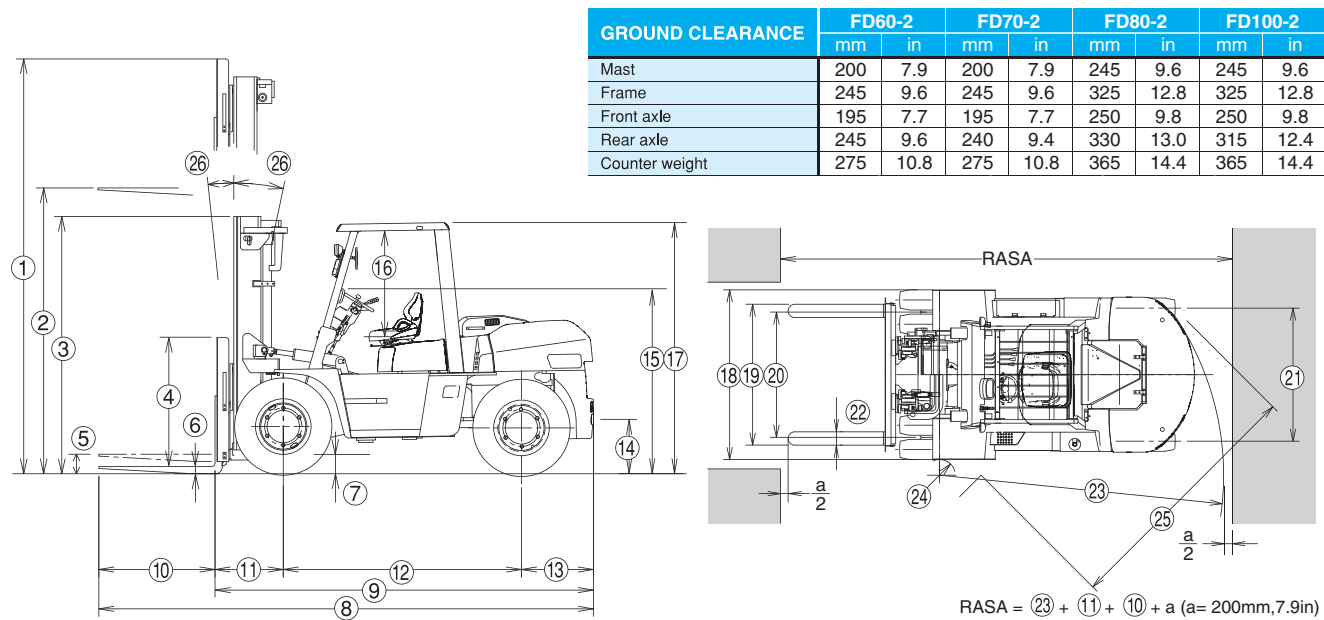


6 - 10t
13000-22000lbs.

DIESEL POWERED
PNEUMATIC TIRE TRUCKS

FD60-2	6000kg/600mm 13000lbs/24in	FD70-2	7000kg/600mm 15500lbs/24in	FD80-2	8000kg/600mm 17500lbs/24in	FD100-2	10000kg/600mm 22000lbs/24in
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STANDARD DIMENSIONS



STANDARD DIMENSIONS

Model	FD60-2		FD70-2		FD80-2		FD100-2	
	mm	in	mm	in	mm	in	mm	in
① Overall height, fork raised(with backrest)	4420	174.0	4420	174.0	4420	174.0	4330	170.5
② Maximum fork height	3000	118	3000	118	3000	118	3000	118
③ Mast height, fork lowered	2500	98.4	2500	98.4	2700	106.3	2850	112.2
④ Backrest height	1370	53.9	1365	53.7	1360	53.5	—	—
⑤ Free lift	205	8.1	215	8.5	205	8.1	205	8.1
⑥ Fork thickness	60	2.4	70	2.8	75	3.0	75	3.0
⑦ Minimum ground clearance	195	7.7	195	7.7	250	9.8	250	9.8
⑧ Overall length(with forks)	4785	188.4	4860	191.3	5200	204.7	5465	215.2
⑨ Length to fork face	3565	140.4	3640	143.3	3980	156.7	4245	167.1
⑩ Fork length	1220	48.0	1220	48.0	1220	48.0	1220	48.0
⑪ Load distance	615	24.2	625	24.6	720	28.3	710	28.0
⑫ Wheelbase	2250	88.6	2250	88.6	2500	98.4	2800	110.2
⑬ Rear overhang	700	27.6	765	30.1	760	29.9	735	28.9
⑭ Drawbar pin center height	485	19.1	485	19.1	570	22.4	570	22.4
⑮ Machine height(without overhead guard and mast)*	1790	70.5	1790	70.5	1895	74.6	1895	74.6
⑯ Overhead guard clearance(from face of seat)	1150	45.3	1150	45.3	1150	45.3	1150	45.3
⑰ Overall height(overhead guard)	2530	99.6	2530	99.6	2640	103.9	2640	103.9
⑱ Overall width	1995	78.5	1995	78.5	2165	85.2	2245	88.4
⑲ Fork spread(outside)	300~1835	11.8~72.2	300~1835	11.8~72.2	340~2000	13.4~78.7	405~2145	15.9~84.4
⑳ Tread(front)	1470	57.9	1470	57.9	1600	63.0	1600	63.0
㉑ Tread(rear)	1700	66.9	1700	66.9	1700	66.9	1700	66.9
㉒ Fork width	150	5.9	150	5.9	180	7.1	180	7.1
㉓ Outside turning radius	3320	130.7	3380	133.1	3630	142.9	3880	152.8
㉔ Inside turning radius	200	7.9	200	7.9	200	7.9	200	7.9
㉕ Minimum intersecting aisle	3045	119.9	3080	121.3	3295	129.7	3445	135.6
㉖ Tilt angle(forward-backward)	6°-12°	6°-12°	6°-12°	6°-12°	6°-12°	6°-12°	6°-12°	6°-12°

STANDARD EQUIPMENT AND ACCESSORIES

[Equipment]

- Adjustable ORS seat with belt
- Asbestos-free brake shoe material
- Automatic shifting T/M
- Converter oil cooler
- Donaldson cyclopac aircleaner
- Drawbar device
- Durable overhead guard
- Flow control valve
- Fork length 1220mm(48in)
- Fuel filter & water sedimenter(WTS)
- Full hydrostatic power steering(OBT)
- Gas cylinder type bonnet latch
- High capacity alternater 50A
- High -visibility wide-view mast(VM300)
- Lift circuit cut-off valve
- Load backrest¹⁾
- Long-life pneumatic tires²⁾
- Neutral start safety system
- Power brake system
- Radiator coolant reservoir
- Transmission oil dipstick
- Transmission oil return filter
- Traveling interlock system
- 2-spool control valve with pressure relief

[Controls]

- Auto glow system
- Electric T/M shift control lever
- Key switch-engine start/stop
- Lift and tilt levers
- Multi-function switch lever with self-cancelling mechanism(Lighting & turn-signal)
- Parking brake lever with inter-lock
- Tilt adjustable steering post

[Instruments and Switch]

- Battery charging indicator
- Electric horn
- Engine glow indicator
- Engine hourmeter
- Engine oil pressure warning indicator
- Fuel gauge
- Neutral safety indicator
- Water sedimenter indicator
- Water temperature gauge

[Accessories]

- Access-assisted handgrip
- Back-up buzzer
- Back-up light
- Deluxe floor mat
- Front combination lights (turn signal, clearance)
- Head lights - trafic purpose
- Pen holder
- Rear combination lights
- Side view mirrors

NOTE : ¹⁾ Excluded FD100

²⁾ STD tread profile:

J-LUG - FD60 FD70 FD80
U-LUG - FD100

OPTIONAL LOADING ATTACHMENT

- Alternative fork length(LF)
- Bale clamp(LG)
- Fork extention sleeve(EF)
- Fork positioner hydraulic cyl type(FS)
- Fork positioner manual type(FSM)
- Hinged forks(HF)
- Hinged scoop(HFS)
- Lifting-eye(HC)
- Ram(RA)
- Rotating forks hook-on type(RF)
- Side shifter(SS)
- Wide type backrest(WBR)
- Wide type fork carriage(WF)
- Wide view full free 2-stage mast(VFM)
- Wide view full free 3-stage mast(VFHM)

OPTIONAL EQUIPMENT AND ACCESSORIES

[Equipment]

- Airconditioner(SCB AC)
- Auxiliary hydraulic valve module(3SV - 4SV - 5SV)
- Dual airelement(ADE)
- Fingertip hydraulic levers(FIT)
- Front windshield with wiper(AW071)
- Heater(HR)
- Heater & defroster(SCB DEF)
- J-lug profile pneumatic tires(FD100) (TJW)
- Overhead exhaust(TUE)
- Plate(straight) fin radiator(RADPF)
- Pneumatic shapped cushion tires(SE)
- Pre-aircleaner(CAKB)
- Radiator dust screen(DSR)
- Right hand direction lever(LCR)
- Steel cabin(SCB)
- Steel net roof on overhead guard(HGD)
- Synchronized steering mechanism(SRS)
- Tilt cylinder boots(TLB)

[Instruments and Switch]

- High-volume backup buzzer(BBH)
- O.K.monitor(OKM)
 - For -Aircleaner clogging
 - Electrolyte level
 - Engine coolant level
 - Parking brake warning
 - Seat belt warning
- Speedmeter(SM)
- Torqueconverter oil pressure gauge(TPM)
- Torqueconverter oil temp. gauge(TTM)

[Accessories]

- Custom paint works(P)
- Fire extinguisher(FE)
- Rear working light(RWL)
- Rotating warning light(RLY/RLR)

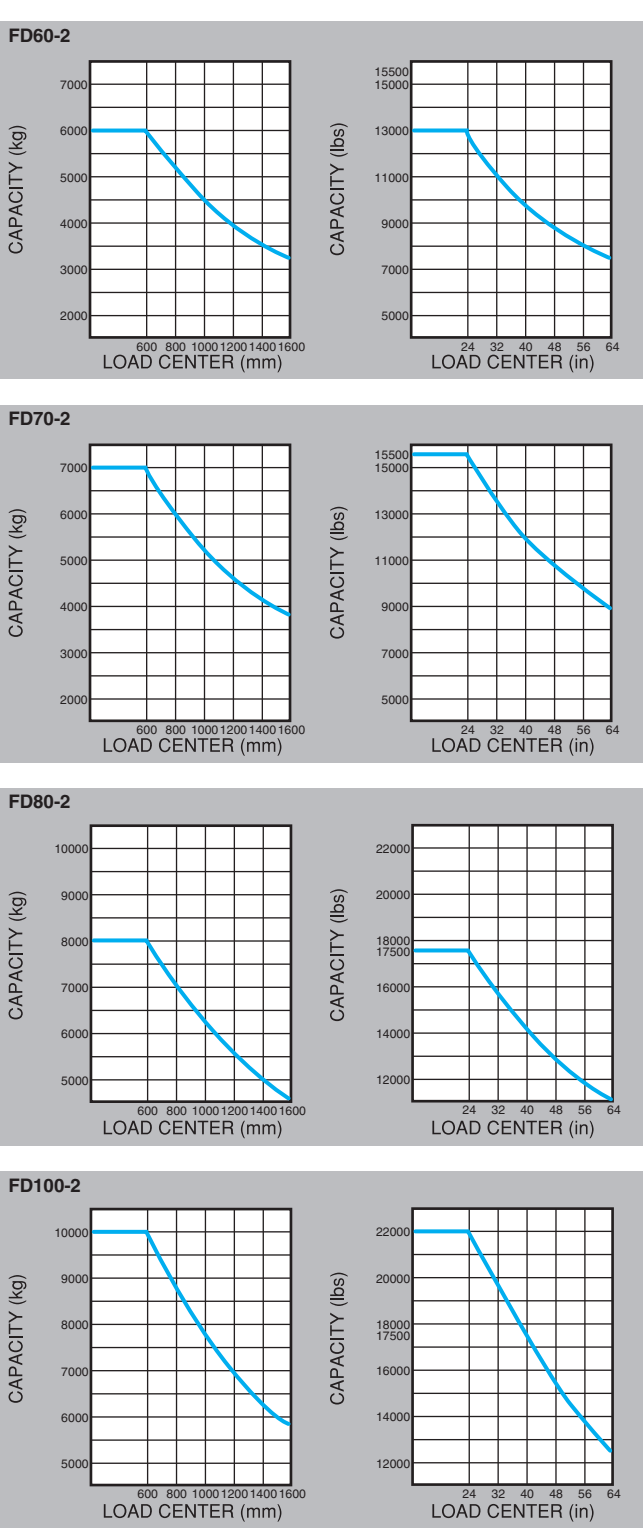
NOTES : ●Meets following major standards and code:
ISO22915-2 Counter Balanced Lift Trucks, Stability & Safety Test (Int'l)
JIS D6001 Industrial Lift Trucks (Japan)
ISO D6011 Stability & Safety Test (Japan)
●Overhead guard meets ISO 6055, JIS D6021

STANDARD SPECIFICATIONS

Characteristics	1 Manufacturer				UNICARRIERS		UNICARRIERS		
	2 Model				FD60-2	FD70-2	FD80-2	FD100-2	
	3 Load Capacity			kg(lbs)	6000(13000)	7000(15500)	8000(17500)	10000(22000)	
	4 Load Center			mm(in)	600(24)	600(24)	600(24)	600(24)	
	5 Power Type				Diesel	Diesel	Diesel	Diesel	
	6 Operator Position				Seated	Seated	Seated	Seated	
	7 Tire Type		Front/Rear		Pneumatic	Pneumatic	Pneumatic	Pneumatic	
	8 Wheels(x=driven)		Front/Rear		4x/2	4x/2	4x/2	4x/2	
Dimensions	9 Maximum Fork Height			mm(in)	3000(118)	3000(118)	3000(118)	3000(118)	
	10 Free Lift			mm(in)	205(8.1)	215(8.5)	205(8.1)	205(8.1)	
	13 Fork Size		LxWxT	mm(in)	1220x150x60(48.0x5.9x2.4)	1220x150x70(48.0x5.9x2.8)	1220x180x75(48.0x7.1x3.0)	1220x180x75(48.0x7.1x3.0)	
	Fork Spread(Outside)		Max./Min.	mm(in)	1835(72.2)/300(11.8)	1835(72.2)/300(11.8)	2000(78.7)/340(13.4)	2145(84.4)/405(15.9)	
	14 Tilt Angle		Fwd./Bwd.	deg	6/12	6/12	6/12	6/12	
	15 Length to Fork Face				3565(140.4)	3640(143.3)	3980(156.7)	4245(167.1)	
	16 Overall Width			mm(in)	1995(78.5)	1995(78.5)	2165(85.2)	2245(88.4)	
	17 Mast Height Fork Lowered			mm(in)	2500(98.4)	2500(98.4)	2700(106.3)	2850(112.2)	
	18 Mast Height Fork Raised			mm(in)	4420(174.0)	4420(174.0)	4420(174.0)	4330(170.5)	
	19 Overhead Guard Height			mm(in)	2530(99.6)	2530(99.6)	2640(103.9)	2640(103.9)	
	21 Turning Radius(Outside)			mm(in)	3320(130.7)	3380(133.1)	3630(142.9)	3880(152.8)	
Performance	22 Load Distance (Centerline of Front Axle to Front Face of Forks)			mm(in)	615(24.2)	625(24.6)	720(28.3)	710(28.0)	
	Rear Overhang			mm(in)	700(27.6)	765(30.1)	760(29.9)	735(28.9)	
	23 Basic Right Angle Stacking Aisle Width			mm(in)	5355(210.8)	5425(213.6)	5770(227.2)	6010(236.6)	
	24	Travel Max.	Full Load	km/h(mph)	29.0(18.0)	29.0(18.0)	28.5(17.7)	28.5(17.7)	
			No Load	km/h(mph)	31.0(19.3)	31.0(19.3)	32.0(19.9)	32.0(19.9)	
		Speeds	Lifting	Full Load	mm/s(fpm)	500(98.4)	500(98.4)	450(88.6)	380(74.8)
			No Load	mm/s(fpm)	520(102.4)	520(102.4)	470(92.5)	400(78.7)	
	26	Lowering	Full Load	mm/s(fpm)	450(88.6)	450(88.6)	450(88.6)	450(88.6)	
			No Load	mm/s(fpm)	500(98.4)	500(98.4)	450(88.6)	350(68.9)	
	28 Max. Drawbar Pull			kN(lbs)	54.9(12300)/21.6(4900)	54.9(12300)/21.6(4900)	59.8(13500)/27.5(6200)	63.7(14300)/31.4(7100)	
	29 Max. Gradeability*			%	31	31	28	22	
			No Load	%	20	20	20		
Weight	32 Total Weight			kg(lbs)	8800(19400)	9580(21120)	11250(24810)	12530(27630)	
	Weight Distribution	Full Load	Front	kg(lbs)	13150(29000)	14670(32350)	17130(37770)	20400(44980)	
			Rear	kg(lbs)	1650(3640)	1910(4210)	2120(4670)	2130(4700)	
		No Load	Front	kg(lbs)	3910(8620)	3860(8510)	4910(10830)	5730(12630)	
Rear			kg(lbs)	4890(10780)	5720(12610)	6340(13980)	6800(14990)		
Chassis & Wheels	35 Tires	Number	Front/Rear		4/2	4/2	4/2	4/2	
			Size	Front	8.25x15-14PR	8.25x15-14PR	9.00x20-14PR	9.00x20-14PR	
			Front	8.25x15-14PR	8.25x15-14PR	9.00x20-14PR	9.00x20-14PR		
			Rear						
	38 Wheelbase		mm(in)	2250(88.6)	2250(88.6)	2500(98.4)	2800(110.2)		
		Front	mm(in)	1470(57.9)	1470(57.9)	1600(63.0)	1600(63.0)		
	39 Tread	Rear	mm(in)	1700(66.9)	1700(66.9)	1700(66.9)	1700(66.9)		
			mm(in)	1370(53.9)	1365(53.7)	1360(53.5)	—		
	Overhead Guard Clearance			mm(in)	1150(45.3)	1150(45.3)	1150(45.3)	1150(45.3)	
	Counterweight Height			mm(in)	1500(59.1)	1500(59.1)	1610(63.4)	1610(63.4)	
	Drawbar Pin Center Height			mm(in)	485(19.1)	485(19.1)	570(22.4)	570(22.4)	
Floor Height			mm(in)	935(36.8)	935(36.8)	1045(41.1)	1045(41.1)		
Engine and Transmission	40 Underclearance	Min. Full Load <td></td> <td>mm(in)</td> <td>195(7.7)</td> <td>195(7.7)</td> <td>245(9.6)</td> <td>245(9.6)</td>		mm(in)	195(7.7)	195(7.7)	245(9.6)	245(9.6)	
			Center of Wheelbase	mm(in)	245(9.6)	245(9.6)	325(12.8)	325(12.8)	
		Service(Foot)			Hydraulic-Foot pedal	Hydraulic-Foot pedal	Hydraulic-Foot pedal	Hydraulic-Foot pedal	
			Parking		Mechanical-Hand lever	Mechanical-Hand lever	Mechanical-Hand lever	Mechanical-Hand lever	
	45 Battery	Voltage/Capacity(SHR)		V/AH	2 x 12/70	2 x 12/70	2 x 12/70	2 x 12/70	
		Make-Model		ISUZU 4HK1-TC	ISUZU 4HK1-TC	ISUZU 4HK1-TC	ISUZU 4HK1-TC		
				Hp/rpm	117/2000 SAE GROSS	117/2000 SAE GROSS	117/2000 SAE GROSS	117/2000 SAE GROSS	
				kW/rpm	87.0/2000	87.0/2000	87.0/2000	87.0/2000	
				PS/rpm	126/2000 SAE GROSS	126/2000 SAE GROSS	126/2000 SAE GROSS	126/2000 SAE GROSS	
				Nm/rpm	486.7/1500	486.7/1500	486.7/1500	486.7/1500	
	51 Internal Combustion Engine	Max. Torque/r.p.m.		kgf-m/rpm	50.0/1500	50.0/1500	50.0/1500	50.0/1500	
			lb-ft/rpm	359/1500	359/1500	359/1500	359/1500		
52	Number of Cylinder			4	4	4	4		
	Displacement		lit(cu-in)	5.193(316.9)	5.193(316.9)	5.193(316.9)	5.193(316.9)		
	Alternator output		Amp	50	50	50	50		
	Fuel Tank Capacity		lit(US gal)	140(37.0)	140(37.0)	140(37.0)	140(37.0)		
	55 Transmission		Type		Automatic Power shift	Automatic Power shift	Automatic Power shift	Automatic Power shift	
57	Stage Fwd.-Rvs.			2-2	2-2	2-2	2-2		
	For Attachment		kg/cm²(psi)	200(2844)	200(2844)	200(2844)	200(2844)		

NOTE : * Computed values

LOAD CHART



NOTE :
Capacity shown is computed with upright in vertical position. Load center are determined front face of forks. Capacities are based on a 1000mm or 48in cube load configuration with the center of gravity (C.G.) at the true center of the cube, and standard forks. Truck capacities with upright in forward tilt position will be less. Long forks, and unusually wide or tall loads may also reduce capacity. Contact TCM representative for capacity information on irregular loads. Specific capacities are shown on truck nameplates. TCM Industrial Trucks are equipped with certain safety devices as standard equipment. UniCarriers Corporation will not assume any liability for injuries or damage arising from or caused by the removal of any safety devices from any of its products.

STANDARD SPECIFICATIONS

Wide View Mast VM

Mast Model	Rated Capacity / 600mm(24in) load center								Max. Fork Height		Overall Mast Height								Tilting Angle F/B	Service weight									
											Lowerd				Raised with Backrest														
											FD60-2		FD80-2		FD100-2		FD60-2 FD70-2 FD80-2											FD100-2	
	FD60-2		FD70-2		FD80-2		FD100-2		FD60-2 FD70-2		FD80-2		FD100-2		FD60-2		FD70-2		FD80-2		FD100-2								
	kg	lbs	kg	lbs	kg	lbs	kg	lbs	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	deg	kg	lbs	kg	lbs	kg	lbs	kg	lbs
VM300	6000	13000	7000	15500	8000	17500	10000	22000	3000	118.0	2500	98.4	2700	106.3	2850	112.2	4420	174.0	4330	170.5	6/12	8800	19400	9580	21120	11250	24810	12530	27630
VM330	6000	13000	7000	15500	8000	17500	—	—	3300	130.0	2650	104.3	2850	112.2	—	—	4720	185.8	—	—	6/12	8850	19510	9630	21230	11310	24940	—	—
VM350	6000	13000	7000	15500	8000	17500	10000	22000	3500	137.8	2750	108.3	2950	116.2	3100	122.0	4920	193.7	4830	190.2	6/12	8880	19580	9660	21300	11350	25030	12640	27870
VM400	6000	13000	7000	15500	8000	17500	10000	22000	4000	157.5	3050	120.1	3250	128.0	3400	133.9	5420	213.4	5330	209.8	6/12	9070	20000	9850	21720	11580	25540	12890	28420
VM450	6000	13000	7000	15500	8000	17500	10000	22000	4500	177.2	3300	130.0	3500	137.8	3650	143.7	5920	233.1	5830	229.5	6/12	9160	20190	9940	21910	11670	25740	13000	28670
VM500	6000	13000	7000	15500	7750	17000	10000	22000	5000	196.9	3550	139.8	3750	147.6	3900	153.5	6420	252.8	6330	249.2	6/6	9270	20440	10050	22160	11770	25950	13100	28890
VM550	5700	12500	6600	14500	7400	16300	9000	19800	5500	216.5	3850	151.6	4050	159.5	4200	165.4	6920	272.4	6830	268.9	3/6	9470	20880	10250	22600	12010	26490	13350	29440
VM600	5400	11900	6400	14100	7000	15400	8000	17500	6000	236.2	4100	161.4	4300	169.3	4450	175.2	7420	292.1	7330	288.6	3/6	9550	21050	10330	22770	12120	26730	13460	29680

Wide View Full Free 2-Stage Mast VFM

Mast Model	Rated Capacity / 600mm(24in) load center						Max. Fork Height		Overall Mast Height						(2)Free lift with Backrest						Tilting Angle F/B	Service weight					
									Lowerd				(1)Raised with Backrest														
	FD60-2		FD70-2		FD80-2				FD60-2 FD70-2		FD80-2		FD60-2		FD70-2		FD80-2		FD60-2			FD70-2		FD80-2			
kg	lbs	kg	lbs	kg	lbs	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	deg	kg	lbs	kg	lbs	kg	lbs	
VFM300	6000	13000	7000	15500	8000	17500	3000	118.0	2625	103.3	2700	106.3	4420	174.0	1255	49.4	1255	49.4	1345	53.0	6/12	8925	19680	9685	21360	11260	24830
VFM330	6000	13000	7000	15500	8000	17500	3300	130.0	2775	109.3	2850	112.2	4720	185.8	1405	55.3	1405	55.3	1495	58.9	6/12	8975	19790	9735	21470	11305	24930
VFM350	6000	13000	7000	15500	8000	17500	3500	137.8	2875	113.2	2950	116.1	4920	193.7	1505	59.3	1505	59.3	1595	62.8	6/12	9005	19860	9765	21530	11340	25010
VFM400	6000	13000	7000	15500	8000	17500	4000	157.5	3175	125.0	3250	128.0	5420	213.4	1805	71.1	1805	71.1	1895	74.6	6/12	9205	20300	9965	21970	11740	25300
VFM450	6000	13000	7000	15500	8000	17500	4500	177.2	3425	134.8	3500	137.8	5920	233.1	2055	80.9	2055	80.9	2145	84.4	6/12	9285	20470	10045	22150	11660	25710



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- Photos and illustrations may or may not include optional equipment and accessories.
- Features and specifications may vary depending on markets.
- Produced in ISO certified factory.