



**Seoul Office :**

Doosan Tower 27th FL. 18-12, Euljiro-6Ga,  
Jung-Gu, Seoul, Korea 100-730

Tel : +82-2-3398-8114

Fax : +82-2-3398-8117

[www.doosaninfracore.com](http://www.doosaninfracore.com)

**Doosan Infracore Europe S.A.**

1A, Rue Achille Degrâce, 7080 Frameries, Belgium  
Tel : +32-65-61-3230 Fax : +32-65-67-7338

**Doosan Infracore U.K., Ltd.**

Doosan House, Unit 6, 3 Heol Y Gamlas, Parc Nantgarw, Nantgarw,  
Cardiff. CF15 7QU, U.K.  
Tel : +44-1443-84-2273 Fax : +44-1443-84-1933

**Doosan Infracore Germany GmbH**

Hans-Böckler strasse 29, D-40764, Langenfeld-Fuhrkamp, Germany  
Tel : +49-2173-8509-18 Fax : +49-2173-8509-45

**Doosan Infracore France**

ZAC de La Clef Saint Pierre - Buroplus 2 1A Avenue Jean d'Alembert  
78990 Elancourt, France  
Tel : +33-(0)1-30-16-21-41 Fax : +33-(0)1-30-16-21-44

**Doosan Infracore America Corporation**

2905 Shawnee Industrial Way, Suwanee, Georgia 30024, U. S. A  
Tel : +1-770-831-2200 Fax : +1-770-831-0480

**Doosan Infracore (China) Co., Ltd.**

#28, Wuzhishan Road, Eco. & Tech, Development Zone,  
Yantai, Shandong, China  
Tel : +86-535-638-2000 Fax : +86-535-638-2004

**Doosan Infracore Xinjiang Machinery Co.,Ltd.**

No. 178, Hetanbei Road, Wulumuqi, Xinjiang, China  
Tel : +86-991-469-7217 Fax : +86-991-469-8641

**Doosan Infracore Liaoning Machinery Co.,Ltd.**

No.32 DongLing Road, DongLing District, ShenYang, Liaoning, China  
Tel : +86-24-8841-1407 Fax : +86-24-8841-1404

**Doosan Infracore South Africa (PTY) LTD.**

60C Electron Road, Isando 1600, Johannesburg, South Africa  
Tel : 27-11-974-2095 Fax : 27-11-974-2778

**Doosan Infracore Middle East Center (Dubai)**

P.O.Box 183127, Al-Serkal Building, Air Port Road, Dubai, U.A.E  
Tel : +971-4-295-2781~2 Fax : +971-4-295-2783



PBP D520C000 0702

The illustrations do not necessary show the product in standard version.  
All products and equipments are not available in all markets.  
Materials and specifications are subjects to change without prior notice.



Doosan Infracore  
Construction Equipment

# DX520LC

Engine Power : DIN 6271, net      245kw (333ps) @ 1,800rpm  
   SAE J1349, net      245kw (328HP) @ 1,800rpm

Operating Weight : 50,700kg (111,800 lb)

Bucket Capacity(PCSA) : 0.92~3.2m<sup>3</sup> (1.20~4.19cu.yd)

Width for 3.2m<sup>3</sup> (PCSA) with cutter : 2,101mm(6'11")  
   without cutter : 2,024mm(6'8")



# Technical Data

## Engine

<b>Model</b>	Doosan DV11
<b>Type</b>	Water-Cooled, Common Rail, Direct Injection
<b>Aspiration</b>	Turbocharged Air to Air intercooled
<b>No. of cylinders</b>	6
<b>Rated flywheel horse power</b>	
DIN6271, net	245KW(333PS)at 1,800rpm
SAEJ1349, net	245KW(328HP)at 1,800rpm
<b>Piston Displacement</b>	10,964cc(669cu.in)
<b>Maximum torque</b>	157kgf.m(1,540Nm, 1,137lbf.ft) @ 1,300rpm
<b>Bore and stroke</b>	128mm X 142mm (5.0" X 5.6")
<b>Starting system</b>	24V x 7.0kw Electric motor
<b>Batteries</b>	2 X 12V X 150AH

## Hydraulic System

- e-EPOS (Electronic Power Optimizing System) allows the operator to maximize work efficiency over a full range of operating conditions and to minimize fuel consumption.
- Hydraulic system assures fully independent and combined operations.
  - Automatic 2 speed travel system for high traction force and travel speed.
  - Cross-sensing and fuel saving pump system.
  - Auto idle system.
  - 2-Working / 2-Power mode selection system.
  - Computer aided engine-pump control.

<b>Main pumps</b>	Parallel, Bent-axis, axial piston
Max. oil flow	2 X 355 ℓ/min (2 X 93 US gpm, 2 X 78 Imp gpm)
<b>Pilot pump</b>	Gear pump
Max. oil flow	22 ℓ/min (5.8US gpm, 4.8Imp gpm)
<b>Swing motor</b>	
Relief valve	225bar (3,700psi, 260kgf/cm <sup>2</sup> )
<b>Main relief valves</b>	
Boom/Arm/Bucket	Normal: 314bar (4,550psi, 320kgf/cm <sup>2</sup> ) Power Boost: 343bar(4,970psi, 350kgf/cm <sup>2</sup> )
Travel circuit	314bar(4,550psi, 320kgf/cm <sup>2</sup> )

## Hydraulic cylinders

High-strength piston rods and tubes are used. Cylinder cushion mechanism is provided for all cylinders to assure shock-free operation and extend life of cylinder.

Cylinders	Q'ty	Bore X Rod dia. X Stroke
Boom	2	170 X 115 X 1,610mm(6.7" X 4.5" X 63")
Arm	1	190 X 130 X 1,805mm(7.5" X 5.1" X 71")
Bucket	1	170 X 115 X 1,341mm(6.7" X 4.5" X 52.8")

## Super-structure revolving frame

A deep, full-reinforced box section. Heavy-gauge steel plates used for ruggedness.

## Operator's cab

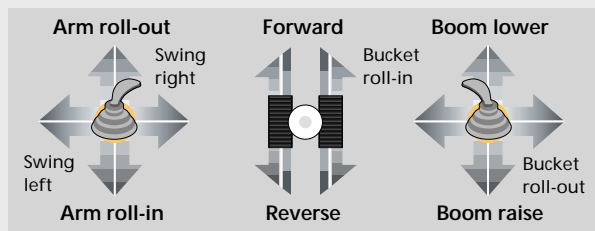
A roomy, independent, shock and noise-free operator's cab, 4 side safety glass windows give all-round visibility. Front window slides up and stores in the roof and side window can be opened for ventilation. Fully adjustable suspension seat. Air conditioner. ISO standard dab.

### Noise Levels (dynamic value)

LWA External noise	
Guaranteed Sound Power Level	106 dB(A)(2000/14/EC)
Measured Sound Power Level	105 dB(A)(2000/14/EC)
LPA Operator noise	
	72 dB(A)(ISO 6396)

## Controls. 2 Implement levers

Pilot pressure control type. Right lever is boom and bucket control, left lever for swing and arm control.



## 2 Travel pedals with levers

Pilot pressure control type. Independent drive at each track allows counter-rotation of the tracks. Levers are detachable.

## Brake

Two oil disk brake on final drive input shafts. Parking brake is spring-set, hydraulic-released disc type.

## Swing mechanism

High-torque, axial piston motor with planetary reduction gear bathed in oil. Swing circle is singlerow, shear type ball bearing with induction-hardened internal gear. Internal gear and pinion gear immersed in lubricant.

Swing speed	0 to 8.8 rpm(min <sup>-1</sup> )
Rear swing radius	3,700 mm(12'2")

## Drive

Each track is driven by an independent, high-torque, axial piston motor through planetary reduction gear. Two levers or foot pedal control provide smooth travel or counter-rotation upon demand.

Travel speed (High/Low)	5.0/3.1km/h(3.1/1.9mph)
Maximum traction force	33,600 kgf(74,080 lbf)
Gradeability	35° (70%) continuous

## Undercarriage

Tractor type undercarriage. Heavy-duty track frame, all welded stress-relieved structure. Top grade materials are used for toughness. Side frames are welded, securely and rigidly, to the track frame. Lifetime-lubricated track rollers, idlers and sprockets with floating seals. Track shoes of induction-hardened rolled alloy with triple grousers. Specially heart-treated connecting pins. Hydraulic track adjusters with shock-absorbing recoil springs.

## Buckets

Capacity		Width		Weight	Recommendation			
PCSA, heaped	CECE heaped	Without side cutters	With side cutters		6.3m (20'8") Boom		9.0m (29'6") Boom	11.0m (20'8") Boom
					2.4(7'10")Arm	2.9(9'6")Arm-Std.	6.0(19'8")Arm	8.0(26'3")Arm
0.92m <sup>3</sup> (1.20yd <sup>3</sup> )	0.81m <sup>3</sup>	1,236mm (49")	1,172mm (46")	707kg (1,560 lb)	-	-	-	A
1.27m <sup>3</sup> (1.66yd <sup>3</sup> )	1.10m <sup>3</sup>	1,445mm (57")	1,376mm (54")	1,091kg (2,410 lb)	-	-	A	-
3.20m <sup>3</sup> Std.(4.19yd <sup>3</sup> )	2.87m <sup>3</sup>	2,101mm (83")	2,024mm (80")	2,600kg (5,730 lb)	A	B	-	-
HD. 1.73m <sup>3</sup> (2.26yd <sup>3</sup> )	1.58m <sup>3</sup>	1,301mm (51")	1,224mm (48")	1,831kg (4,040 lb)	A	A	-	-
HD. 2.01m <sup>3</sup> (2.63yd <sup>3</sup> )	1.82m <sup>3</sup>	1,451mm (57")	1,374mm (54")	1,948kg (4,290 lb)	A	A	-	-
HD. 2.29m <sup>3</sup> (3.00yd <sup>3</sup> )	2.07m <sup>3</sup>	1,601mm (63")	1,524mm (59")	2,106kg (4,640 lb)	A	A	-	-
HD. 2.85m <sup>3</sup> (3.73yd <sup>3</sup> )	2.55m <sup>3</sup>	1,901mm (75")	1,824mm (72")	2,381kg (5,250 lb)	A	A	-	-

A. Suitable for materials with density of 2,000 kg/m<sup>3</sup> (3,370 lb/CU .yd) or less  
 B. Suitable for materials with density of 1,600 kg/m<sup>3</sup> (2,700 lb/CU .yd) or less  
 C. Suitable for materials with density of 1,100 kg/m<sup>3</sup> (1,850 lb/CU .yd) or less

## Number of rollers and shoes(each side) ground contact area

Upper rollers	2+1(Center)
<b>(Standard shoe)</b>	
Lower rollers	9
Track shoes	53
Overall track length	5,465mm(17'11")

## Weight

Equipped with 6.3m(20'8")boom, 2.9m(9'6")arm, and 3.2m<sup>3</sup>(4.19yd<sup>3</sup>; PCSA heaped) bucket and 600mm(24")TG shoes.

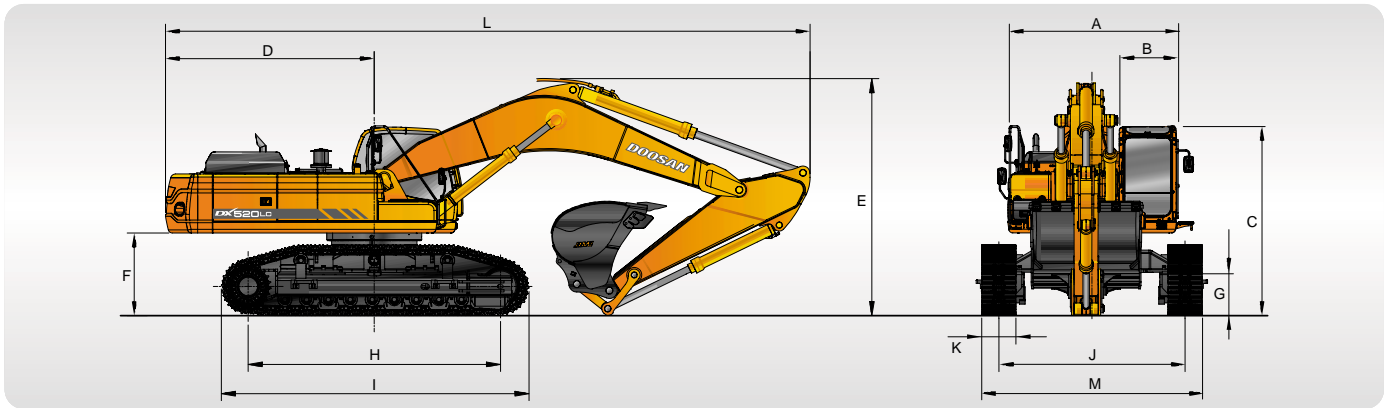
Shoe type	shoe width	Operating weight	Ground pressure
Triple grouser	600mm(24") (Std.)	50,700kg (111,800lb)	0.88kgf/cm <sup>2</sup> (86kpa, 12.5psi)
	750mm(28") (Opt.)	51,400kg (113,300lb)	0.71kgf/cm <sup>2</sup> (70kpa, 10.1psi)
	800mm(32") (Opt.)	51,700kg (114,000lb)	0.67kgf/cm <sup>2</sup> (66kpa, 9.5psi)
	900mm(34") (Opt.)	52,200kg (115,100lb)	0.60kgf/cm <sup>2</sup> (59kpa, 8.5psi)
Double grouser	600mm(24") (Opt.)	51,600kg (113,800lb)	0.89kgf/cm <sup>2</sup> (87kpa, 12.6psi)

## Service refill capacities

	Liters	US gal	Imp gal
Fuel tank	620	164	136
Cooling system	40	10.6	8.8
<b>Lubrication</b>	<b>Liters</b>	<b>US gal</b>	<b>Imp gal</b>
Engine oil	44	11.6	9.7
Swing drive(each)	4	1.1	0.9
Final drive(each)	6	1.6	1.3
Hydraulic tank	500	87.2	110

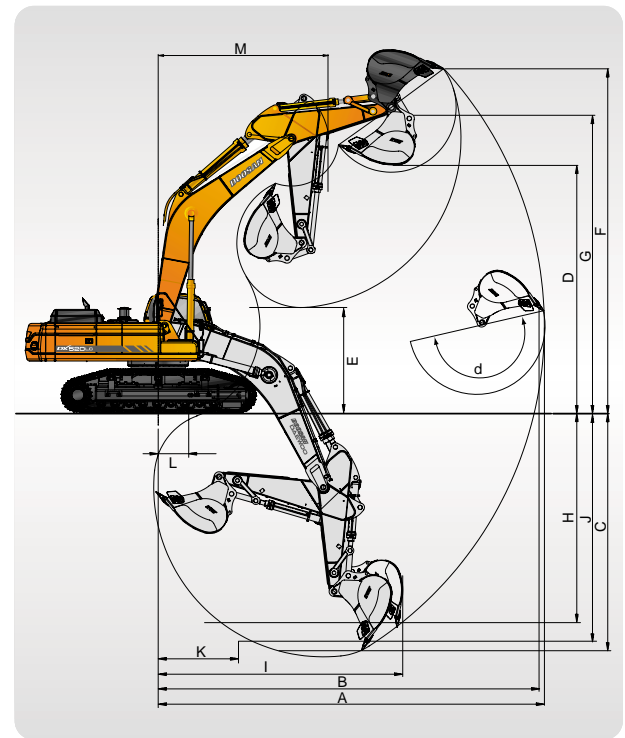
# Dimensions & Working Ranges

**EXX Dimensions (6,300mm(20'8")Boom, 2,900mm(9'6")Arm, 600mm(24")shoe) - Std.**



Boom length	9.0m(29'6") (Std.) 6.3m(20'8")	11.0m(36'1")
Arm length	6.0m(19'8") (Std.) 2.9m(9'6")	8.0m(26'3")
Bucket type(pcsa)	1.27m <sup>3</sup> (Std.) 3.2m <sup>3</sup>	0.92m <sup>3</sup>
A Overall width of upper structure	2,990mm(9'10")	
B Overall width of cab	1,010mm(3'4")	
C Overall height of cab	3,350mm(11'0")	
D Tail swing radius	3,700mm(12'2")	
E Overall height(Hose)	3,910mm(13'0")	4,200mm(13'9") 4,070mm(13'4")
F Clearance under counterweight	1,460mm(4'9")	
G Ground clearance	770mm(2'6")	
H Tumbler distance	4,470mm(14'8")	
I Track length	5,465mm(17'11")	
J Track gauge(Standard Track)	3,300/2,740mm(10'10"/9'10")	
J' Track gauge(Narrow Track)	2,920/2,360mm(9'7"/7'9")	
K Track shoe width	600mm(2')	
L Overall length	14,050mm(46'1")	11,430mm(37'6") 16,090mm(52'9")
M Overall track width(Standard Track)	3,900mm(12'10")	
M' Overall track width(Narrow Track)	3,520mm(11'7")	

**EXX Working ranges (Std.)**



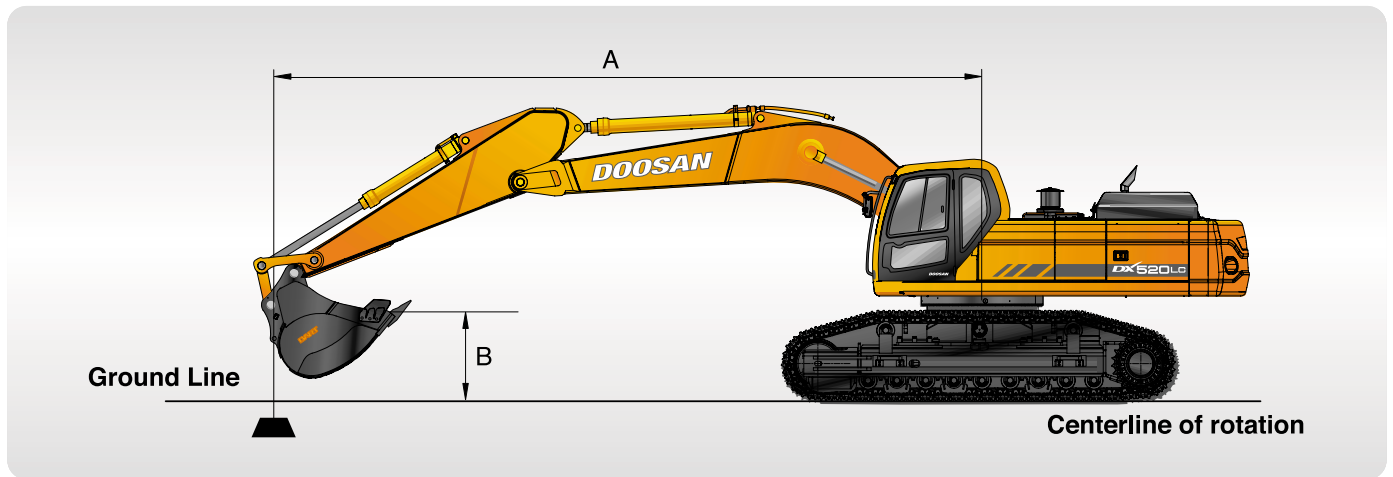
**EXX Digging forces(Maximum radialtooth forces)**

	6.0m Arm	(Std.) 2.9m Arm	8.0m Arm
Bucket digging force	20,300 kgf	30,100 kgf	15,200 kgf
	200 kn	300 kn	150 kn
	44,800 lbf	66,400 lbf	33,500 lbf
Arm digging force	15,100 kgf	25,800 kgf	11,900 kgf
	150 kn	250 kn	120 kn
	33,300 lbf	56,900 lbf	26,200 lbf

\* At power boost  
\* ISO

	9,000mm(29'6")	(Std.) 6,300mm(20'8")	11,000mm(36'1")
Boom length	9,000mm(29'6")	(Std.) 6,300mm(20'8")	11,000mm(36'1")
Arm length	6,000mm(19'8")	(Std.) 2,900mm(9'6")	8,000mm(26'3")
Bucket type(pcsa)	1.27m <sup>3</sup>	(Std.) 3.2m <sup>3</sup>	0.92m <sup>3</sup>
A. Max. digging reach	16,060(52'8")	10,750(38'7")	19,610(64'4")
B. Max. digging reach at ground level	15,870(52'1")	10,460(34'4")	19,460(63'10")
C. Max. digging depth	11,800(38'9")	6,770(22'3")	15,130(49'8")
D. Max. dumping height	9,840(32'3")	6,720(22'1")	11,950(39'2")
E. Min. dumping height	2,080(6'10")	2,950(9'8")	1,980(6'6")
F. Max. digging height	12,800(41'12")	9,600(31'6")	14,520(47'8")
G. Max. bucket pin height	11,455(37'7")	8,520(27'4")	10,735(35'3")
H. Max. vertical wall depth	10,330(33'11")	1,190(3'11")	12,840(42'2")
I. Max. radius vertical	9,510(31'2")	10,100(33'2")	9,730(31'11")
J. Max. digging depth(8'level)	11,685(38'4")	6,590(21'7")	15,020(49'3")
k. Min. radius 8' line	4,910(16'1")	3,215(10'7")	4,930(16'2")
L. Min. digging reach	250(10")	1,240(4'1")	270(11")
M. Min. swing radius	6,470(21'3")	4,750(15'7")	6,210(20'4")
d. Bucket angle	175°	174°	178°

# Lifting Capacities



**Metric** Boom : 6,300mm(20'8") Arm : 2,900mm(9'6") Bucket : SAE 3.2m<sup>3</sup> HEAPED(CECE 2.87m<sup>3</sup>) Shoe : 600mm(2')(TG) Unit : 1,000kg

A(m)	2		3		4		5		6		7		8		9		Max. Reach				
																			A(m)		
7																			*9.80	*9.80	7.63
6											*10.67	*10.67	*10.25	*10.25					*10.15	*10.15	8.16
5									*12.56	*12.56	*11.43	*11.43	*10.67	*10.67					*10.38	9.71	8.53
4					*21.12	*21.12	*16.61	*16.61	*14.01	*14.01	*12.35	*12.35	*11.23	10.68					*10.61	9.10	8.77
3					*25.16	*25.16	*18.97	*18.97	*15.50	*15.50	*13.32	13.02	*11.84	10.46					*10.89	8.74	8.90
2					*27.91	*27.91	*20.89	*20.89	*16.81	16.25	*14.20	12.70	*12.41	10.25					*11.21	8.59	8.90
1					*25.78	*25.78	*22.12	21.32	*17.75	15.88	*14.87	12.44	*12.83	10.07					*11.58	8.65	8.80
0 (Ground)			*15.87	*15.87	*27.86	*27.86	*22.60	21.02	*18.25	15.63	*15.23	12.26	*13.03	9.94					*11.99	8.93	8.57
-1	*16.29	*16.29	*21.11	*21.11	*28.24	*28.24	*22.39	20.89	*18.23	15.50	*15.21	12.16	*12.89	9.88					*12.44	9.50	8.21
-2	*21.47	*21.47	*26.94	*26.94	*26.72	*26.72	*21.51	20.91	*17.65	15.48	*14.70	12.15							*12.93	10.49	7.70
-3	*27.09	*27.09	*30.48	*30.48	*24.41	*24.41	*19.89	*19.89	*16.38	15.58	*13.46	12.24							*13.41	12.20	7.02
-4	*32.77	*32.77	*25.85	*25.85	*21.06	*21.06	*17.28	*17.28	*14.07	*14.07									*13.80	*13.80	6.09
-5			*19.36	*19.36	*16.09	*16.09													*13.74	*13.74	4.76

## Feet

Unit : 1,000lb

A(ft)	10'		15'		20'		25'		30'		Max. Reach				
													A(ft)		
25'													*21.31	*21.31	23.67
20'									*22.81	*22.81			*22.29	*22.29	26.62
15'					*28.68	*28.68	*24.70	*24.70					*23.09	20.76	28.38
10'				*46.31	*46.31	*33.47	*33.47	*27.13	25.01				*23.97	19.29	29.18
5'				*53.21	*53.21	*37.46	34.51	*29.29	24.21				*25.09	18.94	29.09
0 (Ground)	*35.85	*35.85	*55.22	53.97	*39.49	33.59	*30.42	23.66					*26.44	19.69	28.11
-5'	*53.87	*53.87	*53.26	*53.26	*38.98	33.27	*29.73	23.48					*27.99	21.94	26.13
-10'	*66.03	*66.03	*47.54	*47.54	*35.26	33.51							*29.61	27.14	22.89
-15'	*48.98	*48.98	*36.40	*36.40									*30.59	*30.59	17.70

1. RATINGS ARE BASED ON SAE J1097
2. THE LOAD POINT IS A HOOK LOCATED ON THE BACK OF THE BUCKET.
3. \* RATED LOADS ARE BASED ON HYDRAULIC CAPACITY.
4. RATED LOADS DO NOT EXCEED 87% OF HYD. CAPACITY OR 75% OF TIPPING CAPACITY.

: Rating Over Front  
 : Rating Over Side or 360 degree



