

Masted
trucks

MSI 20 - 25 - 30 - 35

Semi-industrial design

- Capacity from 2000 kg to 3500 kg



**Equipment shown with optional fitting.*



MSI: MANITOU exclusive design

The MSI is a range of semi-industrial trucks with a capacity from 2 to 3.5 tonnes that are particularly manoeuvrable and flexible to use. It is stable and multi-purpose to enable it to work in both outside and indoor storage areas whether or not the ground has been consolidated.

- **Direct access to the driver's compartment**

To make life easier for the operator who is continually getting in and out of the cab MANITOU has designed a truck that can be accessed from either side with no step to climb.

The extremely compact MSI is available in the standard version that has an overall height of 2.10 m to the top of the cab or in the Buggie version just 1.99 m high.



- **Exceptionally flexible in use**

The design with large front wheels combined with hydrostatic transmission gives the MSI appreciably greater flexibility when driving on unfinished ground. The low pressure pneumatic tyres absorb the jolts that occur when driving over kerbs, pot-holes etc. and give good road-holding when driving on slippery ground.







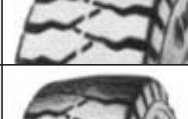







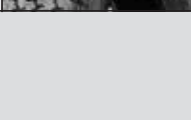


The MSI is also extremely stable when laden/unladen and has a very short turning radius achieved by its new steering axle with integral steering cylinder.

- **Robust components**

The MANITOU manufactured solid bloc chassis and the components on the MSI are well engineered and treated against corrosion for an exceptionally long life.

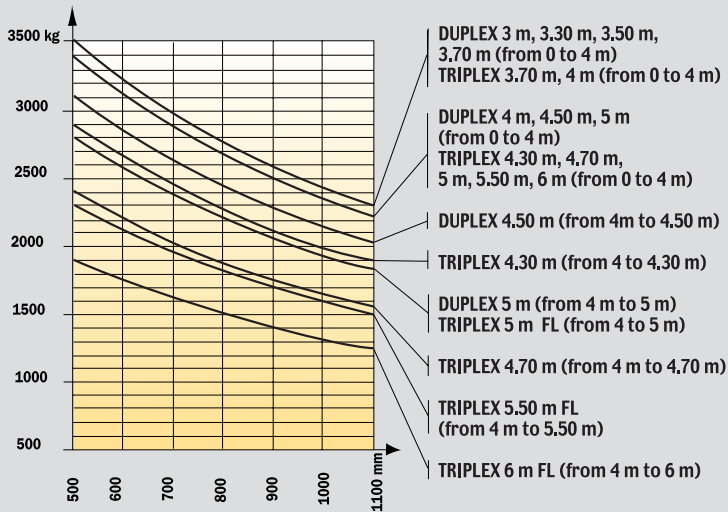
Tyres MSI 20 D - 25 D - 30 D - 35 T

	Versions		Casing	Tyre width (mm)	Overall machine width (mm)	
Standard fitting	Industrial	Front	275/70 R22.5 RHS GOOD YEAR	277	1323	
		Rear	7.00 x 12 14 PR IC 40 CONTINENTAL	192	1294	
Optional fitting	Industrial	Front	285/70 R19.5 XZY 140/137L MICHELIN (A)	276	1412	
	Wide industrial	Front	275/70 R22.5 RHS GOOD YEAR	277	1523	
	All-purpose or Industrial	Rear	27 - 10 - 12 12PR IC 12 CONTINENTAL *	252	1390	
	Industrial	Rear	700 R12 136 A5 XZM MICHELIN	191	1293	
	Flexible solid tyre	Front	8.25 - 20 - CSE SC 10 CONTINENTAL	253	1309	
		Rear	7.00 - 12 CSE SC 10 CONTINENTAL	207	1309	
	All-purpose (except 3.5 T)	Front	10.5 R20 14 PR MPT 80 134 G CONTINENTAL	266	1322	
		Front	12. 0 x 18 12PR T 86 DUNLOP	309	1419	
	Wide all-purpose	Front	10.5 R 20 14PR MPT 80 134 G CONTINENTAL	266	1522	
		Front	15.5/55 R 18 SP PG 7 14 PR DUNLOP	374	1540	
	Extra wide all-purpose	Front	15.5/55 R 18 SP PG 7 14 PR DUNLOP (A)	374	1650	
	Field (2 T/2.5 T only)	Front	275/80 R20 XM 27 MICHELIN	280	1336	
	Field (only on 2 T)	Rear	195 R 14 C SPLT 3 106/104 N DUNLOP	198	1290	

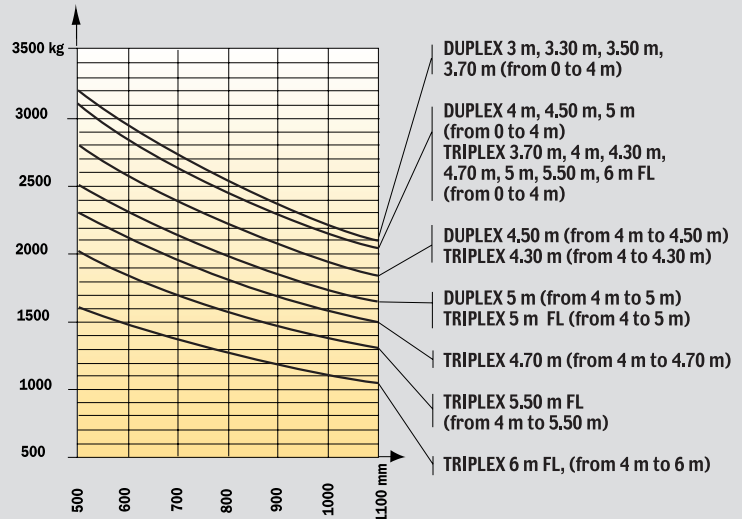
(A) Optional snow chains * With front width higher than 1500 mm

MSI 35 T load charts (Diesel only)

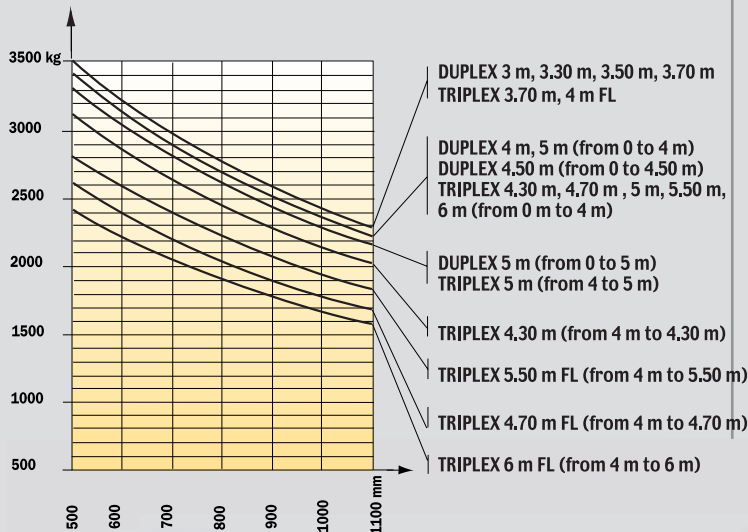
• MSI width with tyres 1320 mm (without TDL)



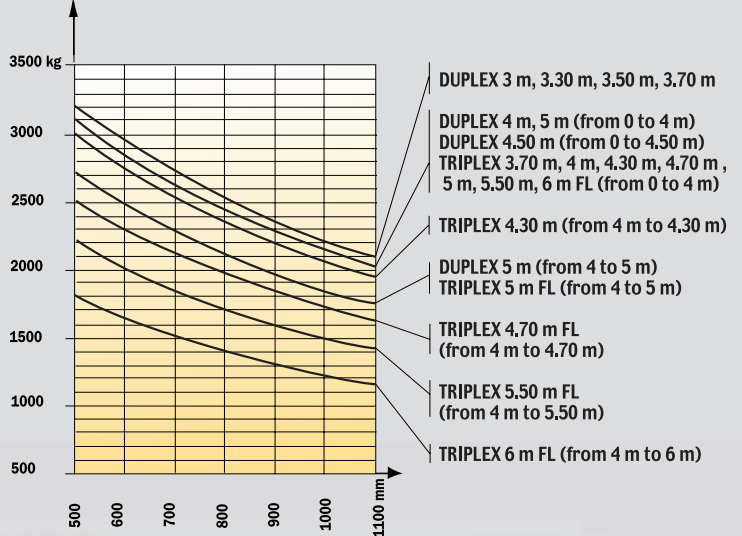
• MSI width with tyres 1320 mm (with TDL)



• MSI width with tyres 1500 mm (without TDL)



• MSI width with tyres 1500 mm (with TDL)



• Ergonomically designed spacious driver's compartment

The MSI's suspended driver's compartment insulates the driver from vibrations. In the optional enclosed cab version, the adjustable steering column, the fabric-covered seat suspended on hydraulic shock-absorbers and ventilated heating all add to comfort.



A single lever close to the seat brings together the operations to lift, lower and tilt the mast (10°/12°). The MSI has an **automatic system to accelerate lifting the mast** which is independent of travel mode.



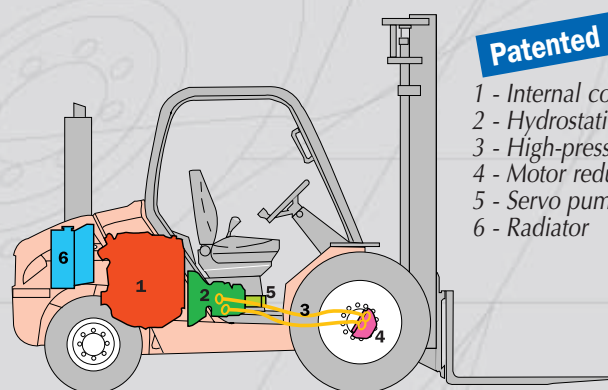
• Precise handling with hydrostatic transmission

Hydrostatic transmission offers **smooth and efficient handling accurately** and in complete safety.

Dynamic double braking system:

- braking by deceleration of the hydrostatic transmission
- dynamic braking with oil bath multidisc brakes

When parking, the braking is carried out partly by the negative brake (automatic when the engine stops).



Patented design

- 1 - Internal combustion engine
- 2 - Hydrostatic pump
- 3 - High-pressure hoses
- 4 - Motor reduction gear
- 5 - Servo pump
- 6 - Radiator



• Easy maintenance

The MSI gives exceptionally easy access to the engine components simplifying maintenance operations. An electro-hydraulic power unit **effortlessly tilts the cab forward**.

You can choose from the MSI 20, 25, 30, 35

MANITOU offers models in a diesel version: MSI 20 D, MSI 25 D, MSI 30 D, MSI 35 T, or in a gas version: MSI 20 G, MSI 25 G, MSI 30 G to suit your kind of business.

These models are also offered in a Buggy version (1.99 m overall height).



MSI 30 D
with fork locator.

In industry the MSI-G is the answer to handling in a closed environment (mushroom houses, greenhouses etc.). In logistics, the MSI-G Buggy is an effective handling tool for loading or unloading lorries.



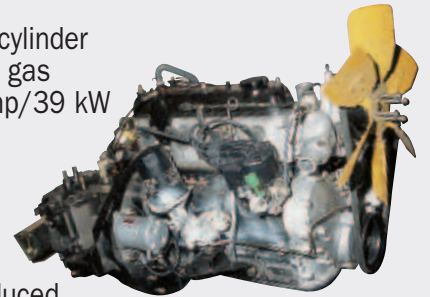
MSI 30 G with fixed reservoir
(standard version with gas bottle).



MSI 20 D Buggy
with re-handling bucket.

MSI - G:

(2 to 3 tonnes) the 4-cylinder TOYOTA 4Y single fuel gas engine, develops 53 hp/39 kW at a nominal engine speed of 2200 rpm. This reliable and powerful engine is distinguished by not emitting soot, and reduced fuel consumption.



MSI - D:

The 3-cylinder 903-27 Perkins engine (MSI 2 to 3 tonnes), develops 52 hp/38.5 kW at a nominal engine speed of 2100 rpm. The 4-cylinder 903-27 T Perkins engine (MSI 3.5 tonnes), develops 63 hp/47 kW at a nominal engine speed of 2100 rpm.

These engines are a combination of advanced technology and long experience. These reliable and robust engines are designed to operate cleanly, in compliance with anti-pollution regulations.



MSI 30 D
cab with 4-fork arrangement.



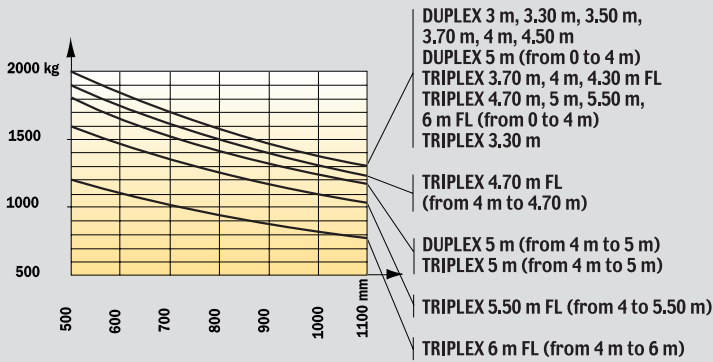
MSI 30 D
cab with rotating grab with reels.

MSI 20 - 25 - 30 load charts Diesel and Gas

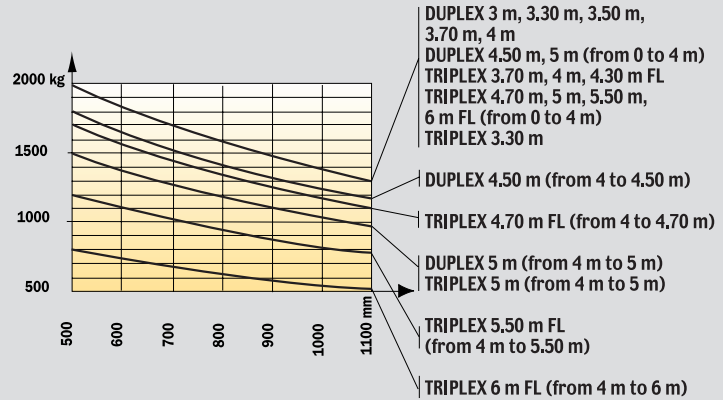
• MSI width with tyres 1500 mm (without TDL)

• MSI width with tyres 1500 mm (with TDL)

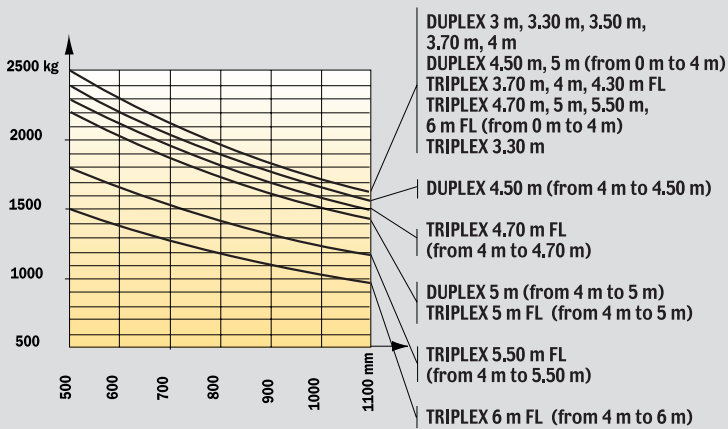
MSI 20 D/G



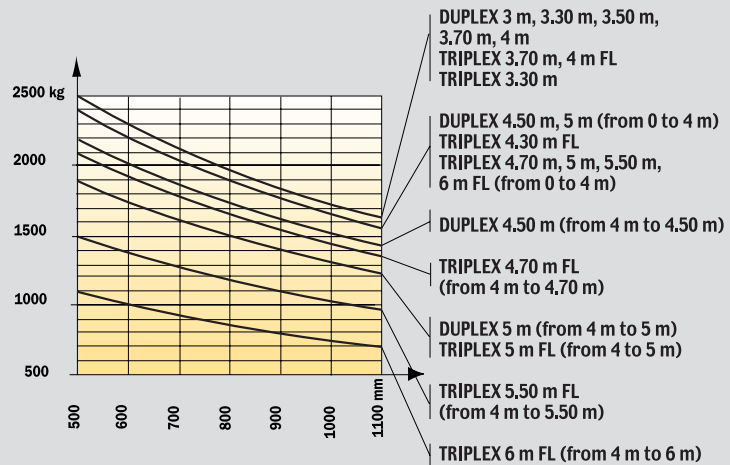
MSI 20 D/G



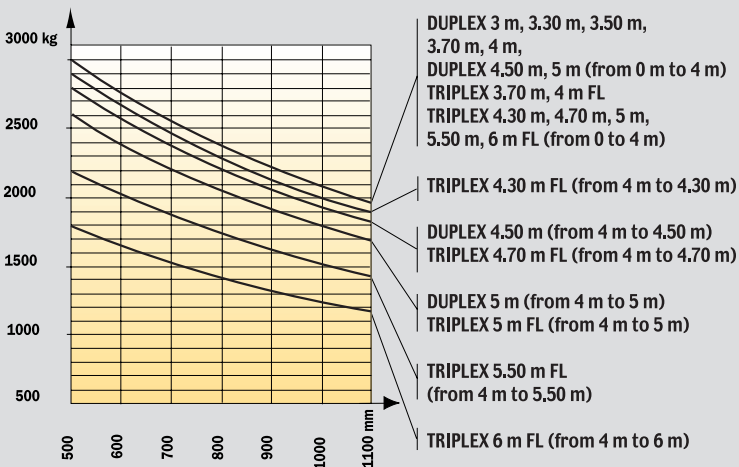
MSI 25 D/G



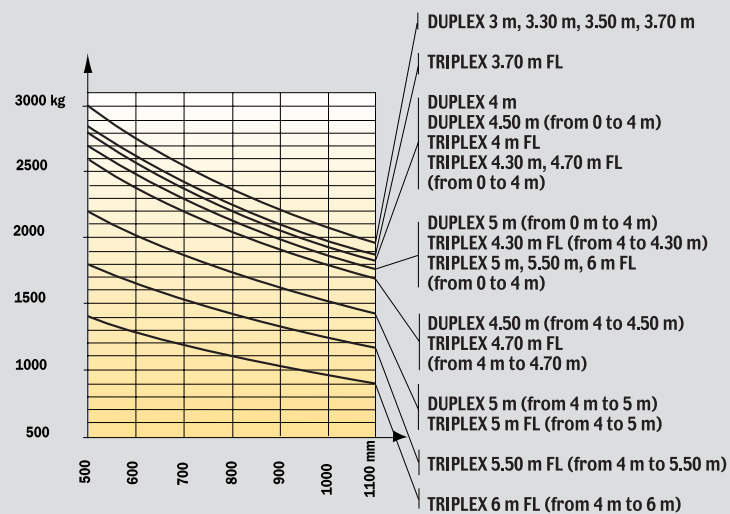
MSI 25 D/G



MSI 30 D/G



MSI 30 D/G

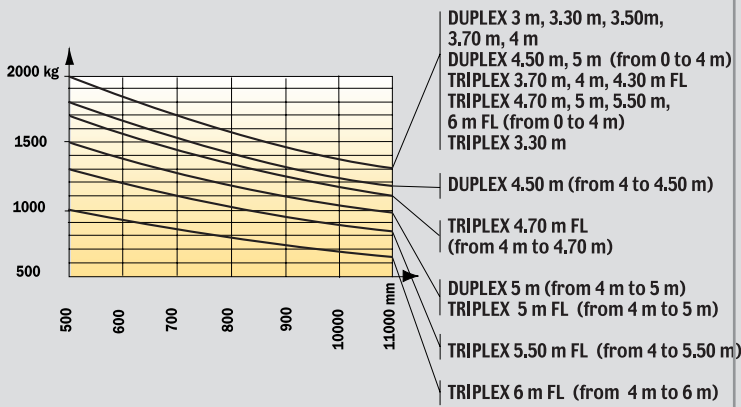


MSI 20 - 25 - 30 load charts Diesel and Gas

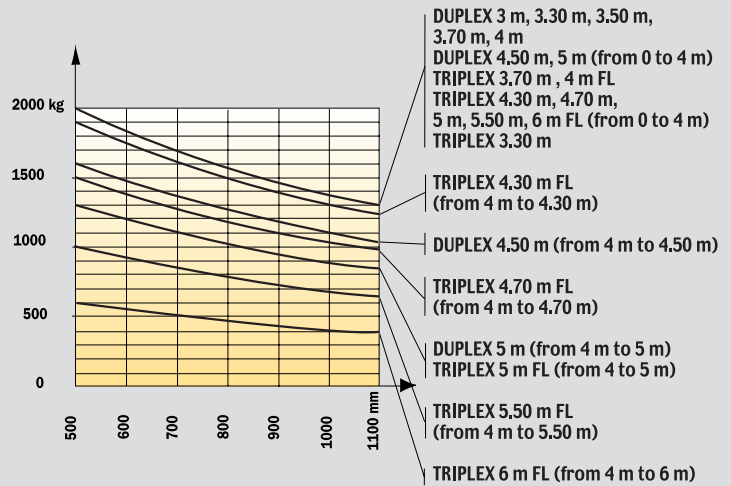
• MSI width with tyres 1320 mm (with TDL)

• MSI width with tyres 1320 mm (without TDL)

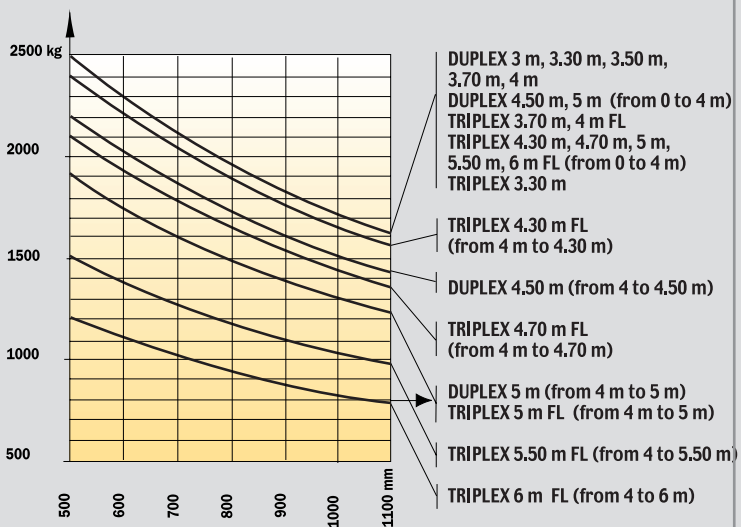
MSI 20 D/G



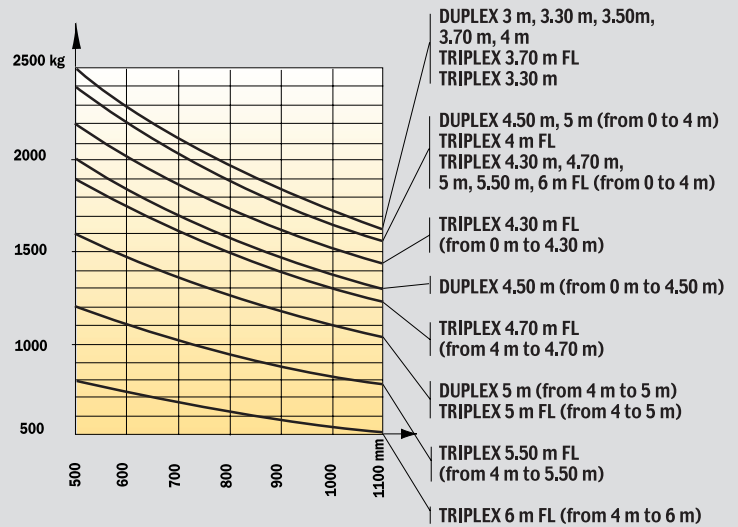
MSI 20 D/G



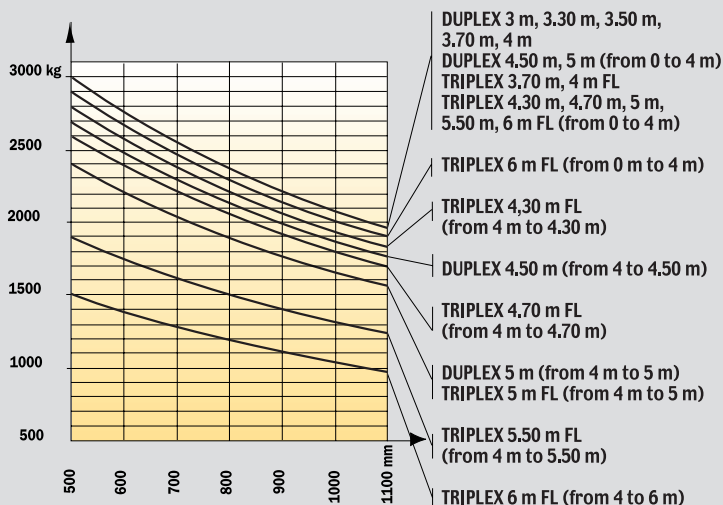
MSI 25 D/G



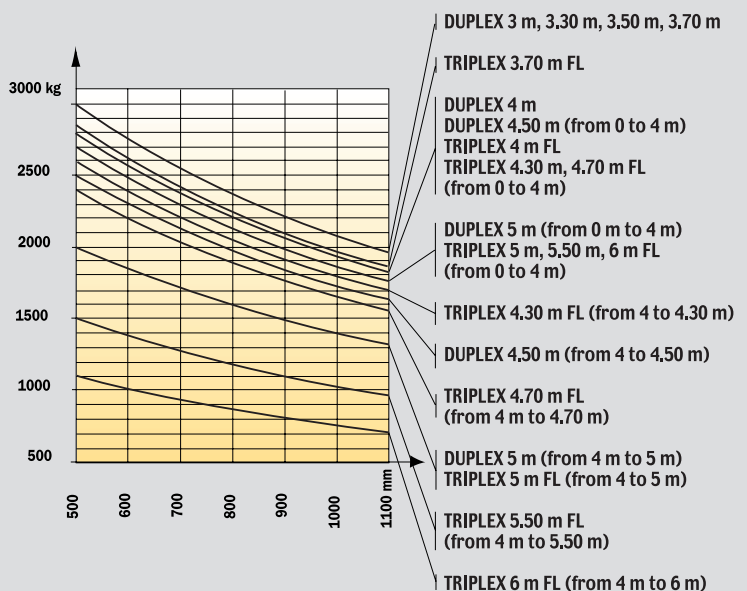
MSI 25 D/G



MSI 30 D/G



MSI 30 D/G



models

• The tilting carriage: perfect versatility

The tilting carriage is an option that can be adapted for MSI trucks from 2 to 3.5 tonnes fitted with Duplex masts with All-round Vision (DVT). Adaptation for the T.I. carriage is carried out in the MANITOU factory.



Option

The advantages of the T.I.

- Quick change for attachments.
- Increased performance using the forward tilt.
- A tilt angle of 66° enables a re-handling bucket to be used.
- Makes possible the use of a wide range of MANITOU attachments.
- Hydraulic locking in option.



Adapting to fit the T.I. carriage changes the truck's load chart- Please consult us.

The Sideshift carriage

The sideshift carriage (T.I.D.L.) can be adapted for MSI trucks from 2 to 3 tonnes fitted with DVT masts.

The T.I.D.L. brings together the Tilting carriage (T.I.) and the Sideshift carriage (T.D.L.) operations.

Adaptation for the T.I.D.L is carried out in the MANITOU factory.

A NEW IDEA FROM
MANITOU



Option



The advantages of the T.I.D.L.

- Precise loading of pallets up to 100 mm movement on each side.
- Integral permanent sideways movement without loss of extra capacity*.
- Fast changing of attachments.
- Hydraulic locking in option.

* The same load chart as a truck fitted with T.I. depending on the model.



Hydraulic locking.



Manitou have the answer to your handling problems increasing versatility and your MSI's speed of operation.

MSI 20 - 25 - 30 - 35 masts

	MASTED MODEL	TYPE OF TRUCK	TOTAL LIFT	OVERALL MAST FOLDED	FREE LIFTING	OVERALL MAST IN USE	HEIGHT AT MAXIMUM CAPACITY	CAPACITY AT MAXIMUM HEIGHT		TILT OF THE MAST
			(mm)	(mm)	(mm)	(mm)	(mm)	(kg)		Front/Rear
ALL-ROUND VISION DUPLEX	3.00 m	MSI 20-25	3030	2150	130	3831	3000	Without TDL	2000 - 2500	10°/12°
		MSI 30-35	3035		135	3893		With TDL	2000 - 2500	
	3.30 m	MSI 20-25	3330	2300	130	4131	3300	2000 - 2500	2000 - 2500	10°/12°
		MSI 30-35	3335		135	4193		3000 - 3500	3000 - 3200	
	3.50 m	MSI 20-25	3530	2400	130	4331	3500	2000 - 2500	2000 - 2500	10°/12°
		MSI 30-35	3535		135	4393		3000 - 3500	3000 - 3200	
	3.70 m	MSI 20-25	3730	2560	130	4531	3700	2000 - 2500	2000 - 2500	10°/12°
		MSI 30-35	3735		135	4593		3000 - 3500	3000 - 3200	
4.00 m	MSI 20-25	4030	2750	130	4831	4000	2000 - 2500	2000 - 2500	10°/12°	
	MSI 30-35	4035		135	4893		4000 - 3700	3000 - 3400		2800 - 3100
4.50 m	MSI 20-25	4530	3000	130	5331	4000	1800 - 2200	1600 - 2200	10°/12°	
	MSI 30-35	4535		135	5393		4000 - 3700	2700 - 3100		2500 - 3100
5.00 m	MSI 20-25	5030	3250	130	5831	4000	1500 - 1900	1300 - 1600	6°/6°	
	MSI 30-35	5035		135	5893		4000 - 3700	2400 - 2800		2000 - 2700
FREE LIFTING DUPLEX	3.00 m	MSI 20-25	3040	2150	1393	3797	3000	2000 - 2500	2000 - 2500	10°/12°
		MSI 30-35	3045		1396	3799		3005	3000 - 3500	
	3.30 m	MSI 20-25	3340	2300	1543	4097	3300	2000 - 2500	2000 - 2500	10°/12°
		MSI 30-35	3345		1546	4099		3300	3000 - 3500	
	3.50 m	MSI 20-25	3540	2400	1643	4297	3500	2000 - 2500	2000 - 2500	10°/12°
MSI 30-35		3545	1646		4299	3500		3000 - 3500	3000 - 3200	
3.70 m	MSI 20-25	3740	2560	1803	4497	3700	2000 - 2500	2000 - 2500	10°/12°	
	MSI 30-35	3745		1806	4499		3700	3000 - 3500		3000 - 3200
4.00 m	MSI 20-25	4040	2750	1993	4797	4000	2000 - 2500	2000 - 2500	10°/12°	
	MSI 30-35	4045		1996	4799		4000 - 3700	3000 - 3400		2800 - 3100
ALL-ROUND VISION TRIPLEX	3.30 m	MSI 20-25	3340	1840	-	4070	3300	2000 - 2500	2000-2500	10°/12
FREE LIFTING TRIPLEX	3.70 m	MSI 20-25	3740	1950	1221	4469	3700	2000 - 2500	2000 - 2500	10°/12°
		MSI 30-35	3745	2050	1297	4500		3700	3000 - 3500	
	4.00 m	MSI 20-25	4040	2050	1321	4769	4000	2000 - 2500	2000 - 2400	10°/12°
		MSI 30-35	4045	2150	1397	4800		4005	3000 - 3500	
	4.30 m	MSI 20-25	4340	2150	1421	5069	4300 - 4000	2000 - 2400	1900 - 2200	10°/12°
		MSI 30-35	4345	2300	1547	5100		4000	2800 - 2900	
	4.70 m	MSI 20-25	4740	2300	1571	5469	4000	1700 - 2100	1500 - 1900	10°/12°
MSI 30-35		4745	2400	1647	5500	4000		2600 - 2400	2400 - 2300	
5.00 m	MSI 20-25	5040	2400	1671	5769	4040	1500 - 1900	1300 - 1600	6°/6°	
	MSI 30-35	5045	2560	1807	5800		4000	2400 - 2800		2000 - 2500
5.50 m	MSI 20-25	5540	2560	1831	6269	4000	1300 - 1500	1000 - 1200	6°/6°	
	MSI 30-35	5545	2750	1997	6300		4000	1900 - 2300		1500 - 1200
6.00 m	MSI 20-25	6040	2750	2021	6769	4000	1000 - 1200	600 - 800	6°/6°	
	MSI 30-35	6045	3000	2247	6800		4000	1500 - 1900		1100 - 1600

MSI 20 - 25 - 30 - 35 T



Lifting capacity

At 500 mm from the fork heels

MSI 20	2000 kg
MSI 25	2500 kg
MSI 30	3000 kg
MSI 35 T	3500 kg



Lifting height as standard3.30 m



Tyres

Front275/70 R 22.5
Rear7.00 x 12



Forks (mm)

Length1100
Width x thickness125 x 45
Maximum distance to the outside of forks1260



Hydraulic brakes by pressure loss



Perkins diesel engine

MSI 20 D/25 D/30 DType: 903.27
MSI 35 TType: 903.27 T
Capacity3 cylinders 2700 cm³
Power (ISO TR 14396):
MSI 20/25/3052 HP/38.5 kw
MSI 35 T63 HP/47 kw
Maximum torque242 Nm at 1400 r.p.m.
Direct injection
Water cooled

Toyota LPG engine

MSI 20 G/25 G/30 GType: 4 Y
Capacity4 cylinders 2237 cm³
Power (ISO TR 14396)53 HP/39 kw
Maximum torque162 Nm at 1800 r.p.m.
Water cooled



REXROTH hydrostatic transmission

Drive wheels2
Reversing shiftelectro-hydraulic
Forward/reverse gears1/1
Maximum travelling speed19 km/h



Hydraulic

Steering pump125 bar/73 l/mn



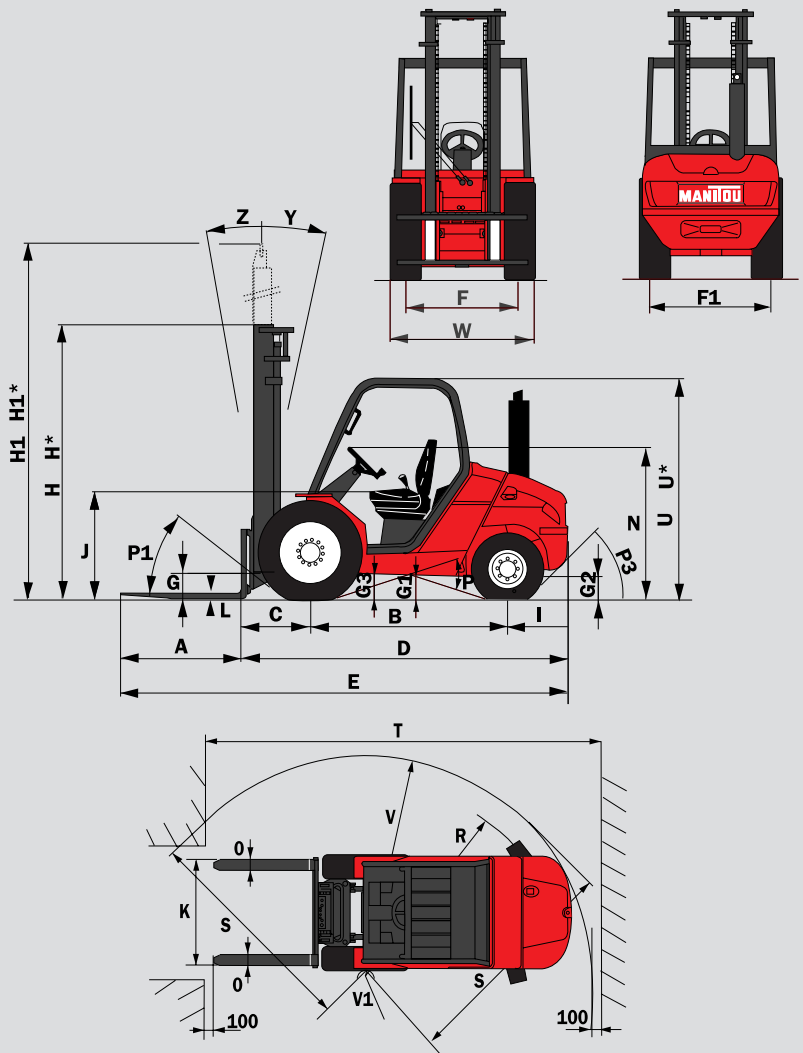
Reservoirs

Cooling system9 l.
Engine oil6.2 l.
Hydrostatic transmission circuit95 l.
Fuel73.5 l.



Unladen weight (with forks)

MSI 20 D/G3830/3470 kg
MSI 25 D/G4135/4045 kg
MSI 30 D/G4515/4425 kg
MSI 35 T4980 kg
Overall width1.32 m
Overall height2.30 m
Ground clearance215 mm



	MSI 20 +BUGGIE	MSI 25 +BUGGIE	MSI 30	MSI 35
A	1100	1100	1100	1100
B	1800	1800	1800	1800
C	625	625	630	630
D	2945	2945	2980	3030
E	4045	4045	4080	4130
F	1046	1046	1046	1046
F1	1102	1102	1102	1102
G	275	275	275	275
G*	245	245	245	245
G1	260	260	260	260
G1*	260	260	260	260
G2	215	215	215	215
G2*	230	230	230	230
G3	270	270	270	270
H	2305	2305	2305	2305
H*	1955	1955	2055	2055
H1	4140	4140	4205	4195
H1*	4470	4470	4500	4500
I	520	520	550	600
J	1025	1025	1025	1025
K	1260	1260	1260	1260
L	40	40	45	45
N	1450	1450	1450	1450
O	100	100	100	125
P1	49.5°	49.5°	49.5°	49.5°
P2	40.5°	40.5°	40.5°	40.5°
P3	44	44	44	40°
R	2300	2300	2300	2330
S	2490	2490	2525	2590
T	4485	4485	4525	4595
U	2105	2105	2105	2105
U*	1990	1990	1990	1990
V	2560	2560	2595	2665
V1	100	100	100	100
W	1323	1323	1323	1323
Y	12°	12°	12°	12°
Z	10°	10°	10°	10°

Standard

- Tilting driver's cab with front windscreen and rear window
- Seat-belt
- Hourmeter
- Front and rear windscreen-wiper
- Cab lifted electro-hydraulically
- Hydraulic differential with electro-hydraulic control
- Lockable parking brake switch
- Reversing shift on steering column
- ...

Options

- Road lights including indicators
- Stop lights
- Working lights
- Reversing lights
- Interior rear-view mirror
- Rotating beacon
- Screen guard
- Enclosed cab with heating
- Audible reverse alarm
- Various attachments such as buckets, TDL, TI, TIDL, grabs etc...

H - H1 - R = Standard
H* (Triplex 3.70 m) - H1* = Option

U* = MSI 20/25 BUGGIE
G* - G1* - G2* = Under load



This publication in no way constitutes an offer and the company reserve the right to alter specification without prior notice. The MANITOU models presented in this brochure can be supplied complete with optional equipment attachments.



MANITOU B.F. S.A.

B.P 249 - 44158 ANCENIS CEDEX - FRANCE
TEL.: 33 (0) 2 40 09 10 11
EXPORT DEPARTMENT FAX: 33 2 40 09 10 97
www.manitou.com