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## Midi-excavator



**YANMAR**

**B7Σ**

Operating weight : 8030 kg

Arm digging force : 3925 kgf

Bucket digging force : 5590 kgf

**B7Σ, high p e**  
**in narro w**



**Midi-excavator**



*performance*  
*in narrow areas*



# Σ Boom

The new B7, with a three-piece Σ boom, offers the ultimate solution that excavators whether conventional, Zero-Tail-Swing (ViO) or ultra-swing can provide.

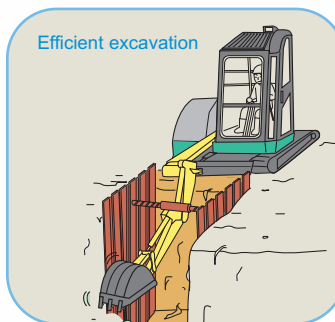
## B7Σ, unique tri ip

## Σ boom

### Advantages of the Σ boom

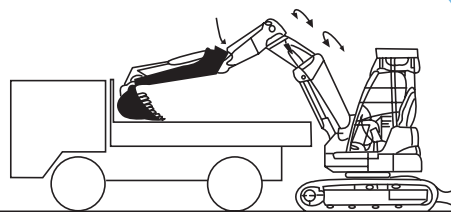
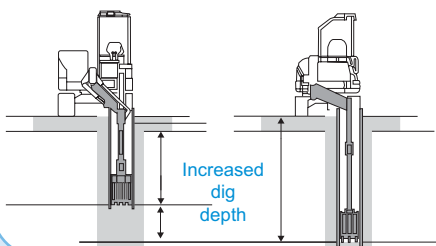
- When working at boom offset in narrow trenches, the second part of the boom does not strike the left-hand shoring plate, as tends to occur with traditional "ultra-swing" excavators, so providing :
  - increased digging depth ;
  - reduced layering at the bottom of the trench.
- Efficient excavation, even below the dividers between the shoring plates of a trench.
- Increased productivity when loading lorries : the bucket can reach the back of the dump vessel, so optimising the filling process and reducing lorry rotation.
- Efficient when working at height (demolition).

Efficient excavation



Traditional "ultra-swing" excavator

B7Σ



Increased productivity when loading lorries

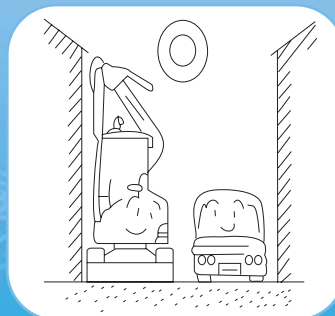
### Reliability and robustness

- Boom made of lightweight high tensile steel with high elastic resistance (1.5 times stronger than traditional steel) : the reduced dead weight makes the machine more stable and increases the lifting capacity.
- A well-protected arm cylinder on the top of the boom ; it does not protrude as it does on traditional ultra-swing excavators.



### Ultra-short swing radius

- Complete rotation (upper frame and equipment) within the crawler width.
- Perfectly suited to excavating in urban environments : pipe-laying, road works, etc...



Midi-excavator



YANMAR

triple-articulated  
boom

## Comfort and safety

### Ergonomic pilot system

- Spacious, both in width and in depth.
- Comfortable, multi-adjustable seat : sliding seat, reclining backrest and weight.
- Large surface with windows for superb all-round visibility.
- Windscreen in 2 parts, stored overhead.



### Maximum operator safety

- Cabin fully compliant with the strictest safety norms : ROPS (Roll Over Protective Structure), FOPS 1 (Falling Object Protective Structure), TOPS (Tip-Over Protective Structure).
- Modern, user-friendly instrument panel, giving instant warning to the operator of any anomalies that may occur.
- Electrical control of engine speed (min. or max.) : time saving and less fuel consumption.
- No need for delicate electronic sensors : the equipment is so designed and positioned that the bucket is naturally prevented from striking the cabin.



# Triple-articulated boom

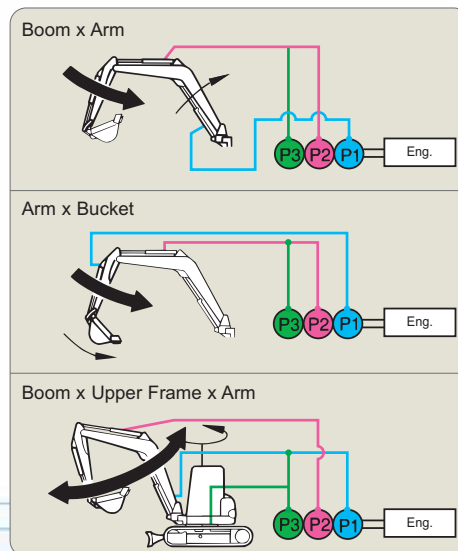


## High performance

### “VIPPS®” hydraulic circuit (ViO Progressive 3 Pumps System)



- Hydraulic circuit fitted with a variable-flow dual piston pump, a gear pump and a multiple-combination directional control valve :
  - increased working speed due to the cumulative pump capacities ;
  - smooth, simultaneous operation of all functions, even when travelling.



## Reliability and acc

### A new-generation Yanmar “TNV” (Totally New Value) engine

- Improvement and modernisation of TNE series, which is already well-known for its “clean and quiet” profile :
  - reduced emissions for an even cleaner engine ;
  - noise reduction for an even quieter engine ;
  - improved starting (warms up faster).
- The new TNV series exceeds the most stringent emissions standards.





## Exceptional stability

- The VICTAS® system (patented by Yanmar) consists in increasing the bearing surface by increasing the track path and using asymmetric crawlers :
  - increased lateral stability ;
  - increased lifting capacity ;
  - reduced ground damage ;
  - reduced track wear ;
  - quiet, vibration-free movement.



## Environmentally friendly

- Combination of a high-performance Yanmar engine and the VIPPS® hydraulic system :
  - less noise ;
  - reduced fuel consumption ;
  - less exhaust fumes.
- Exhaust gas vented vertically.



4560

3150

159

Auxiliary circuit (PTO)  
as standard



4650  
4800

2800  
2400

# accessibility

## Easy access to maintenance points

- Large rear bonnet allowing access to all engine components and hydraulic pumps.
- Daily check points gathered under the front bonnet :
  - hydraulic oil level ;
  - top up for oil, water and diesel ;
  - control of battery ;
  - inspection of fan belt and hydraulic filters.





# TECHNICAL SPECI

## Engine

Yanmar Diesel 4 cylinders ..... 4TNV98-XBV  
 Rated Output (DIN 6270B) ..... 43.4 kw/58.2 HP/2000 rpm  
 Displacement ..... 3318 cm<sup>3</sup>  
 Max. torque ..... 251 N.m./1200 rpm

## Hydraulic circuit

System capacity ..... 100 l  
 Max. pressure ..... 245 bar  
 Variable flow dual piston pump ..... 2 x 74 l/mn  
 1 gear pump ..... 1 x 60.4 l/mn

## Performances

Travelling speed\* ..... 2.7/4.7 - 2.5/4.5 km/h  
 Swing speed ..... 10 rpm  
 Digging force (arm/bucket) ..... 3925/5590 kgf  
 Ground pressure\* ..... 0.356/0.360 kg/cm<sup>2</sup>  
 Gradeability ..... 30°  
 Shoe width ..... 450 mm  
 Ground clearance ..... 380 mm  
 Blade (width x height) ..... 2260 x 450 mm

\* rubber/steel crawlers



## Miscellaneous

Fuel tank ..... 100 l  
 Cooling system ..... 8.7 l  
 Transport dimensions (L x w x h) ..... 5795 x 2270 x 2715 mm  
 Noise Level LwA (2000/14/EC & 2005/88/EC) ..... 98 dBA



## Optional equipment

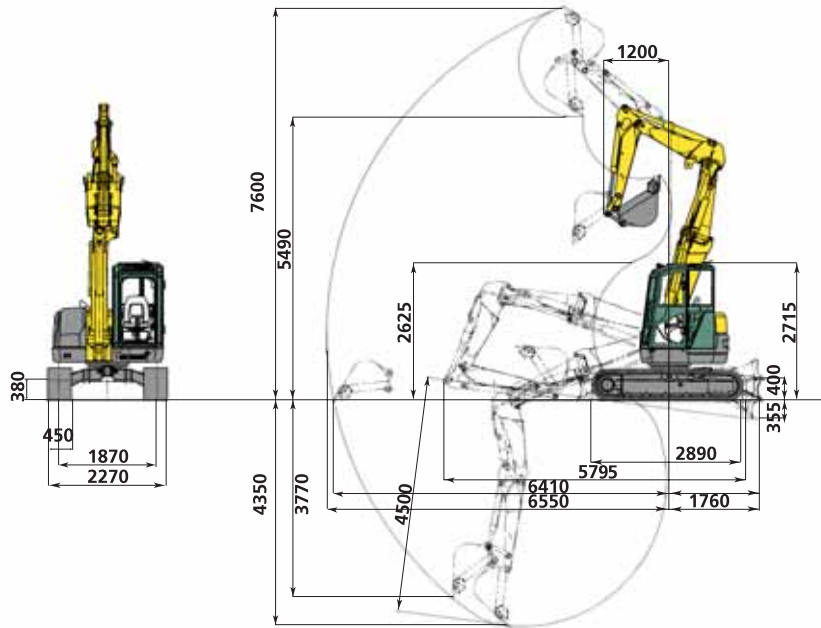
Special paint  
 Air conditioning  
 Anti-theft device  
 Beacon light, yellow  
 FOPS 2 protection bars on cab roof  
 4<sup>th</sup> hydraulic circuit  
 Safety device for loading

PTO	Theoretical data	
	Pressure	2000 rpm
	0 ~ 245 bar	134.4 ~ 92.5 l/mn
	0 ~ 245 bar	134.4 ~ 92.5 l/mn

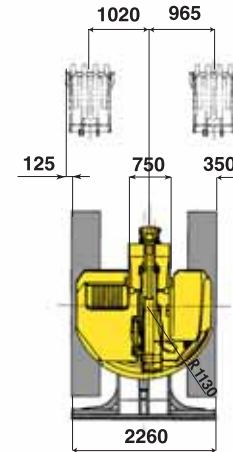
• The output reduces as the pressure increases.



# IFICATIONS



**Operating weight +-2% :**  
**8030 kg (rubber crawlers)**  
**8080 kg (steel crawlers)**



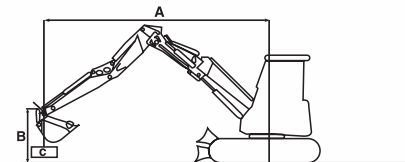
Subject to any technical modifications.  
 Dimensions given in mm with standard Yanmar bucket.

## Blade on ground

A	Maxi		5.0 m		3.5 m		2.5 m		
B									
5.0	1600	*1940	-	-	*2040	*2040	-	-	C
4.0	1210	*1900	-	-	*2170	*2170	-	-	
3.0	960	*1850	-	-	2070	*2440	-	-	
2.0	860	*1810	1010	*1970	1870	*2710	3280	*3970	
1.0	800	*1780	970	*2000	1680	*3010	2680	*3920	
0	820	*1770	-	-	1580	*2840	2700	*3750	
- 1.0	870	*1710	-	-	1530	*2640	2680	*3450	
- 2.0	1070	*1610	-	-	1550	*2190	*2650	*2650	

**Machine with cab,  
 rubber crawlers  
 and 195 kg bucket (750 mm).**

A : Overhang from rotational axis (m).  
 B : Height of hooking point (m).  
 C : Safe working load (kg).



## Blade above ground

A	Maxi		5.0 m		3.5 m		2.5 m		
B									
5.0	1600	1610	-	-	*2040	*2040	-	-	C
4.0	1190	1250	-	-	*2170	*2170	-	-	
3.0	960	1010	-	-	2060	2030	-	-	
2.0	830	870	1010	1050	1870	1960	3280	3300	
1.0	800	820	950	980	1680	1760	2680	2820	
0	820	850	-	-	1570	1650	2670	2820	
- 1.0	870	910	-	-	1510	1580	2660	2940	
- 2.0	1070	1100	-	-	1570	1580	*2650	*2650	

Tipping load,  
 rating over front

Tipping load,  
 rating over side 90°

The data contained in these tables represent the lifting capacity in accordance with ISO standard 10567.  
 They correspond to 75 % of the maximum static tipping load or 87 % of the hydraulic lifting power.  
 Data marked \* are the hydraulic limits of the lifting power.