

**BIGMAX**<sup>®</sup>  
BY DRIVE PRODUCTS



# BIGMAX Cranes

## Choosing your BigMax<sup>®</sup> Crane



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BIGMAX by Drive Products

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## WHICH BIGMAX<sup>®</sup> CRANE IS RIGHT FOR YOU?

BIGMAX<sup>®</sup> **mono-boom TC cranes** can be used for a wide range of applications such as material handling equipment, marine cranes, or on mechanics service bodies. TC cranes (short for telescopic compact cranes) can be mounted almost anywhere, including flat deck trucks, service bodies, van interiors, trailers, and boats.

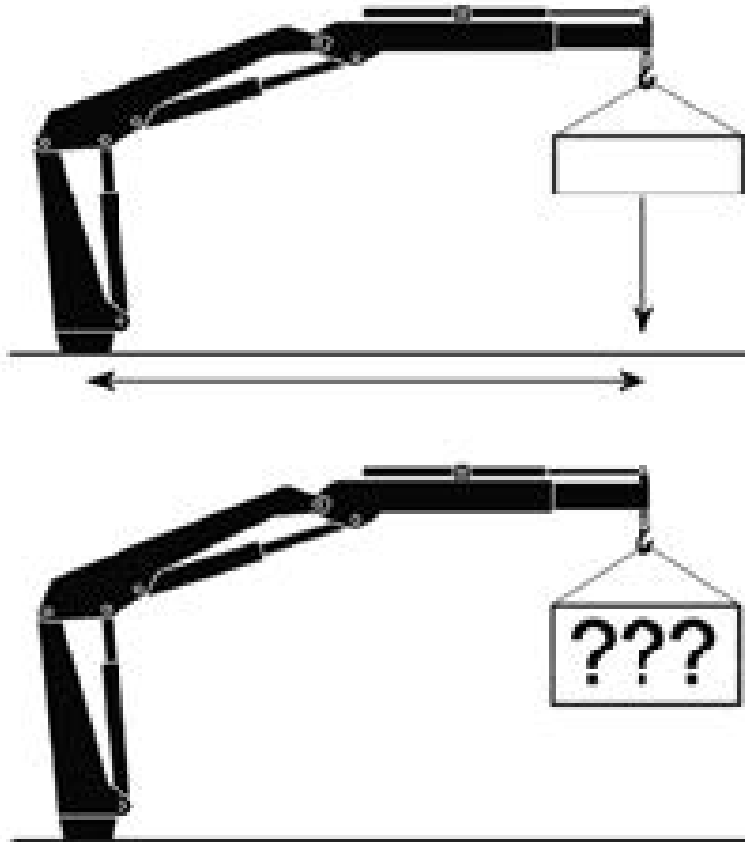
BIGMAX<sup>®</sup> **articulated cranes** include the ECO, TCA or TO/TCH cranes. The ECO crane has an extra boom for longer reach when lifting loads up and over a barrier (such as a fence or wall). SPS cranes are designed to move propane tanks. STS cranes similarly are designed as OTR tire service cranes. Both have special enclosed booms for durability in rugged off-road conditions



## WHAT IS THE RIGHT SIZE OF CRANE?

### Step 1: Determine Load and Reach

- All cranes are designed and manufactured to lift a specific weight over a specific distance. To narrow down the range of crane models that could work for you, consider the following:
- What is the weight of the heaviest object you need to lift?
- Over what distance? What is the maximum distance the crane will need to reach measuring from the center line of the base of the crane to the load



## WHAT IS THE RIGHT SIZE OF CRANE?

### Step 2: Determine the Lift Moment Rating you Require

- Each model of crane has a rating based on what is known as the "lift moment". The lift moment defines how much weight a certain crane can lift at a particular distance. To calculate the lift moment rating you need to, multiply the weight of the heaviest object you need to lift (the "load") by the distance at which the lifting will be done (the "reach").
- For example, if you need to lift a 2,000 lb box and set it down 10 feet from the center of the base of the crane, you will need a crane with a 20,000 ft/lbs lift moment rating.
- Or, in metric if you need to lift a box weighing 1.5 tonnes and set it down 2 meters from the base of the crane, you will need a crane with a 3.0 t/m rating

Model	Lift Moment	Reach Potential		
		Min. Reach	Max. Reach	Max. Lift
TC 100	6,710 Ft.Lbs.	1,890 lbs @ 3'7"	12'	505 lbs @ 12'
TC 130	8,800 Ft.Lbs.	2,585 lbs @ 3'7"	12'	693 lbs @ 12'
TC 160	10,250 Ft.Lbs.	2,895 lbs @ 3'7"	12'	705 lbs @ 12'
TC 200	14,430 Ft.Lbs.	3,505 lbs @ 4'1"	16'10"	639 lbs @ 16'10"
TC 260	4,103 Ft.Lbs.	4,103 lbs @ 4'2"	16'10"	902 lbs @ 16'10"
TC 300	19,850 Ft.Lbs.	4,521 lbs @ 4'4"	17'1"	1012 lbs @ 17'1"
TC 350	24,900 Ft.Lbs.	5,296 lbs @ 4'9"	23'	893 lbs @ 23'



## QUESTIONS ABOUT DETERMINING THE RIGHT CHASSIS AND MOUNTING LOCATION?

**Q: What model of truck chassis and body will be used?**

A: You must match the crane to the GVW (Gross Vehicle Weight) of your truck. Standard choices for the body are: mechanics service bodies with tool boxes, flat deck trucks for transport of material, or purpose built customs truck bodies.

**Q: What is the total payload that the chassis must carry?**

A: Payload equals GVW minus the curb weight of rigged truck with driver. The use of high tensile, lightweight steel in BIGMAX<sup>®</sup> cranes maximizes available payload.

**Q: Will it be a truck frame mounted crane or attached to the truck body?**

A: BIGMAX<sup>®</sup> cranes can be frame or body mounted. However, space must be allowed behind the cab of the truck for frame mounting.

**Q: Where should the crane be mounted on a flat deck to allow for easy operation?**

A: BIGMAX<sup>®</sup> cranes can be mounted anywhere on a flat deck truck with the control panel placed adjacently for easy operation form beside the vehicle. Wireless radio controls are another option to allow greater flexibility in where the operator is located.



## WHAT IS THE BEST POWER SOURCE?

There are two basic options for powering your crane, you can use a power take-off pump or a truck battery.

- **Hydraulic (PTO pump):** for longer duty cycle, more continuous use
- **Electric (12 or 24 volt battery):** for intermittent use (due to the limitations of battery and electrical systems).



## SELECTING THE RIGHT OUTRIGGERS FOR SAFETY AND EFFICIENCY?

A safe lift begins with choosing the right crane and outriggers for the job. The main function of outriggers, also known as 'stabilizers', is to keep a truck and crane unit stable while in work mode. This can generally be accomplished with a single set of outriggers. In some cases, adding a second set of outriggers can create a more stable platform for loading and unloading materials. This additional support minimizes shifting and leaning creating much less stress on the equipment and the crane operator.

Another important benefit of auxiliary outriggers is the reduced wear and tear on the crane rotation system due to limited side loading. Studies have pointed to the additional repair cost and loss of productivity resulting from operating cranes without adequate outriggers.



## WHAT OPTIONS DO YOU NEED?

**Q: Do you need a winch?**

A: Yes, if the crane is required for frequent vertical lifting or lowering, or if the job requires lifting long distances such as over the side of a bridge or down the hold of a ship.

**Q: Do you require manual or radio controls?**

A: Using radio controls, the operator has increased visibility and can operate the crane remotely.

**Q: Are power packs available?**

A: 12 or 24 volt DC power packs are available for BIGMAX<sup>®</sup> TC and ECO Series cranes. These power packs can be easily installed and are a good alternative when a PTO pump is not available.

**Q: What accessories are available?**

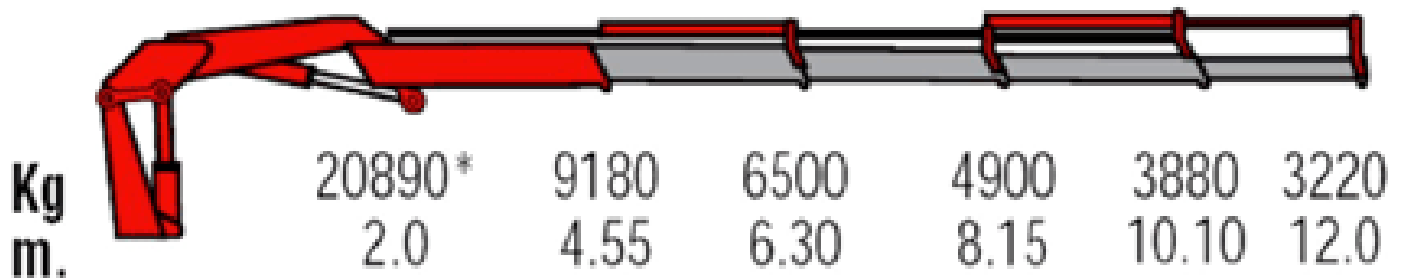
A: A variety of accessories are available to meet specific job requirements including rotators, grabs, and augers.





## READING A BASIC LOAD DIAGRAM

- This simple load diagram shows the lift capacity (kg) of the crane at various distance (m).
- Note how the lift capacity and distance are related; the capacity decreases as the distance increases.
- Adding certain accessories like grabs or winches may change the size of the crane you need.



## THE LOAD "CURVES"

- The curves trace upward from the horizontal position.
- These lines show how high and far the load may be lifted.
- This diagram is important to determine how the crane will perform above the horizontal position.

