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# PRODUCT RANGE

TRACTORS AND  
AIRCRAFT TYPES



**Kalmar Motor AB**  
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**KALMAR**  
MOTOR AB ●



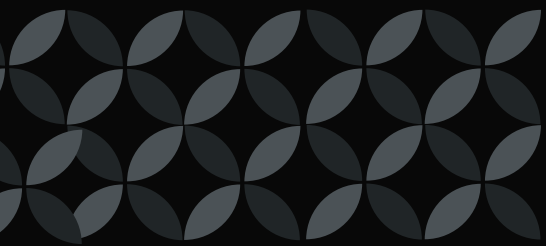


# BUILT ON EXPERIENCE

EQUIPMENT FOR MOVING  
AIRCRAFT ON GROUND

For more than 55 years, Kalmar Motor has been a driving force in developing innovative and efficient solutions for moving aircraft. As industry pioneers, we have introduced several features that are now standard in modern aircraft towing tractors.

Kalmar Motor is synonymous with towbarless tractors (TBL), and almost twenty years of manufacturing towbarless tractors with the new Li-ion battery technology.



COMBINING  
SIMPLICITY WITH  
CUTTING EDGE  
TECHNOLOGY

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# TBL50

AVAILABLE AS DIESEL, ELECTRIC, OR ELECTRIC WITH RANGE EXTENDER

The TBL50 is designed for pushback, intergate towing, and maintenance towing of regional aircraft, including ATR, CRJ, Dash 8, Embraer, and SAAB. It is also capable of handling B737 and A320 series aircraft\* (\*some limitations apply).

The force monitoring system (F.A.C.T.®) enables continuous and accurate measurement of tow, brake, and turning forces, as well as steering angle. This allows for safer and more precise towbarless handling of regional aircraft.

In line with all other Kalmar Motor TBL tractors, the TBL50 is designed to support efficient aircraft turnaround. It can dock with the aircraft while the boarding bridge is connected, and the operator cabin is engineered to provide outstanding comfort and all-round visibility.



## Dimensions and weight

Length (mm): Elec. 7,347 / Diesel 7,320  
Width (mm): Elec. 2,500 / Diesel 2440  
Height: 2,050-2,207 mm  
Ground clearance: 100 mm  
Wheelbase (mm): Elec. 3,178 / Diesel 3,174  
Turning circle radius: 10080 mm  
Dry weight: 6,000-8,240 kg

## Engine

Type: 4-Cyl  
Power output: 95 kW  
Fuel: Diesel  
Stage 5

## Transmission

Type: Torque converter  
Powershift transmission  
Speed: 4 forward and 3 reverse

## Electric version

400Vdc LFP batteries  
78 kWh  
Onboard charger  
Different charging options available  
Optional diesel Range Extender

## Front axle

Make/Model: Clark-Hurth  
Tyre: Pneumatic 265/70 R19.5

## Rear axle

Make/Model: Individually  
Suspended wheel hubs  
Tyre: Solid 18x9x12 1/8

## Brakes

Hydraulic operated 4 wheel brakes  
Front: Disc, wet multi layer  
Rear: Disc

## Performances

Lift capacity cradle: 12,000 kg  
Electric speed:  
Solo = 29 km/h / Push-back: 6-8 km/h  
Diesel speed:  
Solo = 30 km/h / Push-back: 6-8 km/h

## Recommended aircraft range

ATR 47/72  
Gulfstream  
Comac ARJ21-700  
Saab 340 / 2000  
Dash 8 100-Q400  
CRJ 200,700-1000  
ERJ135, 140, 145,  
170/195E1, 170/195E2  
Avro RJ70, RJ85, RJ100  
Airbus A220, A318, A319,  
A320, A321\*  
Boeing B737\*

\* Limitations apply

The aircraft range is not limited to the above. Please contact Kalmar Motor AB for further information, as some listed aircraft types may require additional approval.

Electric drive ●  
Diesel drive ●

# TBL100

DESIGNED FOR PUSHBACK OF AIRCRAFT FROM CRJ200 UP TO AND INCLUDING B757

The TBL100 is Kalmar Motor's original towbarless tractor, first produced in the 1980s. Its operational performance supports pushback of aircraft weighing up to 120 tonnes.

The TBL100 is fully electric and designed for simplicity in both operation and maintenance.

In line with all other Kalmar Motor TBL tractors, the TBL100 supports efficient aircraft turnaround and is capable of docking with the aircraft while the boarding bridge is connected.



## Dimensions and weight

Length: 6,700 mm  
Width: 2,480 mm  
Height: 1,890-2,065 mm  
Ground clearance: 144 mm  
Wheelbase: 2,915 mm  
Turning Circle Radius: 9,900 mm  
Dry Weight: 7,640 kg

## Engine

Type: Electrical, Kalmar Motor  
Voltage: 96 Vdc

## Transmission

Type: Powershift transmission  
Speed: 3 forward and reverse

## Electric version

Lead battery 720 Ah  
Lithium batteries 61 - 100 kWh

## Front axle

Make/Model: Clark-Hurth  
Tyre: Pneumatic 315/70 Rx15

## Rear axle

Make/Model: Individually  
Suspended wheel hubs  
Tyre: Solid 18x9x12 1/8

## Brakes

Hydraulic operated 4 wheel brakes  
Front: Disc, wet multi layer  
Rear: Disc

## Performances

Lift Capacity Cradle: 16,000 kg  
Speed:  
Solo = 21 km/h / Push-back: 6-8 km/h

## Recommended aircraft range

CRJ 200, 700,  
900, 1000

Embraer ERJ170/195,  
ERJ170/175 /190/195E2

Airbus A220, A318, A319,  
A320, A321, A310, A300

Boeing B737, B757

The aircraft range is not limited to the above. Please contact Kalmar Motor AB for further information, as some listed aircraft types may require additional approval.

Electric drive ●

# TBL180

AVAILABLE AS DIESEL, ELECTRIC, ELECTRIC WITH RANGE EXTENDER

The TBL180 is designed for pushback, intergate towing, and maintenance towing of aircraft ranging from Fokker 70, A319, and MD80 up to B767 and A300.

The TBL180 is one of our most popular tractors, combining high performance with low maintenance costs and straightforward, conventional technology.

In line with all other Kalmar Motor TBL tractors, the TBL180 supports efficient aircraft turnaround. It is capable of docking with the aircraft while the boarding bridge is connected, and features an operator cabin designed to provide excellent comfort and all-around visibility.



## Dimensions and weight

Length: 7,780 mm  
Width: 3,060 mm  
Height: 2,050-2,238 mm  
Ground clearance: 130 mm  
Wheelbase: 3,290 mm  
Turning circle radius: 10,390 mm  
Dry weight (kg): Elec. 9700 / Diesel 8250  
*(depending on configuration and customer options)*

## Engine

Type: 4-Cyl  
Power output: 95 kW  
Fuel: Diesel  
Stage 5

## Transmission

Type: Torque converter  
Powershift transmission  
Speed: 4 forward and 3 reverse

## Electric version

400Vdc LFP batteries  
52 - 104 kWh  
Onboard charger  
Different charging options available  
Optional diesel Range Extender

## Front axle

Make/Model: Clark-Hurth  
Tyre: pneumatic 315/70 Rx15

## Rear axle

Make/Model: Individually  
Suspended wheel hubs  
Tyre: Pneumatic 315 / 70 Rx15

## Brakes

Hydraulic operated 4 wheel brakes  
Front: Disc, wet multi layer  
Rear: Disc, wet multi layer

## Performances

Cradle lifting capacity: 23,000 kg  
Electric speed:  
Solo = 28 km/h / Push-back: 6-8 km/h  
Diesel speed:  
Solo = 30 km/h / Push-back: 6-8 km/h

## Recommended aircraft range

Fokker 70/100  
DC-9, MD-80, MD-90

Embraer  
ERJ170/175/190/195,  
ERJ170/195 E2

Airbus A220, A300,  
A310, A318-321

Boeing B717, B737,  
B757, B767

*The aircraft range is not limited to the above. Please contact Kalmar Motor AB for further information, as some listed aircraft types may require additional approval.*

Electric drive ●  
Diesel drive ●

# TBL190

AVAILABLE AS DIESEL, ELECTRIC, ELECTRIC WITH RANGE EXTENDER

The TBL190 is a powerful and versatile tractor designed for pushback operations of aircraft with a takeoff weight above 350 tonnes, as well as higher-speed intergate and maintenance towing.

The TBL190 offers one of the widest aircraft ranges in its class—from the Embraer E170 to the Airbus A340-600—providing a highly flexible solution for modern airport operations.

In line with all other Kalmar Motor TBL tractors, the TBL190 supports efficient aircraft turnaround. It is capable of docking with the aircraft while the boarding bridge is connected, and features an operator cabin designed to provide excellent comfort and all-around visibility.



## Dimensions and weight

Length: 8,100-8,305 mm  
Width: 3,540 mm  
Height: 1,980-2,550 mm  
Ground clearance: 178 mm  
Wheelbase: 3,318 mm  
Turning circle radius: 9,700 mm  
Dry weight: 14,200-16,260 kg

## Engine

Type: 6-Cyl  
Power output: 208 kW  
Fuel: Diesel  
Stage 5

## Transmission

Type: Torque converter  
Powershift transmission  
Speed: 4 forward and 3 reverse

## Electric version

400Vdc LFP batteries  
78 - 130 kWh  
Onboard charger  
Different charging options available  
Optional diesel Range Extender

## Front axle

Make/Model: Kessler  
Tyre: Pneumatic 445/65 Rx22.5  
Traction control system

## Rear axle

Make/Model: Individually  
Suspended wheel hubs  
Tyre: Solid 28 x16 x22

## Brakes

Hydraulic operated 4 wheel brakes with ABS  
Front: Drum brakes  
Rear: Dry disc brakes

## Performances

Cradle lifting capacity: 35,000 kg  
Electric speed:  
Solo = 30 km/h / Push-back: 6-8 km/h  
Diesel speed:  
Solo = 30 km/h / Push-back: 6-8 km/h

## Recommended aircraft range

DC-9, MD-80, MD-90,  
DC-10, MD-11  
  
Embraer ERJ170/195,  
ERJ170/175, 190/195E2  
  
Airbus A220, A300,  
A310, A318, A320, A321,  
A330, A340-300, A350-  
900/1000, 340-600  
  
Boeing B717, B737s,  
B757, B767, B777, B787

*The aircraft range is not limited to the above. Please contact Kalmar Motor AB for further information, as some listed aircraft types may require additional approval.*

Electric drive ●  
Diesel drive ●

# TBL800

AVAILABLE AS ELECTRIC, ELECTRIC WITH RANGE EXTENDER

The TBL800 is an electric-powered tractor designed for pushback and higher-speed maintenance towing of aircraft ranging from Boeing 767 up to Airbus A380.

It is powered by 800V lithium-ion batteries with exceptional capacity. The batteries are charged via onboard chargers that accept both 400V and 115V 400Hz GPU power.

A range extender generator, compliant with the latest emission standards, automatically starts to maintain battery state of charge (SOC) during peak operations. The system can be configured with engines from leading suppliers such as Cummins or Caterpillar, and an eGPU option is also available.

In line with all other Kalmar Motor TBL tractors, the TBL800 supports efficient aircraft turnaround. It is capable of docking with the aircraft while the boarding bridge is connected, and features an operator cabin designed to provide excellent comfort and all-around visibility.



## Dimensions and weight

Length: 9,705-10,140 mm  
Width: 4,500 mm  
Height: 2,000-2,371 mm  
Ground clearance: 225 mm  
Wheelbase: 5,750 mm  
Turning circle radius: 8,820 mm  
Dry weight: 42,000 kg

## Engine

Power output: Front 1000kW

## Diesel Range Extender (Option)

Type: 6-Cyl  
Power output: 175 kW  
Emission standard: Stage 5  
Alternator: 175kW

## Electric

800Vdc LFP batteries  
252 - 378 kWh  
Onboard charger  
Different charging options available

## Front axle

Make/Model: Kessler  
Tyre: pneumatic 18.00X33 EV

## Rear axle

Make/Model:  
Individually Suspended  
wheel hubs  
Tyre: 480-95R X 25

## Brakes

Hydraulic operated 4 wheel brakes  
Front: Disc brakes  
Rear: Disc brakes

## Performances

4 wheel-steering  
Cradle lifting capacity: 60,000 kg  
Speed: Solo = 30 km/h / Towing 25 km/h  
Push-back: 6-8 km/h

## Recommended aircraft range


DC-10, MD-11

Airbus A310\*, A300\*,  
A330, A340, A350,  
A340, A380

Boeing B767, B787,  
B777, B747

*\* Limitations apply*

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Electric drive 



# FB150

ELECTRIC TOW TRACTOR FOR PUSHBACK AND MAINTENANCE TOWING OF AIRCRAFT, CARGO, AND INDUSTRIAL APPLICATIONS

The demand for more environmentally friendly and operationally simple tractors continues to grow.

The FB150 is built on the foundation of our well-known products and is designed to meet the high requirements of airports, industrial applications, and current emission and vehicle standards.

The FB150 features a centrally positioned, 180-degree swiveling operator seat console, eliminating the need for operators to switch the towbar from front to rear during operations. This enhances safety and supports a more efficient aircraft turnaround.



## Dimensions and weight

Length: 5,435 mm  
Width: 2,100 mm  
Height: 1,924-2,083 mm  
Ground clearance: 200 mm  
Wheelbase: 2,160 mm  
Turning circle radius: 5,858 mm  
Dry weight: 12,000 - 15,000 kg (depending on ballast)

## Engine

Type: TM4/Dana Electrical

## Transmission

Type: DANA-Spicer 360  
Speed: 2 forward and reverse

## Electric

Lead batteries 990 Ah  
Lithium batteries 100kWh  
Onboard charger  
Different charging options available

## Front axle

Make/Model: DANA-Spicer with suspension  
Tyre: 315/70R15

## Rear axle

Make/Model: DANA-Spicer rigid mounted  
Tyre: 315/70R15

## Brakes

Hydraulic operated 4 wheel brakes  
Front: Disc, wet multi layer  
Rear: Disc, wet multi layer

## Performances

Tractive effort: 120kN  
Speed: Solo = 25 km/h / Towing 20 km/h  
Maximum speed: 25 km/h

## Recommended aircraft range

CRJ 200,700-1000,  
BAE 146/Avro70-100  
Embraer ERJ170/175,  
ERJ190/195  
Fokker 70/100  
DC-9,MD-80,MD-90  
Airbus A220, A300,  
A310, A318, A319,  
A320, A321  
Boeing B727, B737,  
B757,

*The aircraft range is not limited to the above. Please contact Kalmar Motor AB for further information, as some listed aircraft types may require additional approval.*



# AVAILABLE OPTIONS

## COMFORT/SAFETY OPTIONS

- Air suspended drivers seat
- Air suspended drivers seat with compressor
- Air-conditioning (AC)
- Automatic Climate Control (ACC)
- CD Radio
- Electric heated rear-view mirrors
- Electrical operated rear-view Mirrors
- Electric heated windscreens
- Fire-extinguisher
- Heated drivers seat
- Hydraulic suspension and cabin lift
- Hydraulic suspension front axle
- Hydraulic suspension rear axle
- Interval wipers
- Leather Upholstery drivers seat
- Semi Leather Upholstery drivers
- Seat Map light
- Passenger seat fixed
- Passenger seat foldable
- Remote operated tow hitch front
- Remote operated tow hitch rear
- Seat belt drivers seat
- Seat belt passenger seat
- Sun visor front curtain type
- Sun visor rear standard
- Sun visor rear curtain type
- Diesel heater for engine and cabin
- Windscreen wipers rear
- Electrical engine block heater
- Electrical cabin heater
- Battery charger
- Outside temperature meter
- Winter kit
- Fire extinguisher
- Automatic fire detection and extinguishing system

## HANDLING OPTIONS

- 4-Wheel drive
- 4-wheel steer 1 mode
- 4-wheel steer 2 modes
- ABS Brakes
- ASR Anti Slip
- One Camera system (color)
- Two Camera system (color)
- Collision warning cabin roof
- Com radio installation kit including 24V-12V converter
- Cross cut tyres
- Differential limited slip
- Differential lock front axle
- Extra tow beam
- Extra wide angle rear-view mirrors
- Pneumatic horn
- Pneumatic horn with compressor
- Sand box
- Brake chock storage
- Tow hook mirror front (cabin mounted)
- Tow hook mirror rear
- Side protection nylon
- 4-wheel steer 3 modes (front axle disengage)
- Steering wheel knob
- Towlink Dash 8 Aircraft (for TBL50)

## ELECTRIC/LIGHTS OPTIONS

- Additional rotating beacon
- Backup lights
- 400Hz Ground power unit
- Long range beams front, cabin mounted
- Long range beams rear, cabin mounted
- NATO 24V battery charging socket
- Oversteer red rotating beacon
- Red rotating beacon and red twinkle
- Towing light
- Strobe lights system
- Tow hook light front
- Tow hook light rear
- Corner lights replacing rotating amber light
- Cradle work light
- Work lights front cabin
- Work lights rear chassis
- Work lights rear cabin
- Side mounted line work light (outside chassis)
- Side mounted cradle work light
- Long range beams in chassis legs
- Two red rotating beacons (replacing amber)

## TECHNICAL OPTIONS

- Diesel pre-heater
- Hydraulic jack cylinders
- Lubrication system automatic
- Lubrication system single Point
- Metallic exterior paint
- Solid exterior paint not RAL





Under our policy of continuous improvement, we reserve the right to change specifications and design without prior notice. The illustrations do not necessarily show the standard version of the machine.