

# Hyundai Warehouse Equipment

Electric Pallet truck, Electric Stacker and Manual Hand Pallet Truck

MOVING YOU FURTHER

HYUNDAI MATERIAL HANDLING



■ photo may include optional equipment.

 **HYUNDAI**  
MATERIAL HANDLING

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 **HYUNDAI**  
MATERIAL HANDLING

## Electric Pallet truck

# 15/18/20EP



■ photo may include optional equipment.

## Standard Configurations

### 15EP

- Lifting Capacity : 1,500kg
- DC Brushless Drive Motor 0.9kW
- Lifting Motor : 0.8kW
- Drive Wheel :  $\Phi$ 195x70mm
- Double Fork wheel :  $\Phi$ 80x70mm
- Hourmeter, Battery Discharge Indicator (BDI) & lift cut off
- Overall Fork Width x Length : 550mm x 1,150mm
- Turtle mode switch
- Built-in Charger
- Curtis Tiller with Convenient Control buttons
- Emergency switch
- Belly switch

### 18EP

- Lifting Capacity : 1,800kg
- AC Drive Motor 1.2kW
- Lift motor 1.2kW
- Curtis controller
- Drive wheel :  $\Phi$ 250x70mm
- Double Fork wheel :  $\Phi$ 80x70mm
- Hourmeter, Battery Discharge Indicator (BDI) & lift cut off
- Overall Fork Width x Length : 550mm x 1,150mm
- Turtle mode switch
- Curtis Tiller with Convenient Control buttons
- Side Battery Removal
- Emergency switch
- Belly switch

### 20EP

- Lifting Capacity : 2,000kg
- AC Drive Motor 1.2kW
- Lift motor 1.2kW
- Curtis controller
- Drive wheel :  $\Phi$ 250x70mm
- Double Fork wheel :  $\Phi$ 82x98mm
- Hourmeter, Battery Discharge Indicator (BDI) & lift cut off
- Overall Fork Width x Length : 550mm x 1,150mm
- Turtle mode switch
- Curtis Tiller with Convenient Control buttons
- Side Battery Removal
- Emergency switch
- Belly switch

## Advantages

### SAFETY AND PRODUCTIVITY

- Advanced AC control system eliminates directional contactors, which brings minimal maintenance requirements. (18/20EP Only)
- Intelligent regenerative brake system: increase overall truck performance.
- Side-way battery with roll-out system. (18/20EP Only)
- Emergency switch.
- Turtle mode switch
- Proportional Travel speed control.
- Belly switch.

### STRUCTURAL

- The motor structure is water-proof and dust-proof(IP 44)
- Spring-loaded castors improve lateral stability on uneven floors and enhance truck performance and service life.
- Welded type fork

### SERVICEABILITY

- CANbus technology reduces wiring complexity.
- All pivot points have grease fitting and serviceable to reduce component-wearing

## Tiller Head



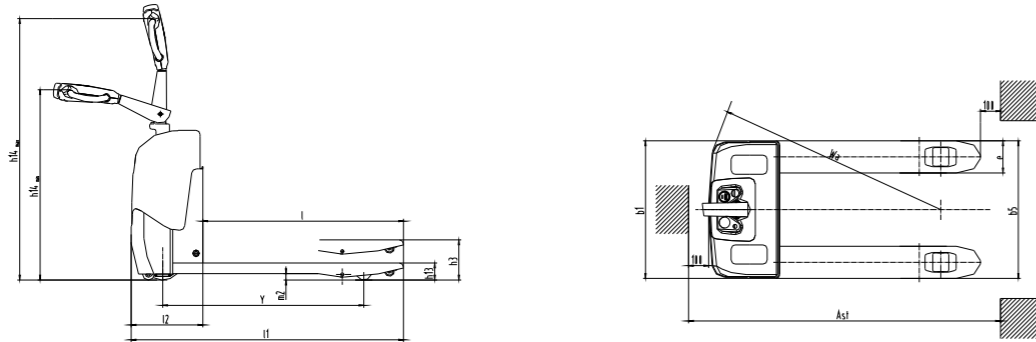
Curtis Tiller with convenient control buttons (standard)



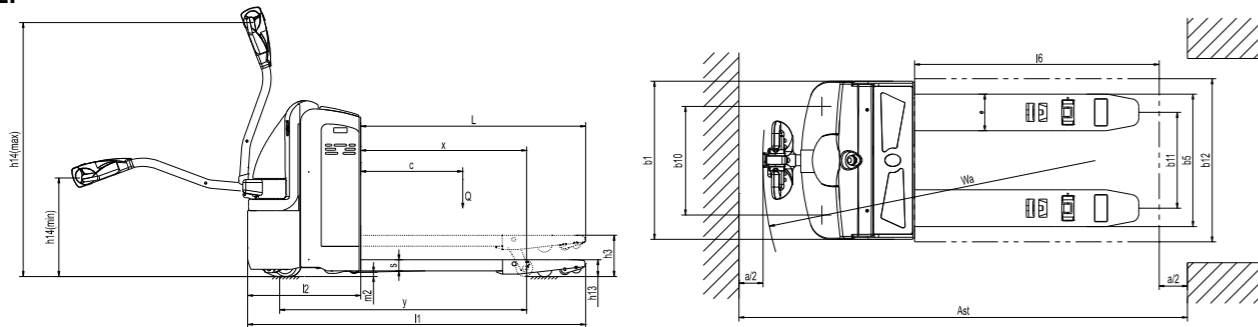
Germany Frei Tiller (option)

Dimension

15EP



18/20EP



Option

15EP

- Load backrest 1220mm
- Fork length (mm)  
900,1000,1150
- German Frei Tiller
- Single Fork Wheel (∅80x93mm)
- Overall Fork width x length : 520x1,150mm

18EP

- Single Fork Wheel (∅82x98mm)
- Cold Storage Specifications -18°C
- Battery (24V/160Ah)
- Integrated Charger (24V/15A)
- Separate Charger (24V/15A)
- Foot protection strip
- Key pad ignition
- Load backrest 1220mm
- Fork length(mm)  
800, 900, 1000, 1150, 1220, 1600, 1800, 2400mm  
(1800, 2400 : rated load capacity 1.5t )
- German Frei Tiller

20EP

- Single Fork Wheel (∅82x126mm)
- Battery (24V/210Ah)
- Battery (24V/240Ah)
- Integrated Charger (24V/20A)
- Separate Charger (24V/30A)
- Battery trolley
- Cold Storage Specifications -18°C
- Foot protection strip
- Key pad ignition
- Load backrest 1220mm
- Fork length(mm)  
800, 900, 1000, 1600, 1800, 2400mm  
(1,800, 2,400 : rated load capacity 1.5t )
- German Frei Tiller
- Overall Fork width x length : 550X1150mm

Specifications (according to VDI 2198)

Characteristics						
1.1	Manufacturer(abbreviation)		Hyundai	Hyundai	Hyundai	
1.2	Model		15EP	18EP	20EP	
1.3	Drive type		electric	electric	electric	
1.4	Operator type		pedestrian	pedestrian	pedestrian	
1.5	Load capacity/rated load	Q	kg	1500	1800	2000
1.6	Load center distance	c	mm	600	600	600
1.8	Load distance	x	mm	886	856	865
1.9	Wheelbase	y	mm	1152	1200	1261
Weight						
2.1	Service weight(with battery)		kg	230	520	620
2.2	Axle load, front/rear, laden		kg	442/1288	720/1600	1170/1450
2.3	Axle load, front/rear, unladen		kg	200/30	420/100	470/150
Wheels/Chassis						
3.1	Tyres: solud rubber, superelastic, pneumatic, polyurethane			polyurethane	polyurethane	polyurethane
3.2	Tyre size, front			∅ 195x70	∅ 250x70	∅ 250x70
3.3	Tyre size, rear			∅ 80x 70	∅ 80x70	∅ 82x98
3.4	Additional wheels(dimensions)			∅ 60x35	∅ 114x60	∅ 127x57
3.5	Wheels number, front/rear ( x = driven wheels )			1x2/4	1x+2/4	1x+2/4
3.6	Tread, front	b10	mm	195	476	510
3.7	Tread, rear	b11	mm	390	400	370
Dimension						
4.4	Lift height	h3	mm	105/115	120	120
4.9	Min. /Max. height of operation handle, in driving position	h14	mm	950/1310	780/1230	780/1230
4.15	Height, lowered	h13	mm	85/75	84	82
4.19	Overall length	l1	mm	1525	1651	1705
4.20	Length to fork face	l2	mm	373	500	555
4.21	Overall width of truck body	b1	mm	685	682	775
4.22	Fork dimension	s/e/l	mm	53/160/1150	54/150/1150	54/180/1150
4.25	Overall width of fork	b5	mm	550	550	550
4.32	Wheelbase ground distance	m2	mm	32/22	28	28
4.33	Aisle width, with pallet 1000x1200 crosswise	Ast	mm	1725	1863	2065
4.34	Aisle width, with pallet 800x1200 lengthwise	Ast	mm	1775	1913	2115
4.35	Turning radius	Wa	mm	1347	1367	1450
Performance Data						
5.1	Traveling speed, laden/unladen		km/h	5.8/6.0	5.8/6.0	5.8/6.0
5.2	Lifting speed, laden/unladen		m/s	0.035/0.045	0.06/0.11	0.039/0.056
5.3	Lowering speed, laden/unladen		m/s	0.08/0.037	0.12/0.13	0.064/0.050
5.7	Gradeability, laden/unladen		%	5/15	8/20	6/12
5.10	Traveling brake			electromagnetic brake	electromagnetic brake	electromagnetic brake
Motor						
6.1	Driving motor power		kW	0.9	1.2	1.2
6.2	Lifting motor power		kW	0.8	1.2	1.2
6.4	Battery voltage/rated capacity		V/Ah	24/80	24/160	24/210
6.5	Battery weight		kg	49	160	196

## Electric Pallet truck(Rider Type)

# 20/25EPR



■ photo may include optional equipment.

## Standard Configurations

### 20EPR

- Lifting Capacity : 2,000kg
- AC Drive Motor : 1.5kW
- Lift motor 1.2kW
- Curtis controller
- Drive wheel : 250x80mm
- Double Fork wheel :  $\phi$ 82x98mm
- Hourmeter, battery discharge indicator (BDI) & lift cut off
- Overall Fork Width x Length : 550mm x 1,150mm
- Turtle mode switch
- Curtis Tiller with Convenient Control Buttons
- EPS(Electric Power Steering)
- With Platform
- Side Battery Removal

### 25EPR

- Lifting Capacity : 2,500kg
- AC Drive Motor : 1.5kW
- Lift motor 1.2kW
- Curtis controller
- Drive wheel : 250x80mm
- Double Fork wheel :  $\phi$ 82x98mm
- Hourmeter, battery discharge indicator (BDI) & lift cut off
- Overall Fork Width x Length : 550mm x 1,150mm
- Turtle mode switch
- Curtis Tiller with Convenient Control Buttons
- EPS(Electric Power Steering)
- With Platform
- Side Battery Removal

## Advantages

### SAFETY AND PRODUCTIVITY

- Advanced AC control system eliminates directional contactors, which makes the minimal maintenance requirements.
- Intelligentized regenerative brake system: increase overall truck performance.
- Side-way battery with roll-out system.
- Belly switch.
- Emergency switch.
- Turtle mode switch
- Proportional Travel speed control.

### STRUCTURAL

- The motor structure is water-proof and dust-proof(IP 44)
- Spring-loaded castors improve lateral stability on uneven floors and enhance truck performance and service life.
- Welded type fork.

### SERVICEABILITY

- CANbus technology reduces wiring complexity.
- All pivot points have grease fitting and serviceable bushing, to reduce component-wearing.

## Tiller Head

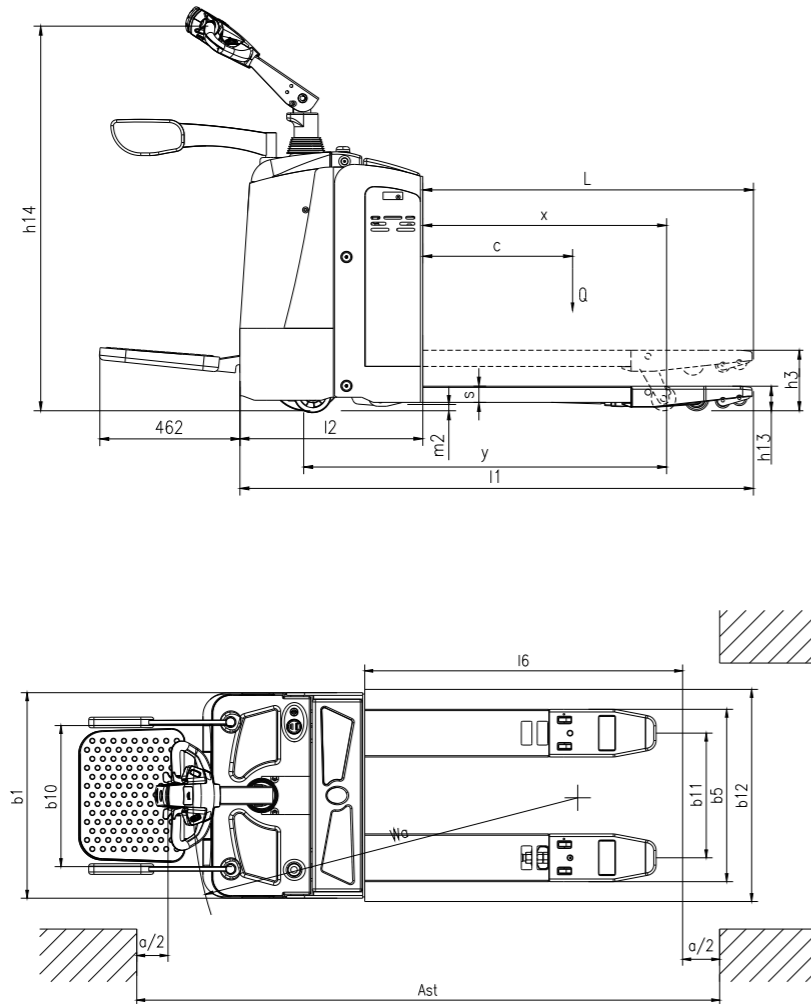


Curtis Tiller with convenient control buttons (standard)



Germany Frei Tiller (option)

Dimension



Option

- 7km/h of Drive Speed (1.2kW Drive motor)
- Single Fork Wheel :  $\phi 82 \times 126\text{mm}$
- Battery (24V/210Ah - 20EPR)
- Battery (24V/240Ah - 20EPR, 25EPR)
- Battery (24V/400Ah - 20EPR, 25EPR)
- Enlarged Battery Compartment for 400Ah Battery
- Integrated charger (24V/20A)
- Separate charger (24V/30A)
- Separate charger (24V/50A for 400Ah Battery)
- Cold storage Specifications  $-18^{\circ}\text{C}$
- Key pad ignition
- German Frei Tiller
- Load backrest 1,220mm
- Without EPS
- Battery trolley
- Fork length(mm)  
800, 900, 1000, 1220(25EPR ONLY), 1600, 1800, 2400  
(1800, 2400 : rated load capacity 1.5t )
- Overall Fork width  $\times$  length : 550mm  $\times$  1150mm

Specifications (according to VDI 2198)

Characteristics					
1.1	Manufacturer(abbreviation)		Hyundai	Hyundai	
1.2	Model		20EPR	25EPR	
1.3	Drive type		Electric	Electric	
1.4	Operator type		standing	standing	
1.5	Load capacity/rated load	Q	kg	2000	2500
1.6	Load center distance	c	mm	600	600
1.8	Load distance	x	mm	865	865
1.9	Wheelbase	y	mm	1261	1261
Weight					
2.1	Service weight(with battery)		kg	710	750
2.2	Axle load, front/rear, laden		kg	1300/1410	1300/1410
2.3	Axle load, front/rear, unladen		kg	600/110	600/110
Wheels/Chassis					
3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane			polyurethane	polyurethane
3.2	Tyre size, front			$\phi 250 \times 80$	$\phi 250 \times 80$
3.3	Tyre size, rear			$\phi 82 \times 98$	$\phi 82 \times 98$
3.4	Additional wheels(dimensions)			$\phi 127 \times 57$	$\phi 127 \times 57$
3.5	Wheels number, front/rear ( x = driven wheels )			1X+2/4	1X+2/4
3.6	Tread, front	b10	mm	490	490
3.7	Tread, rear	b11	mm	370	370
Dimension					
4.4	Lift height	h3	mm	120	120
4.9	Min. /Max. height of operation handle, in driving position	h14	mm	1150/1430	1150/1430
4.15	Height, lowered	h13	mm	82	82
4.19	Overall length	l1	mm	1760	1760
4.20	Length to fork face	l2	mm	723	723
4.21	Overall width of truck body	b1	mm	733	733
4.22	Fork dimension	s/e/l	mm	1150	1150
4.25	Overall width of fork	b5	mm	550	550
4.32	Wheelbase ground distance	m2	mm	30	30
4.33	Aisle width, with pallet 1000x1200 crosswise	Ast	mm	2135/2185/2255	2135/2185/2255
4.34	Aisle width, with pallet 800x1200 lengthwise	Ast	mm	2235/2235/2255	2235/2235/2255
4.35	Turning radius	Wa	mm	1700/1750/1820	1700/1750/1820
Performance Data					
5.1	Traveling speed, laden/unladen		km/h	6.1/9.0	6.1/9.0
5.2	Lifting speed, laden/unladen		m/s	0.03/0.032	0.03/0.032
5.3	Lowering speed, laden/unladen		m/s	0.032/0.03	0.032/0.03
5.7	Gradeability, laden/unladen		%	4/8	3/8
5.8	Max. gradeability, laden/unladen		%	8/20	6/20
5.10	Traveling brake			electromagnetic brake	electromagnetic brake
Motor					
6.1	Driving motor power		kW	1.5	1.5
6.2	Lifting motor power		kW	1.5	1.5
6.4	Battery voltage/rated capacity		kg	24/210	24/240
6.5	Battery weight		kg	210	240

## Electric Pallet truck(Rider Type)

# 30EPCR



■ photo may include optional equipment.

## Standard Configurations

### 30EPCR

- Lifting Capacity : 3,000kg
- AC Drive Motor 2.2KW
- Lifting Motor 1.5kW
- Curtis controller 1234
- With DC steering controller CURTIS 1220
- Drive wheel : 250x80mm (With EPS)
- Front wheel size 82x173mm
- Hourmeter, battery discharge indicator (BDI) & Limiter with lift cut off
- Fork Length 1220mm
- German Frei tiller(Normal)
- Side Battery Removal
- Without Battery / Charger
- With EPS(Electric Power Steering, Curtis steering controller)

## Advantages

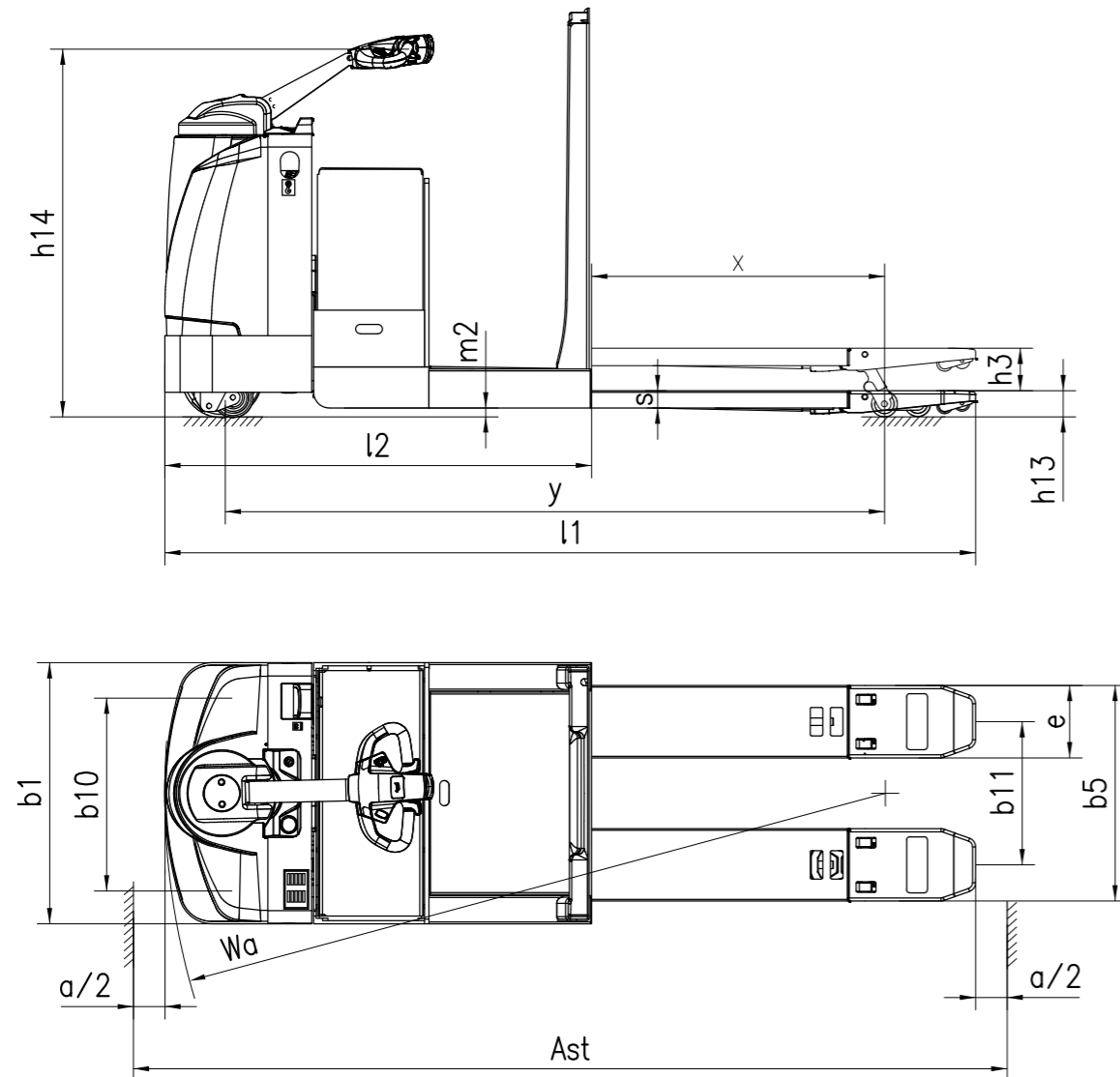
### SAFETY AND PRODUCTIVITY

- Warning lights with buzz to increase the safety of operations (Option)
- Advanced electric power steering (EPS), with flexible and comfortable steering, automatic speed reduction function when turning. Comfortable for driving and controlling.
- Buffered stand on platform is with ergonomic backrest and anti-shock function to avoid operator fatigue.
- Easy & simple to operate, making handling operations more easier and efficient.
- Lifting/Lowering buttons are mounted on the backrest, easy for handling operation.
- Has a sliding control function, when the switch is turned on, releasing the accelerator and leave the driving position, the truck can keep driving straight for a distance slowly, easy for picking up goods. This feature can also be turned off by the switch.
- Powerful drive motor and control system making the truck with strong momentum. Fully laden with 9Km/h maximum speed, fully laden with 10% climbing ability.

### SERVICEABILITY

- With large capacity battery, side way battery ensure the battery quick replacement, to meet the high intensity of the handling operations.

Dimension



Option

- Battery (24V/560Ah) (Chinese)
- Battery Trolley
- Separate Charger (Outside, 24V/70A)
- Fork length : 1,220(STD)/1,500/2,440/3,660
- Non-Marking Rubber Drive Tire
- Cold Storage specification -18°C
- Without EPS
- Storage Tray for Tools (Battery Compartment Mounted)
- With Beacon Lamp
- With Electronic Travel Alarm (Forward and Reverse "bee")
- Lifting and Lowering Switch on the back side
- With On-Off Sliding Switch
- With Load backrest(mm) : 1,525/1,830

Specifications (according to VDI 2198)

Characteristics			
1.1	Manufacturer(abbreviation)		Hyundai
1.2	Model		30EPCR
1.3	Drive type		Electric
1.4	Operator type		Standing
1.5	Load capacity/rated load	Q	kg 3000
1.6	Load center distance	c	mm 600
1.8	Load distance	x	mm 1036/933
1.9	Wheelbase	y	mm 2115
Weight			
2.1	Service weight(with battery)		kg 1150
2.2	Axle load, front/rear, laden		kg 1390/2760
2.3	Axle load, front/rear, unladen		kg 860/290
Wheels/Chassis			
3.1	Tires		PU
3.2	Tire size, Front		φ 250×80
3.3	Tire size, Rear		φ 82×173
3.4	Additional wheel(dimension)		φ 127×57
3.5	Wheels, number front/rear (x=driving wheel)		1X+2/2
3.6	Tread, front	b10	mm 620
3.7	Tread, rear	b11	mm 455
Dimension			
4.4	Lift height	h3	mm 135
4.9	Height of operation handle, in driving position min./max.	h14	mm 1070/1370
4.15	Height, lowered	h13	mm 82
4.19	Overall length	l1	mm 2570
4.20	Length to fork face	l2	mm 1350
4.21	Overall width of truck body	b1	mm 823
4.22	Fork dimension	s/e/l	mm 55x230x1220
4.25	Overall width of fork	b5	mm 685
4.32	Ground clearance, center of wheelbase	m2	mm 27
4.33	Aisle width, with pallet 1000x1200 crosswise	Ast	mm 3093
4.34	Aisle width, with pallet 800x1200 lengthwise	Ast	mm 2970
4.35	Turning radius	Wa	mm 2290
Performance Data			
5.1	Traveling speed, laden/unladen	km/h	8/9
5.2	Lifting speed, laden/unladen	m/s	0.025/0.035
5.3	Lowering speed, laden/unladen	m/s	0.03/0.03
5.7	Gradeability, laden/unladen	%	6/8
5.8	Max. gradeability, laden/unladen	%	8/20
5.10	Traveling brake		Regenerative brake
Motor			
6.1	Driving motor power	kW	2.2
6.2	Lifting motor power	kW	1.5
6.4	Battery voltage/rated capacity	kg	24/560
6.5	Battery weight	kg	559
6.7	Battery dimension (L x W x H)	kg	780x335x625
Other details			
8.4	Noise level at operator's ear, according to DIN12053	dB A	70

## Electric Pallet Truck with Double Pallet(Rider Type)

# 20EDPR



■ photo may include optional equipment.

### Standard Configurations

#### 20EDPR

- Lifting Capacity : 2,000kg
- AC Drive Motor 1.5kW
- Lift motor 2.2kW
- Curtis controller
- Drive wheel :  $\Phi$ 250x80mm
- Double Fork wheel :  $\Phi$ 80x70mm
- Triplex 2.5 m MFH Mast

- Turtle mode switch
- With Platform
- Hourmeter, battery discharge indicator (BDI) with lift cut off
- Overall Fork Width x Length : 570 x 1,150mm
- German Frei tiller
- Side Battery Removal
- EPS (Electric Power Steering)
- German Frei tiller with Convenient control Buttons
- Initial Lift (120mm)

### Advantages

#### SAFETY AND PRODUCTIVITY

- Advanced AC control system eliminates directional contactors, which makes the minimal maintenance requirements.
- Intelligent regenerative brake system.
- Platform with sensor + suspension system.
- Emergency switch.
- Belly Switch.
- Multi function display with BDI( battery discharge indicator ) and working hours.
- 20% max gradeability.
- Electric Power Steering system (EPS), makes truck steering very smoothly and light .

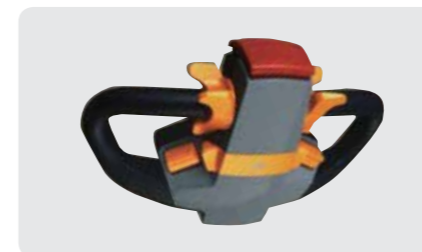
#### STRUCTURAL

- Hard steel rear cover, anti-collision, easy disassembly, provides convenient access to all component.
- Only 90mm lowered fork height.
- The motor structure is water-proof and dust-proof(IP 44).
- Side-way battery with roll-out system.

#### SERVICEABILITY

- Easy replacement and maintenance for the traction wheel.

### Tiller Head



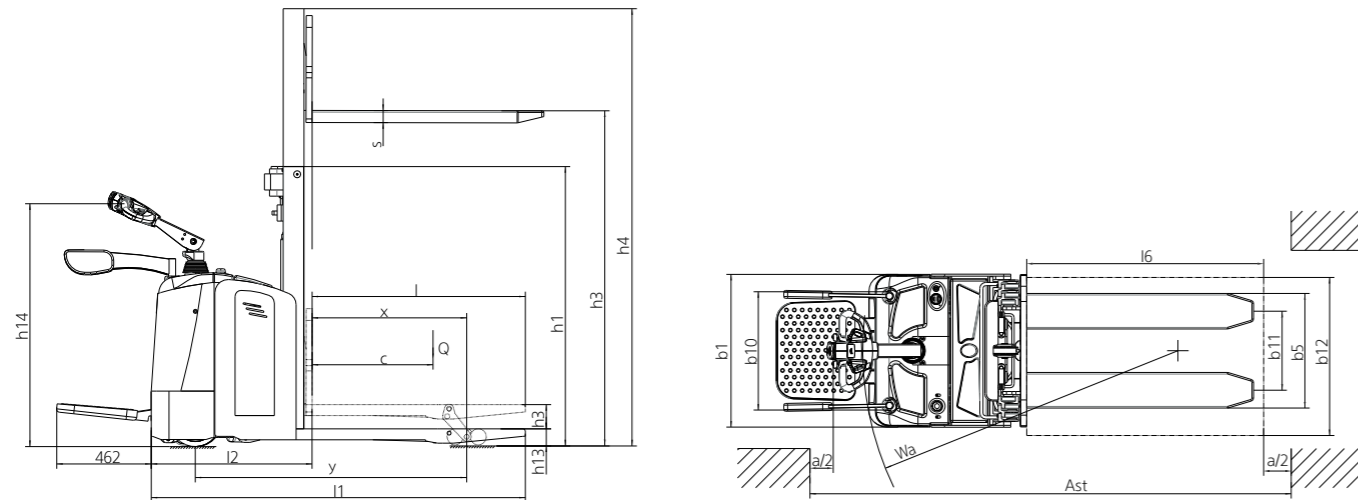
Germany Frei Tiller (Standard)  
with convenient control buttons



Germany Frei Tiller (Option)



Dimension



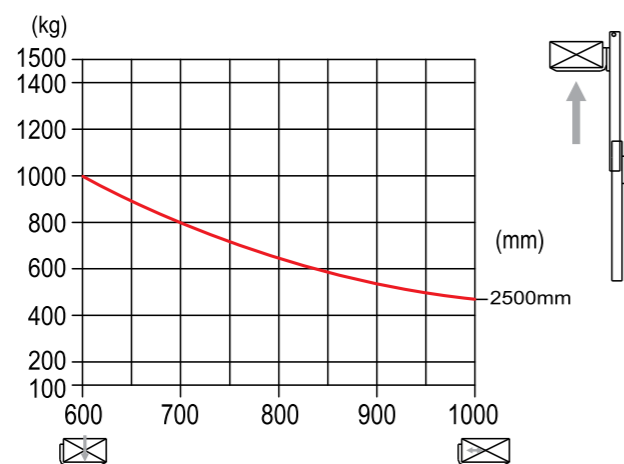
Option

- Battery (24V/240Ah)
- Separate Charger (24V/30A)
- Cold storage Specifications -18°C
- Key pad ignition
- Battery trolley
- Fork length(mm)  
800, 900, 1,000, 1,220
- Mast : Triplex 1.6m, 2.0m MFH
- German Frei tiller (Normal)
- lifting sensor switch to limit height (1.8m)

Mast Specifications

Mast Ref.	Lift Height		Overall Height		Service Weight (kg)	Residual Capacity (kg)
	Max. (mm) h3	Free lift (mm) -	Lowered (mm) h1	Extended (mm) h4		
Triplex mast with free lift (1.6m MFH)	1.6	N/A	1082	2118	1130	2000
Triplex mast with free lift (2.0m MFH)	2	N/A	1212	2508	1130	2000
Triplex mast with free lift (2.5m MFH)	2.5	N/A	1382	3018	1130	2000

Lifting Capacity



Specifications (according to VDI 2198)

Characteristics			
1.1	Manufacturer(abbreviation)		Hyundai
1.2	Model		20EDPR
1.3	Drive type		electric
1.4	Operator type		standing
1.5	Load capacity/rated load	Q	kg 2000
1.6	Load center distance	c	mm 600
1.8	Load distance	x	mm 767
1.9	Wheelbase	y	mm 1348
Weight			
2.1	Service weight(with battery)		1130
2.2	Axle load, front/rear, laden		1090/2040
2.3	Axle load, front/rear, unladen		840/290
Wheels/Chassis			
3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		polyurethane
3.2	Tyre size, front		φ 250×80
3.3	Tyre size, rear		φ 80×70
3.4	Additional wheel(dimension)		φ 127×57
3.5	Wheels number, front/rear ( x = driven wheels )		1X+2/4
3.6	Tread, front	b10	mm 490
3.7	Tread, rear	b11	mm 400/470
Dimension			
4.2	Height of mast, lowered	h1	mm See mast Specifications
4.4	Lift height	h3	mm See mast Specifications
4.5	Max. height of mast, extended	h4	mm See mast Specifications
4.7	Lifting height for leg	h5	mm 120
4.9	Min. /Max. height of operation handle, in driving position	h14	mm 1150/1430
4.15	Height, lowered	h13	mm 90
4.19	Overall length	l1	mm 1948
4.20	Length to fork face	l2	mm 798
4.21	Overall width of truck body	b1	mm 775
4.22	Fork dimension	s/e/l	mm 54×180×1150
4.25	Overall width of fork	b5	mm 580/650
4.32	Wheelbase ground distance	m2	mm 28
4.33	Aisle width, with pallet 1000x1200 crosswise	Ast	mm 2098/2148
4.34	Aisle width, with pallet 800x1200 lengthwise	Ast	mm 2198
4.35	Turning radius	Wa	mm 1600
Performance Data			
5.1	Traveling speed, laden/unladen	km/h	6.2/9.0
5.2	Lifting speed, laden/unladen	m/s	0.11/0.19
5.3	Lowering speed, laden/unladen	m/s	0.16/0.11
5.7	Gradeability, laden/unladen	%	6/12
5.8	Max. gradeability, laden/unladen	%	8/20
5.10	Traveling brake		electromagnetic braking
Motor			
6.1	Driving motor power	kW	1.5
6.2	Lifting motor power	kW	2.2
6.4	Battery voltage/rated capacity	V/Ah	24/240
6.5	Battery weight	Kg	235

## Electric Stacker

# 10/12/15ES



■ photo may include optional equipment.

## Standard Configurations

### 10ES

- Lifting Capacity : 1,000kg
- AC Drive Motor 1.2kW / Lift motor 2.2kW
- Curtis controller
- Drive wheel :  $\phi 250 \times 70$ mm
- Double Fork wheel :  $\phi 80 \times 70$ mm
- Hourmeter, battery discharge indicator(BDI) & lift cut off
- Duplex 3.0m MFH Mast without free lift
- Overall Fork Width x Length : 570mm x 1,150mm
- Turtle mode switch
- Curtis Tiller with Convenient Control Buttons
- Side Battery Removal

### 12ES

- Lifting Capacity : 1,200kg
- AC Drive Motor 1.2kW / Lift motor 2.2kW
- Curtis controller
- Drive wheel :  $\phi 250 \times 70$ mm
- Double Fork wheel :  $\phi 80 \times 70$ mm
- Hourmeter, battery discharge indicator(BDI) & lift cut off
- Duplex 3.0m MFH Mast without free lift
- Overall Fork Width x Length : 570mm x 1,150mm
- Turtle mode switch
- Curtis Tiller with Convenient Control Buttons
- Side Battery Removal

### 15ES

- Lifting Capacity : 1,500kg
- AC Drive Motor 1.5kW / Lift motor 3.2kW
- Curtis controller
- Drive wheel :  $\phi 250 \times 70$ mm
- Double Fork wheel :  $\phi 84 \times 80$ mm
- Hourmeter, battery discharge indicator(BDI) & lift cut off
- Duplex 3.0m MFH Mast with free lift
- Overall Fork Width x Length : 570mm x 1,150mm
- Turtle mode switch
- German Frei Tiller with Convenient Control Buttons
- Proportional Lifting
- Automatic Drive speed reduction (lifting over 1.8m)
- Side Battery Removal

## Advantages

### SAFETY AND PRODUCTIVITY

- Advanced AC control system eliminates directional contactors, which brings minimal maintenance requirements.
- Intelligent regenerative brake system.
- Multi-function display with BDI and hour meter etc.
- Belly switch.
- Emergency switch.
- Proportional Travel speed control.
- Lift limit switch to shut off pump motor at the max. lifting height.
- Vertical drive motor has a small turning radius.
- The motor structure is water-proof and dust-proof(IP 44).

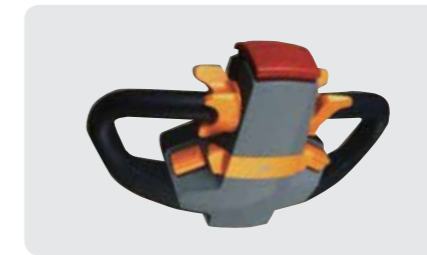
### SERVICEABILITY

- CANbus technology reduces wiring complexity and increases reliability.
- Side-way battery with roll-out system.

## Tiller Head



Curtis Tiller with convenient control buttons  
(Standard for 10/12ES only)

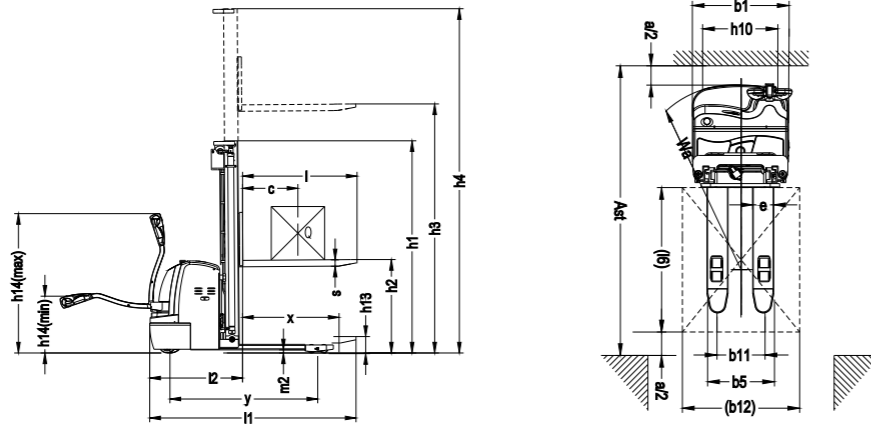


Germany Frei Tiller with convenient control buttons  
(Standard for 15ES only)

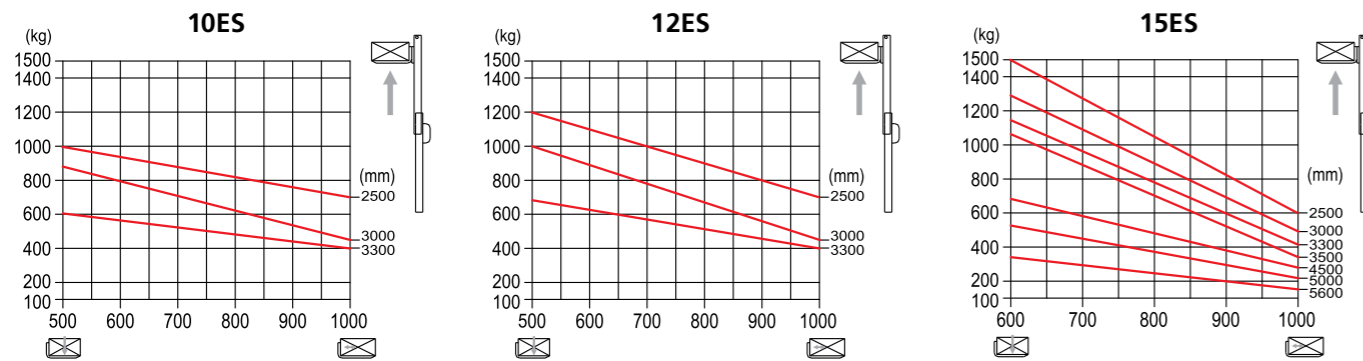


Normal Germany Frei Tiller (option)

Dimension



Lifting capacity



Option

- **Battery**  
10/12 ES : (24V/120Ah)  
15 ES : (24V/300Ah)
- **Integrated Charger (Built-In)**  
10/12 ES : (24V/15A)  
15 ES : (24V/40A)
- **Separate Charger**  
10/12 ES : (24V/15A)  
15 ES : (24V/40A)
- **Key pad ignition**
- **Battery trolley (15ES only)**
- **Fork length(mm)**  
10/12/15 ES : 800, 900, 1000, 1220
- **Germal Feri Tiller (Nomal)**
- **Germal Feri Tiller with big button (including initial lifting button) (15ES)**
- **Cold Storage Specifications -18°C**
- **Initial Lift (15ES)**

Mast Specifications

Mast Ref.	Lift Height		Overall Height		Service Weight (kg)	Residual Capacity (kg)	
	Max. (mm) h3	Free lift (mm) -	Lowered (mm) h1	Extended (mm) h4			
10ES	Duplex 2.5m MFH Mast without free lift	2.5	N/A	1837	3087	730	1000
	Duplex 3.0m MFH Mast without free lift *	3.0	N/A	2087	3587	750	750
	Duplex 3.3m MFH Mast without free lift	3.3	N/A	2237	3887	770	550
12ES	Duplex 2.5m MFH Mast without free lift	2.5	N/A	1837	3087	750	1200
	Duplex mast with free lift (2.9m MFH)	2.9	N/A	2000	3415	790	1000
	Duplex 3.0m MFH Mast without free lift *	3.0	N/A	2087	3587	770	1000
	Duplex 3.3m MFH Mast without free lift	3.3	N/A	2237	3887	790	700
15ES	Duplex mast without free lift (2.5m MFH)	2.5	N/A	1735	2955	1040	1500
	Duplex mast without free lift (3.0m MFH)	3.0	N/A	1985	3455	1160	1300
	Duplex mast without free lift (3.3m MFH)	3.3	N/A	2135	3755	1180	1150
	Duplex mast without free lift (3.5m MFH)	3.5	N/A	2235	3955	1200	1100
	Duplex mast with free lift (2.5m MFH)	2.5	1300	1735	2955	1080	1500
	Duplex mast with free lift (3.0m MFH) *	3.0	1550	1985	3455	1200	1300
	Duplex mast with free lift (3.3m MFH)	3.3	1700	2135	3755	1220	1150
	Duplex mast with free lift (3.5m MFH)	3.5	1800	2235	3955	1240	1100
	Triplex mast with free lift (4.3m MFH)	4.3	1500	1990	4870	1370	600
	Triflex mast with free lift (4.5m MFH)	4.5	1570	2050	5070	1405	700
Triflex mast with free lift (5.0m MFH)	5.0	1740	2210	5550	1450	500	
Triflex mast with free lift (5.6m MFH)	5.6	1940	2410	6150	1490	350	

\* : Standard

Specifications (according to VDI 2198)

Characteristics			
1.1	Manufacturer(abbreviation)		Hyundai
1.2	Model		10ES 12ES 15ES
1.3	Drive type		electric
1.4	Operator type		pedestrian
1.5	Load capacity/rated load	Q kg	1000 1200 1500
1.6	Load center distance	c mm	500 500 600
1.8	Load distance	x mm	697 697 697
1.9	Wheelbase	y mm	1335 1335 1383
Weight			
2.1	Service weight(with battery)	kg	See mast Specifications
2.2	Axle load, front/rear, laden	kg	950/770 1060/870 1470/1310
2.3	Axle load, front/rear, unladen	kg	555/165 560/170 900/380
Wheels/Chassis			
3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		polyurethane
3.2	Tyre size, front		Φ250×70 Φ250×70 Φ250×70
3.3	Tyre size, rear		Φ80×70 Φ80×70 Φ80×84
3.4	Additional wheel(dimension)		Φ150×60 Φ150×60 Φ150×60
3.5	Wheels number, front/rear ( x = driven wheels )		1x+1/4 1x+1/4 1x+1/4
3.6	Tread, front	b10 mm	520 520 520
3.7	Tread, rear	b11 mm	410/525 410/525 404/525
Dimension			
4.2	Height of mast, lowered	h1 mm	See mast Specifications
4.3	Free lift height( optional)		See mast Specifications
4.4	Lift height	h3 mm	See mast Specifications
4.5	Max. height of mast, extended	h4 mm	See mast Specifications
4.9	Min./Max. height of operation handle, in driving position	h14 mm	670/1300 670/1300 670/1300
4.15	Height, lowered	h13 mm	90 90 90
4.19	Overall length	l1 mm	1965 1965 1950
4.20	Length to fork face	l2 mm	792 792 878
4.21	Overall width of truck body	b1 mm	820 820 820
4.22	Fork dimension	s/e/l mm	60/170(1220) 60/170(1220) 60/180(1220)
4.25	Overall width of fork	b5 mm	580/695 580/695 570/695
4.32	Wheelbase ground distance	m2 mm	28 28 31
4.33	Aisle width, with pallet 1000x1200 crosswise	Ast mm	2400 2400 2450
4.34	Aisle width, with pallet 800x1200 lengthwise	Ast mm	2370 2370 2420
4.35	Turning radius	Wa mm	1525 1525 1575
Performance Data			
5.1	Traveling speed, laden/unladen	km/h	5.3/6.0 5.3/6.0 5.8/6.0
5.2	Lifting speed, laden/unladen	m/s	0.11/0.19 0.11/0.19 0.15/0.28
5.3	Lowering speed, laden/unladen	m/s	0.16/0.11 0.16/0.11 0.41/0.27
5.8	Max. gradeability, laden/unladen	%	6/15 6/15 8/15
5.10	Traveling brake		electromagnetic brake
Motor			
6.1	Driving motor power	kW	1.2 1.2 1.5
6.2	Lifting motor power	kW	2.2 2.2 3.2
6.4	Battery voltage/rated capacity	V/Ah	24/120 24/120 24/300
6.5	Battery weight	kg	90 90 300

## Electric Stacker

# 15/20ERSP



■ photo may include optional equipment.

## Standard Configurations

### 15ERSP

- Lifting Capacity : 1,500kg
- DC Lift motor : 4.5KW
- Drive wheel : 250x80mm
- Double PU fork wheel 125x82mm
- Hourmeter, battery discharge indicator (BDI) & Limiter with lift cut off
- Duplex 3.0m MFH Mast without free lift (Germany Mast)
- Single Scissors Fork Carriage (Pantograph Type)
- Fork Length : 1070mm
- Automatic speed reduction (>1.8m lift)
- Without Battery / Charger
- Without Platform / Arm protection
- With EPS (Electric Power Steering, Curtis steering controller)
- With Load Back Rest (Height : 787mm)
- AC Drive Motor 2.2kW
- Curtis controller 1234E
- Balance wheel 150x62mm (2pcs)

### 20ERSP

- Lifting Capacity : 2,000kg
- DC Lift motor : 4.5KW
- Drive wheel : 250x80mm
- Double PU fork wheel 125x82mm
- Hourmeter, battery discharge indicator (BDI) & Limiter with lift cut off
- Duplex 3.0m MFH Mast without free lift (Germany Mast)
- Single Scissors Fork Carriage (Pantograph Type)
- Fork Length:1,070mm
- Automatic speed reduction (> 1.8m lift)
- Without Battery / Charger
- Without Platform / Arm protection
- With EPS(Electric Power Steering, Curtis steering controller)
- With Load Back Rest (Height : 787mm)
- AC Drive Motor 2.2kW
- Curtis controller 1234E
- Balance wheel 150x62mm (2pcs)

## Advantages

### SAFETY AND PRODUCTIVITY

- Advanced AC drive motor eliminates replacement of carbon brush, with good ramp starting performance.
- Cylinder have safety explosion proof valve to avoid fork dropping suddenly when oil tube is broken ensure the safety of operator.
- Automatic speed deceleration when lifting height is up 1.8M
- Mast with micro switch limit the cylinder lifting height to avoid mast shock problems.
- Option EPS power steering system makes steering more light and reliable.

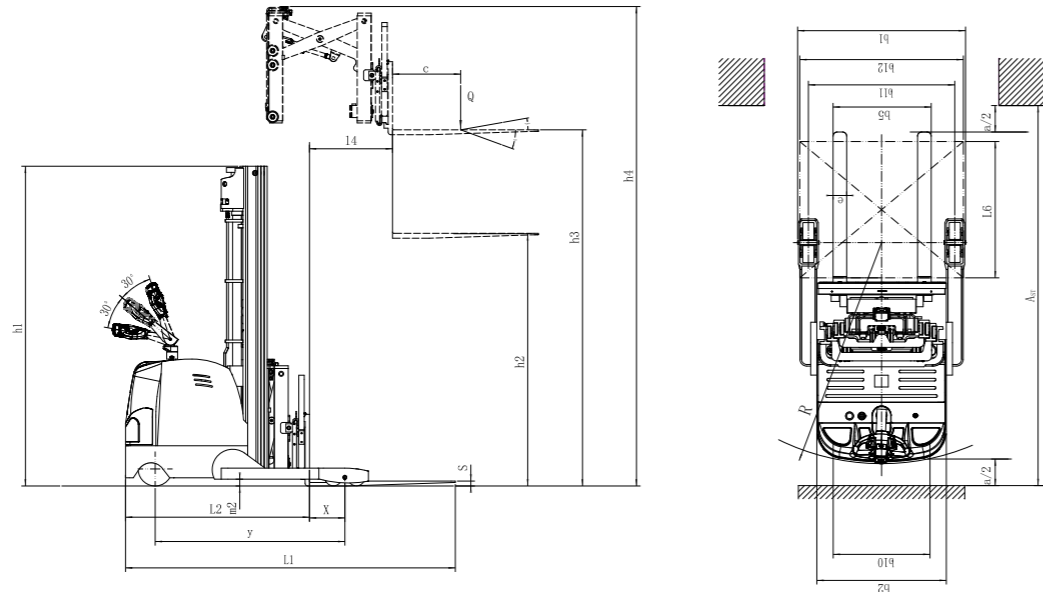
### SERVICEABILITY

- Low voltage protection setting prolongs the battery life. (while battery less 20% only can drive no lifting)

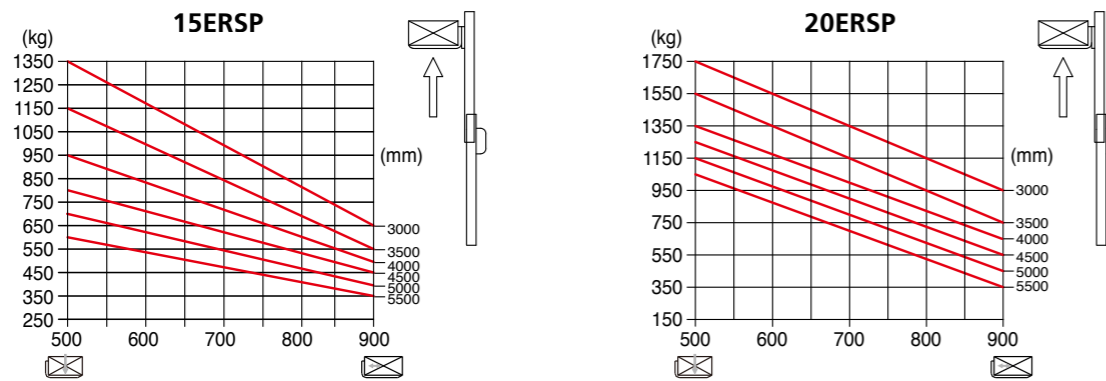
### STRUCTURAL

- Reach stacker with very compact design have different option with platform or without platform.
- Low gravity ensure safety operation.
- Water proof and dust proof motor structure keeps the braking and motor more durable and reliable.
- Multi function display with BDI, hour meter and fault code.
- Vertical driving wheel ensures convenient maintenance and small turning radius.
- The mast and frame are dividable and exchangeable.

Dimension



Lifting capacity



Option

- **Battery**  
 15ERSP : 24V/320Ah (Chinese)  
 24V/460Ah (Hoppeck)  
 20ERSP : 24V/490Ah (Chinese)  
 24V/525Ah (Hoppeck)
- **Auto water battery filling system**
- **Separate Charger**  
 15ERSP : Outside, 24V/40A  
 Outside, 24V/60A for 460Ah battery  
 20ERSP : Outside, 24V/70A
- **Sideshift : For 3m/3.5m/4m mast**  
 For 4.5m/5m/5.5m mast
- **Fork length : 1,070(STD)/1,150/1,200**
- **With proportional lifting**
- **With protection skirt (Rubber made)**
- **Double Scissors Fork Carriage (Pantograph Type)**

Mast Specifications

Mast Ref.	Lift Height		Overall Height		Service Weight (kg)	Residual Capacity (kg)	
	Max. (mm) h3	Free lift (mm) -	Lowered (mm) h1	Extended (mm) h4			
15ERSP	Duplex mast without free lift (3.0m MFH)	3000		2119	2250	1500	
	Duplex mast without free lift (3.5m MFH)	3500		2369	2300	1300	
	Duplex mast without free lift (4.0m MFH)	4000		2619	2350	1100	
	Triflex mast with free lift (4.5m MFH)	4500	1575	2179	5381	2500	900
	Triflex mast with free lift (5.0m MFH)	5000	1700	2341	5881	2550	800
20ERSP	Duplex mast without free lift (3.0m MFH)	3000		2125	2500	2000	
	Duplex mast without free lift (3.5m MFH)	3500		2375	2600	1800	
	Duplex mast without free lift (4.0m MFH)	4000		2625	2650	1600	
	Triflex mast with free lift (4.5m MFH)	4500	1575	2185	5397	2800	1400
	Triflex mast with free lift (5.0m MFH)	5000	1700	2345	5897	2850	1350
Triflex mast with free lift (5.5m MFH)	5500	1825	2505	6397	2900	1250	

\* : Standard

Specifications

Characteristics			
1.1	Manufacturer(abbreviation)		Hyundai
1.2	Model		15ERSP / 20ERSP
1.3	Drive type		electric
1.4	Operator type		Pedestrian(EPS)
1.5	Load capacity/rated load	Q kg	1500 / 2000
1.6	Load center distance	c mm	500
1.8	Load distance	x mm	287 / 265
1.9	Wheelbase	y mm	1319 / 1462
Weight			
2.1	Service weight(with battery)	kg	2250 / 2500
2.2	Axle load, front/rear, laden	kg	765/2835 / 1505/2795
2.3	Axle load, front/rear, unladen	kg	1395/855 / 1580/970
Wheels/Chassis			
3.1	Tires		polyurethane
3.2	Tire size, Front	mm	250x80 / 250x80
3.3	Tire size, Rear	mm	125x82X2 / 125x82X2
3.4	Wheels, number front/rear (x=driving wheel)		1x+2/4 / 1x+2/4
3.5	Additional wheel		150x62 X2 / 150x62 X2
3.6	Tread, Front	b10 mm	715 / 710
3.7	Tread, Rear	b11 mm	1074 / 1074
Dimension			
4.1	Tilt of mast/fork carriage forward/backward	Gard	2/5 / 2/5
4.2	Height, mast lowered	h1 mm	2119 / 2125
4.4	Lift height	h3 mm	3000 / 3000
4.5	Height, mast extended	h4 mm	3881 / 3897
4.9	Height of operation handle, in driving position min./max.	h14 mm	1150/1469 / 1150/1469
4.19	Overall length	l1 mm	2359 / 2550
4.20	Length to fork face	l2 mm	1289 / 1480
4.21	Overall width of truck body	b1/b2 mm	1220/950 / 1220/950
4.22	Fork dimension	s/e/l mm	35 x 100 x 1070 / 40 x 100 x 1070
4.28	Reach distance	l4 mm	500 / 500
4.32	Ground clearance, center of wheelbase	m2 mm	50 / 50
4.33	Aisle width for pallets 1000x1200 crossways	Ast mm	2742 / 2928
4.34	Aisle width for pallets 800x1200 lengthways	Ast mm	2806 / 2996
4.35	Turning radius	Wa mm	1613 / 1779
Performance Data			
5.1	Travel speed , laden/unladen	km/h	4.8/5 / 4.8/5
5.2	Lift speed , laden/unladen	m/s	0.095/0.12 / 0.095/0.12
5.3	Lowering speed laden/unladen	m/s	0.2/0.15 / 0.2/0.15
5.8	Max. gradeability, laden/unladen	%	5/12 / 5/12
5.10	Travelling brake		Electromagnetic brake
Motor			
6.1	Driving motor power	kW	2.2 AC / 2.2 AC
6.2	Lifting motor power	kW	4.5/24 / 4.5/24
6.4	Battery voltage/rated capacity	V/Ah	24/320 (460) / 24/490 (525)
6.5	Battery weight	kg	325 (400) / 380 (410)
6.7	Battery dimension (L x W x H)	mm	812x324x535/812x324x575 / 774x332x580/776x334x580
Other details			
8.4	Noise level at operator's ear, according to DIN12053	dB A	75 / 75



■ photo may include optional equipment.

## Standard Configurations

### 12ESN

- Lifting Capacity : 1,200kg
- AC Drive Motor 1.2kW
- Lift motor : 2.2kW
- Curtis controller
- Drive wheel :  $\phi$ 250x70mm
- Double Fork wheel :  $\phi$ 80x70mm
- Hourmeter, battery discharge indicator (BDI) & lift cut off
- Single 1.95m MFH Mast
- Lowered Height : 2.33m
- Overall Fork Width x Length : 570mm x 1,150mm
- Turtle mode switch
- Curtis Tiller with Convenient Control Buttons
- Automatic drive speed reduction (lifting over 1.8m)
- Built-in Battery (24V/80Ah), Charger (24V/8A)
- Belly Switch
- Side Battery Removal

## Advantages

### SAFETY AND PRODUCTIVITY

- Advanced AC control system
- Intelligentized regenerative brake system.
- Multi-function display with BDI and hour meter etc.
- Belly switch.
- Emergency switch.
- Proportional Travel speed control.
- Lift limit switch to shut off pump motor at the max. lifting height.
- Vertical drive motor has a small turning radius.
- The motor structure is water-proof and dust-proof(IP 44).

### SERVICEABILITY

- CANbus technology reduces wiring complexity and increase reliability.
- Side-way battery with roll-out system.

## Tiller Head

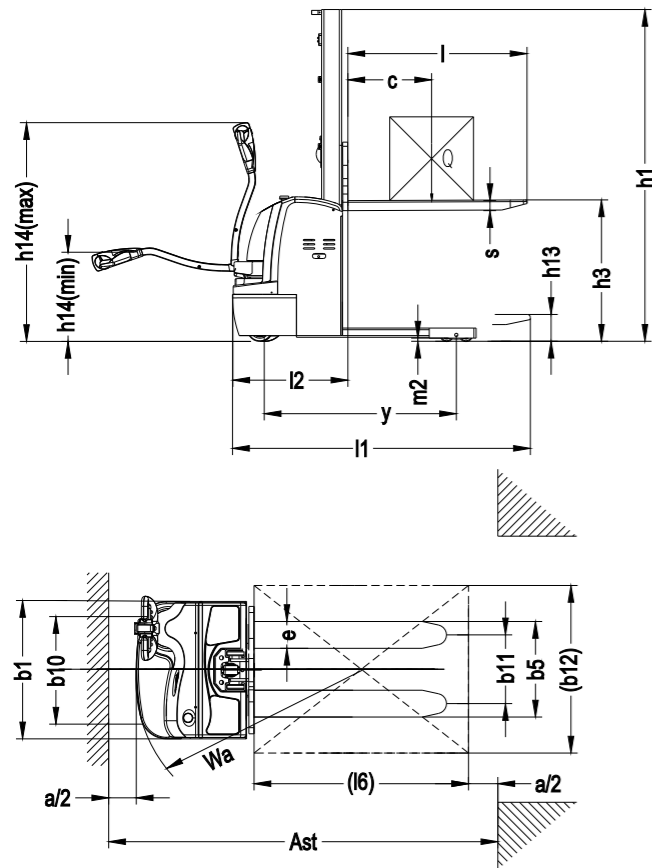


Curtis Tiller with convenient control buttons (standard)

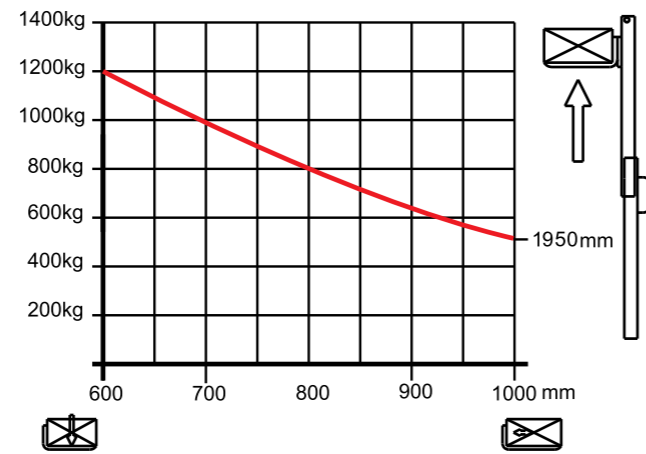


Germany Frei Tiller (option)

Dimension



Lifting capacity



Option

- Single 1.6m MFH Mast
- Fork length(mm)  
800, 900, 1000, 1220
- German Frei Tiller
- Cold Storage Specifications -18°C

Mast Specifications

Mast Ref.	Lift Height		Overall Height		Service Weight (kg)	Residual Capacity (kg)
	Max. (mm) h3	Free lift (mm) -	Lowered (mm) h1	Extended (mm) h4		
Single 1.6m MFH Mast	1.6	1.6	1980	1980	600	1200
Single 1.95m MFH Mast *	1.95	1.95	2330	2330	620	1200

\* : Standard

Specifications (according to VDI 2198)

Characteristics			
1.1	Manufacturer(abbreviation)		Hyundai
1.2	Model		12ESN
1.3	Drive type		electric
1.4	Operator type		walking
1.5	Load capacity/rated load	Q	kg
1.6	Load center distance	c	mm
1.8	Load distance	x	mm
1.9	Wheelbase	y	mm
Weight			
2.1	Service weight(with battery)	kg	See mast Specifications
2.2	Axle load, front/rear, laden	kg	790/1000
2.3	Axle load, front/rear, unladen	kg	195/395
Wheels/Chassis			
3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		polyurethane
3.2	Tyre size, front		φ 250×70
3.3	Tyre size, rear		φ 80×70
3.4	Additional wheel(dimension)		φ 150×60
3.5	Wheels number, front/rear ( x = driven wheels )		1x+1/4
3.6	Tread, front	b10	mm
3.7	Tread, rear	b11	mm
Dimension			
4.2	Height of mast, lowered	h1	mm
4.4	Lift height	h3	mm
4.5	Max. height of mast, extended	h4	mm
4.9	Min. /Max. height of operation handle, in driving position	h14	mm
4.15	Height, lowered	h13	mm
4.19	Overall length	l1	mm
4.20	Length to fork face	l2	mm
4.21	Overall width of truck body	b1	mm
4.22	Fork dimension	s/e/l	mm
4.25	Overall width of fork	b5	mm
4.32	Wheelbase ground distance	m2	mm
4.33	Aisle width, with pallet 1000x1200 crosswise	Ast	mm
4.34	Aisle width, with pallet 800x1200 lengthwise	Ast	mm
4.35	Turning radius	Wa	mm
Performance Data			
5.1	Traveling speed, laden/unladen	km/h	5.3/5.6
5.2	Lifting speed, laden/unladen	m/s	0.11/0.19
5.3	Lowering speed, laden/unladen	m/s	0.16/0.11
5.8	Max. gradeability, laden/unladen	%	6/15
5.10	Traveling brake		electromagnetic brake
Motor			
6.1	Driving motor power	kW	1.2
6.2	Lifting motor power	kW	2.2
6.4	Battery voltage/rated capacity	V/Ah	24/80
6.5	Battery weight	kg	50

## Electric Stacker(Rider Type)

# 15ESR



■ photo may include optional equipment.

## Standard Configurations

### 15ESR

- Lifting Capacity : 1,500kg
- AC Drive Motor 1.5kW
- Lift motor 3.2kW
- Curtis controller
- Drive wheel :  $\phi$ 250x80mm
- Double Fork wheel :  $\phi$ 84x80mm
- Hourmeter, battery discharge indicator (BDI) & Limiter with lift cut off
- Duplex 3.0m MFH Mast with free lift

- Fork Width x Length : 570mm x 1,150mm
- Turtle mode switch
- German Frei tiller with convenient control buttons
- Proportional Lifting
- Automatic speed reduction (lifting over 1.8m)
- Belly switch
- EPS (Electric Power Steering)
- Side Battery Removal

## Advantages

### SAFETY AND PRODUCTIVITY

- Advanced AC control system eliminates directional contactors, which brings minimal maintenance requirements.
- Mast lowering damping cushion for low noise operation.
- Multi-function display with BDI and hour meter etc.
- Side way battery replacement.
- Auto deceleration function.
- Emergency switch.
- Turtle mode switch.
- Proportional Travel speed control.

### OPTIMUM STRUCTURAL DESIGN

- Low barycenter ensures the stable operation.
- The motor structure is water-proof and dust-proof(IP 44).
- Mast and frame dividable and exchangeable.
- Full free lifting. (3M lift height truck can enter into a 2M door)

### SERVICEABILITY

- Central positional electronic component simplifies debugging and maintaining.
- CANbus technology reduces wiring complexity and increase reliability.
- User of non-contact type switch in the mast

## Tiller Head



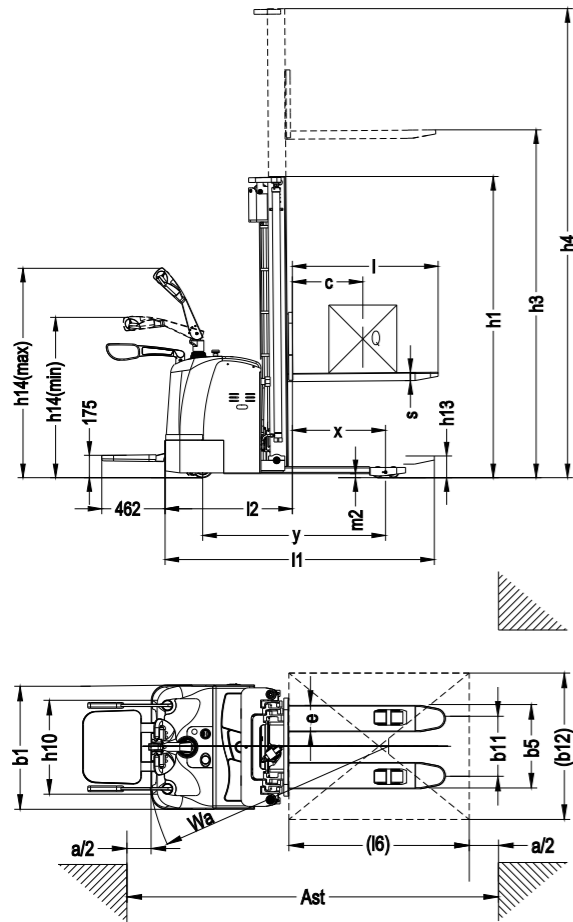
Germany Frei Tiller with convenient control buttons (standard)



Germany Frei Tiller (option)



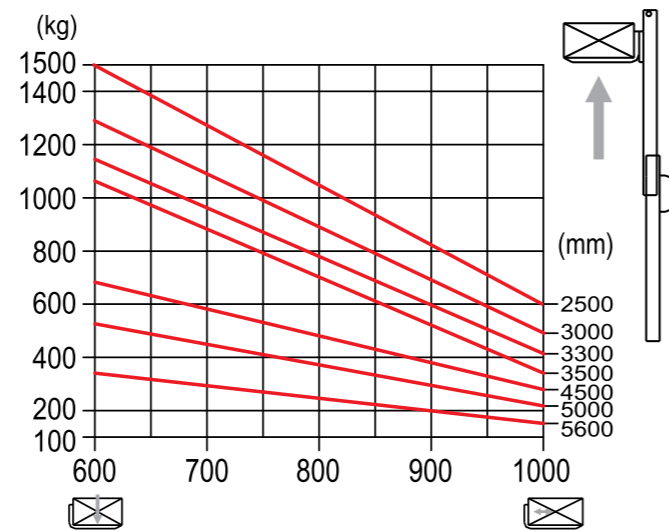
Dimension



Option

- 6.7km/h of Drive Speed
- Battery : 24V/300Ah
- Integrated Charger (24V/40A)
- Separate Charger (24V/40A)
- Germany Frei Tiller (Normal)
- Germal Feri Tiller with big button (including initial lifting button)
- Cold storage Specifications -18°C
- Key pad ignition
- Load backrest 1220mm
- Battery trolley
- Initial lift
- Fork length(mm) 800, 900, 1000, 1220
- Without EPS
- lifting sensor switch to limit the height(1.8m)

Lifting capacity



Mast Specifications

Mast Ref.	Lift Height		Overall Height		Service Weight (kg)	Residual Capacity (kg)
	Max. (mm) h3	Free lift (mm) -	Lowered (mm) h1	Extended (mm) h4		
Duplex mast without free lift (2.5m MFH)	2.5	N/A	1735	2955	1200	1500
Duplex mast without free lift (3.0m MFH)	3.0	N/A	1985	3455	1220	1300
Duplex mast without free lift (3.3m MFH)	3.3	N/A	2135	3755	1240	1150
Duplex mast without free lift (3.5m MFH)	3.5	N/A	2235	3955	1250	1100
Duplex mast with free lift (2.5m MFH)	2.5	1300	1735	2955	1240	1500
Duplex mast with free lift (3.0m MFH) *	3.0	1550	1985	3455	1265	1300
Duplex mast with free lift (3.3m MFH)	3.3	1700	2135	3755	1280	1150
Duplex mast with free lift (3.5m MFH)	3.5	1800	2235	3955	1290	1100
Triplex mast with free lift (4.3m MFG)	4.3	1500	1990	4870	1370	600
Triflex mast with free lift (4.5m MFH)	4.5	1570	2050	5070	1340	700
Triflex mast with free lift (5.0m MFH)	5.0	1740	2210	5550	1360	500
Triflex mast with free lift (5.6m MFH)	5.6	1940	2410	6150	1380	350

\* : Standard

Specifications (according to VDI 2198)

Characteristics			
1.1	Manufacturer(abbreviation)		Hyundai
1.2	Model		15ESR
1.3	Drive type		electric
1.4	Operator type		standing
1.5	Load capacity/rated load	Q	kg 1500
1.6	Load center distance	c	mm 600
1.8	Load distance	x	mm 672
1.9	Wheelbase	y	mm 1378
Weight			
2.1	Service weight(with battery)	kg	See mast Specifications
2.2	Axle load, front/rear, laden	kg	1470/1310
2.3	Axle load, front/rear, unladen	kg	900/380
Wheels/Chassis			
3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		polyurethane
3.2	Tyre size, front		φ 250×80
3.3	Tyre size, rear		φ 80×84
3.4	Additional wheel(dimension)		φ 150×60
3.5	Wheels number, front/rear ( x = driven wheels )		1x+2/4
3.6	Tread, front	b10	mm 580
3.7	Tread, rear	b11	mm 404/530
Dimension			
4.2	Height of mast, lowered	h1	mm See mast Specifications
4.3	Free lift height( optional)		See mast Specifications
4.4	Lift height	h3	mm See mast Specifications
4.5	Max. height of mast, extended	h4	mm See mast Specifications
4.9	Min. /Max. height of operation handle, in driving position	h14	mm 1150/1450
4.15	Height, lowered	h13	mm 90
4.19	Overall length	l1	mm 2100
4.20	Length to fork face	l2	mm 950
4.21	Overall width of truck body	b1	mm 850
4.22	Fork dimension	s/e/l	mm 60/180/1220
4.25	Overall width of fork	b5	mm 570
4.32	Wheelbase ground distance	m2	mm 31
4.33	Aisle width, with pallet 1000x1200 crosswise	Ast	mm 2535
4.34	Aisle width, with pallet 800x1200 lengthwise	Ast	mm 2515
4.35	Turning radius	Wa	mm 1655
Performance Data			
5.1	Traveling speed, laden/unladen	km/h	6.5/6.7
5.2	Lifting speed, laden/unladen	m/s	0.15/0.28
5.3	Lowering speed, laden/unladen	m/s	0.41/0.27
5.8	Max. gradeability, laden/unladen	%	8/15
5.10	Traveling brake		electromagnetic brake
Motor			
6.1	Driving motor power	kW	1.5
6.2	Lifting motor power	kW	3
6.4	Battery voltage/rated capacity	V/Ah	24/300
6.5	Battery weight	kg	300



■ photo may include optional equipment.

## Standard Configurations

### 15EST

- Lifting Capacity : 1,500kg
- AC Drive Motor 1.5kW
- Lift motor 3.2kW (HPI)
- Curtis controller 1232
- Drive wheel : 250x70mm
- Single PU fork wheel size 80x84mm
- Hourmeter, battery discharge indicator (BDI) & Limiter with lift cut off
- Duplex 3.0m MFH Mast (German mast) with free lift
- Forged fork length : 1070mm
- Turtle mode activated
- German Frei tiller with convenient control buttons
- Side Battery Removal
- Proportional Lifting
- Automatic speed reduction (>1.8m lift)
- Without Battery / Charger

## Advantages

### SAFETY AND PRODUCTIVITY

- Advanced AC control system intelligentized regenerative brake system.
- Multi-function display with BDI and hour meter.
- Emergency reversing device.
- Auto deceleration system utilizes regenerative braking.

### STRUCTURAL

- Stepless speed control
- With lifting limit switch to shut off pump motor at top Max. lifting height.
- Small turning radius standing drive motor system, water-proof and dust-proof motor structure.
- Built-in pressure relief valve protects the trucks from overloads.

### SERVICEABILITY

- CANbus technology reduces wiring complexity.
- Side-way battery with roll-out system, convenient for replacement.

## Tiller Head

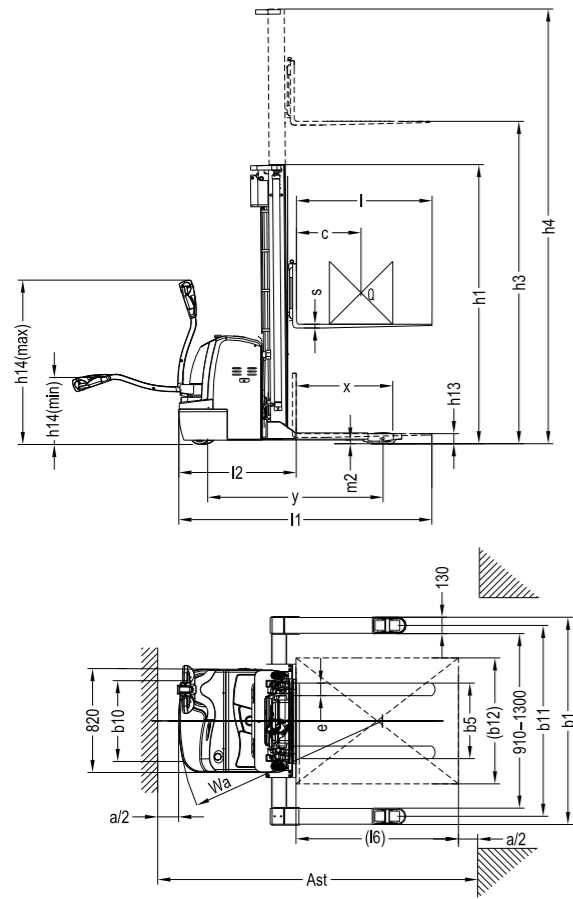


Germany Frei Tiller with convenient control buttons (standard)



Normal Germany Frei Tiller (Option)

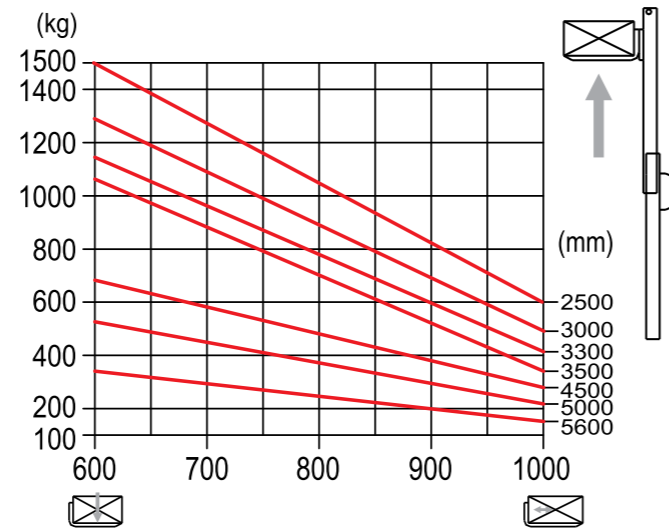
Dimension



Option

- Battery : 24V/300Ah
- Battery trolley
- Integrated Charger (24V/30A)
- Separate Charger (24V/40A)
- German Frei Tiller (Normal)
- German Frei Tiller with big button (two lifting button)
- Cold storage Specifications -18°C
- Keypad ignition (KEYA)
- Fork length (mm) : 800 / 900 / 1,070(STD) / 1,220

Lifting capacity



Mast Specifications

Mast Ref.	Lift Height		Overall Height		Service Weight (kg)	Residual Capacity (kg)
	Max. (mm) h3	Free lift (mm) -	Lowered (mm) h1	Extended (mm) h4		
Duplex mast without free lift (2.5m MFH)	2500		1805	3025	1090	1500
Duplex mast without free lift (3.0m MFH)	3000		2055	3525	1210	1500
Duplex mast without free lift (3.3m MFH)	3300		2205	3825	1230	1500
Duplex mast without free lift (3.5m MFH)	3500		2305	4025	1250	1300
Duplex mast with free lift (2.5m MFH)	2500	1300	1805	3025	1090	1500
Duplex mast with free lift (3.0m MFH)	3000	1550	2055	3525	1210	1500
Duplex mast with free lift (3.3m MFH)	3300	1700	2205	3825	1230	1500
Duplex mast with free lift (3.5m MFH)	3500	1800	2305	4025	1250	1300
Triflex mast with free lift (4.5m MFH)	4500	1570	2120	5080	1415	800
Triflex mast with free lift (5.0m MFH)	5000	1740	2280	5560	1460	600
Triflex mast with free lift (5.6m MFH)	5600	1940	2480	6160	1500	400

\* : Standard

Specifications

Characteristics			
1.1	Manufacturer(abbreviation)		Hyundai
1.2	Model		15EST
1.3	Drive type		Electric
1.4	Operator type		Pedestrian
1.5	Load capacity/rated load	Q	kg 1500
1.6	Load center distance	c	mm 600
1.8	Load distance	x	mm 677
1.9	Wheelbase	y	mm 1420
Weight			
2.1	Service weight(with battery)		kg 1210
2.2	Axle load, front/rear, laden		kg 1470 / 1310
2.3	Axle load, front/rear, unladen		kg 910 / 370
Wheels/Chassis			
3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		Polyurethane
3.2	Tyre size, front		φ 250×70
3.3	Tyre size, rear		φ 80×84
3.4	Additional wheel(dimension)		φ 150×60
3.5	Wheels number, front/rear ( x = driven wheels )		1x+2 / 4
3.6	Tread, front	b10	mm 580
3.7	Tread, rear	b11	mm 1040
Dimension			
4.2	Height of mast, lowered	h1	mm 2055
4.3	Free lift height( optional)		1550
4.4	Lift height	h3	mm 3000
4.5	Max. height of mast, extended	h4	mm 3525
4.9	Min. /Max. height of operation handle, in driving position	h14	mm 670 / 1300
4.15	Height, lowered	h13	mm 70
4.19	Overall length	l1	mm 1985
4.20	Length to fork face	l2	mm 915
4.21	Overall width of truck body	b1	mm 1170
4.22	Fork dimension	s/e/l	mm 40 / 100 / 1070
4.25	Overall width of fork	b5	mm 200-800
4.32	Wheelbase ground distance	m2	mm 35
4.33	Aisle width, with pallet 1000x1200 crosswise	Ast	mm 2480
4.34	Aisle width, with pallet 800x1200 lengthwise	Ast	mm 2465
4.35	Turning radius	Wa	mm 1612
Performance Data			
5.1	Traveling speed, laden/unladen		km/h 5.8 / 6
5.2	Lifting speed, laden/unladen		m/s 0.14 / 0.23
5.3	Lowering speed, laden/unladen		m/s 0.39 / 0.26
5.8	Max. gradeability, laden/unladen		% 8 / 15
5.10	Traveling brake		Electromagnetic brake
Motor			
6.1	Driving motor power		kW 1.5 (AC)
6.2	Lifting motor power		kW 3.2
6.4	Battery voltage/rated capacity		V/Ah 24 / 300
6.5	Battery weight		kg 260
6.7	Battery dimension (L×W×H)		mm 675×254×540
Other details			
8.4	Noise level at operator's ear, according to DIN12053	dB	A 70

## Manual Hand Pallet Truck

# 20HP/25HP/25HPW/30HP

### Standard Configurations

- Polyurethane drive steering wheel
- Double Polyurethane Fork wheels
- Overall Fork Width x Length : 550mm x 1,150mm
- Weighing Scale (25HPW)
- Rubber Wrapped handgrip (25HP/25HPW)

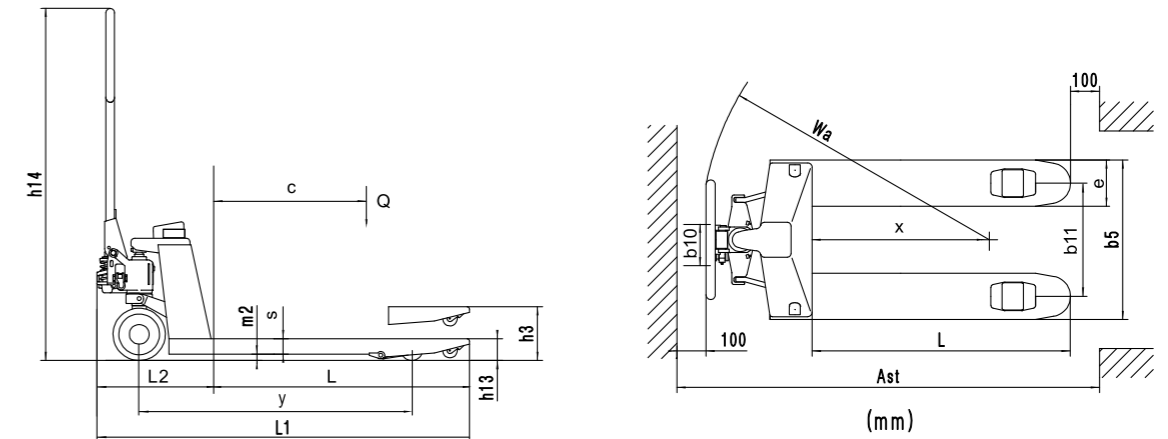
### Option

- Nylon drive wheel and double nylon fork wheel
- Rubber drive wheel and double Polyurethane Fork wheel
- Polyurethane drive wheel and single Polyurethane Fork wheel (20HP/25HP/25HPW)
- Nylon drive wheel and single nylon Fork wheel (20HP/25HP/25HPW)
- Extra long foot pedal release (25HP/25HPW/30HP)
- Quick lift (5 strokes to reach max.height) (25HP/25HPW)
- Fork length (mm) 800, 900, 1000, 1100
- Overall Fork width x Length : 685mm x 1,220mm



■ photo may include optional equipment.

## Dimension & Specifications (according to VDI 2198)



Characteristics			Hyundai	Hyundai	Hyundai	Hyundai
1.1	Manufacturer(abbreviation)		Hyundai	Hyundai	Hyundai	Hyundai
1.2	Model		20HP	25HP	30HP	25HPW
1.3	Drive type		manual	manual	manual	manual
1.4	Operator type		hand	hand	hand	hand
1.5	Load capacity/rated load	kg	2000	2500	3000	2500
1.6	Load center distance	c mm	22	32	40	40
1.8	Load distance	x mm	600	600	600	600
1.9	Wheelbase	y mm	1136	1153	1124	1124
Weight						
2.1	Service weight	kg	55	58	63	60
Wheels/Chassis						
3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		polyurethane	polyurethane	polyurethane	polyurethane
3.2	Tyre size, front(Steering wheel)	mm	Φ 160	Φ 200	Φ 200	Φ 200
3.3	Tyre size, rear(Fork wheel single)	mm	Φ 70x80	Φ 80x93	-	Φ 80x93
	Tyre size, rear(Fork wheel tandem)	mm	Φ 70x60	Φ 80x70	Φ 80x70	Φ 80x70
3.5	Wheels number, front/rear ( x = driven wheels )		2x+2/4	2x+2/4	2x+2/4	2x+2/4
3.6	Tread, front	b10 mm	108	111	120	120
3.7	Tread, rear	b11 mm	400/535	390/525	390/525	390/525
Dimension						
4.4	Max. Lift height	h3 mm	190	195	200	200
4.9	Min. /Max. height of operation handle, in driving position	h14 mm	1176.5	1224	1224	1224
4.15	Height, lowered	h13 mm	75	85	85	85
4.19	Overall length	l1 mm	1520	1543	1533	1533
4.20	Length to fork face	l2 mm	370	393.5	384	384
4.22	Fork dimension	s/e/l mm	53/150/1150	53/160/1150	45/160/1150	45/160/1150
4.25	Overall width of fork	b5 mm	550/685	550/685	550/685	550/685
4.32	Wheelbase ground distance	m2 mm	22	32	32	32
4.33	Aisle width, with pallet 1000x1200 crosswise	Ast mm	1720	1743	1733	1733
4.34	Aisle width, with pallet 800x1200 lengthwise	Ast mm	1770	1793	1783	1783
4.35	Turning radius	Wa mm	1265	1276	1266	1266