

# Hyundai Warehouse Equipment

Electric Pallet truck, Electric Stacker and Manual Hand Pallet Truck

MOVING YOU FURTHER

HYUNDAI CONSTRUCTION EQUIPMENT



■ photo may include optional equipment.

 **HYUNDAI CONSTRUCTION EQUIPMENT**

55, bundang-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea

PLEASE CONTACT

Electric Pallet truck

15/18/20EP



■ photo may include optional equipment.

Standard Configurations

<b>15EP</b> <ul style="list-style-type: none"><li>• Lifting Capacity : 1,500kg</li><li>• DC Brushless Drive Motor 0.9kW</li><li>• Lifting Motor : 0.8kW</li><li>• Drive Wheel : <math>\Phi</math>195x70mm</li><li>• Double Fork wheel : <math>\Phi</math>80x70mm</li><li>• Hourmeter, Battery Discharge Indicator (BDI) &amp; lift cut off</li><li>• Overall Fork Width x Length : 550mm x 1,150mm</li><li>• Turtle mode switch</li><li>• Built-in Charger</li><li>• Curtis Tiller with Convenient Control buttons</li><li>• Emergency switch</li><li>• Belly switch</li></ul>	<b>18EP</b> <ul style="list-style-type: none"><li>• Lifting Capacity : 1,800kg</li><li>• AC Drive Motor 1.2kW</li><li>• Lift motor 1.2kW</li><li>• Curtis controller</li><li>• Drive wheel : <math>\Phi</math>250x70mm</li><li>• Double Fork wheel : <math>\Phi</math>80x70mm</li><li>• Hourmeter, Battery Discharge Indicator (BDI) &amp; lift cut off</li><li>• Overall Fork Width x Length : 550mm x 1,150mm</li><li>• Turtle mode switch</li><li>• Curtis Tiller with Convenient Control buttons</li><li>• Side Battery Removal</li><li>• Emergency switch</li><li>• Belly switch</li></ul>	<b>20EP</b> <ul style="list-style-type: none"><li>• Lifting Capacity : 2,000kg</li><li>• AC Drive Motor 1.2kW</li><li>• Lift motor 1.2kW</li><li>• Curtis controller</li><li>• Drive wheel : <math>\Phi</math>250x70mm</li><li>• Double Fork wheel : <math>\Phi</math>82x98mm</li><li>• Hourmeter, Battery Discharge Indicator (BDI) &amp; lift cut off</li><li>• Overall Fork Width x Length : 550mm x 1,150mm</li><li>• Turtle mode switch</li><li>• Curtis Tiller with Convenient Control buttons</li><li>• Side Battery Removal</li><li>• Emergency switch</li><li>• Belly switch</li></ul>
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Advantages

<b>SAFETY AND PRODUCTIVITY</b> <ul style="list-style-type: none"><li>• Advanced AC control system eliminats directional contactors, which brings minimal maintenance requirements. (18/20EP Only)</li><li>• Intelligentized regenerative brake system: increase overall truck performance.</li><li>• Side-way battery with roll-out system. (18/20EP Only)</li><li>• Emergency switch.</li><li>• Turtle mode switch</li><li>• Proportional Travel speed control.</li><li>• Belly switch.</li></ul>	<b>STRUCTURAL</b> <ul style="list-style-type: none"><li>• The motor structure is water-proof and dust-proof(IP 44)</li><li>• Spring-loaded castors improve lateral stability on uneven floors and enhance truck performance and service life.</li><li>• Welded type fork</li></ul>	<b>SERVICEABILITY</b> <ul style="list-style-type: none"><li>• CANbus technology reduces wiring complexity.</li><li>• All pivot points have grease fitting and serviceable to reduce component-wearing</li></ul>
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Tiller Head



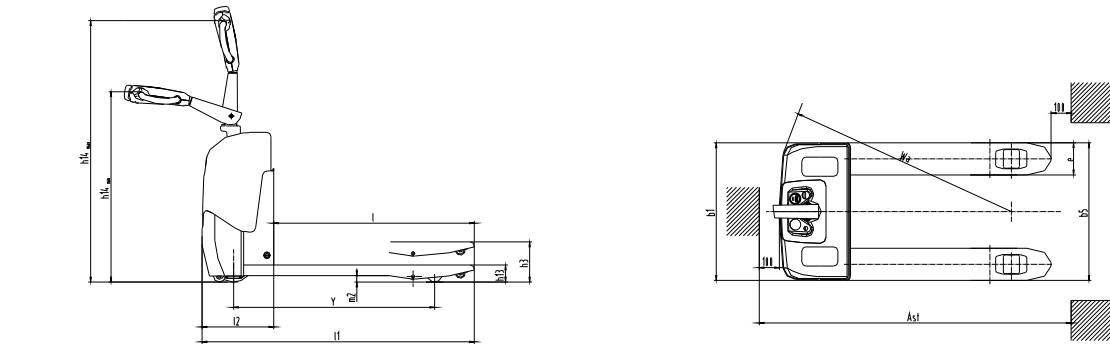
Curtis Tiller with convenient control buttons (standard)



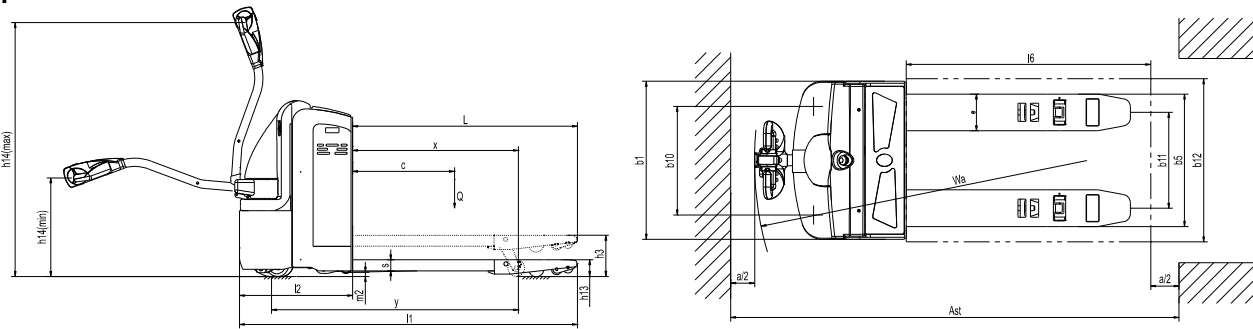
Germany Frei Tiller (option)

Dimension

15EP



18/20EP



Option

15EP

- Load backrest 1220mm
- Fork length (mm)  
900, 1000, 1220
- German Frei Tiller
- Single Fork Wheel (∅80x93mm)
- Overall Fork width x length : 685x1,150mm

18EP

- Single Fork Wheel (∅82x98mm)
- Cold Storage Specifications -18°C
- Battery (24V/160Ah)
- Integrated Charger (24V/15A)
- Separate Charger (24V/15A)
- Battery trolley
- Foot protection strip
- Key pad ignition
- Load backrest 1220mm
- Fork length(mm)  
800, 900, 1,000, 1,220, 1,600, 1,800, 2,400mm

(1,800, 2,400 : 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, 1,000, 1,220, 1,600, 1,800, 2,400mm  
(1,800, 2,400 : rated load capacity 1.5t )
- German Frei Tiller
- Overall Fork width x length : 685x1,150mm

Specifications (according to VDI 2198)

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



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 Covenient Control Buttons
- EPS(Electric Power Steering)
- With Platfrom
- 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 Covenient Control Buttons
- EPS(Electric Power Steering)
- With Platfrom
- Side Battery Removal

Advantages

SAFETY AND PRODUCTIVITY

- Advanced AC control system eliminats 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

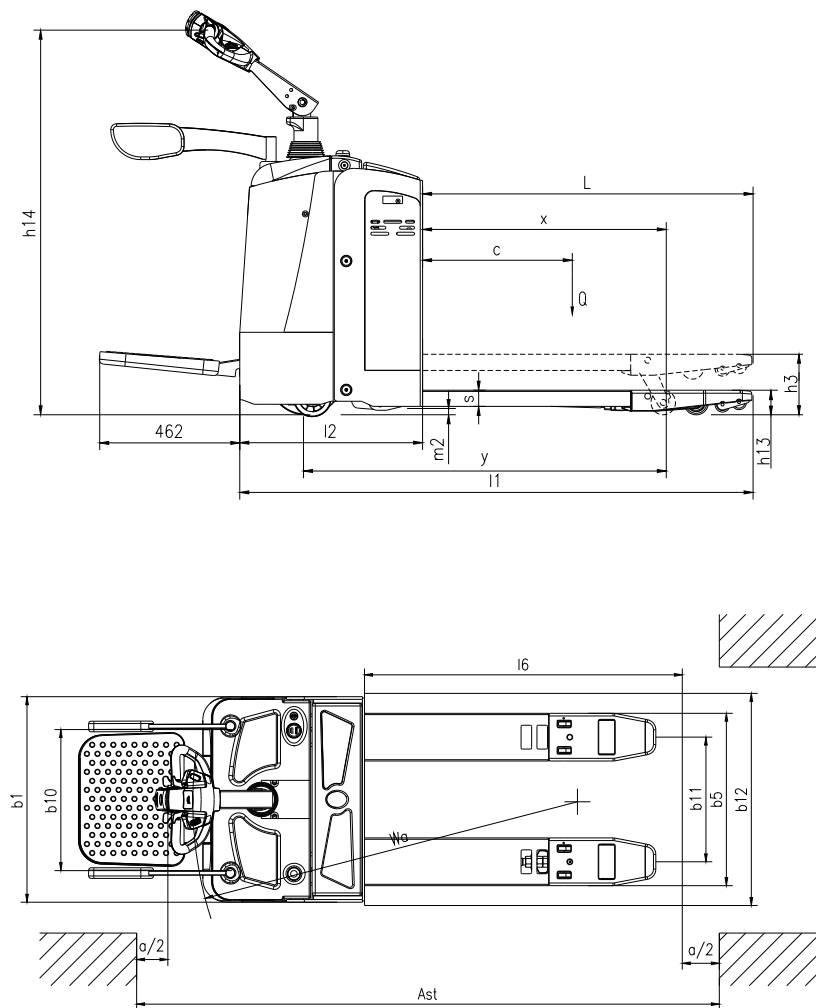


Curtis Tiller with convenient control buttons (standard)



Germany Frei Tiller (option)

Dimension



Option

- 7km/h of Drive Speed (1.2kW Drive motor)
- Single Fork Wheel :  $\phi 82 \times 126$ 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°C
- Key pad ignition
- German Frei Tiller
- Load backrest 1,220mm
- Without EPS
- Battery trolley
- Fork length(mm)  
800, 900, 1,000, 1,220, 1,600, 1,800, 2,400  
(1,800, 2,400 : rated load capacity 1.5t )
- Overall Fork width  $\times$  length : 685mm  $\times$  1,150mm

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			Φ 250×80	Φ 250×80
3.3	Tyre size, rear			Φ 82×98	Φ 82×98
3.4	Additional wheels(dimensions)			Φ 127×57	Φ 127×57
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	610	610
4.21	Overall width of truck body	b1	mm	775	775
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	28	28
4.33	Aisle width, with pallet 1000x1200 crosswise	Ast	mm	1960	1960
4.34	Aisle width, with pallet 800x1200 lengthwise	Ast	mm	2120	2120
4.35	Turning radius	Wa	mm	1600	1600
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	0.039/0.056	0.039/0.056
5.3	Lowering speed, laden/unladen		m/s	0.064/0.05	0.064/0.05
5.7	Gradeability, laden/unladen		%	6/12	6/12
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	1.2	1.2
6.4	Battery voltage/rated capacity		kg	24/210	24/240
6.5	Battery weight		kg	210	240

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 Covenient control Battons
- Initial Lift (120mm)

Advantages

SAFETY AND PRODUCTIVITY

- Advanced AC control system eliminats directional contactors, which makes the minimal maintenance requirements.
- Intelligentized 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 contol buttons



Germany Frei Tiller (Option)





Electric Stacker

10/12/15ES



■ photo may include optional equipment.

Standard Configurations

<b>10ES</b> <ul style="list-style-type: none"><li>• Lifting Capacity : 1,000kg</li><li>• AC Drive Motor 1.2kW / Lift motor 2.2kW</li><li>• Curtis controller</li><li>• Drive wheel : <math>\phi</math>250x70mm</li><li>• Double Fork wheel : <math>\phi</math>80x70mm</li><li>• Hourmeter, battery discharge indicator(BDI) &amp; lift cut off</li><li>• Duplex 3.0m MFH Mast without free lift</li><li>• Overall Fork Width x Length : 570mm x 1,150mm</li><li>• Turtle mode switch</li><li>• Curtis Tiller with Covenient Control Buttons</li><li>• Side Battery Removal</li></ul>	<b>12ES</b> <ul style="list-style-type: none"><li>• Lifting Capacity : 1,200kg</li><li>• AC Drive Motor 1.2kW / Lift motor 2.2kW</li><li>• Curtis controller</li><li>• Drive wheel : <math>\phi</math>250x70mm</li><li>• Double Fork wheel : <math>\phi</math>80x70mm</li><li>• Hourmeter, battery discharge indicator(BDI) &amp; lift cut off</li><li>• Duplex 3.0m MFH Mast without free lift</li><li>• Overall Fork Width x Length : 570mm x 1,150mm</li><li>• Turtle mode switch</li><li>• Curtis Tiller with Covenient Control Buttons</li><li>• Side Battery Removal</li></ul>	<b>15ES</b> <ul style="list-style-type: none"><li>• Lifting Capacity : 1,500kg</li><li>• AC Drive Motor 1.5kW / Lift motor 3.2kW</li><li>• Curtis controller</li><li>• Drive wheel : <math>\phi</math>250x70mm</li><li>• Double Fork wheel : <math>\phi</math>84x80mm</li><li>• Hourmeter, battery discharge indicator(BDI) &amp; lift cut off</li><li>• Duplex 3.0m MFH Mast with free lift</li><li>• Overall Fork Width x Length : 570mm x 1,150mm</li><li>• Turtle mode switch</li><li>• German Frei Tiller with Covenient Control Buttons</li><li>• Proportional Lifting</li><li>• Automatic Drive speed reduction (lifting over 1.8m)</li><li>• Side Battery Removal</li></ul>
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Advantages

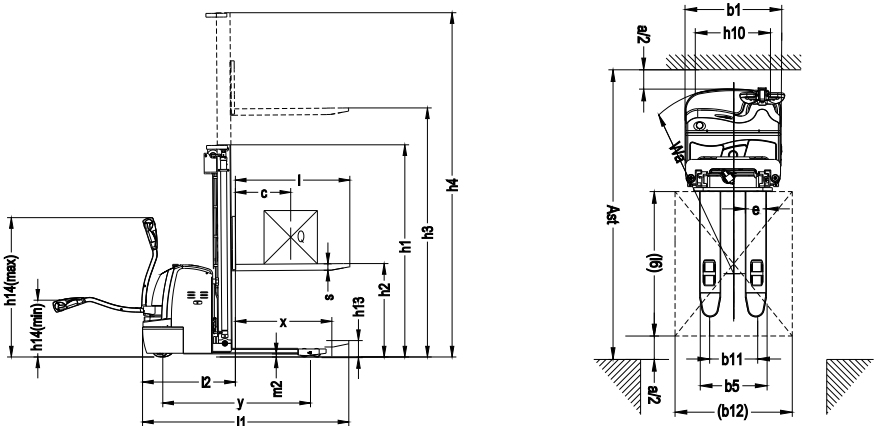
<b>SAFETY AND PRODUCTIVITY</b> <ul style="list-style-type: none"><li>• Advanced AC control system eliminats directional contactors, which brings minimal maintenance requirements.</li><li>• Intelligentized regenerative brake system.</li><li>• Multi-function display with BDI and hour meter etc.</li><li>• Belly switch.</li><li>• Emergency switch.</li><li>• Propotional Travel speed control.</li><li>• Lift limit switch to shut off pump motor at the max. lifting height.</li><li>• Vertical drive motor has a small turning radius.</li><li>• The motor structure is water-proof and dust-proof(IP 44).</li></ul>	<b>SERVICEABILITY</b> <ul style="list-style-type: none"><li>• CANbus technology reduces wiring complexity and increase reliability.</li><li>• Side-way battery with roll-out system.</li></ul>
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Tiller Head

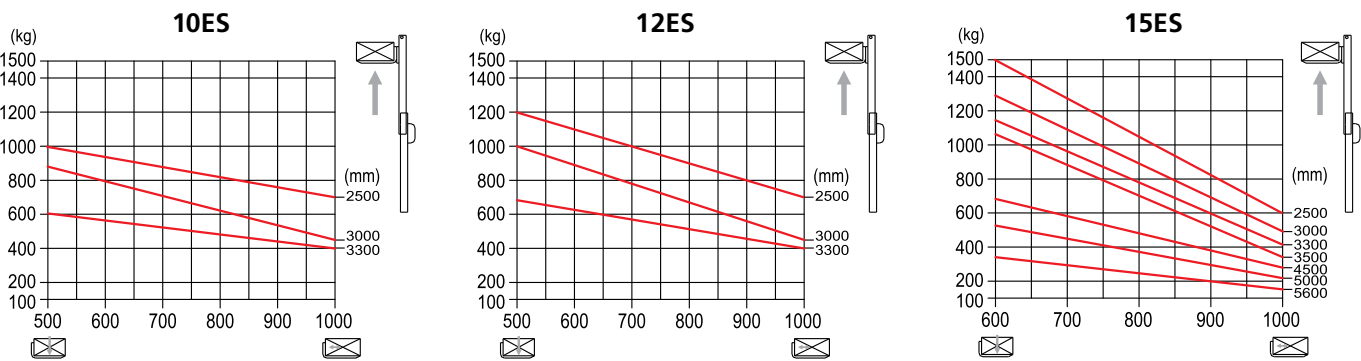
Curtis Tiller with convenient control buttons (Standard for 10/12ES only)	Germany Frei Tiller with convenient contol buttons (Standard for 15ES only)	Normal Germany Frei Tiller (option)



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**
- **Fork length(mm)**  
10/12/15 ES : 800, 900, 1,000, 1,200
- **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 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
	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
1.3	Drive type		electric
1.4	Operator type		pedestrian
1.5	Load capacity/rated load	Q kg	1000
1.6	Load center distance	c mm	500
1.8	Load distance	x mm	697
1.9	Wheelbase	y mm	1335
Weight			
2.1	Service weight(with battery)	kg	See mast Specifications
2.2	Axle load, front/rear, laden	kg	950/770
2.3	Axle load, front/rear, unladen	kg	555/165
Wheels/Chassis			
3.1	Tyres: solud 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	520
3.7	Tread, rear	b11 mm	400
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
4.15	Height, lowered	h13 mm	90
4.19	Overall length	l1 mm	1942
4.20	Length to fork face	l2 mm	792
4.21	Overall width of truck body	b1 mm	820
4.22	Fork dimension	s/e/l mm	60/170(1150)
4.25	Overall width of fork	b5 mm	570
4.32	Wheelbase ground distance	m2 mm	28
4.33	Aisle width, with pallet 1000x1200 crosswise	Ast mm	2400
4.34	Aisle width, with pallet 800x1200 lengthwise	Ast mm	2370
4.35	Turning radius	Wa mm	1525
Performance Data			
5.1	Traveling speed, laden/unladen	km/h	5.8/6.0
5.2	Lifting speed, laden/unladen	m/s	0.11/0.19
5.3	Lowering speed, laden/unladen	m/s	0.16/0.11
5.8	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	24/120
6.5	Battery weight	kg	90

Electric Stacker

# 12ESN



■ 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

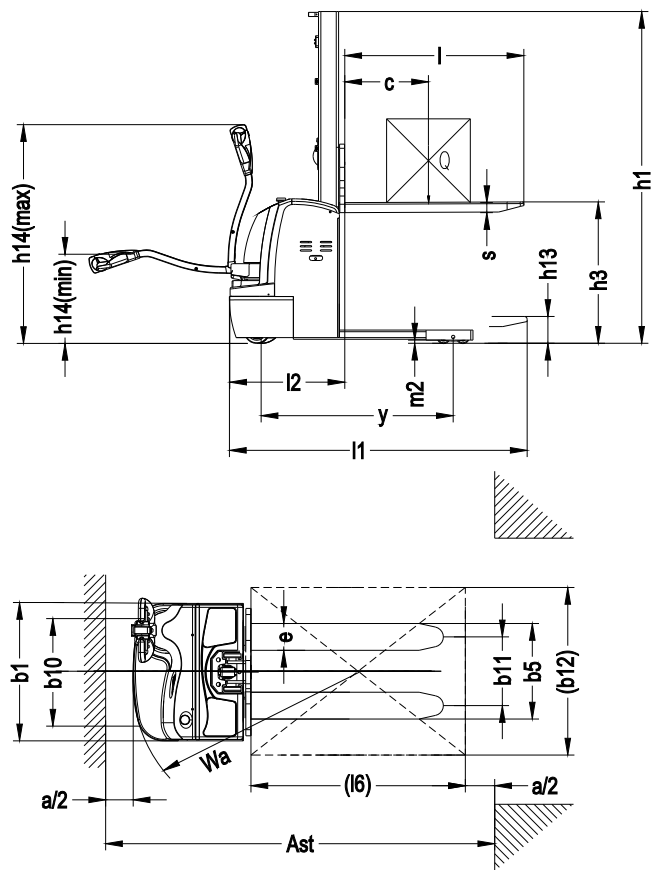


Curtis Tiller with convenient control buttons (standard)

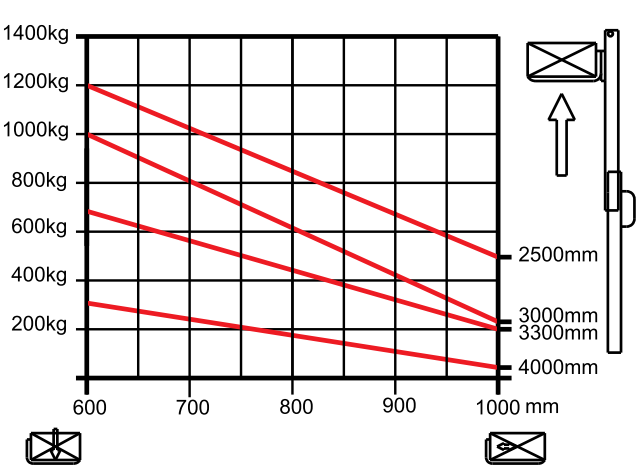


Germany Frei Tiller (option)

Dimension



Lifting capacity



Option

- Single 1.6m MFH Mast
- Fork length(mm)  
800, 900, 1,000, 1,200
- 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	2330	590	1200
Single 1.95m MFH Mast *	1.9	1.9	1980	2330	590	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
1.5			1200
1.6			600
1.8			630
1.9			1146
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: solud 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
3.6			520
3.7			400
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
4.21			820
4.22			60/170/1150
4.25			570
4.32			30
4.33			2180
4.34			2220
4.35			1338
Performance Data			
5.1	Traveling speed, laden/unladen	km/h	5.8/6.0
5.2	Lifting speed, laden/unladen	m/s	0.11/0.19
5.3	Lowering speed, laden/unladen	m/s	0.16/0.11
5.8	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 :  $\phi 250 \times 80$ mm
- Double Fork wheel :  $\phi 84 \times 80$ mm
- 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 eliminats directional contactors, which brings minimal maintenance requirements.
- Mast loweing 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.

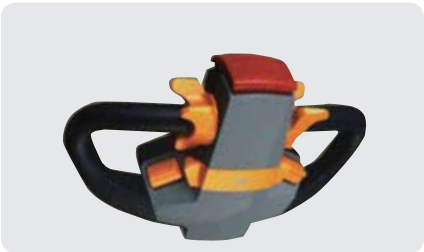
### OPTIMUM STRUCTURAL DESIGN

- 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 debuging and maintaining.
- CANbus technology reduces wiring complexity and increase reliability.
- User of non-contact type switch in the mast

## Tiller Head



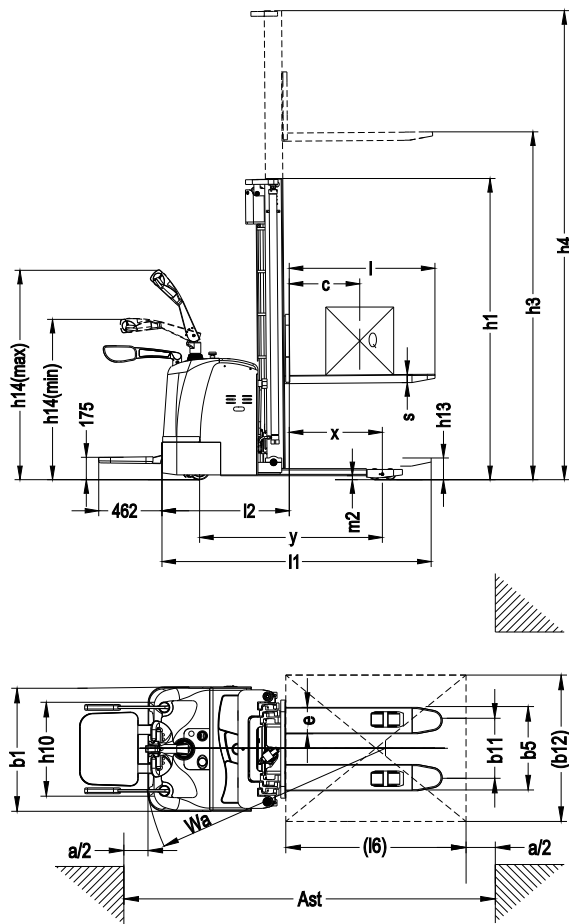
Germany Frei Tiller with convenient control buttons (standard)



Gemany Frei Tiller (option)



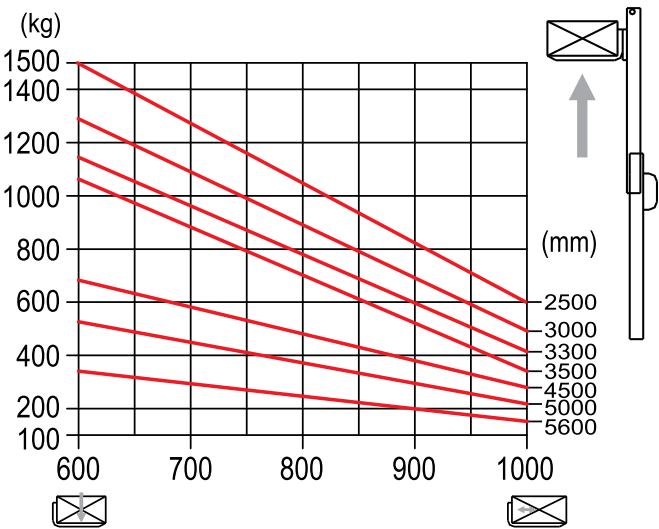
Dimension



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, 1,000, 1,200
- Without EPS

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
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
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	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
3.7	Tread, rear	b11	mm
Dimension			
4.2	Height of mast, lowered	h1	mm
4.3	Free lift height( optional)		See mast Specifications
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	7.8/8.5
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	3.2
6.4	Battery voltage/rated capacity	V/Ah	24/300
6.5	Battery weight	kg	260

Manual Hand Pallet Truck

20HP/25HP/25HPW/30HP



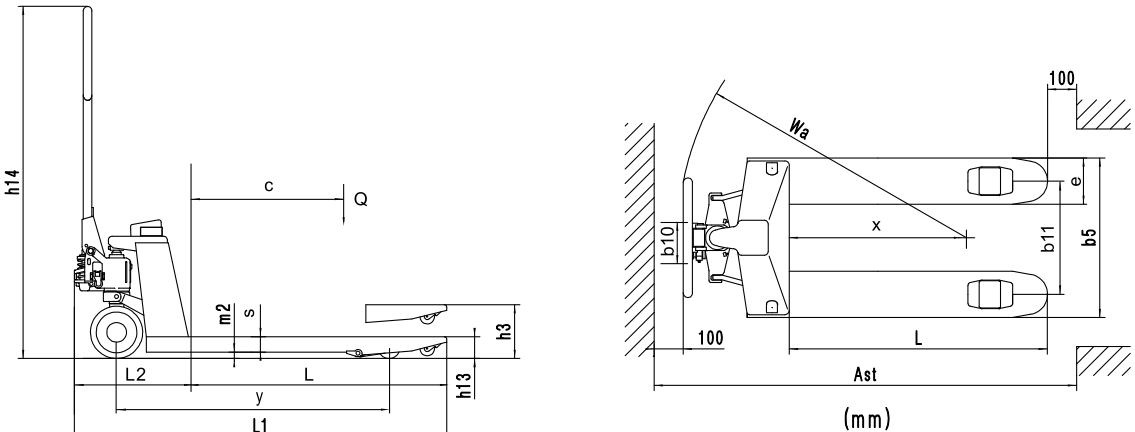
Standard Configurations

- 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

Dimension & Specifications (according to VDI 2198)



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