

# OPX Technical Data Horizontal Order Picker

OPX 20/Li-lon/iGo neo

OPX 25/Li-Ion/iGo neo

OPX 20 Plus/Li-Ion

OPX 25 Plus/Li-Ion

OPX-D 20/Li-lon

OPX-L 20/Li-Ion/iGo neo

OPX-L 20 S/Li-Ion/iGo neo

OPX-L 12/Li-lon/iGo neo

OPX-L 16/Li-Ion







first in intralogistics

1.1	1	Manufacturer				STILL	STILL	STILL	STILL	STILL	STILL
1.2		Manufacturer's type designation				OPX 20/Li-lon	OPX 25/Li-lon	OPX 20 Plus/Li-lon	OPX 25 Plus/Li-lon	OPX-D 20/Li-lon	OPX-L 20/Li-lon
1.3		Drive				Electric	Electric	Electric	Electric	Electric	Electric
8 1.4		Operation				Stand-on	Stand-on	Stand-on	Stand-on	Stand-on	Stand-on
eature		Load capacity/load		Q	ka	2000	2500	2000	2500	1000/1000 (2000)	1000/1000 (2000)
1.6		Load centre distance		C	mm	1200	1200	1200	1200	600	1248/600 for mast stroke <sup>1</sup>
1.8	8	Load distance		х	mm	1615 <sup>2</sup>	1615 <sup>2</sup>	1615 <sup>2</sup>	1615 <sup>2</sup>	944/816 <sup>3</sup>	1910/1782 <sup>3</sup>
1.9		Wheel base		V	mm	2717 <sup>2</sup>	2717 <sup>2</sup>	2720 <sup>2</sup>	2720 <sup>2</sup>	2260/2132 <sup>3,4</sup>	3225/3097 <sup>3, 4</sup>
		Service weight (incl. battery)		,		1178 <sup>2</sup>	1203 <sup>2</sup>	1218 <sup>2</sup>	1243 <sup>2</sup>	1476	1567
2.1 Meights 2.2		Axle load with load	drive end/load end		kg	1120/2058	1188/2515	1236/1982	1322/2421	1278/2198	1539/2028
₿ 2.3		Axle load without load	drive end/load end		<u> </u>	897/281	906/297	933/285	942/301	1024/452	1170/397
3.1		Tyres			0	Polyurethane	Polyurethane	Polyurethane	Polyurethane	Polyurethane	Polyurethane
	2	Tyre size	drive end		mm	Ø 254 x 102	Ø 254 x 102	Ø 254 x 102			
Tyres /chassis	3	Tyre size	load end		mm	Ø 85 x 100	Ø 85 x 80	Ø 85 x 80	Ø 85 x 80	Ø 85 x 60	Ø 85 x 80
(chi)	4	Additional wheels (dimensions)			mm	Ø 150 x 50	Ø 150 x 50	Ø 110 x 60	Ø 110 x 60	Ø 150 x 50	Ø 150 x 50
3.5	5	Number of wheels (x = driven)	drive end/load end			1x - 1/2	1x - 1/4	1x - 2/4	1x - 2/4	1x - 1/4	1x - 1/4
► 3.6	6	Track width	drive end	b <sub>10</sub>	mm	474	474	547	547	474	474
3.7		Track width	load end	b11	mm	348 (368/388/498)	348 (368/388/498)	348 (368/388/498)	348 (368/388/498)	380	370
4.2	2	Height mast lowered		h1	mm	-	-	-	-	See mast table	See mast table
4.3		Free lift		h <sub>2</sub>	mm	-	-	-		See mast table	See mast table
4.4		Lift		h <sub>3</sub>	mm	-	-	-	-	1580	800
4.5		Height mast extended		h4	mm	-	-			See mast table	See mast table
4.6		Initial lift		h₅	mm	130	130	130	130	130	130
4.8		Stand height		h <sub>7</sub>	mm	130 5	1305	1305	1305	1305	130 5
4.9		Height STILL Easy Drive steering wheel in driving position	min./max.		mm	1250 °	1250 6	12506	1250 <sup>6</sup>	1250 6	1250 6
4.		Height support arms		h <sub>8</sub>	mm	-	-			85	85
4.1		5	aisable driver's station			1197	1197	-	-	1197	1197
suois 4.1		Fork height, lowered		h <sub>13</sub>	mm	85	85	85	85	91	91
4.1 4.1		Overhang length Overall length			mm	- 3680	3680	- 3680	- 3680	- 2653 <sup>4</sup>	- 4005 <sup>4</sup>
4. 4.2		Length to face of forks		l <sub>1</sub>	mm mm	1290	1290	1290	1290	15034	15034
oiseg 4.2		Overall width		b <sub>1</sub>	mm	800	800	800	800	800	800
4.2		Fork dimensions		s/e/l	mm	61/172/2390	61/172/2390	61/172/2390	61/172/2390	55/180/1150	60/200/1295
4.2		Fork carriage width		b <sub>3</sub>	mm	-	-	-	-	711	711
4.2		External fork width		b <sub>5</sub>	mm	520 (540/560/670)	520 (540/560/670)	520 (540/560/670)	520 (540/560/670)	560	570
4.3		Ground clearance, loaded, beneath the mast		m1	mm	-	-	-	-	19/143 <sup>3</sup>	13/100 <sup>3</sup>
4.3		Ground clearance, centre of wheel base		m <sub>2</sub>		24/154 <sup>3</sup>	24/154 <sup>3</sup>	24/154 <sup>3</sup>	24/154 <sup>3</sup>	25/155 <sup>3</sup>	25/155 <sup>3</sup>
	34.1	Working aisle width with pallet 1000 x 1200 crossways	raised	A <sub>st</sub>	mm	See additional dimension	ons	See additional dimension	ons	-	
4.3	34.2	Working aisle width with pallet 800 x 1200 crossways	raised	A <sub>st</sub>	mm	See additional dimension	ons	See additional dimension	ons	-	
4.3	34.3	Working aisle width with pallet 800 x l₀ lengthways	raised	A <sub>st</sub>	mm	See additional dimension	ons	See additional dimension	ons	3067 <sup>3, 4</sup>	See additional dimensions
4.3	35	Turning radius		Wa	mm	2893 <sup>2</sup> /2786 <sup>2,3</sup>	2440/2313 <sup>3,4</sup>	3399/3271 <sup>3,4</sup>			
5.1		Driving speed	with/without load		km/h		9/12	11/14	11/14	9/12	9/12
<b>data</b>	1.1	Driving speed, backwards	with/without load		km/h	8/11	8/11	8/11	8/11	8/11	8/11
e 0.2		Lifting speed	with/without load		m/s	0.070/0.111	0.064/0.089	0.070/0.111	0.064/0.089	0.15/0.25	0.159/0.253
<b>uan</b> 5.3		Lowering speed	with/without load		-	0.084/0.067	0.068/0.066	0.084/0.067	0.068/0.066	0.19/0.25	0.218/0.240
5.8 5.9		Maximum gradeability, forks raised	with/without load			7/12 (6.9) 9, 10	7/12 (6.9) 9, 10	7/12 (6.9) 9, 10	7/12 (6.9) <sup>9, 10</sup>	8/15 <sup>°</sup> (8.9) <sup>°</sup>	7/12 <sup>°</sup> (6.6) <sup>°</sup>
		Acceleration time to 10 m	with/without load		S	6.1/4.8	6.4/4.8	6.1/4.8	6.2/4.8	6.6/5.3	6.5/5.3
5.1		Service brake				Electromagnetic	Electromagnetic	Electromagnetic	Electromagnetic	Electromagnetic	Electromagnetic
1.6       2.6       2.6       2.6       2.6       2.6       2.6       2.6       2.6       2.6       2.6       2.6       2.6       2.6       2.6       2.6       2.6       2.6       2.7       2.6       2.7       2.6       2.7       2.7       2.8       2.9 </td <td></td> <td>Driving motor, power S2 = 60 min</td> <td></td> <td></td> <td>kW</td> <td></td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td>		Driving motor, power S2 = 60 min			kW		3	3	3	3	3
engi		Lift motor, power at S3				2.2/5%	2.2/5%	2.2/5%	2.2/5%	2.2/5%	2.2/5%
4.6 tric		Battery voltage/nominal capacity K₅				24/345 - 465	24/345 - 465	24/345 - 465	24/345 - 465	24/345 - 465	24/345 - 465
Elect		Battery weight ±5%				402	402	402	402	402	402
		Energy consumption according to VDI cycle			kWh/h		0.52	0.46	0.52	0.65/0.53 <sup>8</sup>	0.55/0.53 <sup>8</sup>
<b>Wisc</b> 8.1	1	Type of driving control Sound pressure level (driver's ear)			dP(A)	AC control	AC control <70	AC control <70	AC control <70	AC control	AC control <70
- 10					dB(A)	(10	(10	(10	(10	(10	10

<sup>1</sup> With pallet holder 1365/765 mm

<sup>2</sup> With fork length 2390 mm/x = 1615 mm/traction rods; please see the table for more values

<sup>3</sup> Forks or initial lift raised

<sup>4</sup> With tray 54 or Li-lon +114 mm

<sup>5</sup> With load guard (1290 mm height above the forks for OPX-L 20 S and OPX-L 12, 1575 mm for OPX-L 16)

 $^{\rm 6}~$  With raisable driver's station  $h_7$  +30 mm;  $h_{14}$  +87 mm

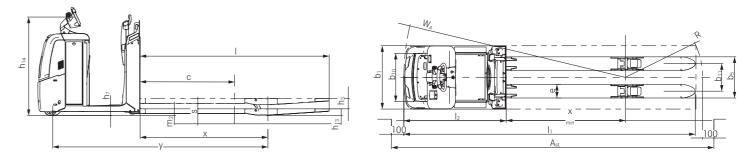
<sup>7</sup> With raisable driver's station +87 mm; with adjustable steering wheel, h<sub>14</sub> adjustment range = +89 mm/-19 mm

<sup>8</sup> With 1000 kg on mast and 1000 kg on initial lift at max initial lift height

<sup>9</sup> In brackets: geometric limit

<sup>10</sup> With fork length 2390 mm; for other fork dimensions, the geometric limit lies between 6.6% (fork length 3100 mm) and 10.7% (fork length 990 mm)

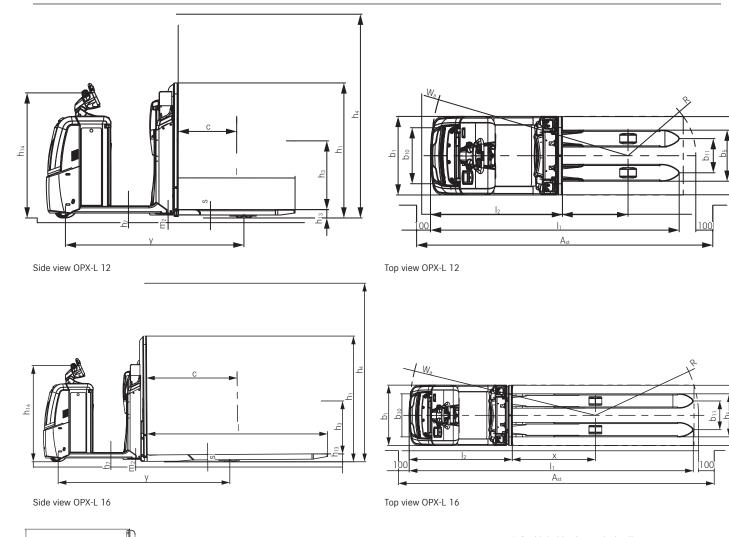
<sup>11</sup> Minimum ground clearance under the chassis with mandatory foot guard

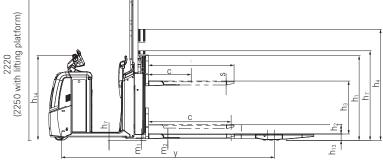


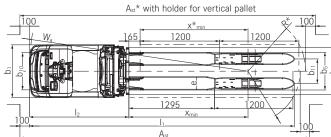


	STILL	STILL	STILL
	OPX-L 20 S/Li-lon	OPX-L 12/Li-lon	OPX-L 16/Li-lon
	Electric	Electric	Electric
	Stand-on	Stand-on	Stand-on
1	2000	1200	1600
	1200	600	1200
	1474/1310 <sup>3</sup>	670	1093
	2661/2497 <sup>3,4</sup>	18234	22794
	1456	1308	1585
	1140/2316	920/1588	944/2241
	1020/436	875/433	1041/544
	Polyurethane	Polyurethane	Polyurethane
	Ø 254 x 102	Ø 254 x 102	Ø 254 x 102
	Ø 85 x 80	Ø 85 x 60	Ø 85 x 80
ļ	Ø 150 x 50	Ø 150 x 50	Ø 150 x 50
	1x - 1/4	1x - 1/4	1x - 1/4
1	474	474	474
i.	368	(348) 388	375
1	13754	13754	16654
i.	700	700	700
1	20754	2075 <sup>4</sup>	2365 <sup>4</sup>
n	-	-	-
1	1305	1305	1305
i i	1250 6	1250 6	1250 6
1	-	-	-
	1197	1197	1197
1	85	86	90
1	-	-	-
	3764 4	25324	37634
	1374 4	13424	13734
	800	800	800
	75/172/2390	55/172/1190	70/190/2390
_	792 <sup>4</sup>	796 <sup>4</sup>	796 <sup>4</sup>
	540	(520) 560	570
	18 <sup>11</sup>		•
	10/710 <sup>3</sup>	30	30
1	-	-	-
i.	40364	28714	40264
1	2838/2675 <sup>3,4</sup>	20074	24594
i.	9/12	9/12	9/12
1	8/11 0.095/0.176	8/11 0.135/0.218	8/11 0.102/0.178
n	0.13/0.13	0.130/0.122	0.123/0.123
	7/12 (2.7) <sup>9</sup>	7,8/15 (6.2) <sup>9</sup>	6,0/15 (5.0) <sup>9</sup>
	6.8/5.4	5.8/4.9	6.4/5.3
	Electromagnetic	Electromagnetic	Electromagnetic
	3	3	3
	2.2/5%	2.2/5%	2.2/5%
	24/345 - 465	24/345 - 465	24/345 - 465
	402	402	402
	0.83	0.54	0.72
	AC control	AC control	AC control
	<70	<70	<70

Top view OPX 20/25/OPX 20 Plus/OPX 25 Plus







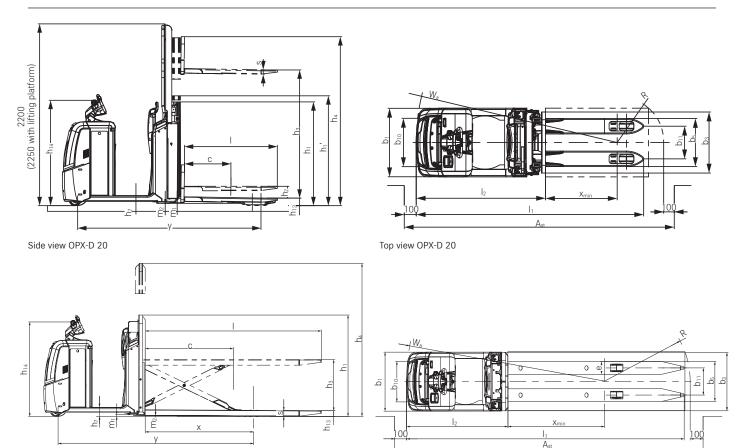
Side view OPX-L 20



				OPX-D 20	OPX-L 20	
Mast				Telescopic	Telescopic	Telescopic
Height, mast lowered		hı	mm	1276	1276	1276
Mast height with used initial lift		h <sub>1</sub> ′	mm	1351	1351	1351
Initial lift <sup>a</sup>		h <sub>2</sub>	mm	150	150	150
Lift height		h3	mm	1580 <sup>b</sup>	800 <sup>b</sup>	1580 <sup>b</sup>
Height mast, extended		h4	mm	2066	1676	2066
	Standard		mm	2200	2200	2200
Height, mast lowered	With raisable driver's station, lowered <sup>b</sup>		mm	2250	2250	2250
	With pallet holder <sup>b</sup>		mm	-	2200	2200
	Standard		mm	2200	2200	2200
Height, mast extended	With raisable driver's station, lowered <sup>b</sup>		mm	2250	2250	2250
	With pallet holder <sup>b</sup>		mm	-	2334	3114

Top view OPX-L 20

 $^{\rm a}$  With increased height  $h_1{}^\prime$   $^{\rm b}$  With finger guard on the accessory bracket, load side, high



Side view OPX-L 20 S

Top view OPX-L 20 S

#### Working aisle width OPX-L 20 and OPX-L iGo neo (with raised support arms)

Fork length	Value with raised pallet	Length support arms	Load distance x	Turning radius W <sub>a</sub> <sup>a</sup>	Working aisle width $A_{st}^{a}$
mm	mm	mm	mm	mm	mm
1295	-	1207	1782	3271 (iGo neo: 3455)	4289 (iGo neo: 4473)
1295	165	1137	1617	3271 (iGo neo: 3455)	4350 (iGo neo: 4534)

<sup>a</sup> With tray 54 or Li-ion +114 mm

#### Fork overview OPX 20/25/20 Plus/25 Plus/20 iGo neo/25 iGo neo

	Fork length I	Load centre distance c	Load distance x <sup>a</sup>	Wheel base Y <sup>a, b, c</sup>	Overall length $I_1 $ <sup>b</sup>	Turning radius Wa <sup>b, d</sup>	Working aisle width $A_{\rm st}^{b, d}$
	mm	mm	mm	mm	mm	mm	mm
	990	500	805	1907	2280 (iGo neo: 2451)	2034 (iGo neo: 2208)	2885 (iGo neo: 3059)
	1190	600	1005	2107	2480 (iGo neo: 2651)	2231 (iGo neo: 2408)	2904 (iGo neo: 3081)
	1450	750	1265	2367	2740 (iGo neo: 2911)	2489 (iGo neo: 2668)	3184 (iGo neo: 3363)
	1650	850	1465	2567	2940 (iGo neo: 3111)	2688 (iGo neo: 2868)	3383 (iGo neo: 3563)
Pressure rod	1650	850	1105	2207	2940 (iGo neo: 3111)	2330 (iGo neo: 2508)	3295 (iGo neo: 3473)
	1800	900	1615	2717	3090 (iGo neo: 3261)	2837 (iGo neo: 3018)	3505 (iGo neo: 3686)
	2150	1100	1605	2707	3440 (iGo neo: 3611)	2827 (iGo neo: 3008)	3792 (iGo neo: 3973)
	2150	1100	1375	2477	3440 (iGo neo: 3611)	2598 (iGo neo: 2778)	3766 (iGo neo: 3946)
	2390 °	1200	1845	2947	3680 (iGo neo: 3851)	3065 (iGo neo: 3248)	4122 (iGo neo: 4305)
	2390 <sup>f</sup>	1200	1615	2717	3680 (iGo neo: 3851)	2837 (iGo neo: 3018)	3969 (iGo neo: 4150)
	2390	1200	1845	2947	3680 (iGo neo: 3851)	3015 (iGo neo: 3197)	3989 (iGo neo: 4171)
Tractice and	2390	1200	1615	2717	3680 (iGo neo: 3851)	2786 (iGo neo: 2967)	3964 (iGo neo: 4145)
Traction rod	2900	1500	2125	3227	4190 (iGo neo: 4361)	3293 (iGo neo: 3477)	4554 (iGo neo: 4738)
	3100	1600	2125	3227	4390 (iGo neo: 4561)	3293 (iGo neo: 3477)	4819 (iGo neo: 5003)

<sup>a</sup> With lowered forks; with fully raised forks and pressure rod -57 mm; for traction rod -108 mm

<sup>b</sup> With battery tray 54 or Li-Ion +114 mm

° For OPX 20 Plus and OPX 25 Plus +3 mm

 $^{\rm d}$  With fully raised forks; with lowered forks  $W_{\rm a}$  for pressure rods +57 mm,  $W_{\rm a}$  for traction rod +108 mm

<sup>e</sup> Long wheel base suitable for accommodating up to 3 Euro-pallets crossways

<sup>f</sup> Short wheel base suitable for up to 2 Euro-pallets lengthways

High handling performance thanks to load capacity of up to 2,500 kg

Simultaneous steering, lifting and driving without changing grip using the STILL Easy Drive steering wheel

High availability due to optionally available lateral battery change and Li-lon technology



#### OPX 20/25

Be it retail trade, automotive or food industry: the STILL OPX horizontal order picker with a load capacity of up to 2.5 tonnes is an innovative all-rounder. Its versatility makes it the optimal vehicle for every application profile. Ever efficient, reliable and inspiring in its dynamic virtues. The operating concept represents the biggest evolutionary steps since the invention of the wheel: Try the height-adjustable STILL Easy Drive steering wheel with an integrated display. You will have never driven a vehicle more intuitively or manoeuvred a 12 km/h fast horizontal order picker more comfortably as well as precisely - all of this without changing grip.

If desired, the OPX can literally propel you, too - with the optionally avaible raisable driver's station. This not only raises the cabin to a picking height of 2.80 m, but the STILL Easy Drive steering wheel rising as well. This means you can manoeuvre the vehicle at this level and directly move to the next picking station, saving valuable time. Battery capacities of up to 620 Ah allow for an extensive range. All models are also available with Li-lon drive: this means that short interim charging breaks allow for 24-hour operational readiness.

High handling performance thanks to outstanding driving dynamics

Unlimited robustness thanks to solid build and metal covers

Outstanding ergonomics thanks to optional pneumatically-damped driver's station and adjustable STILL Easy Drive steering wheel



#### OPX 20/25 Plus

Are you looking for a particularly fast horizontal order picker boasting the best driving dynamics available in the market? The STILL OPX 20/25 Plus means you have found exactly that. Move loads of up to 2.5 tonnes at top speeds of up to 14 km/h through your storage aisles with absolute precision. The exceptional suspension with five wheels makes for an unrivalled driving experience. Smooth and safe cornering is guaranteed by the Curve Speed Control assistance system: depending upon steering angle the system automatically reduces speed to maximise cornering with guaranteed safety! The optional air-sprung driver's station is a distinct and strong asset during long working periods. The damping can be adjusted individually to match the driver's weight, offering the best human vibration values in its class. Naturally, the OPX 20/25 Plus also features the innovative STILL Easy Drive steering wheel as standard for utmost in intuitiveness and easy operation.

High load capacity of up to 1,200 kg for heavy loads

Ideal for even the narrowest aisles thanks to compact vehicle dimensions

Maximised operator safety and low-impact transport thanks to the raising of the load guard mast lift actuation

#### OPX-L 12

Power, ergonomics and manoeuvrability are the hallmarks of the OPX-L 12: Thanks to its mast picked goods of up to a total weight of 1,200 kg can be lifted to a working height of up to 786 mm – back-friendly ergonomics as standard. The lift and lower buttons provide even more comfort. The vehicle raises and lowers the pallet depending

on the loading condition. You benefit from having the optimum order picking height at all times. The lift function allows pallets to be stacked lengthwise. In combination with the high manoeuvrability, you can make better use of existing storage space, down to the last centimetre.

High manoeuvrability when transporting two pallets

Back-friendly picking of up to 1,600 kg

Pallets can be lifted length- or crossways thanks to short support arms and long forks

#### OPX-L 16

The OPX-L 16 is capable of transporting two pallets simultaneously with a minimum turning circle. An ideal prerequisite for the effective use of all available storage space and highly efficient picking of goods. In combination with the innovative STILL Easy Drive steering wheel you gain better control over the full range of precise manoeuvrability to quickly deliver two fully laden pallets to their destination. The short support arms combined with the swiveling forks add up to a further advantage: You can even stack pallets! This can be done lengthwise and crosswise up to a height of 790 mm. The OPX-L 16 is definitely a true all-rounder.

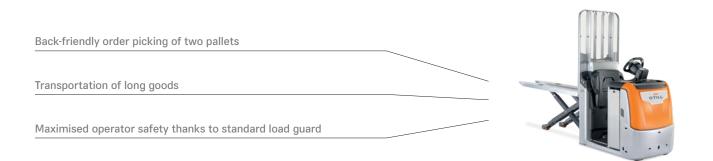
#### OPX Horizontal Order Picker Thrillingly Dynamic

Shorter picking routes to pallets to enhance picking performance and ensure back-friendly picking thanks to the special vehicle design High driving dynamics in curves with an optimised centre of gravity Optional raisable driver's station for order picking in the first level

#### OPX-L 20

What do you do when the first pallet is fully loaded? With the OPX-L 20 you simply switch round to the second pallet on board and carry on picking, always on the shortest route to the next pallet. This is how it works: You load the picker with two empty pallets. One pallet is folded vertically upwards on the back of the fork and then the second is placed next to it. You can now start loading the horizontal pallet. After that work is done, the fully loaded pallet is simply lowered and the

vehicle moved forward until the pallet reaches the fork tips. The pallet on the back of the fork is now folded down onto the free part of the fork and work continues. Comfortable, back-friendly order picking of up to 2,000 kg at variable working heights of up to 891 mm. Thanks to the vehicle's high driving stability, based on the low centre of gravity, the goods can be quickly brought to their destination even on curvy routes.



#### OPX-L 20 S

The OPX-L 20 S also raises job motivation - thanks to the scissor lift the best ergonomic working height can be set to match the drivers' size and loading status up to a height of 785 mm. Back-friendly working is just one aspect of this intelligent order picking vehicle: With a fork length of 2,390 mm, the OPX-L 20 S can easily handle two Euro-

pallets concurrently. At the same time it is strong enough to lift a

total load of up to 2,000 kg. The long forks in combination with the STILL Easy Drive steering wheel make the innovative horizontal order picker perfect for the transportation of long goods, for example in the furniture industry. Apropos long: Its working hours are also long thanks to extra large battery capacities and the optional Li-lon technology. The OPX-L 20 S can do long for longer.

High handling capacity when transporting non-stackable pallets of up to 2,000 kg

Compact dimensions ensure maximum manoeuvrability

Maximum safety thanks to optional intelligent LED daytime running lights

#### OPX-D 20

Twice as efficient: The OPX-D 20 integrates all the benefits offered by the OPX series - plus an extra pallet. The compact double-decker vehicle can transport two separately forked pallets at the same time. This is ideal for pressure-sensitive goods such as yogurt or fruit. Nonetheless, the vehicle offers unimpeded views to the front and a minimal turning circle: The OPX-D 20 carries two pallets of up to 1,000 kg above instead of behind one another. Battery capacities of up to 620 Ah and a maximum speed of 12 km/h ensure fast working over long periods. The optional STILL Li-lon technology even enables operations round the clock.





A variety of access control options: optional access via FleetManager or PIN code and standard access via key switch



Optional lateral battery changes guarantee maximised availability and best user/ driver ergonomics



Optional folding seat for improved comfort over longer trips



Optional foldable step for sporadic picking at first level



Unique STILL Easy Drive steering wheel for best driving experience and control of all functions without changing grip



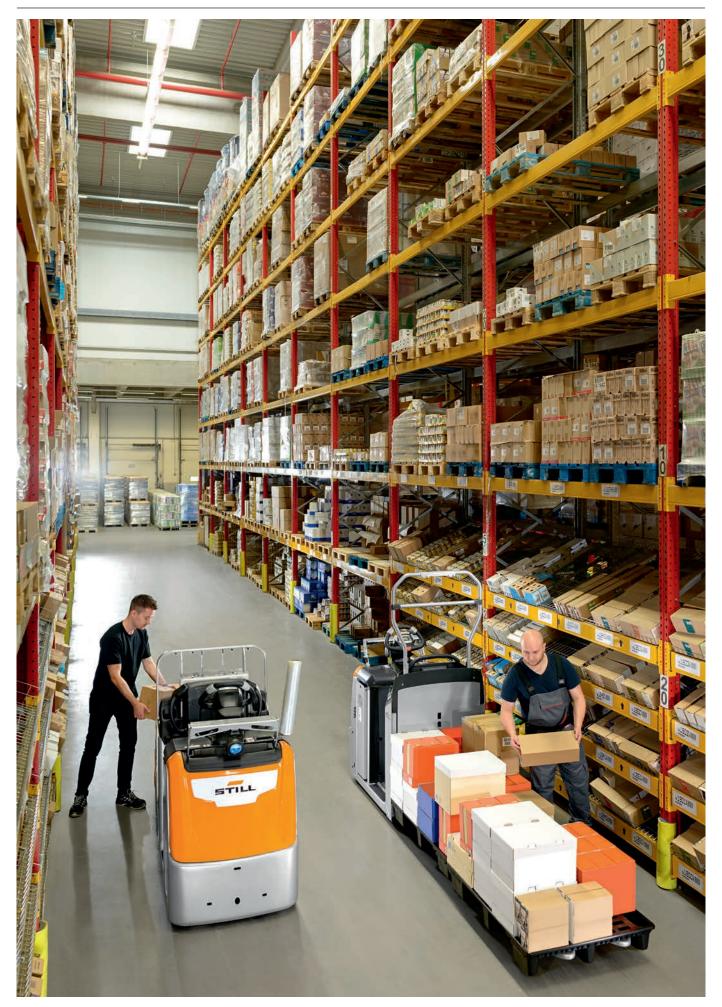
Optional STILL Safety Light for better visibility of vehicle and enhanced safety



Double-sided pedestrian mode for improved handling even during high picking densities



Maximum ergonomics due to the height-adjustable steering wheel and improved angle for individual driver preferences



#### OPX iGo neo Autonomous Horizontal Order Picker The Smart Way

This specification sheet, which conforms to VDI guidelines 2198 and 3597, provides the technical values for the standard equipment only. Different tyres, other masts, the use of accessories, etc., may result in other values.

1.1 Manufacturer			STILL	STILL	STILL	STILL	STILL
1.2 Manufacturer's type designation			OPX 20 iGo neo	OPX 25 iGo neo	OPX-L 20 iGo neo	OPX-L 20 S iGo neo	OPX-L 12 iGo neo
1.3 Drive			Electric	Electric	Electric	Electric	Electric
1.4 Operation			Stand-on	Stand-on	Stand-on	Stand-on	Stand-on
1.5 Load capacity/load	Q		kg 2000	2500	2000/1000 for mast stroke	2000	1200
1.6 Load centre distance	С		mm 1200	1200	1248/600 for mast stroke 1	1200	600
1.8 Load distance	Х		mm 1615 <sup>2</sup>	1615 <sup>2</sup>	1910/1782 <sup>3</sup>	1474/1310 <sup>3</sup>	670
1.9 Wheel base	У		mm 2717 <sup>2</sup>	2717 <sup>2</sup>	3225/3097 <sup>3,4</sup>	2661/2497 3, 4	1823 4
2.1 Service weight (incl. battery)			kg 1265 <sup>2</sup>	1290 <sup>2</sup>	1654	1543	1395
2.2 Axle load with load	drive end/load end		kg 1211/2054	1279/2511	1629/2025	1231/2312	1015/1580
2.3 Axle load without load	drive end/load end		kg 988/277	997/293	1260/394	1111/432	967/428
3.1 Tyres			Polyurethane	Polyurethane	Polyurethane	Polyurethane	Polyurethane
3.2 Tyre size	drive end		mm Ø 254 x 102	Ø 254 x 102	Ø 254 x 102	Ø 254 x 102	Ø 254 x 102
3.3 Tyre size	load end		mm Ø 85 x 100	Ø 85 x 80	Ø 85 x 80	Ø 85 x 80	Ø 85 x 60
8.4 Additional wheels (dimensions)			mm Ø 150 x 50	Ø 150 x 50	Ø 150 x 50	Ø 150 x 50	Ø 150 x 50
3.5 Number of wheels (x = driven)	drive end/load end		1x - 1 / 2	1x - 1 / 4	1x - 1 / 4	1x - 1 / 4	1x - 1 / 4
.6 Track width	drive end bio	10	mm 474	474	474	474	474
.7 Track width	load end b <sub>11</sub>		mm 348 (368/388/498)	348 (368/388/498)	370	368	(348) 388
4.2 Height mast lowered	hı	1	mm -	-	See mast table	1375 5	1375 5
4.3 Free lift	h <sub>2</sub>		mm -	-	See mast table	-	-
4.4 Lift	h <sub>3</sub>	3	mm 130	130	800	700	700
4.5 Height mast extended	h <sub>4</sub>		mm -	-	See mast table	2075 5	2075 5
4.6 Initial lift	h5	5	mm -	-	130	-	-
4.8 Stand height	h <sub>7</sub>		mm 130	130	130	130	130
4.9 Height steering wheel in driving position	min./max. h <sub>14</sub>	14	mm 1250 °	1250 6	1250 6	1250 6	1250 6
4.10 Height support arms	h <sub>8</sub>	В	mm -	-	85	-	-
4.14 Stand height, extended	with raisable driver's station h12	12	mm 1197	1197	1197	1197	1197
4.15 Fork height, lowered	h13	13	mm 85	85	91	85	86
4.19 Overall length	I <sub>1</sub>		mm 3851	3851	41764	3935 4	2703 4
4.20 Length to face of forks	2		mm 1461	1461	1674 4	1545 4	15134
4.21 Overall width	bı		mm 830	830	830	830	830
4.22 Fork dimensions	s/e	/e/I	mm 61 (78 max)/172/2390	61 (78 max)/172/2390	60 (72 max)/200/1295	75/172/2390	55/172/1190
4.24 Fork carriage width	b <sub>3</sub>	3	mm -	-	711	792 <sup>5</sup>	796 5
4.25 External fork width	bs	5	mm 520 (540/560/670)	520 (540/560/670)	570	540	(520) 560
4.31 Ground clearance, loaded, beneath the mast	mi	11	mm -	-	13/100 <sup>3</sup>	18 <sup>7</sup>	-
4.32 Ground clearance, centre of wheel base	m <sub>2</sub>	12	mm 24/154 <sup>3</sup>	24/154 <sup>3</sup>	25/155 <sup>3</sup>	10/710 <sup>3</sup>	30
4.34 Working aisle width for pallet 800 x I₀ lengthways	raised A <sub>st</sub>	st	mm See additional dimensions	See additional dimensions	See additional dimensions	4216 4	3045 4
4.34.1 Working aisle width with pallet 1000 x 1200 crossways	raised A <sub>st</sub>		mm See additional dimensions	See additional dimensions	-	-	-
4.34.2 Working aisle width with pallet 800 x 1200 crossways	raised A <sub>st</sub>	st	mm See additional dimensions	See additional dimensions	-	-	-
4.35 Turning radius	Wa	la	mm 3075 <sup>2</sup> /2967 <sup>2,3</sup>	3075 <sup>2</sup> /2967 <sup>2,3</sup>	3583/3455 3.4	3019/2855 3, 4	21814
5.1 Driving speed, conventional	with/without load		km/h 9/12	9/12	9/12	9/12	9/12
5.1.1 Driving speed, conventional, backwards	with/without load		km/h 8/11	8/11	8/11	8/11	8/11
5.1.2 Driving speed, autonomous	with/without load		km/h 7.2	7.2	7.2	7.2	7.2
5.2 Lifting speed	with/without load		m/s 0.070/0.111	0.064/0.089	0.159/0.253	0.095/0.176	0.135/0.218
5.3 Lowering speed	with/without load		m/s 0.084/0.067	0.068/0.066	0.218/0.240	0.13/0.13	0.130/0.122
5.8 Maximum gradeability	with/without load		% 7/12 <sup>8</sup>	7/128	7/12 8 (6.6, 5.3) 9	7/12 (2.7) 9	7.8/15 (6.2) 9
5.9 Acceleration time	with/without load		s 6.1/4.8	6.4/4.8	6.5/5.3	6.8/5.4	5.8/4.9
5.10 Service brake			Electromagnetic	Electromagnetic	Electromagnetic	Electromagnetic	Electromagnetic
Driving motor, power S2 = 60 min			kW 3	3	3	3	3
6.2 Lift motor, power at S3			kW 2.2/5%	2.2/5%	2.2/5%	2.2/5%	2.2/5%
6.3 Battery according to DIN 43531/35/36; A, B, C, no			No	No	No	No	No
6.4 Battery voltage/nominal capacity K₅			V/Ah 24/345-465	24/345-465	24/345-465	24/345-465	24/345-465
6.5 Battery weight ±5%			kg 402	402	402	402	402
6.6 Energy consumption according to VDI cycle		k	Wh/h 0.46	0.52	0.55/0.52 10	0.83	0.54
8.1 Type of driving control			AC control	AC control	AC control	AC control	AC control
10.7 Sound pressure level (driver's ear)			dB(A) <70	<70	<70	<70	<70

 $^1$  With holder for vertical pallet 1365/765 mm  $^2$  With fork length 2390 mm/x = 1615 mm/pull bar version; for other forks see page 5, bottom table

<sup>3</sup> With load arms or forks raised

<sup>4</sup> With tray 54 or Li-ion +114 mm

<sup>5</sup> With mandatory load guard (1290 mm height above the forks)
 <sup>6</sup> With height adjustment option for the STILL Easy Drive steering wheel, h<sub>14</sub> setting range = +89 mm/-19 mm

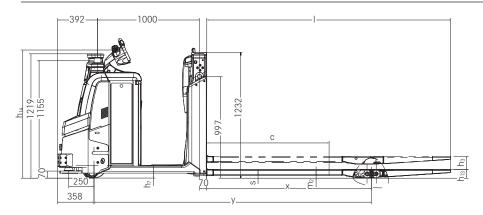
<sup>7</sup> Minimum ground clearance under the chassis with mandatory foot guard

<sup>8</sup> On slope with chamfered edge with forks/arms raised, if possible

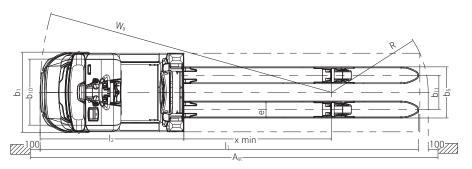
<sup>9</sup> In brackets: geometric limit
 <sup>10</sup> With 1000 kg on the mast and 1000 kg on the initial lift at max. initial lift height



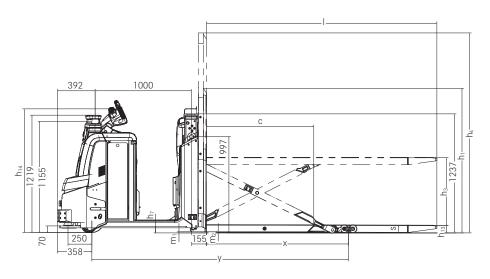
# OPX iGo neo Autonomous Horizontal Order Picker Technical Drawings



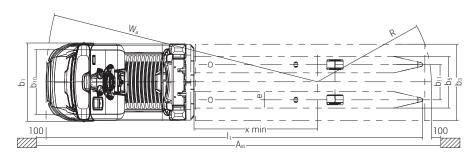
Side view OPX 20 iGo neo



Top view OPX 20 iGo neo



Side view OPX-L 20 S iGo neo



Top view OPX-L 20 S iGo neo

"Autonomous" refers to the ability to act independently. This is the very point where autonomous transport solutions come into play: vehicles that drive, steer, accelerate and brake autonomously. Which other advantages can you expect from autonomous vehicles?

In addition to reducing the workload on employees, occupational safety is also significantly improved: damage is prevented and personal accidents are even completely ruled out. The lithium ion battery and the professional service concept by STILL allow long operating times and maximum availability around the clock. In addition, you also help to protect the environment, as the trucks achieve maximum energy efficiency with lower consumption. And the best thing is: autonomous trucks by STILL can be used directly without any additional installation requirements - you do not have to change your warehouse or your IT infrastructure.



Higher picking performance through autonomous driver assistance operation

Safe and reliable recognition of the operator thanks to the hybrid tracking system, even during Z-picking

Up to 75% less mounting and dismounting during picking



#### OPX iGo neo

You can imagine the autonomous horizontal order picker OPX iGo neo as a reliable colleague who reacts to you and helps to reduce your workload. By means of the latest sensor technology, the vehicle detects its operator, its surroundings, obstacles and distances. A multi-level safety concept and a pedestrian protection system ensure that the OPX iGo neo protects people, warehouse equipment and

loads. The vehicle makes decisions based on the data transmitted and defined algorithms: Obstacles are either avoided or the truck stops when the path is completely blocked. If a slower vehicle drives ahead or if a traffic jam develops, the speed is adapted to the situation. Once

the route is clear again, the OPX iGo neo moves up autonomously. For safety reasons, intersections are only crossed autonomously after the operator has given the go-ahead. The operator can of course operate the vehicle manually at any time - an LED signal indicates the current mode. The OPX iGo neo significantly increases picking performance and reduces picking errors. On the one hand, because the autonomous helper takes over driving and steering, allowing the operator to concentrate fully on his work. On the other hand, up to 75% of the time-consuming and strenuous mounting and dismounting is eliminated and walking distances with loads are greatly reduced.

# OPX iGo neo Autonomous Horizontal Order Picker Detailed Photos



Safety in a new dimension: the optional 3D front camera of the OPX iGo neo detects obstacles over the entire vehicle height



Always in focus: safe and reliable operator recognition thanks to hybrid tracking



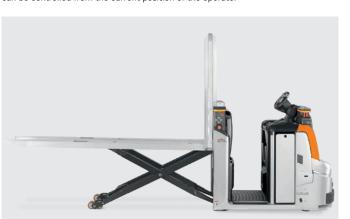
Always well informed: LED signal units indicate the current operating mode of the vehicle to the operator



Maximum safety in series: the pedestrian protection system (PPE) actuates the emergency stop in potentially dangerous situations



Everything under control: with the remote control all important vehicle functions can be controlled from the current position of the operator  $% \left( {{{\bf{n}}_{\rm{c}}}} \right)$ 



The right level: freely adjustable lifting heights on the OPX-L 20 S iGo neo variant for additional ergonomics



Intuitive operation: as an alternative to the remote control, the most important functions can be operated using the keypad on the side



Transport of load carriers up to a width of 1,000 mm for a broad range of applications

#### OPX iGo neo Autonomous Horizontal Order Picker The Smart Way



Execution of individual order picking preferences: simply stop OPX iGo neo in the desired position. The truck will stop autonomously at the exact distance from the rack as specified by the operator. If a safe distance of 500 mm is not maintained, the truck will rectify this once it is restarted. The relative position of the truck to the operator and the rack orientation can be adjusted remotely, thereby reducing walking distances.



Precise handling in the event of obstacles: the OPX iGo neo autonomously avoids obstacles and reacts to the situation. Trucks will either drive around the obstacle, avoid it by driving in convoy, or – if the obstacle completely blocks its path – the truck will stop.



High-performance order picking: the operator can specify whether the truck moves to the first or second pallet position or anywhere in-between.



Process reliability – even for empty racks or crossroads: the OPX iGo neo recognises and passes by empty racks. Crossroads are also detected well in advance and the truck will only drive autonomously over them once the driver has checked the way is clear and has approved the onward journey.



Easy Protect collision avoidance: if the operator is heading for a collision with a vehicle or other obstacle during manual operation, the vehicle detects this and brakes automatically depending on the distance from the obstacle.

## 🇯 Simply easy

- High driving comfort due to height-adjustable, electric steering wheel with automatic neutral position
- Less need for training thanks to intuitive display and control unit
- Freedom of movement on the wide operator's platform with optional extra narrow backrest
- Maximum energy savings with the ECO driving program
- iGo neo vehicles drive, steer, accelerate and brake independently and follow their operator at every turn

# G Simply powerful

- High handling performance thanks to a load capacity of up to 2,500 kg
- Powerful, reliable and low-maintenance 3-kW three-phase AC traction motor
- Fast goods handling through powerful acceleration and a travel speed of up to 14 km/h
- Cornering stability and optimum traction with the optional 5-wheel chassis
- iGo neo: up to 75% less mounting and dismounting to relieve the operator; picking performance is significantly increased compared to conventional picking

### Simply safe

- Fatigue-free mounting and dismounting via the low vehicle entrance
- Excellent visibility thanks to LED daytime running light, Safety Light and Safety Light 4Plus

- Increased safety when cornering with Curve Speed Control and Dynamic Drive Control
- Less wear on the forks due to speed reduction with lowered forks
- iGo neo offers maximum safety for people in the warehouse environment thanks to a unique and multi-level safety concept
- Minimisation of impact damage even when the OPX iGo neo is driven manually

### Simply flexible

- High picking performance without mounting and dismounting thanks to pedestrian operation
- Fast order picking on the first level with fold-down step and raisable operator's platform
- Prevention of back pain with optional air-cushioned driver's stand and folding seat
- Flexible use of in-house batteries with the tray for batteries by other manufacturers
- OPX and OPX iGo neo as basic vehicles available in different variants according to the individual picking requirements

### 🔞 Simply connected

- Operator management, shock detection and access protection with FleetManager 4.x
- Early detection of a flat battery with the LED daytime running light Plus
- Integration into customer processes via automation interface and MMS preparation
- iGo neo: safe and reliable operator recognition thanks to the hybrid tracking system, even during Z-picking



#### **OPX Horizontal Order Picker Equipment Variants**



OPX 20/25         OPX 20/25 <t< th=""><th>0PX-D 20 </th></t<>	0PX-D 20 
Steering wheel height adjustment         O         <	
Openationed stand platform         O1         O         O1         O1 <thd< td=""><td></td></thd<>	
Folding seat         01         0         01	
Big         Picking step and handle         O1         D1         D1         D	
Accessory bracket load side - high         O	
Accessory bracket load side - high         O	
Accessory bracket load side - high         O	
Accessory bracket load side - high         O	
Accessory bracket load side - high with cross piece         O         <	
Adjustable DIN A4 writing surface         O 1         D 1 <thd 1<="" th=""> <th< td=""><td></td></th<></thd>	
12-V power outlet         0	
Pedestrian mode via butterfly switch on steering wheel         01	0 0    0
Pedestrian mode via butterfly switch on steering wheel and lateral pressure buttons         O </td <td>0 0    0</td>	0 0    0
Pedestrian mode via lateral pressure buttons on the back rest         O1         O1 </td <td>0 — — — — — — — — —</td>	0 — — — — — — — — —
Pedestrian mode via lateral pressure buttons on the back rest         O1         O1 </td <td></td>	
External width bs = 520 mm         - </td <td></td>	
External width bs = 540 mm         O         O  -	
Extern work of y of thin         O         O         O         O           Battery compartment 345-465 Ah, craneable         • </td <td></td>	
Extern work of y of thin         O         O         O         O           Battery compartment 345-465 Ah, craneable         • </td <td></td>	
Execting         Execting         C         C         C         C           Battery compartment 345-465 Ah, craneable         •	0
Battery compartment 345-465 Ah, craneable         •	0
Battery compartment 345-465 Ah, lateral change         O<	-
Adapter tray for alternative batteries         01         0         01	
Adapter tray for alternative batteries         01         0         01	0
Adapter tray for alternative batteries         01         0         01	0
Adapter tray for alternative batteries         01         0         01	0
Fork rollers on the insidew for simple entry/exit         O         O <t< td=""><td>0</td></t<>	0
Rubber protection, bottom         O1	0
Steel guard on drive motor         O1         O1 <tho1< th="">         O1         <tho< td=""><td>_</td></tho<></tho1<>	_
Steel guard, high         O1	0
Steel guard on drive motor and rubber protection at bottom       01       <	0
Raisable workplace (gripping height of 2800 mm)         O1         —         O1         O1 <th< td=""><td>0</td></th<>	0
MMS prepared       O1	0
MMS prepared       O1	0
MMS prepared       O1	0
MMS prepared       O1	0
MMS prepared       O1	_
Data transmission, Bluetooth     O     O     O     O     O       Data transmission, GPRS     O     O     O     O     O       Transport of load carriers up to a width of 1,000 mm with     O     O     O     O     O	0
Data transmission, GPRS     O     O     O     O       Transport of load carriers up to a width of 1,000 mm with     O     O     O     O	0
Transport of load carriers up to a width of 1,000 mm with	0
	_
Lift with lower lock when driving (115 mm)         O	0
Load guard with a height of 1875 mm O O — — — —	_
Load guard with a height of 1290 mm $     -$	_
Load guard with a height of 1570 mm — — — — — — — — —	_
Load guard with a height of 1450 mm — — — — — 2 O 1 — —	0
Load guard with a beight of 1700 mm	0
Dead guard with a height of 1450 mm - with pallet holder for vertical positioningOFork tips to stop trolleysOOProportional raising/lowering using STILL Easy Move paddlesOOOSpeed limit with lowered forksOOOOOOSafety Light frontOOOOOO	_
Fork tips to stop trolleys O O — — — —	_
Proportional raising/lowering using STILL Easy Move paddles — — O O O	•
Speed limit with lowered forks O O O O O	0
Safety Light front O O O O O O	0
Safety Light 4Plus front O O O O O O	0
Easy Protect: collision avoidance in manual operation with OPX iGo neo O O O O O O O	
Easy Protect 3D: 3D camera enables advanced collision protection both in manual operation and in autonomous assistance mode (the area covered extends almost across the entire front of the OPX iGo neo) O O O O	_

● Standard ○ Optional — Not available

<sup>1</sup> Not available with iGo neo version
 <sup>2</sup> Optionally available with iGo neo version





#### Matriz San Luis Potosí

Carretera Federal 57 Km183 #950 C.P. 78420, San Luis Potosí. S.L.P. Tel: 444 738 01 07 al 10

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