

EN



LPS 420 E

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LIEBHERR

Mobile harbour crane

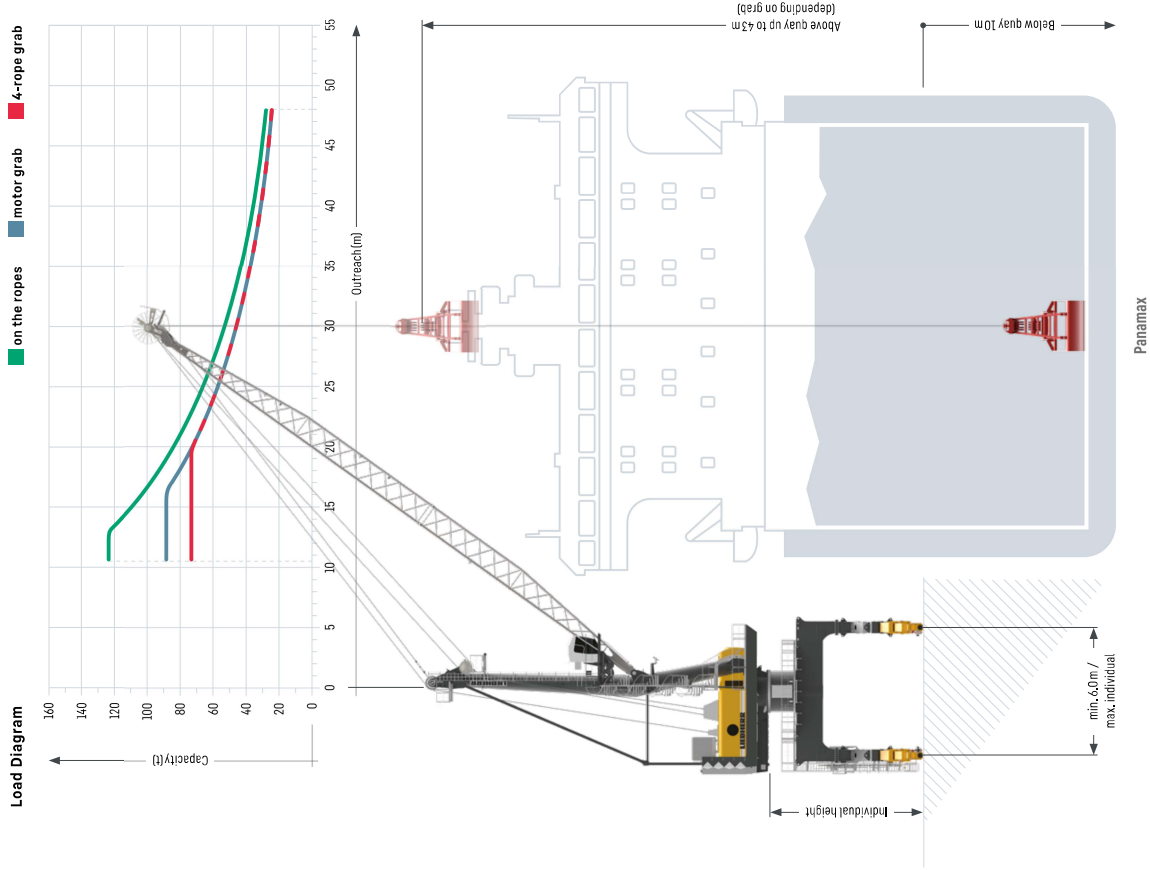
**Maximum
lifting capacity**
124 t

**Maximum
outreach**
48 m

Ship size
Panamax,
Post-Panamax

Main dimensions

Bulk operation



Lifting capacities

Bulk operation

Maximum crane capacity 124t

Hook operation			Grab operation		
Outreach	on the ropes	4-rope grab	motor grab		
(m)	(t)	(t)	(t)		
10.5	124.0	75.0	90.0		
11	124.0	75.0	90.0		
12	124.0	75.0	90.0		
13	117.6	75.0	90.0		
14	111.5	75.0	90.0		
15	105.6	75.0	90.0		
16	100.1	75.0	90.0		
18	90.0	75.0	81.0		
19	85.3	75.0	76.8		
20	81.0	72.9	72.9		
22	73.1	65.8	59.6		
24	66.2	59.6	54.2		
26	60.2	54.2	49.5		
28	55.1	49.5	45.5		
30	50.6	45.5	42.1		
32	48.6	42.1	39.1		
34	43.4	39.1	36.5		
36	40.5	36.5	34.2		
38	38.0	34.2	32.1		
40	35.7	32.1	30.2		
42	33.5	30.2	28.3		
44	31.4	28.3	26.3		
46	29.3	26.3	24.5		
48	27.3	24.5			

Weight ranshorn hook 3.0t
Weight rotator 3.5t

Maximum crane capacity 84t

Hook operation			Grab operation		
Outreach	on the ropes	4-rope grab	motor grab		
(m)	(t)	(t)	(t)		
10.5	84.0	45.0	52.0		
11	84.0	45.0	52.0		
12	84.0	45.0	52.0		
13	84.0	45.0	52.0		
14	84.0	45.0	52.0		
15	84.0	45.0	52.0		
16	84.0	45.0	52.0		
18	84.0	45.0	52.0		
19	84.0	45.0	52.0		
20	81.0	45.0	52.0		
22	73.1	45.0	52.0		
24	66.2	45.0	52.0		
26	60.2	45.0	52.0		
28	55.1	45.0	48.9		
30	50.6	45.0	45.0		
32	48.6	41.6	41.6		
34	43.4	38.6	38.6		
36	40.5	36.0	36.0		
38	38.0	33.8	33.8		
40	35.7	31.7	31.7		
42	33.5	29.8	29.8		
44	31.4	27.9	27.9		
46	29.3	26.0	26.0		
48	27.3	24.2	24.2		

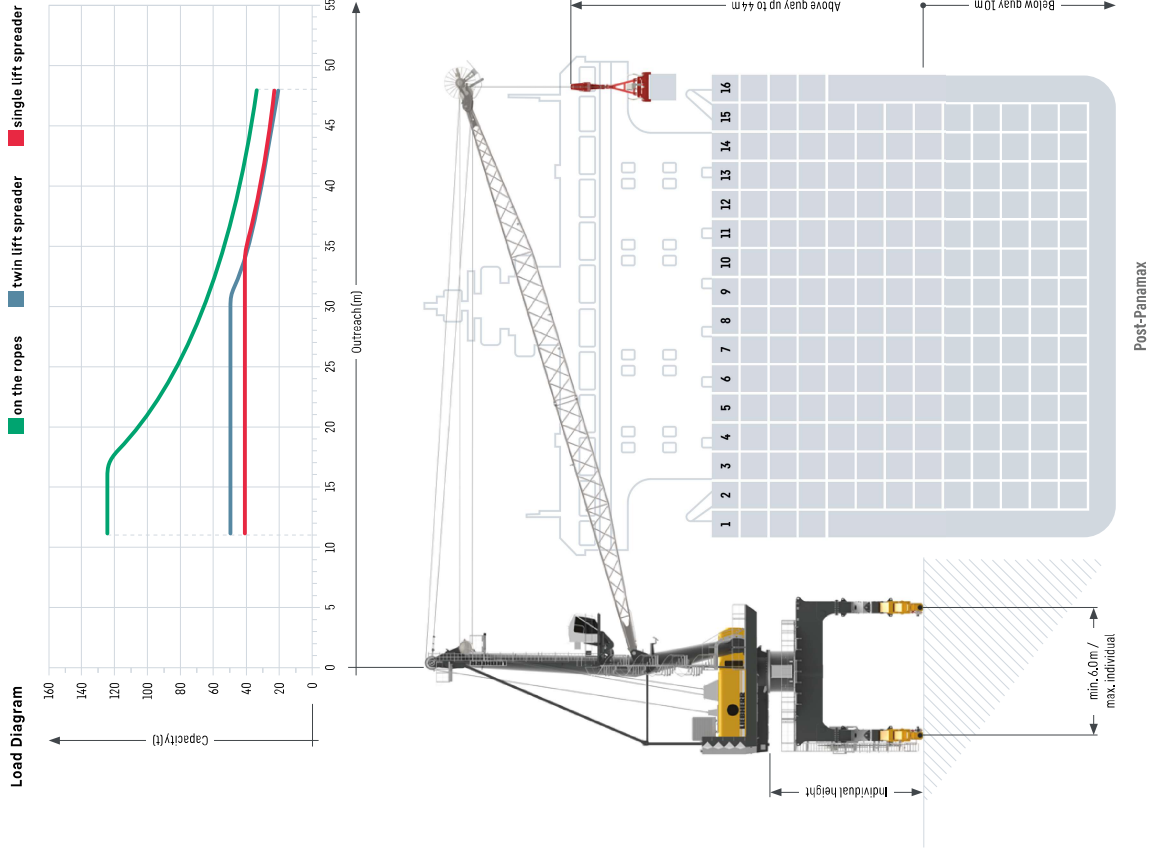
Weight ranshorn hook 3.0t
Weight rotator 2.5t

Turnover up to 1,200 t per hour

The LPS 420 E raises the bar in terms of electrical driven bulk handling performance.

Main dimensions

Container operation



Lifting capacities

Container operation

Maximum crane capacity 124t

Spreader operation under				Hook operation on the ropes	
Outreach	Single lift	Twin lift	Heavy lift	Single lift	Twin lift
(m)	(t)	(t)	(t)	(t)	(t)
11	41.0	50.0	124.0	124.0	84.0
12	41.0	50.0	124.0	124.0	84.0
13	41.0	50.0	124.0	124.0	84.0
14	41.0	50.0	124.0	124.0	84.0
16	41.0	50.0	124.0	124.0	84.0
18	41.0	50.0	113.9	113.9	84.0
20	41.0	50.0	102.5	102.5	84.0
22	41.0	50.0	92.5	92.5	84.0
24	41.0	50.0	83.8	83.8	84.0
26	41.0	50.0	76.2	76.2	84.0
28	41.0	50.0	69.7	69.7	84.0
30	41.0	49.9	64.1	64.1	84.0
32	41.0	45.0	59.2	59.2	84.0
34	41.0	40.8	55.0	55.0	84.0
35	40.5	38.8	53.0	53.0	84.0
36	38.8	37.1	51.3	51.3	84.0
38	35.6	33.9	48.1	48.1	84.0
40	32.7	31.0	45.2	45.2	84.0
42	30.0	28.3	42.5	42.5	84.0
44	27.3	25.6	39.8	39.8	84.0
46	24.6	22.9	37.1	37.1	84.0
48	22.0	20.3	34.5	34.5	84.0

Weight rotator 3.5t
Weight fully automatic (telescopic) spreader 9t
Weight twin lift spreader 10.7t

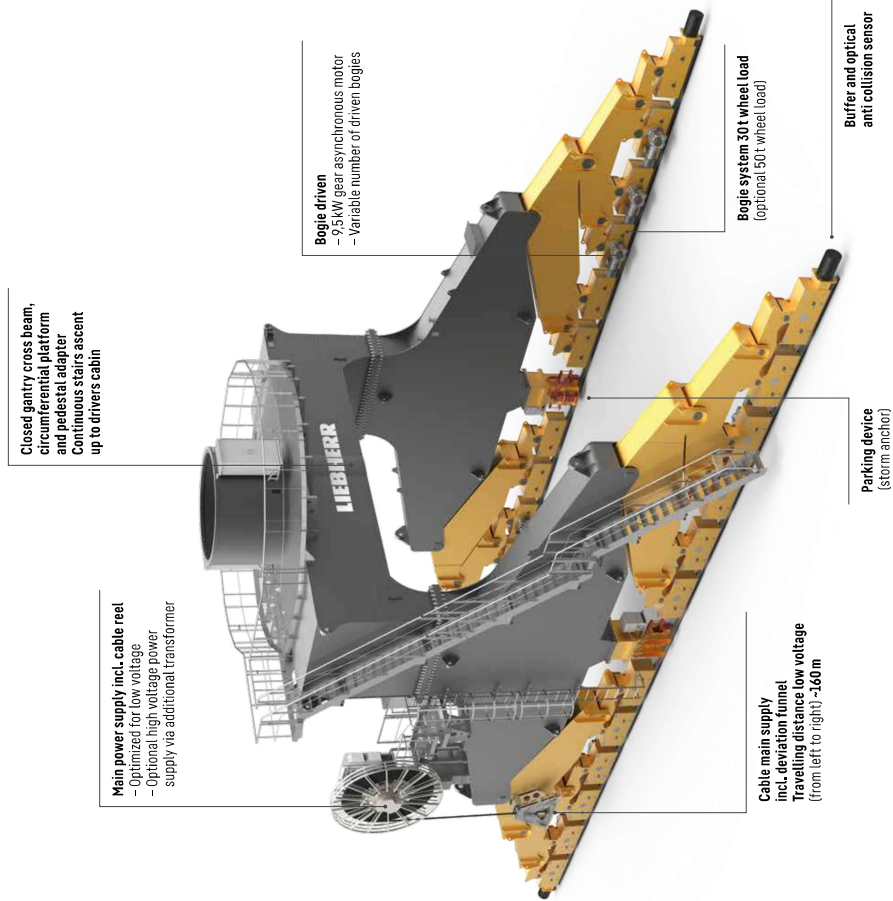
Maximum crane capacity 84t

Spreader operation under				Hook operation on the ropes	
Outreach	Single lift	Twin lift	Heavy lift	Single lift	Twin lift
(m)	(t)	(t)	(t)	(t)	(t)
11	41.0	50.0	84.0	84.0	84.0
12	41.0	50.0	84.0	84.0	84.0
13	41.0	50.0	84.0	84.0	84.0
14	41.0	50.0	84.0	84.0	84.0
16	41.0	50.0	84.0	84.0	84.0
18	41.0	50.0	84.0	84.0	84.0
20	41.0	50.0	84.0	84.0	84.0
23	41.0	50.0	84.0	84.0	84.0
24	41.0	50.0	83.8	83.8	84.0
26	41.0	50.0	76.2	76.2	84.0
28	41.0	50.0	69.7	69.7	84.0
30	41.0	50.0	64.1	64.1	84.0
32	41.0	46.0	59.2	59.2	84.0
34	41.0	41.8	55.0	55.0	84.0
35	41.0	39.8	53.0	53.0	84.0
36	39.8	38.1	51.3	51.3	84.0
38	36.6	34.9	48.1	48.1	84.0
40	33.7	32.0	45.2	45.2	84.0
42	31.0	29.3	42.5	42.5	84.0
44	28.3	26.6	39.8	39.8	84.0
46	25.6	23.9	37.1	37.1	84.0
48	23.0	21.3	34.5	34.5	84.0

Weight rotator 2.5t
Weight fully automatic (telescopic) spreader 9t
Weight twin lift spreader 10.7t

Turnover up to 30 cycles per hour

Precision to perfection: With incredibly short acceleration times for all crane motions, Liebherr is the top performer in container handling.



Capacity and Classification

Capacity	Classification
Four rope grab operation ≤ 46 t	A8
Four rope grab operation ≤ 57 t	A7
Motor grab operation ≤ 46 t	A8
Container operation ≤ 57 t	A7
Heavy lift operation ≤ 124 t	A3
Standard operation ≤ 70 t	A6

Hoisting Heights*

Above quay at minimum radius	44.0 m
Above quay at maximum radius	29.0 m
Below quay level (approx.)	10.0 m

* Depending on portal height

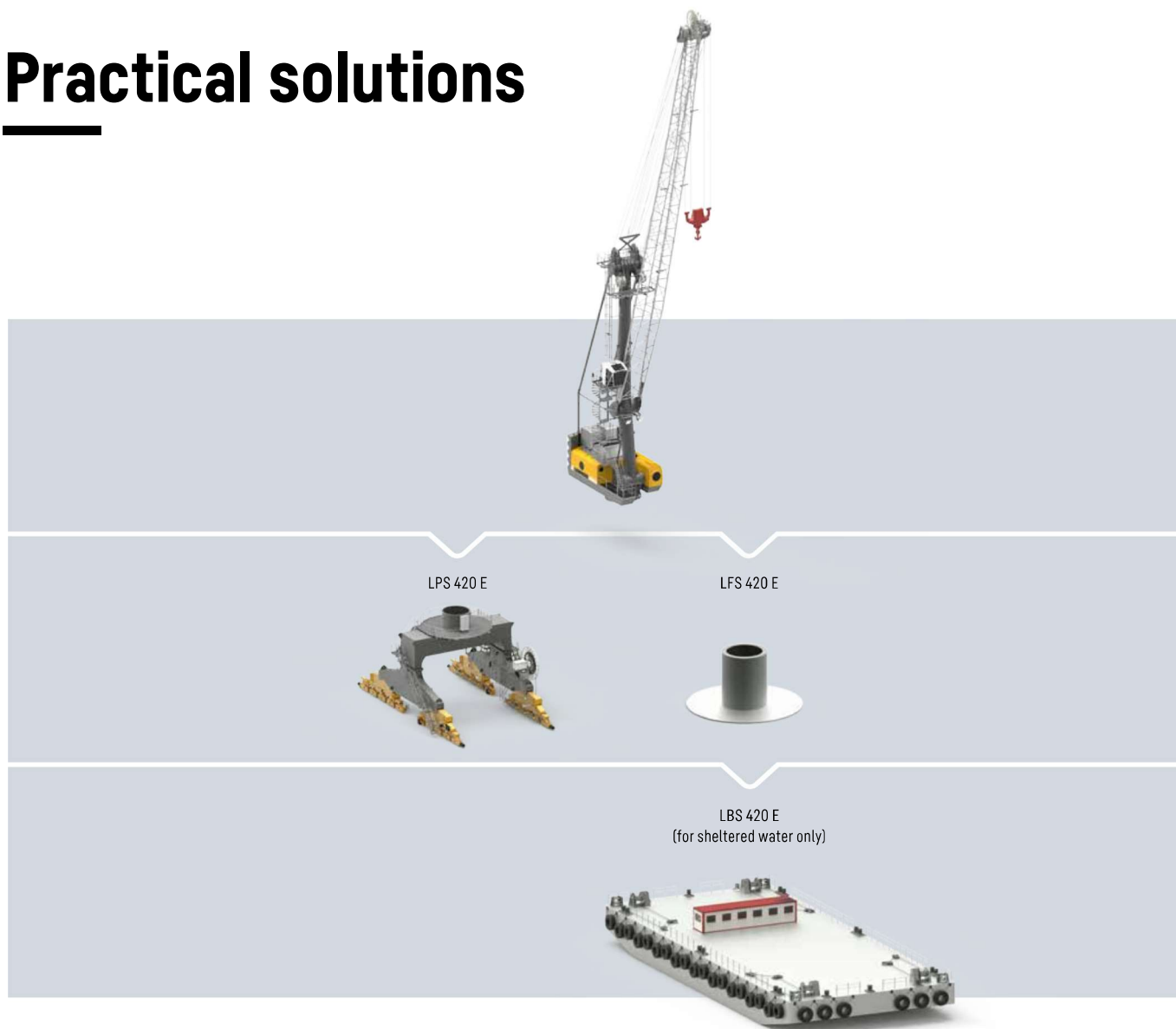
Working Speeds

Hoisting / lowering	0 – 100 m/min
Slewing	0 – 1.6 rpm
Luffing (20 m to 40 m)	19 seconds
Travelling	30 m/min

Features

- Installed power: ~ 8–12 x 9.5 kW
- Travelling speed: 30 m/min
- Designed for travelling with load
- Simultaneous operation of travelling, slewing, luffing

Practical solutions



Liebherr develops and produces special designs and solutions to meet customer-specific requirements

- The Liebherr Portal Crane (LPS) is an efficient combination of a space-saving portal (mounted on rails) and the proven mobile harbour crane concept. Particularly on narrow quays, individual portal solutions permit (railway) trains and (road) trucks to travel below the portal.
- Liebherr Fixed Slewing Cranes (LFS) are an efficient combination of a mobile harbour crane upper carriage and a fixed pedestal. LFS cranes provide an economical and space-saving solution for the installation on quaysides and jetties, especially where room for manoeuvring is limited and low ground pressure is essential. Additionally LFS solutions are also ideally suited for the installation on crane barges.
- Liebherr floating cranes (LBS) can be used for transshipment and midstream operation between ocean-going vessels and river barges on different types of waterways, including those having no or few quays. In addition, the LBS solution allows direct cargo transfer from ship to shore – especially when quays reach capacity limits. Depending on customer specifications, the LBS range may have varying lifting capacities due to tailor-made design solutions.