



Global Survey of Mobile Equipment Deliveries 2024



MARKET SURVEY
ISSUED 2025



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Introduction

This is the fifteenth global survey of mobile port handling equipment deliveries worldwide to be published by PEMA, the Port Equipment Manufacturers Association.

Document Purpose

Based on original data gathered from port equipment manufacturers around the world, the objective of the survey is to determine market size by equipment delivery volumes for:

- Reach stackers for handling laden containers
- Reach stackers for handling empty containers
- Lift trucks for handling laden containers
- Lift trucks for handling empty containers
- 4 x 2 terminal tractors
- 4 x 4 terminal tractors

Delivery figures cover only those manufacturers contributing to the survey. This must be taken into account in using these figures and caution must be applied, as figures do not fully reflect the global marketplace.

Furthermore, the participating manufacturers have changed over the years. Information about current and previous participants of this survey can be found at the end of this document.

About This Document

PEMA is committed to promoting and supporting the global role of port equipment and technology and commissioned this and previous surveys to contribute to the body of port equipment industry knowledge. Since the first survey of 2006/7 deliveries these reports have become an established and well-respected publication in the industry and PEMA extends sincere thanks to everyone who once again contributed information.

Over the past decades a lot of information has been available via the industry media on deliveries of large equipment such as ship-to-shore cranes and yard cranes. However, prior to the publication of these annual surveys by PEMA, there was a dearth of information relating to delivery numbers for smaller equipment classes.

Development

The first PEMA survey of mobile port handling equipment was published in April 2008 and provided figures for equipment deliveries in 2006 and 2007. Deliveries for 2006 and 2007 were reported globally and by three broad geographic regions: EMEA (Europe, Middle East and Africa), Americas and Asia Pacific.

Since the 2008 survey, manufacturers have been asked to be more specific and to report deliveries by the following geographic categories: Europe, North America, Latin America, China, Other Asia, Indian sub-continent, Middle East, Africa and Australasia/Pacific.

This survey of 2024 deliveries follows the same geographic breakdown as 2008-2023. However, for longer-term comparison and trend purposes the geographic breakdown used in the early years can be deployed.

Methodology

The survey research was conducted between February and April 2025, and results were compiled in May 2025. All known equipment manufacturers of the corresponding equipment types were contacted by email and/or telephone.

Confidentiality

Contributors to the survey were given an assurance of strict confidentiality.

The conductors of the survey have signed a confidentiality agreement with PEMA stating that individual company data would not be released by them to any other party, including any officer or member of PEMA, except in fully consolidated and aggregated form.

Furthermore, the release of any and all data must comply with criteria established by outside counsel and all source data will be destroyed within six months of the survey results being released.

Regulatory Requirement

There must be at least five (5) manufacturers reporting deliveries in total for each equipment type and into a geographic region. In some situations, this requirement was not met. In these cases, some consolidation of data for regions has been made in order to ensure regulatory compliance.

Survey Distribution

The full consolidated survey results will be released to PEMA members and to contributors to the survey in 2nd quarter 2025. At a later date the report will be released more generally.

Disclaimer

This survey is based on information provided directly by the equipment manufacturers. Data has not been independently verified. PEMA cannot accept responsibility for the accuracy of the data provided.

This document does not constitute professional advice, nor is it an exhaustive summary of the information available on the subject matter to which it refers.

Every effort is made to ensure the accuracy of the information, but neither the author, PEMA nor any member company is responsible for any loss, damage, costs or expenses incurred, whether or not in negligence, arising from reliance on or interpretation of the data.

Further information papers and surveys from PEMA and partner organisations can be downloaded free of charge in PDF format at: pema.org/members-area/resources/market-surveys

1. Executive Summary

Equipment deliveries for 2024 have not changed significantly compared to 2023 – with the exception of empty container lift trucks (+22% year-on-year).

Deliveries of all other equipment types in 2024 deviated by a maximum of +/- 6% from the previous year's deliveries..

Key Findings

The reach stacker market was up by 5% in 2024, with deliveries exceeding 2,000 units for the 4th consecutive year. It is the only market segment that has experienced long-term growth since 2008.

Laden container lift truck deliveries decreased slightly by 6% reaching 161 units in 2024 - it is the only market segment that declined year-on-year.

Empty container lift truck deliveries increased by 22% in 2024, but are still below pre-COVID levels of 700 unit deliveries per year.

Deliveries of 4x2 terminal tractors and 4x4 terminal tractors increased only slightly by 1% and 4% The delivery figures for 2024 for both terminal tractor types are 10-12% below the long-term average.

Note

Terminal Tractors:

For regulatory reasons this survey excludes 4X2 tractor deliveries in North America, which is by far the biggest single market for this equipment type.

Reach Stackers:

For regulatory reasons, reach stackers for empty container handling are not reported separately. Less than 60 such units were delivered worldwide per year.

Table 1: Global delivery trend 2008 - 2024 for all equipment types																		
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Avg. *
Reach stackers	1480	796	1227	1452	1504	1324	1288	1403	1453	1555	1784	1756	1577	2050	2183	2054	2156	1591
Lift trucks for laden containers	198	110	113	146	178	146	194	204	153	93	63	94	98	76	146	171	161	138
Lift trucks for empty containers	613	318	467	549	709	671	679	698	705	733	734	712	482	420	569	504	613	599
Terminal tractors 4x2 (excl.North America)	2843	1778	1343	1727	1625	1596	1947	1723	1816	1918	1876	1630	1482	1809	1808	1548	1558	1766
Terminal tractors 4x4	692	404	320	375	414	406	405	468	481	446	445	472	311	415	530	374	388	432

* average annual unit deliveries since 2008.

2. Reach Stackers

Seven manufacturers contributed delivery numbers to the survey for the year 2024:

- CVS Ferrari
- Hyster
- Kalmar
- Konecranes Lift Trucks
- Liebherr
- Sany
- ZPMC

Key Findings

Global deliveries of reach stackers increased by 5% year-on-year to a total of 2,156 units delivered in 2024. Compared to the previous year, significantly more machines were delivered in three regions (Latin America, Other Asia and Africa), while deliveries to all other regions mostly declined slightly.

Note

Reach Stackers for empty container handling:

Empty container handling reach stacker deliveries have been included in Table 2 below, because again there were less than 60 such units delivered worldwide per year, and therefore regulatory requirement criteria were not met to allow them to be reported separately.

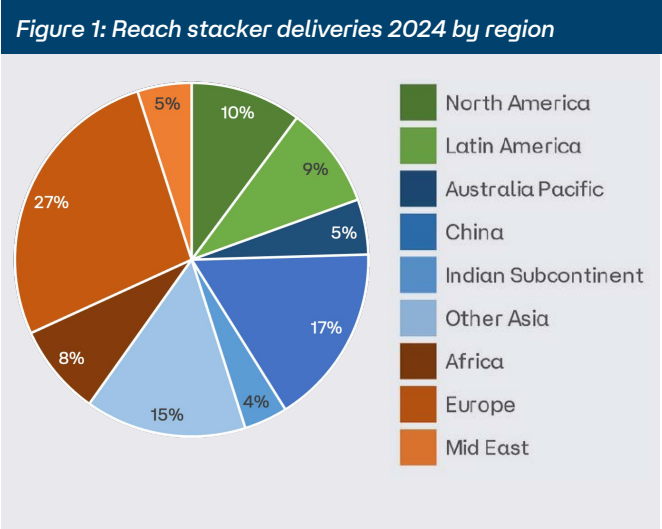


Table 2: Reach stacker delivery trend 2008 - 2024 by region																		
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Americas	North America	68	32	47	50	68	66	40	80	68	121	122	148	63	111	154	225	219
	Latin America	214	106	164	198	171	159	136	144	98	117	87	119	69	71	132	147	201
Asia Pacific	Australia Pacific	16	15	24	52	71	91	37	79	92	68	85	107	67	95	96	139	109
	China	142	68	213	226	199	210	245	228	271	301	423	370	522	799	587	395	357
	Indian Subcontinent	78	38	81	71	89	26	43	83	97	94	92	101	25	55	88	139	86
	Other Asia	159	62	148	159	199	180	193	167	155	198	222	170	167	212	250	192	318
EMEA	Africa	189	200	153	213	239	143	179	162	101	65	175	137	147	145	158	115	180
	Europe	539	207	305	410	388	382	322	399	504	519	517	543	464	508	604	583	579
	Mid East	75	68	92	73	80	67	93	61	67	72	61	61	53	54	114	119	107
Global		1480	796	1227	1452	1504	1324	1288	1403	1453	1555	1784	1756	1577	2050	2183	2054	2156

3. Laden Container Lift Trucks

Five manufacturers contributed delivery numbers to the survey for the year 2024:

- CVS Ferrari
- Hyster
- Kalmar
- Konecranes Lift Trucks
- Sany

Key Findings

Deliveries of loaded container handlers stabilized at a relatively high level of 161 units in 2024, considering that only 63 units were delivered in 2018.

As in previous years, over 50% of global deliveries went to customers in the Americas.

Note

The small number of laden container lift truck deliveries and the limited geographic range of deliveries mean that the usual detailed analysis of this equipment type was not possible.

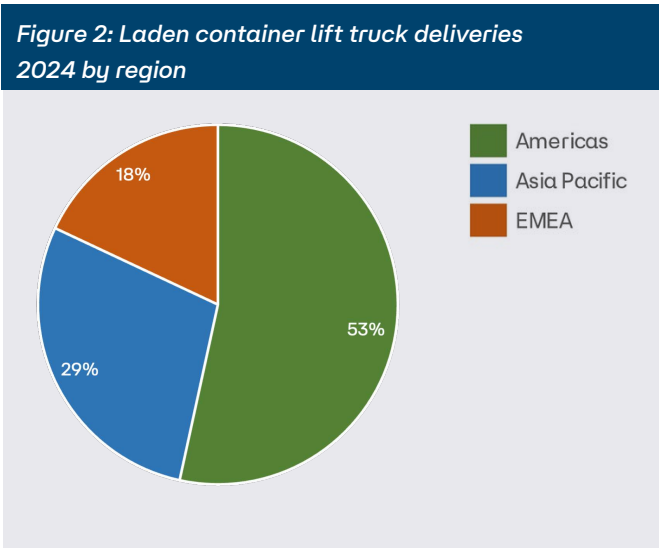


Table 3: Laden container lift truck delivery trend 2008 - 2024 by region																	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Americas	32	10	21	37	47	44	70	70	46	42	52	69	48	39	51	90	86
Asia Pacific	79	49	30	61	64	44	47	78	48	39	6	19	31	28	88	58	46
EMEA	87	51	62	48	67	58	77	56	59	12	5	6	19	9	7	23	29
Global	198	110	113	146	178	146	194	204	153	93	63	94	98	76	146	171	161

4. Empty Container Lift Trucks

Six manufacturers contributed delivery numbers to the survey for the year 2024:

- CVS Ferrari
- Hyster
- Kalmar
- Konecranes Lift Trucks
- Sany
- ZPMC

Key Findings

In 2024, 613 empty container lift trucks were delivered worldwide, which is almost exactly the long-term average since the PEMA survey began in 2006.

Compared to the previous year 2023, deliveries increased by 22% globally, with only slight declines in Australia Pacific, Africa and Mid East.

Note

For regulatory reasons the Indian Subcontinent and Other Asia have been combined since 2010, also including Australia Pacific in previous years.

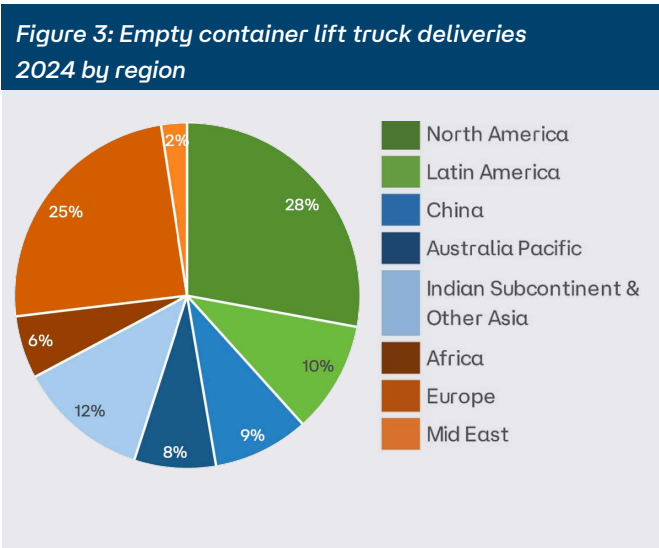


Table 4: Empty container lift truck delivery trend 2008 - 2024 by region																		
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Americas	North America			19	15	41	71	49	55	46	59	68	85	75	43	99	125	171
	Latin America	41	23	36	50	48	60	46	50	32	29	39	63	32	43	62	37	64
Asia Pacific	China	140	73	111	147	168	127	147	155	153	150	186	153	85	96	79	34	55
	Australia Pacific			31	44	54	55	42	47	47	91	44	66	44	35	63	65	47
	Indian Subcontinent & Other Asia	145	74	79	103	144	140	111	114	155	167	169	118	61	63	74	57	75
EMEA	Africa	80	52	34	43	90	52	61	60	53	42	42	63	33	43	50	45	36
	Europe	153	73	114	127	132	116	145	154	196	163	154	151	119	83	127	120	150
	Mid East	54	23	43	20	32	50	78	63	23	32	32	13	33	14	15	21	15
	Global	613	318	467	549	709	671	679	698	705	733	734	712	482	420	569	504	613

5. 4x2 Terminal Tractors

Eight manufacturers contributed delivery numbers to the survey for the year 2024:

- Capacity
- Kalmar
- KAMAG
- Mafi
- MOL
- Ottawa
- Sany
- Terberg

Key Findings

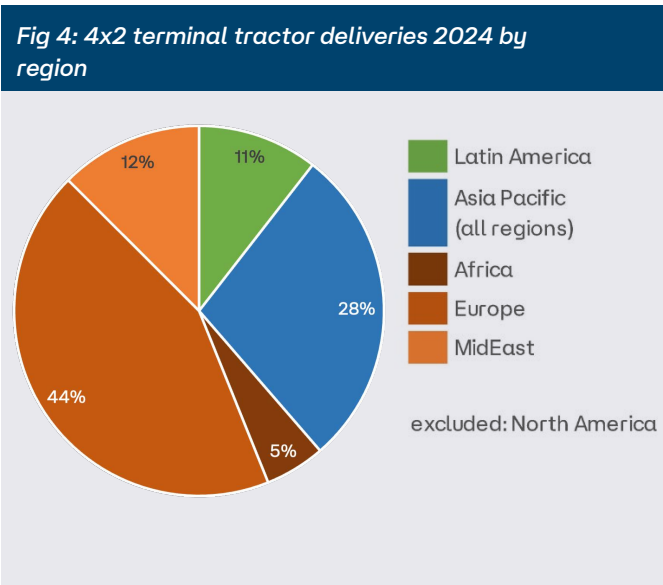
Global deliveries of 4x2 terminal tractors remained virtually unchanged at a relatively low level of 1,558 units in 2024, compared to a long-term average of just under 1,800 units per year since 2008.

Compared to 2023, a higher number of deliveries in Asia Pacific and Mid East was offset by the decline in Europe.

Table 5: 4x2 terminal tractor delivery trend 2008 - 2024 by region																		
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Americas	North America	- excluded -																
	Latin America	347	134	193	367	256	357	271	288	268	244	195	210	216	185	184	197	164
Asia Pacific	Australia Pacific																	
	China	1019	540	377	578	430	383	487	457	473	524	512	392	307	320	299	305	438
	Indian Subcontinent																	
	Other Asia																	
EMEA	Africa	255	204	150	184	209	209	195	149	164	197	139	206	183	159	85	75	82
	Europe	702	343	366	377	440	504	677	557	678	686	777	797	673	1067	1141	895	679
	Mid East	520	557	257	221	290	143	317	272	233	267	253	25	103	78	99	76	195
	Global	2843	1778	1343	1727	1625	1596	1947	1723	1816	1918	1876	1630	1482	1809	1808	1548	1558

Note

North America is excluded due to the limited number of manufacturers serving this region. Given the scale of the excluded North American market, figures reported here are significantly less than the actual world market. Deliveries to Asian Pacific are combined in order to meet the reporting criteria.



6. 4x4 Terminal Tractors

Five manufacturers contributed delivery numbers to the survey for the year 2024:

- Kalmar
- Mafi
- MOL
- Ottawa
- Terberg

Key Findings

Global deliveries of 4x4 terminal tractors increased by 4% from 2023 to 388 units in 2024. Deliveries decreased slightly in Europe and increased slightly in the rest of the world.

Since the PEMA survey began covering 4x4 terminal tractors in 2008, an average of around 430 units have been delivered annually, with Europe accounting for 80% of global deliveries.

Note

For regulatory reasons North and Latin America have been combined into Americas. Australia Pacific, China, the Indian Subcontinent and Other Asia have been combined into Asia Pacific.

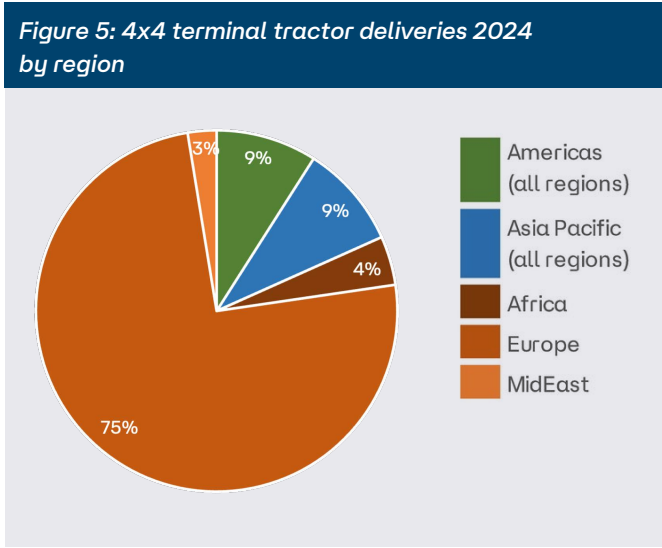


Table 6: 4x4 terminal tractor delivery trend 2008 - 2024 by region																		
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Americas	North America																	
	Latin America	16	5	21	6	21	17	13	22	10	11	29	17	18	37	49	30	35
Asia Pacific	Australia Pacific																	
	China	15	20	25	41	30	35	23	29	28	15	28	25	16	13	44	17	36
	Indian Subcontinent																	
	Other Asia																	
EMEA	Africa	63	84	36	43	62	23	34	29	34	21	14	14	9	15	18	8	17
	Europe	583	285	230	277	301	329	325	372	395	396	365	403	258	344	409	310	290
	Mid East	15	10	8	8	0	2	10	16	14	3	9	13	10	6	10	9	10
	Global	692	404	320	375	414	406	405	468	481	446	445	472	311	415	530	374	388

7. Survey Participants

Delivery figures cover only those manufacturers contributing to the survey. The participating manufacturers have changed over the years, which must be taken into account when using the figures presented here.

Reach Stackers

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
CVS Ferrari																	
Fantuzzi Reggiane			incorporated in Terex														
Heli																	
Hyster																	
Indital																	
Kalmar																	
Konecranes																	
Liebherr																	
Linde			incorporated in Konecranes														
Mitsubishi Logisnext*																	
Sany																	
Terex			incorporated in Konecranes														
TOMAC																	
ZPMC																	

* incl. Unicarriers, respectively TCM

Laden Container Lift Trucks

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
CVS Ferrari																	
Fantuzzi Reggiane			incorporated in Terex														
Hyster																	
Indital																	
Kalmar																	
Konecranes																	
Linde			incorporated in Konecranes														
Mitsubishi Logisnext*																	
Sany																	
Terex			incorporated in Konecranes														

* incl. Unicarriers, respectively TCM

Empty Container Lift Trucks

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
CVS Ferrari																	
Fantuzzi Reggiane			incorporated in Terex														
Heli																	
Hyster																	
Indital																	
Kalmar																	
Konecranes																	
Linde			incorporated in Konecranes														
Mitsubishi Logisnext*																	
Sany																	
Terex			incorporated in Konecranes														
TOMAC																	
ZPMC																	

* incl. Unicarriers, respectively TCM

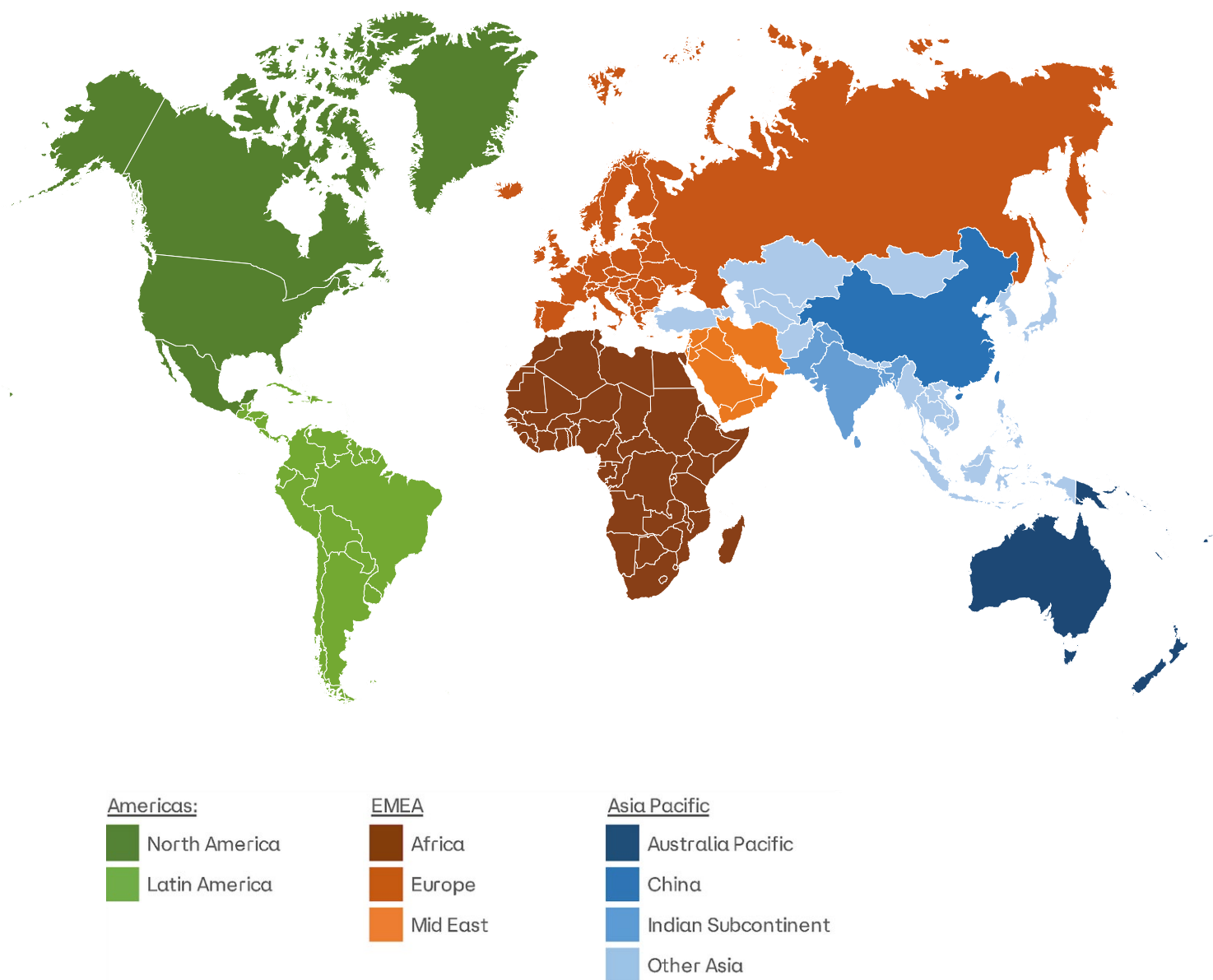
4x2 Terminal Tractors

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Capacity																	
CVS Ferrari																	
Kalmar																	
KAMAG																	
Konecranes																	
Mafi																	
MOL																	
Ottawa																	
Terberg																	

4x4 Terminal Tractors

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Capacity																	
CVS																	
Kalmar																	
Konecranes																	
Mafi																	
MOL																	
Ottawa																	
Terberg																	

8 . Definition of Region



About PEMA

Founded in late 2004, PEMA’s mission is to provide a forum and public voice for the global port equipment and technology sectors, reflecting their critical role in enabling safe, secure, sustainable and productive ports, and thereby supporting world maritime trade.

Chief among the aims of the Association is to provide a forum for the exchange of views on trends in the design, manufacture and operation of port equipment and technology worldwide.

PEMA also aims to promote and support the global role of the equipment and technology industries, by raising awareness with media, customers and other stakeholders, forging relations with other port industry associations and bodies; and contributing to best practice initiatives.

Membership

PEMA membership is open to:

- Manufacturers and suppliers of port and terminal equipment
- Manufacturers and suppliers of components or attachments for port equipment
- Suppliers of technology that interfaces with or controls the operation of port equipment
- Consultants in port and equipment design, specification and operations

Please visit pema.org for more information or email info@pema.org.

PEMA was constituted by agreement dated 9 December 2004 as a non profit making international association (association internationale sans but lucratif / internationale vereniging zonder winstoogmerk).

PEMA is governed by the Belgian Law of 27 June 1921 on ‘associations without a profit motive, international associations without a profit motive and institutions of public utility’ (Articles 46 to 57).

Company Number/ Numéro d’entreprise/ Ondernemingsnummer 0873.895.962 RPM (Bruxelles)

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**Port Equipment
Manufacturers
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