



# Nokian container and material handling tyres

The relentless lifting, moving and transporting of heavy loads, requires besides high load bearing capacity absolute precision and stability from the tyres. The much praised wear resistance of our container and material handling tyres is based on thorough material and structure development. The Shockabsorb Radial Construction (S.R.C), created as the result of our development work, combines the best qualities of radial and cross-ply structures into one product. We are the first tyre manufacturer in the world to introduce a special tyre for terminal tractors, the Nokian HTS Tugger. The Nokian RTG is the only tyre specially designed for RTG Cranes to reduce steering forces. Latest innovation is the Beyond All Steel construction, introduced first in the Nokian BAS HTS Straddle.

## Container and material handling tyres includes:

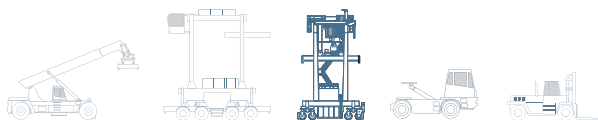
- |     |                        |     |                            |
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**Notice!**  
Manual may contain technical information also on omitted products.





# Container and material handling tyres



**Nokian HTS E-3 / E-4**



**Nokian HTS L-4S**



**Nokian RTG**



**Nokian HTS Tugger**



**Nokian Armor Gard**



**Nokian Nordman Harbour**



**Nokian Nordman RTG**

# World's biggest port as a test track

Leo Steenbergen, C. Steinweg Handelsveem B.V.

Reach stackers in Rotterdam run on Nokian container handling tyres



About 10 years ago, Nokian Heavy Tyres was looking for a partner to test special container tyres in reach stackers. The Rotterdam based transport company, C. Steinweg Handelsveem B.V., expressed its interest. Over the years the testing has brought a close relationship between the Finnish manufacturer and the Dutch importer, De Klok Banden and its service partners.

## Nokian HTS L4-S delivers stability and a long service life

Harbour tyres must be able to handle extremely heavy weights. A reach stacker with its load can weigh up to 120 tonnes. The machine must be able to move all this weight and still steer precisely. Friction and heat resulting from these forces are factors in tyre wear.

– We prefer the non-profile model 18.00-25 Nokian HTS L4-S, which provides greater stability and releases heat more efficiently. This translates into less wear and tear, and consequently a longer service life, **Leo Steenbergen** explains.

He has been very happy in the co-operation with the Nokian Heavy Tyres from the beginning.

– We deploy a regular tyre monitoring procedure. In addition four times a year, Nokian Heavy Tyres' engineers check tyre pressures, measure wear and look for any tyre damages. These inspections provide valuable information for refinements and improvements in the tyre manufacturing and development processes.







# Nokian HTS



Nokian HTS E-3  
Nokian HTS E-4

## STABLE CONTAINER HANDLING

- › A stable special tyre for harbour and terminal equipment; also suitable for sawmills and timberyards
- › Durable cross-ply structure
- › Excellent driving result, well suited for retreading



Nokian HTS L-4S

## NOKIAN HTS

Size	PR	Pattern	TT/TL	Rim	Permitted rims	Width				Diameter				Loaded static radius		Rolling circumference	Max. inflation pressure		Load capacity kg/lb								Product code					
						New		Max		New		Max		mm/in	mm/in		kPa/p.s.i.	kPa/p.s.i.	Forklift trucks				Other vehicles									
						mm/in	mm/in	mm/in	mm/in	mm/in	mm/in	25 km/h / 15 mph	35 km/h / 22 mph						10 km/h / 5 mph	25 km/h / 15 mph												
14.00-24	28	HTS E-3	TL	10.00 VA, 10.00 WA	10.0, 10.00W	375	14.8	405	15.9	1368	53.9	1414	55.7	624	24.6	4115	162.0	1000	145	9500	20945	12350	27225	8790	19380	11875	26180	12350	27225	9500	20945	T488311
16.00-25	28	HTS E-3	TL	11.25/2.0	13.00/2.0	432	17.0	480	18.9	1493	58.8	1561	61.5	672	26.5	4474	176.1	900	131	11500	25355	14950	32960	10640	23455	14380	31700	14950	32960	11500	25355	T488411
16.00-25	36	HTS E-4	TL	11.25/2.0	13.00/2.0	432	17.0	480	18.9	1548	60.9	1623	63.9	694	27.3	4618	181.8	1000	145	12150	26785	15795	34820	11240	24780	15190	33490	15795	34820	12150	26785	T488431
18.00-25	40	HTS E-4	TL	13.00/2.5	15.00/2.5	498	19.6	553	21.8	1673	65.9	1758	69.2	772	30.4	4935	194.3	1000	145	17500	38580	22750	50155	16190	35690	21875	48225	22750	50155	17500	38580	T488530
18.00-25	40	HTS L-4S	TL	13.00/2.5	15.00/2.5	498	19.6	553	21.8	1673	65.9	1758	69.2	765	30.1	5100	200.8	1000	145	17500	38580	22750	50155	16190	35690	21875	48225	22750	50155	17500	38580	T445329
18.00-33	40	HTS E-4	TL	13.00/2.5	-	498	19.6	553	21.8	1865	73.4	1960	77.2	853	33.6	5554	218.7	1000	145	21200	46740	27560	60760	19610	43230	26500	58420	27560	60760	21200	46740	T445514
18.00-33	40	HTS L-4S	TL	13.00/2.5	-	498	19.6	553	21.8	1857	73.1	1960	77.2	838	33.0	5617	221.1	1000	145	21200	46740	27560	60760	19610	43230	26500	58420	27560	60760	21200	46740	T445458

## TREAD DEPTH

Size	PR	Pattern	Total tread depth	
			mm	32 nds in
14.00-24	28	HTS E-3	29	37
16.00-25	28	HTS E-3	32	40
16.00-25	36	HTS E-4	52,5	66
18.00-25	40	HTS E-4	56	71
18.00-25	40	HTS L-4S	54	68
18.00-33	40	HTS E-4	67	85
18.00-33	40	HTS L-4S	54	68

# Nokian Nordman Harbour



## STABLE CONTAINER HANDLING

- › Reliable and cost effective solution for reach stackers, lift trucks and empty container handlers
- › Durable cross-ply structure
- › Engineered by Nokian

## NOKIAN NORDMAN HARBOUR

Size	PR	Pattern	TT/TL	Rim	Permitted rims	Width		Diameter		Loaded static radius		Rolling circumference		Max. inflation pressure kPa/p.s.i.	Load capacity kg/lb								Product code
						New mm/in	Max mm/in	New mm/in	Max mm/in	mm/in	mm/in	mm/in	mm/in		Forklift trucks				Other vehicles				
															25 km/h / 15 mph		35 km/h / 22 mph		10 km/h / 5 mph		25 km/h / 15 mph		
12.00-24	20	Nordman Harbour	TL	8.5	9.0	315 12.4	340 13.4	1 247 49.1	1 272 50.1	578 22.8	3 770 148.4	1 000 145	7 500 16 535	9 750 21 495	6 940 15 300	9 375 20 670	9 750 21 495	7 500 16 535	T845491				
18.00-25	40	Nordman Harbour	TL	13.00/2.5	15.00/2.5	524 20.6	553 21.8	1 673 65.9	1 758 69.2	764 30.1	5 046 198.7	1 000 145	17 500 38 580	22 750 50 155	16 190 35 690	21 875 48 225	22 750 50 155	17 500 38 580	T845489				
18.00-33	40	Nordman Harbour	TL	13.00/2.5	-	519 20.4	553 21.8	1 865 73.4	1 960 77.2	869 34.2	5 737 225.9	1 000 145	21 200 46 740	27 560 60 760	19 610 43 230	26 500 58 420	27 560 60 760	21 200 46 740	T845490				

**NEW**

## TREAD DEPTH

Size	PR	Pattern	Total tread depth	
			mm	32 nds in
12.00-24	28	Nordman Harbour	31	39
18.00-25	40	Nordman Harbour	54	68
18.00-33	40	Nordman Harbour	67	85

# Nokian RTG



## AGILITY AND DURABILITY FOR RTG HARBOUR CRANES

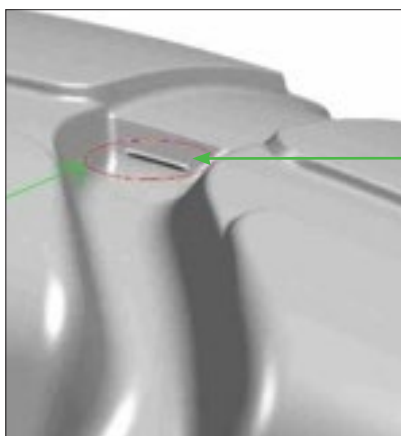
- › The structure and tread pattern of the stable cross-ply tyre are optimised for RTG harbour cranes
- › Rounded shoulder area with rounded tread block reduces steering forces. The tyre needs less power to steer than traditional harbour tyres for RTG cranes
- › The low heat build-up significantly slows down tyre wear and reduces the risk of tyre damage
- › Low rolling resistance results in low fuel consumption

## NOKIAN RTG

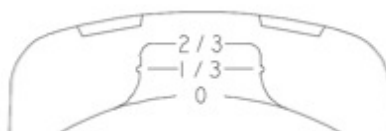
Size	PR	Pattern	TT/TL	Rim	Permitted rims	Width		Diameter		Loaded static radius		Rolling circumference		Max. inflation pressure		Load capacity kg/lb								Product code
						New mm/in	Max mm/in	New mm/in	Max mm/in	mm/in	mm/in	kPa/p.s.i.	kPa/p.s.i.	Forklift trucks				Other vehicles						
														25 km/h / 15 mph		35 km/h / 22 mph		10 km/h / 5 mph		25 km/h / 15 mph				
14.00-24	28	RTG	TL	10.00 VA, 10.00 WA	10.0, 10.00W	375 14.8	405 15.9	1368 53.9	1414 55.7	629 24.8	4147 163.3	1000 145	17500 38580	22750 50155	16190	35690	21875 48225	12350 27225	22750 50155	17500 38580	9500 20945	20945	T445471	
18.00-25	40	RTG	TL	13.00/2.5	15.00/2.5	498 19.6	553 21.8	1673 65.9	1758 69.2	746 29.4	5014 197.4	1000 145	17500 38580	22750 50155	16190	35690	21875 48225	12350 27225	22750 50155	17500 38580	9500 20945	20945	T445468	

## TREAD DEPTH

Size	PR	Pattern	Total tread depth	
			mm	32 nds in
14.00-24	28	RTG	23	29
18.00-25	40	RTG	31.5	40



Tread depth indicator





# Nokian Nordman RTG



## AGILITY AND DURABILITY FOR RTG HARBOUR CRANES

- › The structure and tread pattern of the stable cross-ply tyre are optimised for RTG harbour cranes
- › Good price/operating hours ratio
- › Engineered by Nokian

## NOKIAN NORDMAN RTG

Size	PR	Pattern	TT/TL	Rim	Permitted rims	Width		Diameter		Loaded static radius		Rolling circumference		Max. inflation pressure kPa/p.s.i.	Load capacity kg/lb								Product code
						New mm/in	Max mm/in	New mm/in	Max mm/in	mm/in	mm/in	mm/in	mm/in		Forklift trucks				Other vehicles				
															25 km/h / 15 mph		35 km/h / 22 mph		10 km/h / 5 mph		25 km/h / 15 mph		
14.00-24	28	Nordman RTG	TL	10.00 VA, 10.00 WA	10.0, 10.00W	375 14.8	405 15.9	1 368 53.9	1 414 55.7	625 24.6	4 084 160.8	1 000 145	9 500 20 945	12 350 27 225	8 790 19 380	11 875 26 180	12 350 27 225	9 500 20 945	T845487				
18.00-25	40	Nordman RTG	TL	13.00/2.5	15.00/2.5	512 20.2	553 21.8	1 658 65.3	1 758 69.2	750 29.5	4 947 194.8	1 000 145	17 500 38 580	22 750 50 155	16 190 35 690	21 875 48 225	22 750 50 155	17 500 38 580	T845488				

**NEW**

## TREAD DEPTH

Size	PR	Pattern	Total tread depth	
			mm	32 nds in
14.00-24	28	Nordman RTG	31	39
18.00-25	40	Nordman RTG	32	40

# Nokian HTS Tugger



## MASSIVE LOAD CAPACITY FOR TERMINAL TRACTORS

- › The first tyre on the market that is specially designed for terminal tractors
- › Sturdy multi-layer structure
- › Precise driving response, exceptionally high load capacity

## NOKIAN HTS TUGGER

Size	LI/SS	Pattern	TL/TL	Rim	Permitted rims	Width				Diameter		Loaded static radius		Rolling circumference		Max. inflation pressure kPa/p.s.i.	Load capacity kg/lb								Product code							
						New mm/in	Max mm/in	New mm/in	Max mm/in	mm/in	mm/in	Forklift trucks					Other vehicles															
												25 km/h / 15 mph		35 km/h / 22 mph			10 km/h / 5 mph		25 km/h / 15 mph													
315/60R22.5	174 A5	HTS Tugger	TL	9.00	9.75	302	119	308	121	950	37.4	966	38.0	425	16.7	2890	113.8	1000	145	6700	14770	8700	19180	6200	13670	8400	18520	8700	19180	6700	14770	T445221

## TREAD DEPTH

Size	LI / SS	Pattern	Total tread depth	
			mm	32 nds in
315/60R22.5	174 A5	HTS Tugger	21	27

# Nokian Armor Gard



## LONG SERVICE LIFE FOR MATERIALS HANDLING MACHINES AND EXCAVATORS

- › Top-class tyre for harbour machinery, lift trucks, mining machinery and excavators
- › Record-breaking mileage
- › Gripping tread design, durable carcass, excellent suitability for retreading
- › Precise and stable driving response
- › Groove depth indicator

## NOKIAN ARMOR GARD

Size	PR	Pattern	TT/TL	Rim	Permitted rims	Width		Diameter		Loaded static radius	Rolling circumference	Max. inflation pressure	Load capacity kg/lb								Product code
						New mm/in	Max mm/in	New mm/in	Max mm/in				Forklift trucks				Other vehicles				
													25 km/h / 15 mph		35 km/h / 22 mph		10 km/h / 5 mph	25 km/h / 15 mph	40 km/h / 25 mph	50 km/h / 30 mph	
						Steering	Drive	Steering	Drive												
9.00-20	14	Armor Gard	TT	7.0	7.5	269 10.6	291 11.5	1026 40.4	1057 41.6	469 18.5	3017 118.8	900 131	4500 9920	5850 12895	4165 9180	5625 12400	5850 12895	4500 9920	4005 8830	3780 8335	T445452
10.00-20	16	Armor Gard	TT	7.5	8.0	280 11.0	302 11.9	1061 41.8	1094 43.1	482 19.0	3119 122.8	900 131	5000 11025	6500 14330	4625 10195	6250 13780	6500 14330	5000 11025	4450 9810	4200 9260	T445451
11.00-20	16	Armor Gard	TT	8.0	8.5	298 11.7	322 12.7	1091 43.0	1126 44.3	493 19.4	3208 126.3	900 131	5600 12345	7280 16050	5180 11420	7000 15430	7280 16050	5600 12345	4980 10980	4700 10360	T445450
12.00-20	20	Armor Gard	TT	8.5	9.0	325 12.8	351 13.8	1125 44.3	1162 45.7	516 20.3	3393 133.6	1000 145	6900 15210	8970 19775	6385 14075	8625 19015	8970 19775	6900 15210	6145 13545	5800 12785	T445459

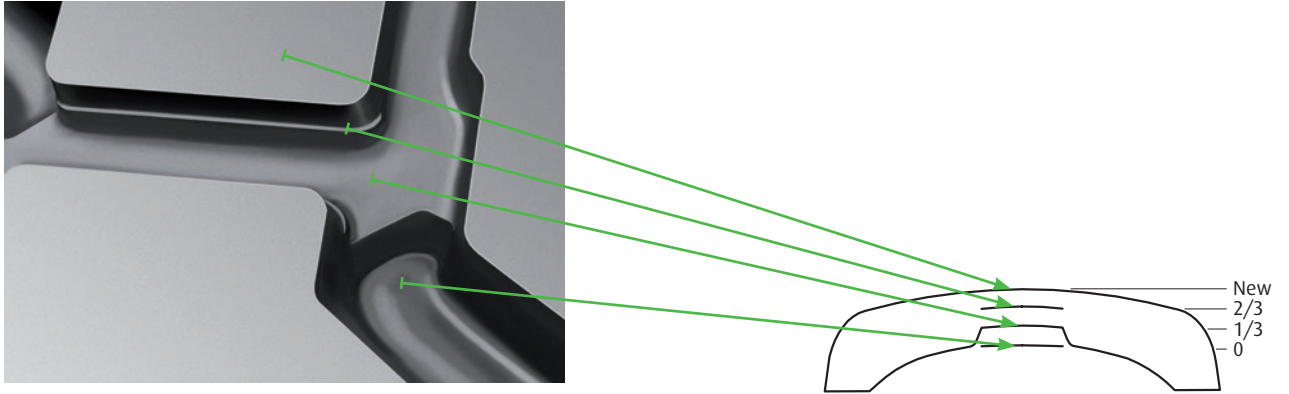
## TREAD DEPTH

Size	PR	Pattern	Total tread depth	
			mm	32 nds in
9.00-20	14	Armor Gard	20	25
10.00-20	16	Armor Gard	20.5	26
11.00-20	16	Armor Gard	21.3	27
12.00-20	20	Armor Gard	25.5	32



### GROOVE DEPTH INDICATOR NOKIAN ARMOR GARD

Regular tyre maintenance is made easier by a groove depth indicator. This indicator helps you monitor tyre wear.



**FACTORY AUTHORIZED DISTRIBUTOR:**

**BOLTZ EQUIPMENT, INC.**  
JACKSONVILLE, FLORIDA, USA  
TOLL FREE USA/CANADA: +1 (888) 955-9779  
INTERNATIONAL DIRECT: +1 (904) 232-4448  
EMAIL: SALES@BOLTZEQUIPMENT.COM  
WEB: BOLTZEQUIPMENTPARTS.COM

# Tubes and valves

## NOKIAN HTS

Size	PR	Product code	Valve tubeless	Tube product code	Valve tube-type
14.00-24	28	T488311	TR650	T55767	TR1175A
16.00-25	28	T488411	TR650	T55810	TR J1175
16.00-25	36	T488431	TR650	T55810	TR J1175
18.00-25	40	T488530	TR650	T55831	TR J1175
18.00-25	40	T445329	TR650	T55831	TR J1175
18.00-33	40	T445514	TR650	-	-
18.00-33	40	T445458	TR650	-	-

## NOKIAN NORDMAN HARBOUR

Size	PR	Product code	Valve tubeless	Tube product code	Valve tube-type
12.00-24	20	T845491	TR650	-	-
18.00-25	40	T845489	TR650	T55831	TR J1175
18.00-33	40	T845490	TR650	-	-

## NOKIAN RTG

Size	PR	Product code	Valve tubeless	Tube product code	Valve tube-type
14.00-24	28	T445471	TR650	T55767	TR1175A
18.00-25	40	T445468	TR650	T55831	TR J1175

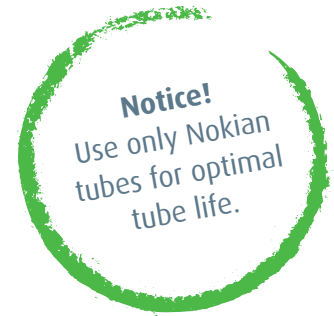
## NOKIAN NORDMAN RTG

Size	PR	Product code	Valve tubeless	Tube product code	Valve tube-type
14.00-24	28	T845487	TR650	T55767	TR 1175A
18.00-25	40	T845488	TR650	T55831	TR J1175

**Notice!**  
Use only Nokian tubes for optimal tube life.

**NOKIAN HTS TUGGER**

Size	LI/SS	Product code	Valve tubeless	Tube product code	Valve tube-type
315/60R22.5	174 A5	T445221	155MS	-	-



**NOKIAN ARMOR GARD**

Size	PR	Product code	Valve tubeless	Tube product code	Valve tube-type	T-Code Flap	Flap
9.00-20	14	T445452	-	T52520	TR175	T299520	170-20
10.00-20	16	T445451	-	T52620	TR78	T299520	170-20
11.00-20	16	T445450	-	T52720	TR179	T299520	170-20
12.00-20	20	T445459	-	T52810	V3.02.16	T299530	195-20



# Liquid and salt ballasting

## LIQUID AND SALT BALLASTING

- › Liquid ballasting is used to increase machine stability.
- › It is recommended to use professional tyre outlets to carry out the filling procedure.
- › Special equipment and water permeable valves are required.
- › In liquid and salt ballasting, use tubes to prevent rims from rusting.

**Note! If a filler other than liquid is used (i.e. polyurethane), tyre warranty does not apply.**

### Water ballasting

75 % of tyre volume is filled. Amounts listed in the table below.

### Water and salt ballasting

The addition of salt will prevent freezing. 75% of tyre volume is filled with the proportions given in the table below. The salt / water solution is calculated at a temperature of -30 °C / -22 °F. Normal commercial salt (CaCl<sub>2</sub>), 77% purity, is used. Any additional salt will not necessarily dissolve in water. The remaining tyre volume is inflated to the recommended inflation pressure.



## NOKIAN HTS

Size	PR	Tyre volume 100%		Water filling (75%)		Water / salt filling (75% / -30°C / -22°F)					
		l	gal (US)	l	gal (US)	Water		Salt (CaCl <sub>2</sub> )		Total weight increase	
						l	gal (US)	kg	lb	kg	lb
14.00-24	28	230	60	175	45	142	38	72	160	214	470
16.00-25	28	355	95	265	70	218	58	111	245	329	725
16.00-25	36	340	90	255	65	209	55	107	235	316	695
18.00-25	40	485	130	365	95	298	79	152	335	450	990
18.00-25	40	485	130	365	95	298	79	152	335	450	990
18.00-33	40	520	135	390	105	320	85	163	360	483	1065
18.00-33	40	520	135	390	105	320	85	163	360	483	1065

## NOKIAN NORDMAN HARBOUR

Size	PR	Tyre volume 100%		Water filling (75%)		Water / salt filling (75% / -30°C / -22°F)					
		l	gal (US)	l	gal (US)	Water		Salt (CaCl <sub>2</sub> )		Total weight increase	
						l	gal (US)	kg	lb	kg	lb
12.00-24	20	175	45	130	35	108	29	55	120	163	360
18.00-25	40	485	130	365	95	298	79	152	335	450	990
18.00-33	40	520	135	390	105	320	85	163	360	483	1065

**NOKIAN RTG**

Size	PR	Tyre volume 100%		Water filling (75%)		Water / salt filling (75% / -30°C / -22°F)					
		l	gal (US)	l	gal (US)	Water		Salt (CaCl <sub>2</sub> )		Total weight increase	
						l	gal (US)	kg	lb	kg	lb
14.00-24	28	230	60	175	45	142	38	72	160	214	470
18.00-25	40	485	130	365	95	298	79	152	335	450	990

**NOKIAN NORDMAN RTG**

Size	PR	Tyre volume 100%		Water filling (75%)		Water / salt filling (75% / -30°C / -22°F)					
		l	gal (US)	l	gal (US)	Water		Salt (CaCl <sub>2</sub> )		Total weight increase	
						l	gal (US)	kg	lb	kg	lb
14.00-24	28	230	60	175	45	142	38	72	160	214	470
18.00-25	40	485	130	365	95	298	79	152	335	450	990


**NOKIAN HTS TUGGER**

Size	LI/SS	Tyre volume 100%		Water filling (75%)		Water / salt filling (75% / -30°C / -22°F)					
		l	gal (US)	l	gal (US)	Water		Salt (CaCl <sub>2</sub> )		Total weight increase	
						l	gal (US)	kg	lb	kg	lb
315/60R22.5	174 A5	86	25	65	15	53	14	27	60	80	175

**NOKIAN ARMOR GARD**

Size	PR	Tyre volume 100%		Water filling (75%)		Water / salt filling (75% / -30°C / -22°F)					
		l	gal (US)	l	gal (US)	Water		Salt (CaCl <sub>2</sub> )		Total weight increase	
						l	gal (US)	kg	lb	kg	lb
9.00-20	14	90	25	70	20	55	15	28	60	84	185
10.00-20	16	105	30	80	20	65	15	33	75	98	215
11.00-20	16	125	35	95	25	77	20	39	85	116	255
12.00-20	20	145	40	110	30	89	25	45	100	135	300

**FACTORY AUTHORIZED DISTRIBUTOR:**



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**JACKSONVILLE, FLORIDA, USA**  
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**INTERNATIONAL DIRECT: +1 (904) 232-4448**  
**EMAIL: SALES@BOLTZEQUIPMENT.COM**  
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