





Monolithic Silos • Bolted Silos Marine Terminal for Cement Storage





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# **EUROMECC**

**EUROMECC S.r.l.** is an Italian company specialized in concrete batching and pre-cast plants planning and production, silos and marine terminals for cement and pulverulent material high technological developed.

Euromecc's manufacturer sites are on an area of more than **150.000 sq. m.**, with a covered area of about **12.000 sq. m.** 

Euromecc has more than **140** high specialized technicians and skilled workers.

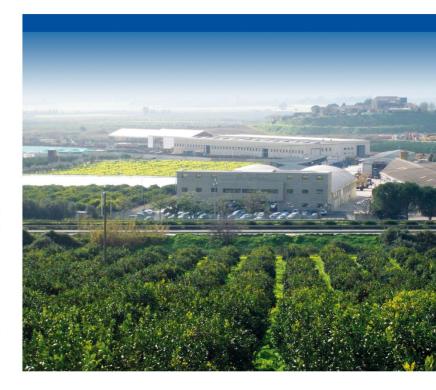
Euromecc high quality products are: Concrete Batching Plants, storage Silos and machines for cement and other kind of bulk material transport (shiploader, bucket elevator, conveyor belts, etc.).

The Steel and Profiled used have a quality and origin certificate, all the manufacturing are made through high technological equipments, finally the plant has the best components present on the market.

All the products respect the strictest safety and environmental rules and are provided of **Conformity Declaration CE.** 

Planning and production quality is assured by the procedure application **UNI EN ISO 9001:2000.** 





Silos planned and realized by Euromecc are usually used for cement and pulverulent material storage (fly-ashes, filler, limestone, bentonite, etc).

Silos for the storage of sulfur pastilles are available, according to the Fire Safety Regulations.

The Silos are produced in series and have a storage capacity from 33 cu.m. until more than 3000 cu.m. and with different building type in order to satisfy all the customers demands.

Particular attention is reserved to the superficial finishing which includes a standard painting cycle and, under request, a painting cycle for harsh environment.

Each Euromecc's Silos is characterized by the use of high quality materials, manufacturer solidity, the best superficial finishing.



# SILOS

#### **MONOLITHIC SILOS**

Planned in order to grant the assembly in the site. The tin-plate output, ensured by the body unity, is the main characteristic of this kind of silos.

Easy to be transported, on normal articulated-lorry, monolithic silos satisfy the demands of each kind of plant for concrete production which require both little and big cement storage.

To Silos completion, Euromecc is able to supply a series of accessories which satisfy customers' demands. Under the customer request, it can be equipped with any kind of silos' accessories (safety valve, foot irons for top entrance completed with intermediate lay-by according to the rules in force, top perimeter parapets, connection gateway, level gauge and continuous level gauge, KCS systems, filters, screws, etc.), calculation reports and all other customers' requests. Table 1 lists the series of monolithic silos and their main characteristics.

Ø			
mm	m³	Ton	н
2400	33÷52	43÷70	9450÷13150
3000	68÷90	90÷120	13550÷16550

#### **BOLTED SILOS**

These particular silos produced by Euromecc have the cone, the roof and the cylindrical band built with flanged elements longitudinally.

The elements number changes according to the silos series. Euromecc Silos are bolted on the external part in order to allow a more rapid and easy assembly in site. Special gaskets and silicone in the assembly phase ensure the maximum endurance. Table 2 lists the series of bolted silos and their main characteristics.



Ø			
mm	m³	Ton	Н
3500	45÷120	60÷160	7750÷16500
4600	125÷250	166÷332	11090÷18690
6130	230÷455	305÷605	12050÷19650
7680	390÷740	520÷985	13940÷21540
9276	600÷1600	800÷2130	15280÷30480
12500	1425÷3090	1895÷4110	18750÷32430





# Monolithic Silos Ø 2400 mm

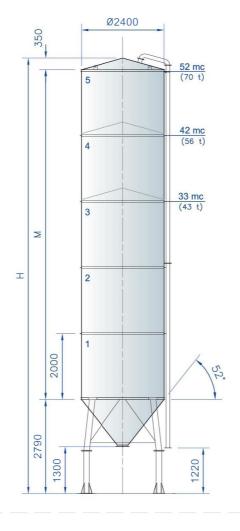
SERIES	CAPACITY m³ c.a.	CAPACITY Ton* c.a.	M (mm)	H (mm)
SM4/2,4/33	33	43	7000	10140
SM4/2,4/42	42	56	9000	12140
SM4/2,4/52	52	70	11000	14140

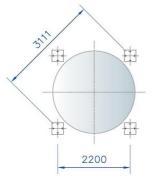
\*CEMENT WITH SPECIFIC WEIGHT 1,33 TON/CU.M.C.A.

## Accessories

- Manhole 400 mm
- Predisposition for measuring gauge
- Aeration system with no.3 plates or nozzles
- Manual Throttle valve for unloading door close









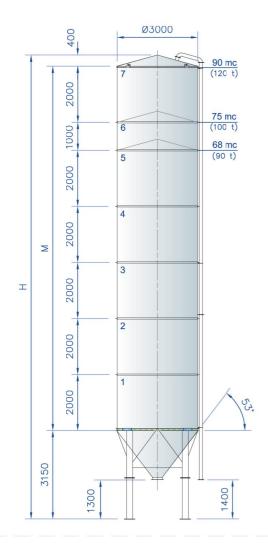
# Monolithic Silos Ø 3000 mm

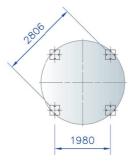
SERIES	CAPACITY m³ c.a.	CAPACITY Ton* c.a.	M (mm)	H (mm)	
SM4/3,0/68	68	90	10000	13550	
SM4/3,0/75	75	100	11000	14550	
SM4/3,0/90	90	120	13000	16550	

\*CEMENT WITH SPECIFIC WEIGHT 1,33 TON/CU.M.C.A.

### **Accessories**

- Manhole 400 mm
- Predisposition for measuring gauge
- Aeration system with no.4 plates or nozzles
- Manual Throttle valve for unloading door close











# BOLTED SILOS Ø 3500 MM

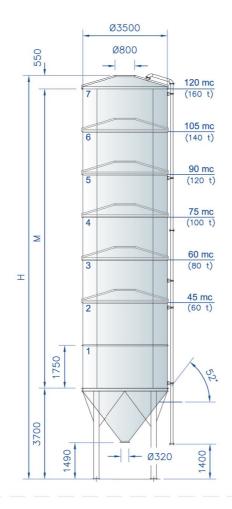
These products represent the best answer for sites geographically decentralized or localized abroad, where the transport price is really high. The structure built in four flanged elements permits to transport more Silos at the same time in the same transport.

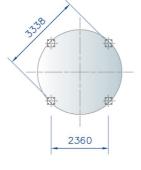
Accessorie	
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- Manhole 400 mm
- Predisposition for measuring gauge
- Aeration system with no.8 plates or nozzles
- Manual Throttle valve for unloading door close
- Kit galvanized bolts, gaskets and silicon for erection

SERIES	CAPACITY m³ c.a.	CAPACITY Ton* c.a.	M (mm)	H (mm)
SD4/3,5/45	45	60	3500	7750
SD4/3,5/60	60	80	5250	9500
SD4/3,5/75	75	100	7000	11250
SD4/3,5/90	90	120	8750	13000
SD4/3,5/105	105	140	10500	14750
SD4/3,5/120	120	160	12250	16500









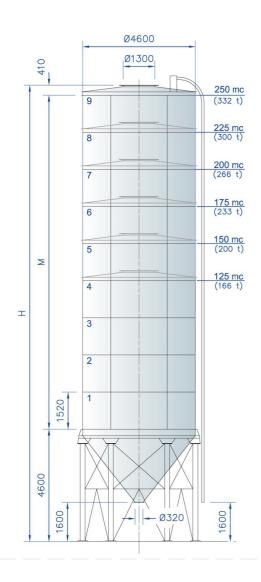
# BOLTED SILOS Ø 4600 MM

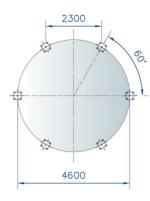
These Silos satisfy the sites' demands of high cement storage. They are realized in 6 external bolted and vertical bands on the silos roof and divided in sectors.

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- Manhole 400 mm
- Predisposition for measuring gauge
- Kit galvanized bolts, gaskets and silicon for erection

SERIES	CAPACITY m³ c.a.	CAPACITY Ton* c.a.	M (mm)	H (mm)	
SD6/4,6/125	125	166	6080	11090	
SD6/4,6/150	150	200	7600	12610	
SD6/4,6/175	175	233	9120	14130	
SD6/4,6/200	200	266	10640	15650	
SD6/4,6/225	225	300	12160	17170	
SD6/4,6/250	250	332	13680	18690	











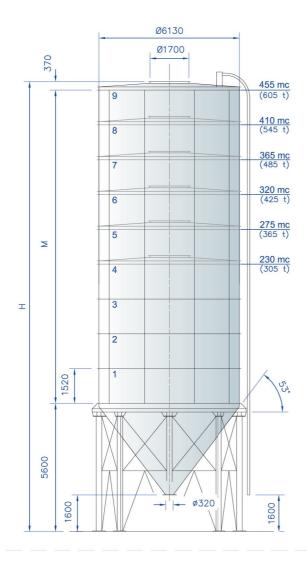
# BOLTED SILOS Ø 6130 MM

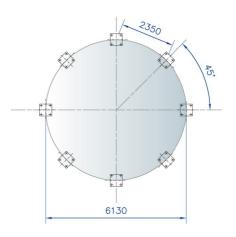
They can be used for small silos batteries for the storage and load on tanker Lorries of bulk cement. The maximum volumetry to be realized on these silos is of 455 cu.m.

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- Manhole 400 mm
- Predisposition for measuring gauge
- Kit galvanized bolts, gaskets and silicon for erection

SERIES	CAPACITY m³ c.a.	CAPACITY Ton* c.a.	M (mm)	H (mm)
SD8/6,1/230	230	305	6080	12050
SD8/6,1/275	275	365	7600	13570
SD8/6,1/320	320	425	9120	15090
SD8/6,1/365	365	485	10640	16610
SD8/6,1/410	410	545	12160	18130
SD8/6,1/455	455	605	13680	19650







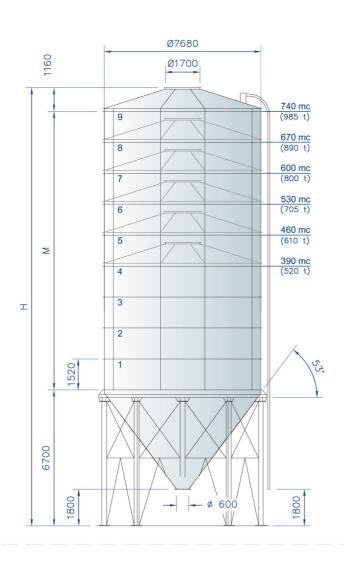
# BOLTED SILOS Ø 7680 MM

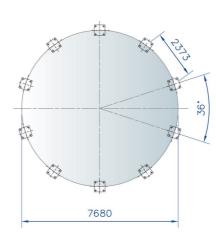
They can be used for medium storage battery and load on tanker lorry of bulk cement. The maximum volumetry to be realized on Silos is 740 cu.m. with height limited.

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- Manhole 400 mm
- Predisposition for measuring gauge
- Kit galvanized bolts, gaskets and silicon for erection

SERIES	CAPACITY m³ c.a.	CAPACITY Ton* c.a.	M (mm)	H (mm)	
SD10/7,6/390	390	520	6080	13940	
SD10/7,6/460	460	610	7600	15460	
SD10/7,6/530	530	705	9120	16980	
SD10/7,6/600	600	800	10640	18500	
SD10/7,6/670	670	890	12160	20020	
SD10/7,6/740	740	985	13680	21540	









# BOLTED SILOS Ø 9276 MM

It is mostly used for the realization of storage batteries with high volumetry and load on tank lorry of bulk cement. The maximum volumetry to be realized on the silos is of 1500 cu.m.

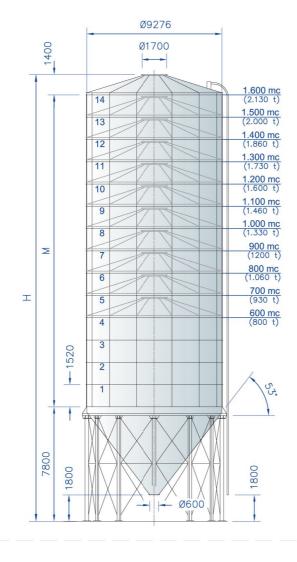
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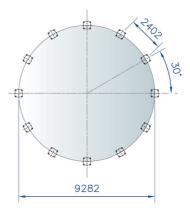
- Manhole 400 mm
- Predisposition for measuring gauge
- Kit galvanized bolts, gaskets and silicon for erection

	SERIES	CAPACITY m³ c.a.	CAPACITY Ton* c.a.	M (mm)	H (mm)	
SD	12/9,2/600	600	800	6080	15280	
SD	12/9,2/700	700	930	7600	16800	
SD	12/9,2/800	800	1060	9120	18320	
SD	12/9,2/900	900	1200	10640	19840	
SD	12/9,2/1000	1000	1330	12160	21360	
SD	12/9,2/1100	1100	1460	13680	22880	
SD	12/9,2/1200	1200	1600	15200	24400	
SD	12/9,2/1300	1300	1730	16720	25920	
SD	12/9,2/1400	1400	1860	18240	27440	
SD	12/9,2/1500	1500	2000	19760	28960	
SD	12/9,2/1600	1600	2130	21280	30480	

\*Cement with specific weight 1,33 Ton/cu.m.c.a.







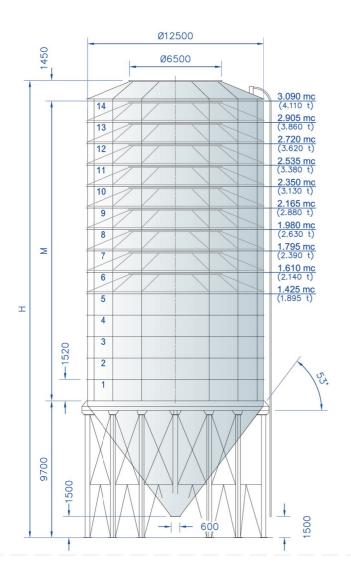
# BOLTED SILOS Ø 12500 MM

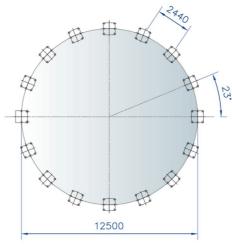
Ideal for marine terminal, they are planned and realized for the storage of any kind of bulk material. They allow both the unload from vessel and the load on tank lorries, both the load on vessels, through the use of special pump systems. This kind of installation needs less space, because it develops in height, and permits the storage of different kinds of materials: one per each silo.

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- Manhole 400 mm
- Predisposition for measuring gauge
- Kit galvanized bolts, gaskets and silicon for erection

SERIES	CAPACITY m³ c.a.	CAPACITY Ton* c.a.	M (mm)	H (mm)	
SD16/12,5/1425	1425	1895	7600	18750	
SD16/12,5/1610	1610	2140	9120	20270	
SD16/12,5/1795	1795	2390	10640	21790	
SD16/12,5/1980	1980	2630	12120	23310	
SD16/12,5/2165	2165	2880	13680	24830	
SD16/12,5/2350	2350	3130	15200	26350	
SD16/12,5/2535	2535	3380	16720	27870	
SD16/12,5/2720	2720	3620	18240	29390	
SD16/12,5/2905	2905	3860	19760	30910	
SD16/12,5/3090	3090	4110	21280	32430	









# MARINE TERMINAL

### STORAGE TERMINAL SPR EUROMECC

Euromecc SPR Marine Terminal has been developed and produced for cement storage. It is a modular plant composed of one or more silos with rectangular plant. Each silo is provided of a cement extraction system through tubular screws, which reach bucket elevator or inclines screws which will feed a telescopic unloader able to be adapted to all kinds of tank lorries.

Storage terminal SPR is designed for receipt of cement discharged from ships by a pneumatic system. It consists of bolted elements that can be transported and easily assembled on site.









# Mobile Terminal

# MOBILE SYSTEM FOR CEMENT TEMPORARY STORAGE AND DIRECT TRANSFER FROM VESSELS TO TANKERS

The machine is constituted by a silo square shaped and a system of screws for the extraction and the cement loading to the tanker.

In squared sections with completed mobility on wheels, dimensions:  $5 \times 5 \times h = 10$  m. Storage capacity 170 cu.m/225 Ton of cement, two loading points, of 200 ton each one, of bulk cement on tank lorry.





# REFERENCE

Our Silos comply with the most recent international legislation standards (D.M 14-1-2008, CNR UNI 10011 1988, UNI EN 1993-4-1:2006, EN 1992-1991, EN 206, EN 1992-2005, UNI EN 1998-1).

Our wide range of silos is suitable for each environmental and weather conditions all over the world.

In fact, we have specific solutions for:

- · extreme temperatures
- desertic regions
- · conditions of highly ice creation
- · seismic stress

We are active in all the continents' market, with installations in more than 30 countries.





## Accessories

#### **FOOT IRONS:**

Hot galvanized and equipped with intermediate lay-by and safe-body grid.



# PARAPET:

Placed on the roof of the silos  $H=1,2\,$  mt with baseboard 15 cm made with a pipe of 42 mm and a plate  $50\,x\,6$ .

Euromecc parapets are hot galvanized.



#### **CONNECTION GANGWAY:**

To connect no. 2 silos, realized in strained metal sheet and completed with banisters  $H=1,2\,\mathrm{mt}$  with baseboard. of 15 cm. Hot galvanized.



### **AERATION KIT:**

Applied inside the silo inferior cone, it avoids possible damages due to the product irregular descent, such as demixing, bridges, stagnation. Aeration plates help the product outflow thanks to the local change of the specific weight of the product blowing air through blowing nozzles connected to the air distribution pipes.

for silos  $\emptyset$  2500 mm (no. 3 plates or nozzles) for silos  $\emptyset$  3000 mm (no. 4 plates or nozzles) for silos  $\emptyset$  3500 mm (no. 8 plates or nozzles) for silos  $\emptyset$  4600 mm (no. 12 plates or nozzles) for silos  $\emptyset$  6130 mm (no. 16 plates or nozzles) for silos  $\emptyset$  7680 mm (no. 20 plates or nozzles) for silos  $\emptyset$  9276 mm (no. 24 loglines 800 x 200 mm) for silos  $\emptyset$  12500 mm (no. 32 loglines 1600 x 200 mm)



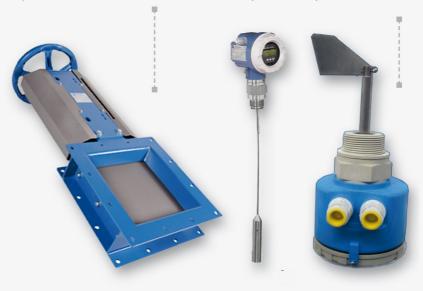
### **BUTTERFLY VALVES/SLIDE VALVES:**

They are used where the material flux in dust or granular must be intercepted. The valves can be installed under unloading gates of silos and hoppers, on the loading and unloading gates of the mechanic conveyors or on the loading gate of the telescopic unloader. The valves can be both with pneumatic and manual start-up.

### **MEASURING GAUGE:**

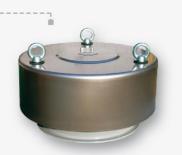
PADDLE: The universal gauge with revolving paddle is used as a full/empty alarm and the tank request containing bulk solid material.

IN CONTINUOUS: The measuring gauge in continuous is a transmitter which works according to the fly-time, through micro-impulses. Ideal to measure the level of fine and pulverulent solid products inside the silos.



#### **SAFETY VALVE:**

Spring check-pressure valve represents the last outlet possibility in case of anomalous pressure conditions inside the silo that could endanger its structure. It consists of a cylindrical body that can be connected to a flange by a special shaft to be welded on the silo, a disc-shaped internal metal cover held in place by a central spring bar for depression conditions, an external metallic ring for over-pressure held in place by 3 spring bars and a protection hat.



#### **SAFETY SYSTEM:**

The risk of serious damage to people and structures arises during the pneumatic loading.

This is because of an overcharge or an overpressure of the silos.

Safety system, supplied by single components, prevents both the inconvenients. In this way we can avoid silos damages, to the filter and to the other components of the plants. Moreover, it reduces the risk of undesired dust emission.



#### **DUST EXHAUST FILTERS:**

Euromecc is able to offer a wide range of filters in order to blow down from the smallest to the biggest quantity of dust. On series they are provided of hood for smoke suction, according to the law in force.



#### **SCREWS:**

Euromecc offers a wide range of screws (tubulars, canal, etc.) with high performance and reliability suitable to convey every kind of material: cement, sand, lime, mortar, limestone, chalk, filler, flowing ashes, etc.



Euromecc Bucket Elevators are designed to the vertical convey of fine materials such as cement, lime, calcium carbonate, etc. The traction element is constituted by a rubber carpet and the distance between the buckets is optimized, in order to obtain the requested output maintaining the buckets speed and filling inside the values which ensure reliability.

### **TELESCOPIC DISCHARGER:**

Telescopic dischargers are used to load dust materials on tanker in absence of dust. They are suitable for a continuous service reaching a maximum output of 250 cu.m/h.

The inferior extremity of the discharger is coated with technopolymer which assures the dust capacity of connection between the discharger and the tanker.

#### **ROTARY VALVE**

They are developed for the controlled unload of dusts or granular material from silos, hoppers or filters towards mechanic (screws) or low/medium pneumatic pressure transport lines.











# CARRIAGE

Every silo is planned to be transported with normal flatcars from 13,60 m of length and have components stackable to optimize the number of transports.

The only series that needs an exceptional transport without escort is the  $\emptyset$  3.000 monolithic.

## MONOLITHIC SILOS Ø 2400 MM

SERIES	CAPACITY	TRUCK	CONTAINER
SM4/2,4/33	33 m <sup>3</sup>	Ø 2400 mm x 8840 mm	Non-portable
SM4/2,4/42	42 m³	Ø 2400 mm x10840 mm	Non-portable
SM4/2,4/52	52 m³	Ø 2400 mm x 12840 mm	Non-portable

## MONOLITHIC SILOS Ø 3000 MM

SERIES	CAPACITY	TRUCK	CONTAINER
SM4/3,0/68	68 m <sup>3</sup>	Ø 3000 mm x 12050 mm	Non-portable
SM4/3,0/75	75 m³	Ø 3000 mm x 13050 mm	Non-portable
SM4/3,0/90	90 m <sup>3</sup>	Ø 3000 mm x 15050 mm**	Non-portable

# BOLTED SILOS Ø 3500 MM

SERIES	CAPACITY	TRUCK	CONTAINER
SD4/3,5/45	45 m <sup>3</sup>	0,25	0,33
SD4/3,5/60	60 m <sup>3</sup>	0,33	0,5
SD4/3,5/75	75 m <sup>3</sup>	0,33	0,5
SD4/3,5/90	90 m <sup>3</sup>	0,33	0,5
SD4/3,5/105	105 m <sup>3</sup>	0,5	0,75
SD4/3,5/120	120 m <sup>3</sup>	0,5	0,75

## BOLTED SILOS Ø 4600 MM

SERIES	CAPACITY	TRUCK	CONTAINER
SD6/4,6/125	125 m <sup>3</sup>	1	1
SD6/4,6/150	150 m <sup>3</sup>	1	1
SD6/4,6/175	175 m³	1	1,5
SD6/4,6/200	200 m <sup>3</sup>	1,5	1,5
SD6/4,6/225	225 m³	1,5	1,5
SD6/4,6/250	250 m <sup>3</sup>	1,5	2

# BOLTED SILOS Ø 6130 MM

CAPACITY	TRUCK	CONTAINER
230 m <sup>3</sup>	1,5	2
275 m³	1,5	2
320 m³	2	2,5
365 m³	2	2,5
410 m <sup>3</sup>	2	3
455 m³	2	3
	230 m <sup>3</sup> 275 m <sup>3</sup> 320 m <sup>3</sup> 365 m <sup>3</sup> 410 m <sup>3</sup>	230 m³     1,5       275 m³     1,5       320 m³     2       365 m³     2       410 m³     2

## BOLTED SILOS Ø 7680 MM

SERIES	CAPACITY	TRUCK	CONTAINER
SD10/7,6/390	390 m³	2,5	2,5
SD10/7,6/460	460 m <sup>3</sup>	2,5	3
SD10/7,6/530	530 m <sup>3</sup>	3	3
SD10/7,6/600	600 m³	3	3
SD10/7,6/670	670 m³	3	3
SD10/7,6/740	740 m³	3	3,5

# BOLTED SILOS Ø 9276 MM

SERIES	CAPACITY	TRUCK	CONTAINER
SD12/9,2/600	600 m <sup>3</sup>	3	3
SD12/9,2/700	700 m <sup>3</sup>	3	3,5
SD12/9,2/800	800 m³	3,5	3,5
SD12/9,2/900	900 m³	3,5	3,5
SD12/9,2/1000	1000 m <sup>3</sup>	3,5	3,5
SD12/9,2/1100	1100 m³	3,5	4
SD12/9,2/1200	1200 m³	4	4
SD12/9,2/1300	1300 m <sup>3</sup>	4	4
SD12/9,2/1400	1400 m <sup>3</sup>	4	4,5
SD12/9,2/1500	1500 m <sup>3</sup>	4	4,5
SD12/9,2/1600	1600 m³	4	4,5

# BOLTED SILOS Ø 12500 MM

SERIES	CAPACITY	TRUCK	CONTAINER
SD16/12,5/1425	1425 m <sup>3</sup>	5,5	8
SD16/12,5/1610	1610 m <sup>3</sup>	5,5	8
SD16/12,5/1795	1795 m³	5,5	8
SD16/12,5/1980	1980 m³	5,5	8,5
SD16/12,5/2165	2165 m³	6	8,5
SD16/12,5/2350	2350 m <sup>3</sup>	6,5	9
SD16/12,5/2535	2535 m <sup>3</sup>	6,5	9
SD16/12,5/2750	2750 m <sup>3</sup>	7,5	10
SD16/12,5/2950	2950 m <sup>3</sup>	7,5	10
SD16/12,5/3090	3090 m <sup>3</sup>	7,5	10

<sup>\*</sup> Note: Trailer truck with flatcar by 13,60 m

<sup>\* \*</sup> Note: Exceptional Transport

