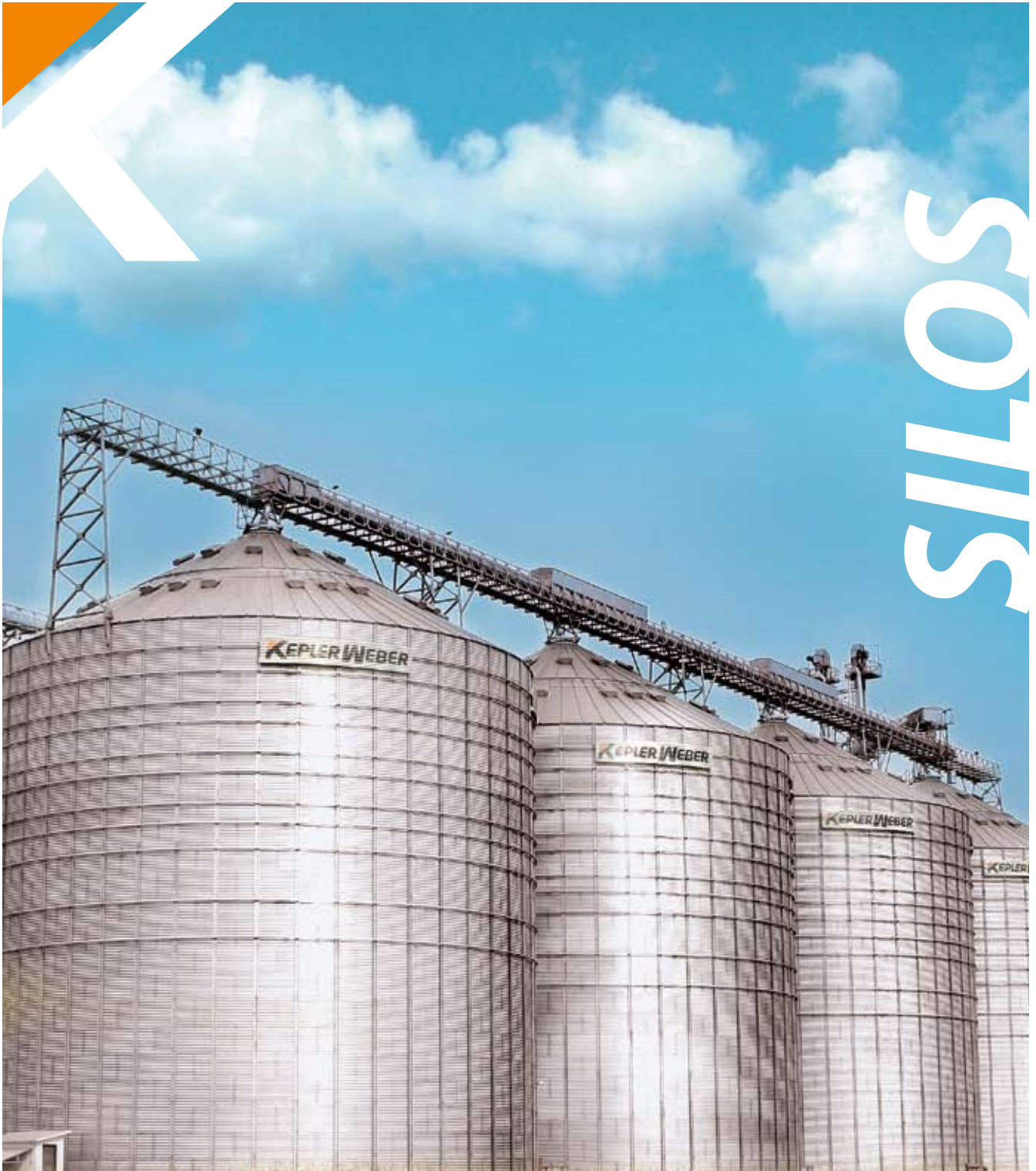


SILOS



KEPLERWEBER®



MORE THAN 80 YEARS CONTRIBUTING TO OUR CUSTOMERS' GROWTH.

Founded in 1925, in the city of Panambi/Brazil, and focused on the agribusiness since its creation, Kepler Weber is specialized in developing complete storage solutions. Kepler Weber offers an agile and integrated structure, which allows us to annually process 100,000 Mt of steel to serve an array of customers like trading companies and cooperatives, or even small and big businesses. The company is widely recognized for the development of agribusiness in Brazil and, acting as an exporter since 1973, is the current Latin-American leader in the segment. Our strong investment in technology, the maximum quality of consumables and the development of tailor-made projects are features that confirm Kepler Weber's commitment of always contributing to its customer's growth.



SERVICES

KW Support

Our multiservice support system aims at fulfilling our customers' every after sale need in Brazil or abroad. In order to keep the highest quality and performance standards for Kepler Weber equipment, the KW Support offers services like Technical Assistance, Original Spare Parts and Technical Training.

Technical Assistance

A specialized technical team is at the complete service of Kepler Weber's customers for answering questions, running technical checks, and offering solutions. Technical visits are also offered in order to carry out preventive and corrective maintenance services and to provide overhauls, improvements, updates, and expansion of the customer's system.

Original Parts

Original parts for Kepler Weber equipment are available for purchase through KW Support or in any of our many resellers in Brazilian territory, or through our international sales agents.



Technical Training

Our Technical Training Program takes Kepler Weber professionals with theoretical and practical expertise of grain transport, cleaning, drying and storage techniques, to the client's facilities, where they teach courses of equipment operation and maintenance.

Designed to guarantee an efficient and safe storage, Kepler Weber silos are manufactured with the most modern production processes, with high standardization levels and full quality guarantee. Dimensioned according to national and international standards, they are designed to store products with specific weight up to 0.83 Mt/m^3 . KW steel silos can withstand wind speeds of up to 120 km/h, as well as hold the weight imposed by its accessories such as catwalks and thermometry cables.

STEEL SILOS

Flat Bottom Silos

The flat bottom silos line has as one of its main features the low cost per stored Mt, providing the best option for long-period storage, preserving quality and grain integrity. Its design allows vertical expansions, optimizing the physical space in the facilities.



Technical Details



Roof Structure

It is made up of galvanized structural profiles joined to the stiffeners by the central ring, which gives it greater rigidity and allows a uniform loading transference such as wind, thermometry cables, catwalks and conveyors. Silos up to model 36, have self-supporting covering sheets, sparing the use of a structure.

MODEL	Nominal Diameter (m)	Dimensions (m)		Total Volume (m ³)	Holding Capacity (Mt)	
		Total Height	Body Height		Soybean (0.75Mt/m ³)	Paddy rice (0.60Mt/m ³)
2404	7.28	5.87	3.76	183.2	136.7	109.3
2405		6.79	4.68	221.2	165.2	132.1
2406		7.70	5.59	259.2	193.7	154.9
2407		8.61	6.51	297.2	222.2	177.8
2408		9.53	7.42	335.2	250.7	200.6
2409		10.44	8.34	373.3	279.2	223.4
2410		11.36	9.25	411.3	307.7	246.2
2411		12.27	10.17	449.3	336.2	269.0
2412		13.19	11.08	487.3	364.8	291.8
3005	9.10	7.31	4.68	355.6	265.6	212.5
3006		8.23	5.59	415.0	310.2	248.1
3007		9.14	6.51	474.4	354.7	283.8
3008		10.05	7.42	533.9	399.3	319.4
3009		10.97	8.34	593.3	443.8	355.0
3010		11.88	9.25	652.7	488.4	390.7
3011		12.80	10.17	712.1	532.9	426.3
3012		13.71	11.08	771.5	577.5	462.0
3013		14.63	11.99	830.9	622.0	497.6
3014	15.54	12.91	890.3	666.6	533.3	
3015	16.45	13.82	949.7	711.1	568.9	
3606	10.91	8.85	5.59	612.1	457.5	366.0
3607		9.76	6.51	697.7	521.6	417.3
3608		10.68	7.42	783.2	585.8	468.6
3609		11.59	8.34	868.7	649.9	519.9
3610		12.51	9.25	954.3	714.1	571.3
3611		13.42	10.17	1,039.8	778.2	622.6
3612		14.33	11.08	1,125.4	842.4	673.9
3613		15.25	11.99	1,210.9	906.5	725.2
3614		16.16	12.91	1,296.5	970.7	776.6
3615		17.08	13.82	1,382.0	1,034.9	827.9
3616		17.99	14.74	1,467.6	1,099.0	879.2
3617		18.91	15.65	1,553.1	1,163.2	930.5
3618	19.82	16.57	1,638.6	1,227.3	981.9	
4208	12.72	11.21	7.42	1,086.7	815.0	652.0
4209		12.12	8.34	1,203.1	902.3	721.9
4210		13.04	9.25	1,319.5	898.7	791.7
4211		13.95	10.17	1,436.0	1,077.0	861.8
4212		14.86	11.08	1,552.4	1,164.3	931.4
4213		15.78	11.99	1,668.8	1,251.6	1,001.3
4214		16.69	12.91	1,785.3	1,338.9	1,071.2
4215		17.61	13.82	1,901.7	1,426.3	1,141.0
4216		18.52	14.74	2,018.1	1,513.6	1,210.9
4217		19.44	15.65	2,134.6	1,600.9	1,280.7
4218		20.35	16.57	2,251.0	1,688.2	1,350.6
4219		21.27	17.48	2,367.4	1,775.6	1,420.4
4220		22.18	18.39	2,483.8	1,862.9	1,490.3
4808		14.55	11.74	7.42	1,443.7	1,079.9
4809	12.65		8.34	1,595.8	1,193.9	955.2
4810	13.57		9.25	1,747.9	1,308.0	1,046.4
4811	14.48		10.17	1,900.0	1,422.1	1,137.6
4812	15.40		11.08	2,052.0	1,536.1	1,228.9
4813	16.31		11.99	2,204.1	1,650.2	1,320.1
4814	17.23		12.91	2,356.2	1,764.2	1,411.4
4815	18.14		13.82	2,508.3	1,878.3	1,502.6
4816	19.06		14.74	2,660.4	1,992.3	1,593.9
4817	19.97		15.65	2,812.4	2,106.4	1,685.1
4818	20.88		16.57	2,964.5	2,220.4	1,776.3
4819	21.80		17.48	3,116.6	2,334.5	1,867.6
4820	22.71		18.39	3,268.7	2,448.5	1,958.8
4821	23.63		19.31	3,420.8	2,532.6	2,050.1
4822	24.54		20.22	3,572.8	2,676.6	2,141.3

MODEL	Nominal Diameter (m)	Dimensions (m)		Total Volume (m ³)	Holding Capacity (Mt)	
		Total Height	Body Height		Soybean (0.75Mt/m ³)	Paddy rice (0.60Mt/m ³)
5410	16.37	14.09	9.25	2,246.3	1,684.7	1,347.8
5411		15.00	10.17	2,438.8	1,829.1	1,463.3
5412		15.91	11.08	2,631.2	1,973.4	1,578.7
5413		16.83	11.99	2,823.7	2,117.8	1,694.2
5414		17.74	12.91	3,016.2	2,262.1	1,809.7
5415		18.66	13.82	3,208.6	2,406.5	1,925.2
5416		19.57	14.74	3,401.1	2,550.8	2,040.7
5417		20.49	15.65	3,593.6	2,695.2	2,156.1
5418		21.40	16.57	3,786.0	2,839.5	2,271.6
5419		22.32	17.48	3,978.5	2,983.9	2,387.1
5420		23.23	18.39	4,171.0	3,128.2	2,502.6
5421		24.14	19.31	4,363.4	3,272.6	2,618.1
5422	25.06	20.22	4,555.9	3,416.9	2,733.5	
6010	18.19	14.62	9.25	2,811.4	2,104.0	1,683.2
6011		15.53	10.17	3,049.0	2,282.2	1,825.7
6012		16.45	11.08	3,286.6	2,460.4	1,968.3
6013		17.36	11.99	3,524.2	2,638.6	2,110.9
6014		18.28	12.91	3,761.9	2,816.8	2,253.4
6015		19.19	13.82	3,999.5	2,995.0	2,396.0
6016		20.11	14.74	4,237.1	3,173.2	2,538.6
6017		21.02	15.65	4,474.7	3,351.4	2,681.1
6018		21.93	16.57	4,712.4	3,529.6	2,823.7
6019		22.85	17.48	4,950.0	3,707.8	2,966.3
6020		23.76	18.39	5,187.6	3,886.0	3,108.8
6021		24.68	19.31	5,425.2	4,064.3	3,251.4
6022	25.59	20.22	5,662.8	4,242.5	3,394.0	
7210	21.83	15.77	9.25	4,164.0	3,116.4	2,493.1
7211		16.68	10.17	4,506.1	3,373.0	2,698.4
7212		17.60	11.08	4,848.3	3,629.6	2,903.7
7213		18.51	11.99	5,190.5	3,886.3	3,109.0
7214		19.42	12.91	5,532.7	4,142.9	3,314.3
7215		20.34	13.82	5,874.9	4,399.5	3,519.6
7216		21.25	14.74	6,217.0	4,656.1	3,724.9
7217		22.17	15.65	6,559.2	4,912.8	3,930.2
7218		23.08	16.57	6,901.4	5,169.4	4,135.5
7219		24.00	17.48	7,243.6	5,426.0	4,340.8
7220		24.91	18.39	7,585.8	5,682.6	4,546.1
7221		25.83	19.31	7,927.9	5,939.2	4,751.4
7222	26.74	20.22	8,270.1	6,195.9	4,956.7	
9016	27.28	22.79	14.74	9,985.1	7,478.4	5,982.7
9017		23.70	15.65	10,519.7	7,879.4	6,303.5
9018		24.62	16.57	11,054.4	8,280.3	6,624.3
9019		25.53	17.48	11,589.0	8,681.3	6,945.1
9020		26.44	18.39	12,123.7	9,082.3	7,265.8
9021		27.36	19.31	12,658.4	9,483.3	7,586.6
9022		28.27	20.22	13,193.0	9,884.2	7,907.4
10516	31.83	24.15	14.74	13,898.1	10,409.4	8,327.5
10517		25.06	15.65	14,625.9	10,955.2	8,764.2
10518		25.98	16.57	15,353.6	11,501.0	9,200.8
10519		26.89	17.48	16,081.3	12,046.7	9,637.4
10520		27.80	18.39	16,809.0	12,592.5	10,074.0
10521		28.72	19.31	17,540.3	13,155.2	10,524.2
10522		29.63	20.22	18,268.0	13,701.0	10,960.8

Hopper Bottom Steel Silos

The hopper bottom line is designed to cater small and medium capacities, and its main feature is its easy unloading process due to its conic funnel elevated by metallic columns. These silos can be used as temporary storage for the reception area or at the drying process, increasing the reception capacity and regulating the product flow optimizing the equipments usage. They are also used as truck/ wagons dispatch silos.



Technical Details



Metallic Columns

The reinforced holding columns are made in a "C" shape profile, welded by submerged arch technique, which guarantees a perfect union and a high resistance. Available in painted or zinc-coated finishings.

Funnel

The unloading funnels are made of highly resistant zinc-coated steel with two inclination options: 45° or 60°. This easy to assemble structure has its joints sealed, and it also supports the ventilation system's ducts.

MODEL	Nominal Diameter (m)	Dimensions * (m)			Total Volume (m ³)	Holding capacity (Mt)	
		Total Height	Body Height	Metallic Support Height		Soybean (0.75Mt/m ³)	Paddy rice (0.60Mt/m ³)
1202-E	3.63	5.85	1.86	2.94	28.5	21.9	17.1
1203-E		6.76	2.77		38.0	28.5	22.8
1204-E		7.67	3.69		47.5	35.7	28.5
1205-E		8.59	4.60		57.0	42.8	34.2
1206-E		9.50	5.52		66.5	49.9	39.9
1502-E	4.55	6.56	1.86	3.39	48.3	36.6	29.3
1503-E		7.48	2.77		63.1	47.8	38.2
1504-E		8.39	3.69		78.0	58.9	47.1
1505-E		9.31	4.60		92.8	70.0	56.0
1506-E		10.22	5.52		107.7	81.2	64.9
1507-E		11.13	6.43		122.5	92.3	73.8
1802-E	5.46	7.29	1.86	3.84	74.9	56.7	45.4
1803-E		8.20	2.77		96.2	72.8	58.2
1804-E		9.11	3.69		117.6	88.8	71.1
1805-E		10.03	4.60		139.0	104.9	83.9
1806-E		10.94	5.52		160.4	120.9	96.7
1807-E		11.86	6.43		181.8	136.9	109.6
1808-E		12.77	7.34		203.1	153.0	122.4
1809-E		13.69	8.26		224.5	169.0	135.2
2104-E	6.36	9.79	3.69	4.29	167.4	125.6	100.5
2105-E		10.70	4.60		196.5	147.4	117.9
2106-E		11.61	5.52		225.6	169.2	135.4
2107-E		12.53	6.43		254.7	191.1	152.8
2108-E		13.44	7.34		283.8	212.9	170.3
2109-E		14.36	8.26		313.0	234.7	187.8
2110-E		15.27	9.17		342.1	256.5	205.2
2404-E	7.28	10.55	3.69	4.78	228.1	172.2	137.7
2405-E		11.46	4.60		266.1	200.7	160.6
2406-E		12.38	5.52		304.1	229.2	183.4
2407-E		13.29	6.43		342.1	257.7	206.2
2408-E		14.21	7.34		380.1	286.2	229.0
2409-E		15.12	8.26		418.1	314.7	251.8
2410-E		16.03	9.17		456.2	343.3	274.6
2411-E		16.95	10.09		494.2	371.8	297.4
2412-E		17.86	11.00		532.2	400.3	320.2
3010-E	9.10	17.52	9.17	5.72	742.5	556.1	444.8
3011-E		18.43	10.09		801.8	600.4	480.3
3012-E		19.35	11.00		861.2	645.2	516.1
3013-E		20.26	11.92		920.6	689.6	551.6
3014-E		21.18	12.83		980.0	734.3	587.5
3015-E		22.09	13.75		1,039.4	778.7	623.0

* Silos with 45° funnel



Technical details

common to all metallic silos

Silo Body

Side sheets are made of highly resistant steel and coated with zinc in a 350 g/m² layer, which guarantees resistance to corrosion and high durability. The sheets are 914mm high and have a 102mm standard corrugation, allowing high structural resistance. They are assembled with 8.8 highly resistant chrome-plated bolts, with neoprene seal washers and caulking filler to securely seal the joints.

Stiffeners

These structures are made of highly resistant zinc-coated steel, with a minimum coating of 350 g/m², with a "C" shape profile with reinforced edges. The stiffeners have the same shape from the base to the top of the silo, with overlapping junctions, which provides perfect alignment and an easier assemble process.

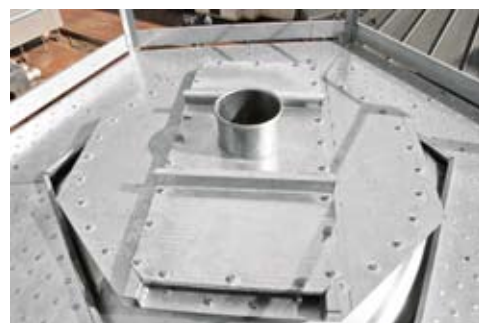


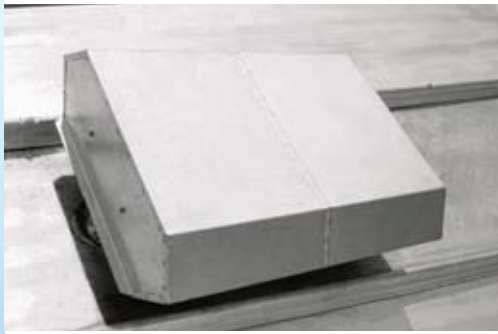
Roof Sheets

The silos roof sheets have a 30° inclination and are zinc-aluminum coated, which makes them up to 4 times more resistant to corrosion than regular zinc-coating. They have exclusive grooves between sheets, providing perfect fit. The fixation points have rims that create a flat surface for the neoprene seal washers to be fitted, making the roof water proof.

Central Lid

This lid is designed to give access to the inside of the silo for inspection or maintenance without the need to disassemble any loading equipment or piping.





Vents

The vents balance the internal pressure of the silo during loading and unloading procedures, as well as provide an outlet for the air coming out of the aeration system. They have a unique format, which prevents the accumulation of grains and impurities on the roof.

Ladders and Platforms

The ladders are zinc-coated, and the external ones have guardrails and resting platforms with baseboards and handrails; internal ladders are equipped with fall arrester system, to provide both accessibility and safety to the operator.



Access Doors

The silo has two standard access doors, one on the roof near the top platform, and another near the intermediary platform.

OPTIONAL ACCESSORIES



Aeration System

Designed to maintain the quality of the product during storage period, the aeration consists of blowing the air through the grain mass. Aeration benefits are:

- Homogenize the grain mass temperature,
- Reduces or maintains moisture,
- Helps to remove odours,
- Inhibits insects growth.

Thermometry System

System in which cables with temperature sensors remain immersed in the grain mass and measure the temperature at different levels. The thermometry and aeration systems may be connected to provide automation for the management of product storage conditions.



SWEEP AUGERS

Developed to speed up the silo unloading process and reduce operator intervention. Its automatic advancing system and self-supporting gutters allow the equipment to start operation while still submerged in the grain mass and remove the product with a single sweep.

- More structural rigidity to operate in severe operation conditions,
- System advance pace and traction strength are adjustable, allowing operation to be made with different kinds of products,
- Reduced product layer on the floor after operation,
- Available to be installed in existing silos.

Model		Capacity (0.75 Mt/m ³)		Power (HP)	Rotation (rpm)
Sweep Augers	Silo	mt/h	m ³ /h		
RV-200	SL 42	50	66.7	10	215
RV-200	SL 48	50	66.7	10	215
RV - 200	SL 54	50	66.7	12.5	215
RV - 200	SL 60	50	66.7	12.5	215
RV - 250	SL 60	100	133.3	25	220
RV - 200	SL 72	50	66.7	15	215
RV - 250	SL 72	100	133.3	25	220
RV - 250	SL 90	60	80.0	25	142
RV - 250	SL 90	100	133.3	30	222
RV - 250	SL 105	60	80.0	25	142
RV - 250	SL 105	100	133.3	40	222

Metallic Catwalk

Totally bolted, it is designed to hold the silo load conveyor, operation overloads and winds of up to 120 km/h, allowing a safe access to the top of the silo. Metallic catwalks may be opened or enclosed.

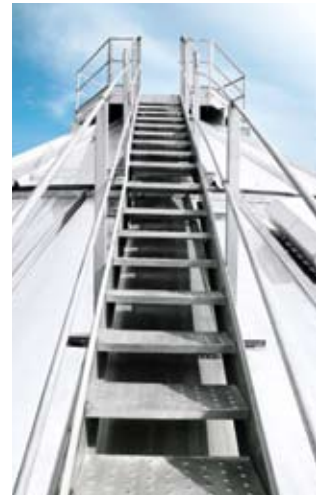


Spiral Ladder

Its entire structure is made of galvanized steel with skid-proof steps, baseboard, handrails, and a rest platform. Available from silos model 36' on.

Roof Ladder

With skid-proof steps, guardrails, handrails, and a platform at the silo's central lid area, roof ladders guarantee a safe access for inspections in pipes, catwalks and conveyors.





Grain Spreader

This device makes it possible to load the product more homogenously, reducing the concentration of impurities and broken grain in the center of the silo, improving the air flow during aeration. Two models are available: motorized or kinetic.

Maintenance Door

Located next to the concrete base, in the first ring, it's a rectangular door with 0.7m high x 1.0m width, equipped with quick lock, which allows easy access for cleaning and maintenance.



Side Discharge

Its internal structure makes unloading more even and allows removing the product through the side of the silo, in order to load trucks or equipments without the use of conveyor systems.



DISPATCH HOPPERS

Used for loading trucks and wagons, dispatch hoppers have modular structure, allowing an uniform flow and the reduction of product's dispatch time. Technical specifications features:

- Dimensioned to guarantee structural and operational safety,
- Side steel sheets 350 g/m² zinc-coated which provide greater durability to the equipment,
- 35° inclination funnel made of painted high resistant steel,
- Vents that balance the internal pressure inside the dispatch hopper during loading and unloading procedures,
- Joints are bolted and sealed with neoprene seal washers and caulking filler,
- Provided with safety and accessibility items.



N° of Modules	Width x Length (m)	Body height (m)	Free height (m)	Structure height (m)	Total height (m)	Total volume (m ³)	Holding Capacity (Mt)	
							Soy bean (0.75Mt/m ³)	Paddy rice (0.60Mt/m ³)
1	4.2 x 4.2	2.3	4.0	5.7	9.26	55	40	33
2	4.2 x 8.4					110	80	48
3	4.2 x 12.6					165	120	72

OPTIONAL ACCESSORIES

- Unloading slide gates,
- Ladders with security railings and skid-proof steps,
- Piping support system, allowing easy maintenance (available for 110 and 165m³ dispatch hoppers).



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