



Steel silos
STORAGE SILOS

Steel silos

- Silos manufactured with galvanised steel S450GD of high elastic tolerance and with Z600 minimum coating equivalent to 600 g/m² of zinc.
- 8,8 quality dichromate high tensile bolts in all of our product range..
- Washers with neoprene to ensure a waterproof seal.
- Galvanised reinforced exteriors, regardless of thickness, that provide excellent anti-corrosion qualities.
- A shallower corrugated wave to diminish the adherence of product inside.
- Galvanized cross section roof structure on models with a diameter superior to 12,22 meters.
- Hot galvanised end support structure.
- Our method for calculating thickness is more demanding than that established by standard EUROCODIGO1.
- Stairs and platforms comply with regulation UNE-EN ISO 14122.

Flat bottom silos

Galvanised sheet metal silos are nowadays the best alternative for grain storage thanks to their versatility, easy assembly, hygienic handling and low storage cost.

Our silos, either flat or hopper bottom, are used for extended storage of large quantities of grain, seeds and granulate products.

Our range of concrete base silos cover **capacities ranging from 83 m³ to 45.055 m³** and with **diameters from 4.58 m to 41.25 m**.



Flat bottom silo accessories

Bobcat door for high-capacity silos.

Ventilation system for silos of all capacities. **Framework comprised** of perforated grating made of galvanised steel.

Sweeping machines adapt to all of our silo diameters.

Lateral unloading system means a truck can be loaded directly from the silo.

Inner silo staircase for maintenance tasks and visual analysis of the product within; **Roof staircase** combines accessibility, safety and comfort for plant maintenance and **Spiral staircase** specially designed for easier access to the silo.

Temperature monitoring systems.

Models of flat bottom silos

Models	Wall ring number	4	5	6	7	8	9	10	11	12	13
Diameter (m)	Height cilinder	4,58	5,71	6,86	8,01	9,15	10,30	11,44	12,58	13,73	14,87
	Height roof										
4,58	1,26	83	101	120	139	158	177	196	215	233	252
5,35	1,60	114	140	166	192	217	243	269	294	320	346
6,11	1,77	151	185	218	252	286	319	353	386	420	453
6,88	2,08	195	237	280	322	365	407	450	492	535	577
7,64	2,20	243	296	348	401	453	506	558	611	663	715
8,40	2,41	298	362	425	489	552	615	679	742	806	869
9,17	2,64	360	436	512	587	663	738	814	889	965	1.040
9,93	2,86	428	517	606	694	780	869	957	1.045	1.133	1.222
10,70	3,11	504	607	710	813	916	1.018	1.121	1.224	1.327	1.430
11,46	3,31	586	704	822	940	1.058	1.176	1.294	1.412	1.530	1.648
12,22	3,53	675	809	943	1.077	1.211	1.345	1.480	1.614	1.748	1.882
12,99	3,69	772	924	1.075	1.227	1.379	1.530	1.682	1.833	1.985	2.137
13,75	3,86	876	1.046	1.216	1.386	1.555	1.725	1.895	2.065	2.235	2.405
14,51	4,13	988	1.177	1.366	1.555	1.744	1.933	2.123	2.312	2.501	2.690
15,28	4,34	1.109	1.319	1.528	1.738	1.948	2.158	2.367	2.577	2.787	2.997
16,04	4,55	1.237	1.468	1.699	1.930	2.161	2.392	2.624	2.855	3.086	3.317
16,81	4,77	1.375	1.628	1.882	2.136	2.390	2.644	2.898	3.152	3.406	3.660
17,57	4,99	1.519	1.797	2.074	2.352	2.629	2.906	3.184	3.461	3.738	4.016
18,33	5,19	1.673	1.975	2.277	2.579	2.881	3.182	3.484	3.786	4.088	4.390
19,10	5,41	1.838	2.165	2.493	2.821	3.149	3.477	3.804	4.132	4.460	4.788
19,86	5,74	2.010	2.364	2.718	3.073	3.427	3.781	4.136	4.490	4.845	5.199
20,63	5,90	2.193	2.576	2.958	3.340	3.723	4.105	4.488	4.870	5.252	5.635
21,39	6,18	2.384	2.795	3.206	3.617	4.028	4.439	4.851	5.262	5.673	6.084
22,92	6,54	2.798	3.270	3.742	4.214	4.686	5.158	5.630	6.102	6.574	7.046
23,68	6,83	3.019	3.523	4.026	4.530	5.035	5.539	6.043	6.547	7.051	7.555
24,45	6,98	3.253	3.790	4.327	4.864	5.402	5.939	6.476	7.013	7.550	8.087
27,50	7,68	4.290	4.969	5.649	6.328	7.008	7.687	8.367	9.046	9.726	10.405
30,55	8,61	5.513	6.353	7.192	8.031	8.870	9.709	10.548	11.387	12.226	13.065
32,08	9,22	6.198	7.124	8.049	8.974	9.899	10.825	11.750	12.675	13.600	14.526
36,66	10,52	8.559	9.768	10.976	12.184	13.392	14.600	15.809	17.017	18.225	19.433
41,25	11,82	11.420	12.949	14.478	16.006	17.535	19.064	20.593	22.122	23.651	25.180

Models of flat bottom silos

14	15	16	17	18	19	20	21	22	23	24	25	26
16,02	17,16	18,30	19,45	20,59	21,74	22,88	24,02	25,17	26,31	27,46	28,60	29,74
271	290	309	328	347	365	384	403	422	441	460	478	497
372	397	423	449	474	500	526	552	577	603	629	655	680
487	520	554	587	621	655	688	722	755	789	822	856	889
620	663	705	748	790	833	875	918	960	1.003	1.045	1.088	1.130
768	820	873	925	978	1.030	1.083	1.135	1.187	1.240	1.292	1.345	1.397
932	996	1.059	1.123	1.186	1.249	1.313	1.376	1.440	1.503	1.566	1.630	1.693
1.116	1.192	1.267	1.343	1.418	1.494	1.569	1.645	1.720	1.796	1.872	1.947	2.023
1.310	1.398	1.486	1.575	1.663	1.751	1.839	1.935	2.023	2.112	2.200	2.289	2.377
1.533	1.636	1.738	1.841	1.944	2.047	2.150	2.253	2.356	2.459	2.561	2.664	2.767
1.766	1.884	2.002	2.120	2.238	2.356	2.474	2.592	2.710	2.828	2.946	3.064	3.182
2.016	2.150	2.285	2.419	2.553	2.687	2.821	2.955	3.090	3.224	3.358	3.492	3.626
2.288	2.440	2.591	2.743	2.895	3.046	3.198	3.350	3.501	3.653	3.804	3.956	4.108
2.575	2.745	2.914	3.084	3.254	3.424	3.594	3.764	3.934	4.104	4.273	4.443	4.613
2.879	3.068	3.258	3.447	3.636	3.825	4.014	4.203	4.393	4.582	4.771	4.960	5.149
3.207	3.416	3.626	3.836	4.046	4.255	4.465	4.675	4.885	5.095	5.304	5.514	5.724
3.548	3.779	4.011	4.242	4.473	4.704	4.935	5.166	5.398	5.629	5.860	6.091	6.322
3.913	4.167	4.421	4.675	4.929	5.183	5.437	5.691	5.945	6.199	6.452	6.706	6.960
4.293	4.570	4.848	5.125	5.403	5.680	5.957	6.235	6.512	6.789	7.067	7.344	7.622
4.692	4.994	5.296	5.597	5.899	6.201	6.503	6.805	7.107	7.409	7.711	8.013	8.314
5.116	5.443	5.771	6.099	6.427	6.754	7.082	7.410	7.738	8.066	8.393	8.721	9.049
5.553	5.908	6.262	6.617	6.971	7.325	7.680	8.034	8.388	8.743	9.097	9.452	9.806
6.017	6.400	6.782	7.164	7.547	7.929	8.311	8.694	9.076	9.459	9.841	10.223	10.606
6.495	6.906	7.317	7.728	8.139	8.550	8.961	9.373	9.784	10.195	10.606	11.017	11.428
7.518	7.990	8.462	8.934	9.406	9.878	10.350	10.822	11.294	11.766	12.238	12.710	13.182
8.059	8.563	9.067	9.571	10.075	10.579	11.083	11.584	12.088	12.591	13.095	13.599	14.103
8.624	9.161	9.699	10.236	10.773	11.310	11.847	12.384	12.921	13.458	13.996	14.533	15.070
11.085	11.764	12.444	13.123	13.802	14.482	15.161	15.841	16.520	17.200	17.879	18.559	19.238
13.905	14.744	15.583	16.422	17.261	18.100	18.939	19.778	20.618	21.457	22.296	23.135	23.974
15.451	16.376	17.301	18.227	19.152	20.077	21.002	21.927	22.853	23.778	24.703	25.628	26.554
20.641	21.850	23.058	24.266	25.474	26.682	27.891	29.099	30.307	31.515	32.723	33.932	35.140
26.708	28.237	29.766	31.295	32.824	34.251	35.774	37.410	38.939	40.468	41.997	43.526	45.055

Capacities are estimated and show in m³. Shade models upon request. Tonnes with a density of 0.75 T/m³ as a reference.

Hopper silos



Hopper silos are designed to store grains, seeds, legumes, pellets and other products that require special storage conditions. The stored product stays off the ground to prevent moisture and lower the possibility of breakage.

Our range of hopper silos covers **capacities** ranging from **43 m³** to **2.016 m³** with **diameters** from **3.82 m** a **10.70 m**.

Technical details for hopper silos

Support structure which is made up of hot-dip galvanised structural profile columns braced together with laminate profiles, guarantees high silo resistance against external forces.

Cones with slopes of 45° and 60° may be supplied for proper **silo unloading**.

The **silo outlet** dimensions vary between **Ø270 mm** a **Ø1200 mm**.

Models of hopper silos

Hopper silos at 45°

Models	Wall ring number		4	5	6	7	8	9	10	11	12	13	14	15	16
Diameter (m)	Cylinder Height		4,58	5,72	6,86	8,01	9,15	10,30	11,44	12,58	13,73	14,87	16,02	17,16	18,30
	Roof Height	Column Height 1 m													
4,58	1,26	3,00	95	114	133	151	170	189	208	226	245	264	283	302	320
5,35	1,60	3,60	134	160	185	211	237	262	288	314	339	365	390	416	442
6,11	1,77	3,90	181	214	248	281	314	348	381	415	448	482	515	548	582
6,88	2,08	4,30	237	279	322	364	406	449	491	534	576	618	661	703	745
7,64	2,20	4,60	301	353	406	458	510	562	615	667	719	771	824	876	928
8,40	2,41	5,00	375	438	501	565	628	691	754	817	881	944	1.007	1.070	1.133
9,17	2,64	5,50	460	536	611	686	762	837	912	987	1.063	1.138	1.213	1.289	1.364
10,70	3,11	6,30	663	765	868	971	1.073	1.176	1.278	1.380	1.483	1.585	1.688	1.790	1.893

Hopper silos at 60°

Models	Wall ring number		2	4	4	5	6	7	8	9	10	11	12	13	14	15	16
Diameter (m)	Cylinder Height		2,29	3,43	4,58	5,72	6,86	8,01	9,15	10,30	11,44	12,58	13,73	14,87	16,02	17,16	18,30
	Roof Height	Column Height 1 m															
3,50	1,01	3,60	32	42	52	64	-	-	-	-	-	-	-	-	-	-	-
3,82	1,03	4,00	-	-	69	82	95	108	121	135	148	-	-	-	-	-	-
4,58	1,26	4,30	-	-	104	123	142	161	180	199	217	236	255	274	293	312	330
5,35	1,60	5,00	-	-	149	175	200	226	252	278	303	329	355	380	406	432	458
6,11	1,77	5,60	-	-	203	237	270	304	337	371	404	438	471	505	538	572	605
6,88	2,08	6,30	-	-	268	311	353	396	439	481	524	566	609	651	694	736	779
7,64	2,20	7,00	-	-	344	397	449	502	554	607	659	712	764	816	869	921	974
8,40	2,41	7,60	-	-	433	496	559	623	686	750	813	876	940	1.003	1.067	1.130	1.193
9,17	2,64	8,30	-	-	535	611	686	762	837	913	988	1.064	1.140	1.215	1.291	1.366	1.442
10,70	3,11	9,70	-	-	782	885	987	1.090	1.193	1.296	1.399	1.502	1.605	1.707	1.810	1.913	2.016

Hopper silo accessories

Hopper silo ventilation through highly-resistance perforated metal cylinders. The number and position on the silo cone guarantee even air distribution in the stored grain mass.

Overhead ventilation / Flow mass or FLOW MASS unloading system.

Vibrating bottom which helps to unload the products stored in hopper silos with poor flow characteristics.

Truck load silos

Structure-based truck load silos are designed for the storage and later dispatch of bulk products such as granulates, flour, etc.

For **agricultural facilities, feed plants or flour plants**, the silo available range **from 2.55 m in diameter to 4.58 m** with **capacities ranging from 11 m³ to 200 m³**.

For **industrial facilities** with silos for **truck or rail dispatch**, we recommend silos with **a diameter of at least 4.58 m** and **capacities ranging from 80 m³ a 400 m³**, upon request.



Models of truck load silos

Models	Wall ring number		1	2	3	4	5	6	7	8	9
	Cylinder Height										
Diameter (m)	Structure Height		4,58	5,72	6,86	8,01	9,15	10,30	11,44	12,58	13,73
	Truck	Train									
2,55	8,21	8,51	11	17	22	27	-	-	-	-	-
3,82	9,57	9,87	-	39	52	65	78	91	104	117	130
4,58	10,75	11,05	-	59	78	97	116	135	154	173	192

Capacities are estimated and shown in m³. Tonnes with a density of 0,75 T/m³ as a reference.