

FLAT BOTTOM SILOS FOR GRAIN STORAGE

MADE OF FLAT AND CORRUGATED SHEETS OF STEEL





















FLAT BOTTOM SILO FOR GRAIN STORAGE MADE OF FLAT SHEETS OF STEEL

BIN



prevents condensation of water vapour on the roof of the silo

ROOF

solid roof of the silo provides high resistance to wind and snow loads

ROOF EXHAUSTERS

ensure adequate ventilation of grain

SIDE LOADING INLET

is used for loading with the blower

TUBE FOR PNEUMATIC LOADING

PROBE FOR MEASURING TEMPERATURE OF THE GRAIN

CENTRAL DISCHARGE INLET DEDICATED FOR UNLOADING

equipped with an opening mechanism with a latch, used to carry out the grain from the silo into underfloor conveyor

UNLOADING SLEEVE

it allows inclined screw conveyor to be introduced into the silo

FULLY PERFORATED FLOOR

covering the entire surface of the silo's floor

CONCRETE BLOCKS

serve as supports of the silo's floor

AIR INLET

for connecting the fan

WATER PRESSURE MANOMETER

indicates the pressure of air flowing through the grain

ADVANTAGES OF THE SILO

DEVICE

with anti-dynamic pipe for protecting silo shell against damage

MANHOLE

and anti-slip

DESIGN

FUNCTIONALITY

for the storage of grain, cereals, corn and oilseeds

high-quality galvanized sheets of steel and fasteners

reasonable price

long-term grain storage



cooling and drying of stored grain



the roof is ribbed to prevent rain entering the silo



reduces the risk of mould and pests



equipment for mechanized loading and unloading of grain



they meet required parameters of fire resistance



BAG FILLING

with double door

PLATFORM

BOTTOM ACCESS

CONTROL MODULE OF THE SILO

not transferred gravitationally to the underfloor conveyor

LADDER PROTECTION

against unauthorized entry

CENTRAL LOADING INLET

it is a place for comfortable operation

ROOF STAIRS

PLATFORM

ROOF HATCH

with protection

gives access into the silo

EXTERNAL LADDER

OR SPIRAL STAIRS

INTERNAL LADDER

INTERNAL SWEEP

AUGER CONVEYOR

it unloads grain, which is

with a safety cage

they provide convenient access to the catwalk of the silo or silo crown stand

it is designed for convenient access to the roof hatch and roof stairs

SERVICE CATWALK

of grain transport equipment

it is intended for connecting loading equipment and using the entire operational volume of the silo

informs about status of silo hatches (open/closed) and about its full loading

DISCHARGE CONVEYOR UNDER THE FLOOR

of screw or chain (scraper) type

EMERGENCY OUTLET OF GRAIN

enables to discharge the silo in the case of a failure of the underfloor conveyor or clogging the central dischargé inlet that is mounted in the centre of the silo's floor

Type of this equipment varies depending on the silo model.

ENSURE PROPER CONDITIONS OF GRAIN STORAGE IN THE SILO

FORCED VENTILATION FAN

FOR COOLING, AERATING AND DRYING GRAIN

AIR HEATER

FOR HEATING AIR THAT DRIES GRAIN

PERFORATED FLOOR

PERFORATION OF ENTIRE FLOOR SURFACE ENSURES EFFICIENT VENTILATION

TEMPERATURE PROBE

FOR MEASURING TEMPERATURE OF STORED GRAIN

EXTRACTION FAN

REMOVES DUST AND HUMID AIR FROM THE SPACE ABOVE GRAIN, PREVENTS CONDENSATION UNDER ROOF OF THE SILO

SILOS UNLOADING

BAG FILLING DEVICE

- used for unloading small quantities of grain
- installed in small silos

UNLOADING SLEEVE

- is used to house the inclined screw conveyor
- we recommend the SLEEVE EXTENTION the conveyor will be able to take more grain without the need to manually scooping it to the conveyor inlet

UNDERFLOOR CONVEYOR

- of screw or chain (scraper) type
- the grain is provided to this conveyor through the inlet in the middle of the floor
- it transfers grain outside the silo

INTERNAL SWEEP AUGER CONVEYOR

it gathers grain that could not be transferred gravitationally to the underfloor conveyor

EMERGENCY OUTLET OF GRAIN

- it is located on the floor or under the floor
- it is used in the case of a failure of unloading equipment or grain caking above the inlet to the underfloor conveyor

SILOS LOADING

SILOS LOADING BLOWER

- it is a pneumatic loading system designed for small silos
- with own charging hopper
- the same fan is used to ventilate the silo
- it transports grain vertically to a height of 7m and offers a conveying capacity up to 6t/h

VERTICAL SCREW CONVEYOR

- very compact
- with own charging hopper
- suitable for connecting to the underfloor conveyor and using for unloading grain to a trailer
- it transports grain vertically to a height of 14m and offers a conveying capacity up to 24t/h

BUCKET ELEVATOR

- it is used to load the grain storages consisting of several silos
- it can be supported by a tower, pipe roller support (PRS) or fixed to the silo
- it transports grain to a height of 29,9m and offers a conveying capacity up to 45t/h

INTAKE HOPPERS

- of overrun and non-overrun type
- of screw or scraper type
- since 1990 we have delivered over 65 000 silos to Polish and European farmers
- since 2014 we have been controlling the quality of anti-corrosion coating of connectors in a brine chamber
- we have been granted a Certificate of Factory Production Control issued by the Institute of Welding in Gliwice city
- our silos are designed according to European construction standards called Eurocodes and provide our customers with free project in the electronic version



MODELS OF FLAT BOTTOM SILOS MADE OF FLAT SHEETS OF STEEL

NBIRTON NBIR	Ā						77				
COLUME (m²) 10,5 13,5 19,7 22,4 28,1 33,8 35,0 44,0 52,0 61,0 57,7 68,8											
VOLUME (m²) 15,6 19,5 26,3 29,9 37,4 45,0 45,0 56,0 67,0 78,0 76,9 91,7			NBIN10 NBIN1	OW NBIN2ON	NBIN20	NBIN20W	NBIN20WW	NBIN4ON NBIN4O	NBIN40W NBIN40WW	NBIN60	NBIN60W
HEIGHT (m)**	LOA	ADING CAPACITY (t)*	10,5 13,5	19,7	22,4	28,1	33,8	35,0 44,0	52,0 61,0	57,7	68,8
HEIGHT (m)**	VOL	_UME (m³)	15,6 19,5	26,3	29,9	37,4	45,0	45,0 56,0	67,0 78,0	76,9	91,7
	HEI	GHT (m)**	4,6 5,5	4,3	4,8	5,8	6,7	5,0 5,9	6,9 7,8	6,1	7,1
Internal ladder	DIA	METER (m)	2,3 2,3	3,2	3,2	3,2	3,2	3,8 3,8	3,8 3,8	4,5	4,5
Spiral stairs		external ladder	S		S		S	0	0	S	S
		internal ladder	S		S		S	0	iei jo	S	S
Service catwalk -		spiral stairs	-		_		-	-	-		-
Service catwalk -	ESS	roof stairs					- -			-	7
Determination Determinatio	ACC	crown stand	-		=		=		101 -	- 1	5.5.5
Troof hatch S		service catwalk			-		-	11 (3)-	/- \\\	0	0
		bottom access manhole			0		0	0	0	0	0
Inside perforated hopper		roof hatch	S		S		S	0	laf O laf	S	S
A sir inlet		flat perforated floor	S		S	100	S	0	0	S	S
Universal air inlet		inside perforated hopper		/			-	0	0	0	0
Note		air inlet	S Ø180		S ø180		S Ø180 0 Ø180 or Ø310		O Ø180 or Ø310	S Ø310	S Ø310
Note	NE NE	universal air inlet	-		/ -		-	-	:)-	-	-
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Note	VE VE	extraction fan	0		0		0	0	1=t (-10	0	0
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		roof exhauster			-		-	S 1pc	S 1pc	S 1pc	S 1pc
Central loading inlet S S S S S S S S S		water-filled manometer	S		S		S	0	101 0	S	S
Side loading inlet S S S O O S S		temperature probe	0		0		0	0		0	0
Day Filling device S S S O T O S S		central loading inlet	S	3 ::	S	95	S	S	S	S	S
Standard Standard		side loading inlet	S		S	#/	S	0	1=1 O 1=0	S	S
underfloor discharge conveyor 0		bag filling device	S		S		S	0	<u>_</u> 0	S	S
underfloor discharge conveyor 0	ADING	anti-dynamic pipe of bag filling device			<u></u>	,	. S/	- /	Lo	:-	S
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internal sweep auger conveyor 0 0 control module of the silo 0 0 0 0 0		underfloor discharge conveyor	7 7 9 7		- 0		0	0	0	0	0
control module of the silo 0 0 0 0 0 0	Y	internal sweep auger conveyor	4 -	4 4	-		. : (): -↓		0	0
			0		0	D D	0	0	0	0	0

the loading capacity for wheat with a density 750kg/m³ (780kg/m³ for NBIN40N, NBIN40N, NBIN40W and NBIN40WW) related to the usable volume; the actual volume of material gathered in the silo depends among others on the method of loading, bulk properties of the material, allowable maximum level of silo filling
 height measured from the surface of the foundation to the central loading inlet in the roof

STANDARD AND OPTIONAL EQUIPMENT:

























NBIN60WW	NBIN100U	NBIN100WU	NBIN200U	NBIN200WU	NBIN500 NBIN501W		NBIN1001	NBIN1001W	NBIN1500N	NBIN1500P	NBIN1500	NBIN1500W		
91,0	99,8	132	211	261	521	604	948	1095	1170	1285	1514	1744		
121,3	133	176	281	348	695	805	1264	1460	1560	1713	2 019	2325		
9,0	7,2	9,1	9,6	11,5	13,9	15,8	14,7	16,6	12,7	13,7	15,5	17,4		
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S 1pc	S 2pcs	S 3pcs	S 10pcs	S 10pcs		2pcs	31	8pcs		-39 -39 -	2pcs			
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FLAT BOTTOM SILO FOR GRAIN STORAGE MADE OF CORRUGATED SHEETS OF STEEL



it gathers grain that could not be transferred gravitationally to the underfloor conveyor

INLET DEDICATED FOR UNLOADING

equipped with an opening mechanism with a latch, used to carry out the grain from the silo into underfloor conveyor

Type of this equipment varies depending on the silo model.

BIN CORRUGATED STEEL SILOS WITH FLAT BOTTOM MODELS FBIN:

TYPE		DI	FBIN9 AMETER 8	,6m		FBIN11 DIAMETER 11,5m									
MODEL	FBIN 9/10	FBIN 9/11	FBIN 9/12	FBIN 9/13	FBIN 9/14	FBIN 11/10	FBIN 11/11	FBIN 11/12	FBIN 11/13	FBIN 11/14	FBIN 11/15	FBIN 11/16	FBIN 11/17	FBIN 14/10	FBIN 14/11
LOADING CAPACITY (t)*	560	605	657	708	760	1005	1097	1190	1281	1373	1464	1556	1647	1606	1750
VOLUME (m³)	709	775	842	908	974	1289	1407	1525	1642	1760	1877	1995	2112	2059	2243
HEIGHT (m)**	13,88	15,00	16,15	17,30	18,44	14,74	15,88	17,02	18,16	19,30	20,44	21,58	22,70	15,57	16,71

^{*} the loading capacity for wheat with a density 780kg/m³ related to the silo volume given below; the actual volume of material gathered in the silo depends among others on the method of loading, bulk properties of the material, allowable maximum level of silo filling, floor type etc.

^{**} height measured from the surface of the foundation to the central loading inlet in the roof

WE CAN OFFER VARIOUS TYPES OF FLOORS TO THE SILOS MADE OF CORRUGATED SHEETS OF STEEL:

FULLY PERTORATED FLOOR MADE OF STEEL MOUNTED ON THE CONCRETE BLOCKS

- suitable for the silos with the shell up to 12 rings high
- there is a space to mount PS220 screw conveyor with the conveying capacity of up to 45 tons per hour under the floor
- foundation slab is easy to build and inexpensive
- one or two fans for grain ventilation
- whole surface of the floor is perforated

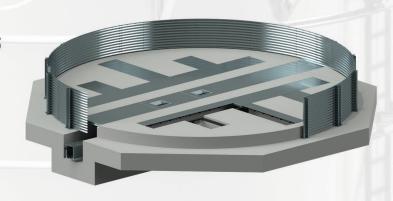
FULLY PERTORATED FLOOR MADE OF STEEL BASED ON SUPPORTING GRILL MADE OF STEEL

- suitable for all types of silos
- there is a space to mount chain conveyor (scraper conveyor) with the conveying capacity of up to 150 tons per hour under the floor
- foundation slab is easy to build and inexpensive
- one or two fans for grain ventilation
- whole surface of the floor is perforated



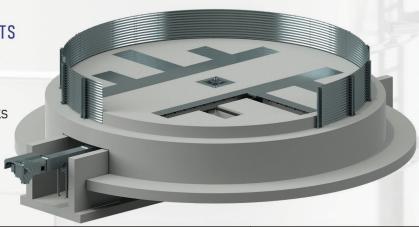
CONCRETE FLOOR WITH VENTILATION DUCTS

- there is channel dedicated for chain conveyor (scraper conveyor) in the concrete foundation
- we offer prefabricated foundation formworks that helps to build up ventilation ducts
- two fans for grain ventilation
- ■up to 35 % of the floor can be ventilated



CONCRETE FLOOR WITH VENTILATION DUCTS AND A PASSABLE MAINTENANCE CHANNEL

- constant and convenient access to the chain conveyor (scraper conveyor)
- we offer prefabricated foundation formworks that helps to build up ventilation ducts
- two fans for grain ventilation
- up to 35 % of the floor can be ventilated



	FBIN14 DIAMETER 14,3m								I N17 ER 16,7m	FBIN19 DIAMETER 19,1m					
FBIN 14/12	FBIN 14/13	FBIN 14/14	FBIN 14/15	FBIN 14/16	FBIN 14/17	FBIN 17/14	FBIN 17/15	FBIN 17/16	FBIN 17/17	FBIN 17/18	FBIN 17/19	FBIN 19/15	FBIN 19/16	FBIN 19/17	FBIN 19/18
1893	2036	2179	2323	2466	2609	3005	3200	3395	3590	3785	3981	4232	4487	4741	4996
2427	2610	2794	2978	3161	3345	3853	4103	4353	4603	4853	5104	5425	5752	6078	6405
17,85	18,99	20,13	21,27	22,41	23,55	20,87	22,01	23,15	24,29	25,43	26,57	22,70	23,84	24,98	26,12

WE DESIGN AND INSTALL FULLY INTEGRATED SYSTEMS FOR GRAIN STORAGE



PLEASE FIND OUR FULL OFFER:

HOPPER SILOS FOR GRAIN STORAGE

SILOS FOR ANIMAL FEED

FLAT BOTTOM SILOS FOR GRAIN STORAGE

EQUIPMENT FOR FEED MIXING PLANTS

DEVICES FOR GRAIN TRANSPORTATION

AGRICULTURAL SHEDS



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+48 54 282 88 05



export@bin.agro.pl

BIN Sp. z o.o.

ul. Narutowicza 12 87-700 Aleksandrów Kujawski **POLAND**



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