



**BENTALL  
ROWLANDS**

FARM & COMMERCIAL HOPPER GRAIN STORAGE SILOS



Flat Bottom Silos



Plastic/Woodchip Storage Silos



Splayed Leg Silos



Loadout Silos



Hopper Bottom Silos



Grain Walling



Apache Hoppers



Smooth Wall Silos



Grain Tunnels



Sweep Augers



Dischargers



Aeration Laterals



Catwalks



Square Hoppers



Aeration Fans



Flat Roof Silos

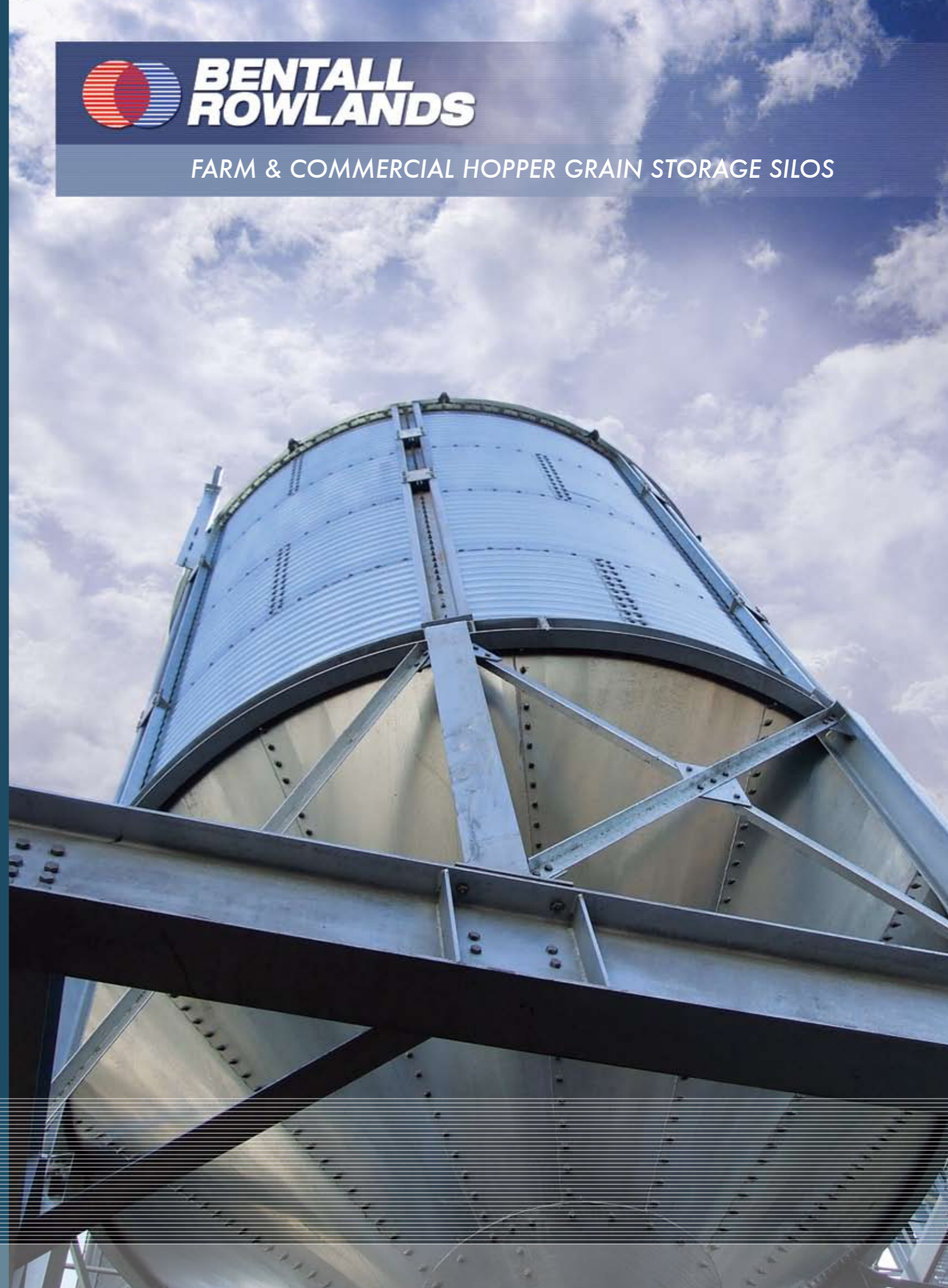


Turnkey Project

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Bentall Rowlands Storage Systems designs, manufactures, delivers and installs all your storage needs. Our in-house design and on-site manufacturing enables us to cope with your non standard requirements as well as the very comprehensive range of standard equipment that is produced in our facility in Scunthorpe, England.

The design of Bentall Rowlands hopper silos is based upon the loads and pressures derived from the German DIN 1055 1987 standard. Structural calculation based upon BS 5950 part 5 and wind loading of 50m/sec (180m/h) for a probability period of 25 years.

Bentall Rowlands standard silo range - No allowances for compaction made.															
		45 Degree Hopper Bottom Silo Volume (cubic metres)							60 Degree Hopper Bottom Silo Volume (cubic metres)						
		Diameter							Diameter						
Wall Height	No. of Rings	4.00	5.00	6.00	7.00	8.00	9.00	10.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00
1.19	1	29	50	79	117	167	228	305	35	62	100	150	216	297	401
2.37	2	44	73	112	163	226	303	398	50	85	133	196	275	373	494
3.56	3	59	97	146	209	286	378	491	65	109	167	241	335	448	587
4.74	4	74	120	179	255	345	454	584	80	132	200	287	395	524	679
5.93	5	89	143	213	300	406	530	677	95	155	234	333	455	600	773
7.11	6	103	166	247	346	465	606	770	110	178	268	379	514	676	866
8.30	7	118	190	280	392	525	681	863	124	202	301	425	574	751	959
9.48	8	133	213	314	438	584	757	956	139	225	335	470	634	826	1,052
10.67	9	148	236	347	483	644	832	1,049	154	248	368	516	693	902	1,145
11.85	10		260	381	529	704	907	1,142		272	402	562	753	977	1,238
13.04	11		283	414	574	763	983	1,235		295	435	607	812	1,053	1,331
14.22	12			448	620	823	1,058	1,329			469	653	872	1,128	1,424
15.41	13			481	666	882	1,133	1,422			502	698	931	1,203	1,517
16.59	14			515	711	942	1,209	1,515			536	744	991	1,279	1,610
17.78	15				757	1,001	1,284	1,610				790	1,050	1,354	1,706
18.96	16					1,061	1,360	1,703					1,110	1,429	1,799
20.15	17					1,121	1,435	1,796					1,170	1,505	1,892
21.33	18						1,510	1,889						1,580	1,985
22.52	19						1,586	1,982						1,656	2,078
23.70	20							2,075							2,171
24.89	21							2,168							2,264
Roof Height		1.2	1.46	1.75	2.06	2.35	2.51	2.8	1.2	1.46	1.75	2.06	2.35	2.51	2.8



**Hopper Assembly**  
The hopper assembly is constructed using galvanised cone panels. Galvanised dome headed bolts are also used as they reduce the chance of product build-up.



**Substructure**  
Wide faced I beams which are hot dipped galvanised are standard with this range of hopper silo.



**Eaves Inspection Hatch**  
Standard with all of our silos; the eaves inspection hatch comes complete with hinged lid, rubber sealant and mesh grill. We also offer an optional safety handrail assembly.



**Fixings**  
Silo fixings are generally spun galvanised to ensure a long life. We also use a 25 mm OD neoprene backed washer for the perfect seal.



**Sidewall Stiffeners**  
Strong upright stiffener columns carry the vertical load of the bin to the hip ring. Manufactured from high strength steel, stiffeners have a wide flange profile which allows them to carry a greater load than other designs.



**Sidewall Sheets**  
Wall sheets are corrugated, utilising shallow pitch corrugation to ease material flow and manufactured from pre-galvanised G600 steel sheet with minimum total coating of 600 grams per square metre.



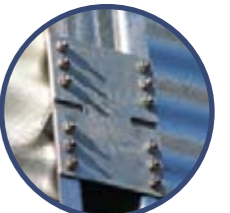
**Hopper Aeration System**  
If aeration is required we can supply perforated aeration ducts which bolt to the inside of hopper cone.



**Silo Roof**  
Our silos feature an exceptionally strong roof structure. Silos up to & including the 9 metre diameter are fitted with a standard, single span roof structure, while on the larger silos, 10 metre diameter & above, feature galvanised rafter system spanning from eaves to peak.



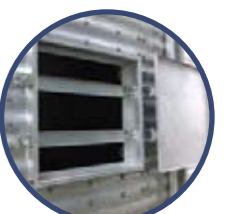
**Stiffener Joint**  
The Bentall Rowlands stiffeners are joined by using a horizontal plate to transfer the axial loading stiffener to stiffener guaranteeing even load distribution. This design does not rely on edge to edge contact or bolt shear to transfer loads.



**Release Gate**  
BRSS produces a rack and pinion gate as an option for our hopper silos. These come with either a chain or hand wheel and are fully galvanised.



**Sidewall Access Hatch**  
The tight sealing, reinforced inner door panel swings easily out of the way when open, and is securely held in place when closed by a pair of wedge-lock door handles.



**Anchor Points**  
All entablature legs and plates are hot dip galvanised to ensure long life. Chemical fix or cast-in anchor bolts are also available as an option.



**Roof Vents**  
The Bentall Rowlands roof vents are triangular in design. This design allows high airflow when filling/discharging or aerating the silo but also ensures that foreign objects such as rain, snow, birds, etc. cannot enter.



**Roof Cap**  
Whether your fill rate is large or small we can accommodate it with our range of roof cap sizes. These can vary from 600 mm to over 1000 mm depending on your requirements.

