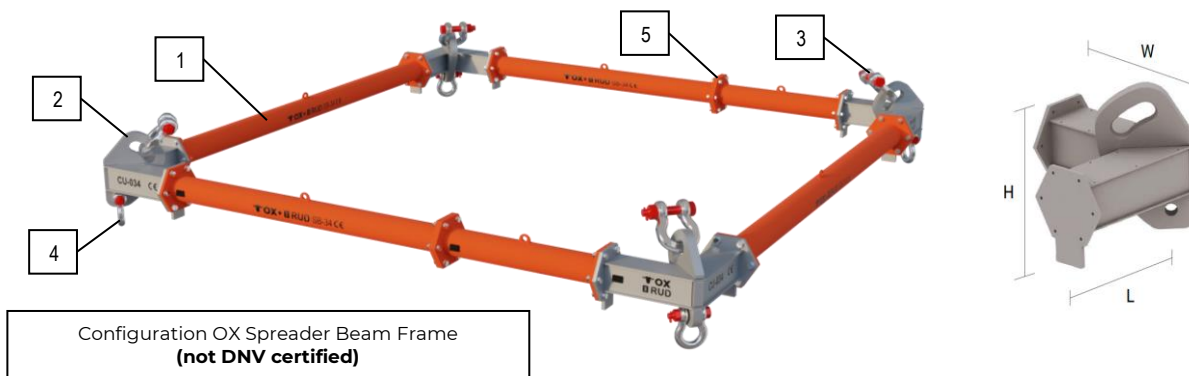


INTRODUCTION

The OX-RUD Spreader Beam Frame model is a set composed of 4 CU OX-SB-50 V3 Corner Units combined with OX-SB-50 V2 modular sections, to form a square or rectangular structure. The size of the square or rectangle can be modified by combining different OX-SB-50 V2 modular sections. The OX-RUD Spreader Frame can be used from its minimum configuration of 1x1m to its maximum configuration of 16x16m. The Working Load Limit should never be exceeded or used in an unintended lifting configuration.

ASSEMBLY

It is made up of different elements that can be assembled using screwed flanges to form a specific length, connected with 4 Corner Units and the intermediate sections assembled in the central part.



COMPONENT TABLE CU OX-SB-50 V3					
Part	Code	Description	Nominal Length (mm)	Dimensions L x W x H (mm)	Weight (kg)
1	80220050SXXX	OX-SB-50 Section XXXX mm	XXXX (A)	XXXX x 400 x 347	39 + 0,033xL[mm]
	80220050S050	OX-SB-50 Section 500mm	500	500 x 400 x 347	55,5
	80220050S100	OX-SB-50 Section 1000mm	1000	1000 x 400 x 347	72
	80220050S200	OX-SB-50 Section 2000mm	2000	2000 x 400 x 347	105,1
	80220050S300	OX-SB-50 Section 3000mm	3000	3000 x 400 x 347	138,1
	80220050S400	OX-SB-50 Section 4000mm	4000	4000 x 400 x 347	171,3
	80220050S500	OX-SB-50 Section 5000mm	5000	5000 x 400 x 347	204,3
	80220050S600	OX-SB-50 Section 6000mm	6000	6000 x 400 x 347	237,3
	80220050R1525	OX-SBT-50 X 1500-2500mm Telescopic Section	1500-2500 (x100)	1500 x 470 x 347	185
	80220050R2440	OX-SBT-50 X 2400-4000mm Telescopic Section	2400-4000 (x100)	2400 x 470 x 347	266
2	80230050CU	OX-SB-50 500mm Corner Unit	500	700 x 700 x 600	177
3		Shackle 35t - 2" (top) (B)	Variable (D)	2"	-
4		Shackle 25t-1 3/4" (bottom) (B)	Variable (D)	1 3/4"	-
5		Screws 14399 HV HOT DIP GALV. 10.9 (C)	-	M20 x 80	-



(A) APPROVED NOMINAL LENGTH BETWEEN 500 AND 6000 mm.

(B) OX & RUD RECOMMENDS LYRE-TYPE SHACKLES WITH THREADED PIN WITH NUT AND SAFETY PIN (OR WIDE-BODY SHACKLE WHEN INDICATED). CONSIDER THE LOSS OF CAPACITY (BENDING LOSS) BETWEEN THE SLINGS AND THE SHACKLES, EVEN IF THEY ARE WIDE-BODY SHACKLES, WHEN DIMENSIONING THE SLINGS.

(C) SCREW TIGHTENING TORQUE: 180 NM. NEVER EXCEED THIS TIGHTENING TORQUE. SPANNER SIZE 32MM.

(D) VARIABLE LENGTH DEPENDING ON THE BRAND AND MODEL USED.

MATERIAL AND FINISH

The device is constructed from welded structural steel, sandblasted and painted in accordance with ISO 12944 category C2 or other finishes on request.

TEMPERATURE

The elements of the OX Spreader Beams OX-SB-50 range defined in this Technical Data Sheet can be used in a temperature range between -20°C and 80°C, as they have been dimensioned and validated within this range.

LOAD CYCLE CLASSES

The products in the OX-SB Spreader Beam range are designed to withstand $\leq 16,000$ load cycles, which corresponds to type U0 for total number of working cycles in accordance with standard EN 13155:2020 + A1:2025.

GENERAL CONDITIONS

- The OX Spreader Beam Frame uses Corner Units (not DNV certified). The longest sections must be placed in the center of the set.
- A maximum of 6 intermediate sections can be placed for each set (without considering the End Units).**
- If telescopic sections are used (not DNV certified), up to 2 can be mounted, replacing 2 sections each. That is, up to 2 telescopic sections plus 2 conventional sections.
- The bottom slings can work up to a maximum of 6° from the vertical in both directions.
- Check that there is always space between the end of the sling and the Corner Unit (Clearance). Leave space between the Spreader Beam and the load.

TABLE OF CAPACITIES ACCORDING TO ANGLE AND LENGTH OF CONFIGURATIONS

The maximum capacity of the OX Spreader Beam Frame depends on the length of the assembly and the working angle of the upper slings. The upper slings can work **from 30° to 45°** from the vertical. The OX Spreader Beam Frame capabilities depend on selected configuration.

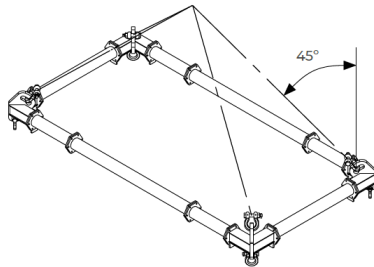
CU-OX-SB050 - 30°

Span [m]	30° SWL [Tons]															Span [m]
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
16																38
15															38	35
14														38	35	33
13												40	35	33	32	
12											40	35	33	32	31	
11										40	35	33	32	31	30	
10									48	35	33	32	31	30	29	
9								60	45	33	32	31	30	29	28	
8							72	60	57	42	32	31	30	29	28	27
7						72	60	53	39	31	30	29	28	27	26	
6					72	72	60	50	36	30	29	28	27	26	24	
5				72	72	72	60	46	35	29	28	27	26	24	22	
4			72	72	72	60	58	43	34	28	27	26	25	22	21	
3		72	72	72	72	60	55	41	33	27	26	25	22	21	21	
2	72	72	72	72	72	60	48	40	32	27	25	22	21	21	20	
1	72	72	72	72	72	52	46	36	27	25	22	21	21	20	20	

CU-OX-SB050 - 45°

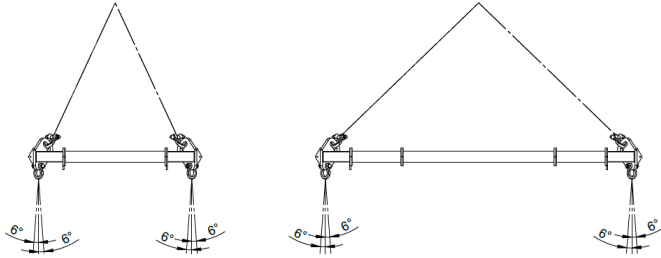
Span [m]	45° SWL [Tons]															Span [m]
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
16																20
15															20	18
14														20	19	17
13													22	19	18	16
12												22	20	18	17	16
11											22	20	18	17	16	15
10										24	20	18	17	16	16	15
9								30	22	18	17	16	16	15	14	
8							30	28	21	17	16	16	15	15	14	
7						37	30	26	20	16	16	15	15	14	14	
6					44	37	30	25	19	16	15	15	14	14	13	
5				44	44	37	30	24	18	15	15	14	14	14	13	
4			56	44	44	30	30	22	18	15	14	14	14	14	13	
3		56	56	44	44	30	28	22	17	14	14	14	14	13	12	
2	56	56	56	44	37	30	27	21	17	14	14	14	13	13	12	
1	56	56	56	56	44	37	30	27	21	16	14	14	13	13	12	12

Upper angle: max. 45°



The upper slings of the Spreader Beam Frame, work at a maximum of 45° from the vertical.

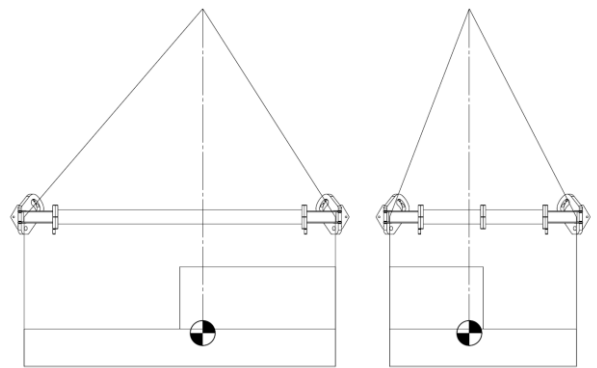
Bottom angle: max. $\pm 6^\circ$



The bottom slings of the Spreader Beam Frame work at a maximum of $\pm 6^\circ$ from the vertical.

IMPORTANT NOTES

- It is convenient to lubricate the top shackle (Bow) and the upper hole of the Corner Unit lugs to allow the shackle to swing and orient smoothly when tensioning the upper branches while hoisting the Spreader Beam Frame.
- Check that the top shackle (bow) is in contact with the Corner Unit lugs.
- Never exceed the W.L.L. capacity for the selected configuration (working lengths and angles).
- Under no circumstances is it allowed to lift loads directly from the sections or flange unions. The Spreader Beam Frame are designed exclusively for compression use, always using the lower hooks of the Corner Units. Check that the Spreader Beam Frame is only loaded by the Corner Units.
- Check that Gravity Center (GC) of the load is centered with the crane hook. The load distribution on the Spreader Beam Frame must be distributed among all lifting points, ensuring that none of these lifting points exceeds the maximum W.L.L. of the individual Corner Unit:
 - o **With symmetric loads**, the load weight is uniformly distributed between all lifting points.
 - o **With asymmetric loads**, the load weight is not uniformly distributed between all lifting points
(IMPORTANT: never exceed the maximum capacity of the individual Corner Units).



Asymmetric loads (offset GC)

The CU-50 V3 units have a maximum individual capacity:

- **18t each** (72t combined capacity) **[30° angle]**
- **14t each** (56t combined capacity) **[45° angle]**

TABLE OF LENGTHS OF UPPER SLINGS ACCORDING TO WORKING ANGLE

SLING LENGTH – 30° WORKING ANGLE

16																		22,7
15																	21,3	22
14																19,8	20,6	21,3
13														18,4	19,2	19,9	20,7	
12													17	17,7	18,5	19,3	20	
11												15,6	16,3	17,1	17,9	18,7	19,5	
10											14,2	14,9	15,7	16,5	17,3	18,1	18,9	
9									12,8	13,5	14,3	15	15,9	16,7	17,5	18,4		
8								11,4	12,1	12,9	13,7	14,5	15,3	16,2	17	17,9		
7							9,9	10,7	11,5	12,3	13,1	13,9	14,8	15,7	16,6	17,5		
6						8,5	9,3	10	10,9	11,7	12,6	13,5	14,4	15,3	16,2	17,1		
5					7,1	7,9	8,7	9,5	10,3	11,2	12,1	13	14	14,9	15,9	16,8		
4				5,7	6,5	7,3	8,1	9	9,9	10,8	11,8	12,7	13,7	14,6	15,6	16,5		
3			4,3	5	5,9	6,8	7,7	8,6	9,5	10,5	11,5	12,4	13,4	14,4	15,3	16,3		
2		2,9	3,7	4,5	5,4	6,4	7,3	8,3	9,3	10,2	11,2	12,2	13,2	14,2	15,2	16,2		
1	1,5	2,3	3,2	4,2	5,1	6,1	7,1	8,1	9,1	10,1	11,1	12,1	13,1	14,1	15,1	16,1		
Span (m)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		

SLING LENGTH – 45° WORKING ANGLE

16																	16
15																	15,6
14															14	14,6	15,1
13														13	13,6	14,1	14,6
12													12	12,6	13,1	13,6	14,2
11												11	11,6	12,1	12,6	13,2	13,8
10											10	10,6	11,1	11,6	12,2	12,8	13,4
9										9	9,6	10,1	10,7	11,2	11,8	12,4	13
8								8	8,6	9,1	9,7	10,2	10,8	11,5	12,1	12,7	
7							7	7,6	8,1	8,7	9,3	9,9	10,5	11,1	11,8	12,4	
6						6	6,6	7,1	7,7	8,3	8,9	9,5	10,2	10,8	11,5	12,1	
5					5	5,6	6,1	6,7	7,3	8	8,6	9,2	9,9	10,6	11,2	11,9	
4				4	4,6	5,1	5,8	6,4	7	7,7	8,3	9	9,7	10,3	11	11,7	
3			3	3,6	4,2	4,8	5,4	6,1	6,8	7,4	8,1	8,8	9,5	10,2	10,9	11,6	
2		2	2,6	3,2	3,9	4,5	5,2	5,9	6,6	7,3	8	8,7	9,4	10	10,8	11,5	
1	1	1,6	2,3	3	3,7	4,4	5	5,8	6,5	7,2	7,9	8,6	9,3	10	10,7	11,4	
Span (m)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	

NOTES:

- The sling lengths shown in the tables are for configurations when the Gravity Center of the load is centered.
- In the case of loads with an offset center of gravity, the slings length must be resized according to the application case. If you are unsure of how to proceed, please contact OX&RUD.