

Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal: 2821-1 2821-1 Cabeza de pluma principal:

360° Valor de vuelco: 2 - Vía ancha

Lastre trasero [t]: 74.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 19.0	de plumí	n (1916-		n Plumín			
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]			
8.7	78.0	59.7		30.1						
9.0	77.2	59.7	15.1	30.1						
10.0	74.1	59.4	15.1	30.1						
11.0	70.9	59.0	15.1	27.7						
12.0	67.6	58.6	15.1	24.8						
13.0	64.3	58.2	15.1	21.1						
14.0 16.0	60.8 53.5	57.6 56.2	15.1 15.0	18.4 14.4						
18.0	45.3	54.5	13.2	14.4						
20.0	35.6	52.0	10.3	9.6						
	23.0				ıma prin	cipal 83.0	1°10			
13.7	73.0	58.9	,90	30.1	a p.iiii	J. Pai 50.	~ L J			
14.0	73.0	58.8	15.1	30.1						
16.0	65.5	58.0	15.1	22.2						
18.0	58.5	56.9	15.1	17.0						
20.0	51.0	55.4	15.1	13.5						
22.0	42.4	53.4	12.1	11.0						
24.0	31.9	50.7	9.8	9.2						
			Ángu	ılo de plu	ıma prin	cipal 75.0	[°]			
21.4	65.0	56.7		20.4						
22.0	63.0	56.5	15.1	20.0						
24.0	55.9	55.2	15.0	15.5						
26.0	48.0	53.6	14.2	12.6						
28.0 30.0	38.9 27.2	51.4 48.3	11.2 9.2	10.3 8.8						
30.0	21.2	40.3			ıma nrin	cipal 65.0) [°]			1
30.5	55.0	52.5	Angu	12.3	iiia pilli	upai 00.1	, []			
30.5	55.0 49.2	52.5 51.4	14.4	12.3						
34.0	49.2	49.3	11.7	9.4						
36.0	29.2	46.3	9.6	8.1						
			Ángu	ılo de plu	ıma prin	cipal 45.0	[°]			
45.9	35.0	39.7		2.9						
46.0	34.2	39.7	3.8	2.9						
48.0	20.0	35.8	3.0	2.2						



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 28.0	de plumi	oal, Punt ín (2316- osición m	1) 50.5 r	n Plumín	dfall		
			Ánaı	ılo de plı	ıma prin	cipal 88.0	1°10			
10.7	78.0	68.6	15.1	30.1						
11.0	77.3	68.5	15.1	30.1						
12.0	75.2	68.2	15.1	30.1						
13.0	73.1	67.9	15.1	29.8						
14.0	70.9	67.6	15.1	29.0						
16.0	66.5	66.7	15.1	24.7						
18.0 20.0	61.9 57.0	65.7 64.5	15.1 15.1	20.4 17.3						
20.0	57.0 51.9	63.0	15.1	14.9						
24.0	46.4	61.2	13.7	13.1						
26.0	40.3	59.1	11.9	11.5						
28.0	33.2	56.3	10.4	10.2						
30.0	24.2	52.6	9.2	9.1						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
16.4	73.0	67.5	15.1	30.1						
18.0	69.5	67.0	15.1	28.1						
20.0	65.0	66.1	15.1	23.1						
22.0	60.3	65.0	15.1	19.4						
24.0 26.0	55.4 50.2	63.7 62.1	15.1 14.8	16.4 14.3						
28.0	44.5	60.2	13.0	12.5						
30.0	38.1	57.9	11.4	11.1						
32.0	30.6	54.9	10.2	10.0						
34.0	20.6	50.7	8.9	8.9						
			Ángı	ılo de plı	ıma prin	cipal 75.0	[°]			
25.3	65.0	64.9		19.7						
26.0	63.3	64.6	15.1	18.8						
28.0	58.6	63.4	15.1	16.6						
30.0	53.6	62.0	15.1	14.8						
32.0	48.2	60.3	14.6	13.2						
34.0 36.0	42.3 35.6	58.3	12.6 11.1	11.9 10.6						
38.0	35.6 27.4	55.8 52.4	9.8	9.5						
55.0	21.7	OL.T			uma prin	cipal 65 (1°10			
35.7	55.0	59.9	,g.	9.2						
36.0	54.3	59.8	10.6	9.0						
38.0	49.0	58.1	9.5	8.0						
40.0	43.2	56.2	8.4	7.0						
42.0	36.6	53.7	7.5	6.2						
44.0	28.7	50.5	6.7	5.5						
46.0	17.6	45.9	5.9	4.8						



Nº de ident.: 9842523/95738/

Radio de descarga: 360 $^{\circ}$

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 22.0	de plumí		1) 53.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
9.4 10.0 11.0 12.0 13.0 14.0 16.0 20.0 22.0 24.0	78.0 76.3 73.6 70.8 68.0 65.2 59.2 52.8 45.7 37.6 27.4	62.7 62.5 62.2 61.9 61.5 61.0 59.9 58.5 56.7 54.4 51.2	15.1 15.1 15.1 15.1 15.1 15.1 14.3 11.8 9.7 7.8 6.5 Ángu 15.1 15.1 15.1 15.1 113.4	30.1 30.1 27.7 23.1 20.0 17.4 13.7 11.0 9.1 7.6 6.4 ulo de plu 24.4 20.9 16.0 12.7 10.4	uma prind	cipal 83.0	D[°]			
24.0 26.0	43.3 34.7	55.7 53.1	9.1 7.4	8.6 7.3						
28.0	23.2	49.5	6.3	6.2						
			Ángu	ılo de plu	ıma prin	cipal 75.0	[°]C			
22.7	65.0	59.5		16.2						
24.0 26.0 28.0 30.0 32.0	61.1 54.9 48.0 40.3 31.0	58.8 57.5 55.8 53.7 50.8	15.1 13.1 10.5 8.4 7.1	14.6 11.8 9.8 8.1 7.0						
			Ángı	ılo de plu	ıma prin	cipal 65.0	0[°]			
32.2 34.0 36.0 38.0	55.0 49.1 41.5 32.5	55.0 53.6 51.6 48.9	10.8 8.8 7.3	11.2 9.9 8.4 7.2						
			Ángı	ılo de plu	ıma prin	cipal 45.0	[°]			
48.3 50.0 51.0	35.0 27.2 20.4	41.4 38.8 36.3	2.4 2.1	2.3						



Nº de ident.: 9842523/95738/

Radio de descarga: 360 $^{\circ}$

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 31.0	de plumi	oal, Punt ín (2316- osición m	1) 53.5 r	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	1°1			
11.3	78.0	71.5	15.1	30.1	· '					
12.0 13.0 14.0	76.7 74.7 72.8	71.3 71.1 70.7	15.1 15.1 15.1	30.1 30.1 28.4						
16.0 18.0	68.9 64.8	70.0 69.1	15.1 15.1	23.7 19.4						
20.0 22.0 24.0	60.6 56.2 51.6	68.0 66.8 65.3	14.9 13.7 12.8	16.4 14.1 12.3						
26.0 28.0	46.6 41.1	63.5 61.3	11.3 9.7	10.9 9.6						
30.0 32.0	34.9 27.5	58.7 55.4	8.4 7.5	8.5 7.6						
32.0	27.5	33.4			ıma prin	cipal 83 (1°10			
17.3	73.0	70.4	15.1	28.1	Jina pini	oipai oo.	, <u>, , , , , , , , , , , , , , , , , , </u>			
18.0 20.0	71.6 67.6	70.2 69.4	15.1 15.1	27.4 22.2						
22.0	63.5	68.4	15.1	18.3						
24.0 26.0	59.2 54.8	67.3 66.0	14.5 13.5	15.6 13.5						
28.0	50.0	64.4	12.6	11.9						
30.0 32.0	44.9 39.2	62.5 60.2	10.8 9.3	10.5 9.2						
34.0	32.7	57.4	8.2	8.3						
36.0	24.7	53.7	7.3	7.4						
			Ángı		ıma prin	cipal 75.0	[°]			
26.5 28.0	65.0 62.0	67.6 66.9	15.1	18.0 16.5						
30.0	57.6	65.7	14.8	14.7						
32.0	53.1	64.3	12.9	12.9						
34.0 36.0	48.2 42.9	62.6 60.6	11.4 9.9	11.4 10.1						
38.0	37.0	58.1	8.6	9.0						
40.0 42.0	30.1 21.0	55.0 50.8	7.7 6.9	8.1 7.2						
42.0	21.0	30.0		7.2	ıma prin	cinal 65 () [°] (
37.5	55.0	62.3		8.0		- pa. 00.]			
38.0 40.0	53.7 48.9	62.0 60.4	9.1 8.1	7.8 6.9						
40.0 42.0	48.9	58.4	7.2	6.1						
44.0	37.9	56.0	6.4	5.3						
46.0 48.0	31.1 22.6	53.1 49.1	5.6 4.9	4.7 4.0						
49.0	16.7	46.3	4.6	3.7						



Nº de ident.: 9842523/95738/

Radio de descarga: 360 $^{\circ}$

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 22.0	de plumí	n (2316-		n Plumín			
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]			
9.4	78.0	62.7		30.1						
10.0	76.4	62.5	15.1	30.1						
11.0	73.7	62.3	15.1	30.1						
12.0	71.0	61.9	15.1	28.5						
13.0	68.2	61.5	15.1	26.6						
14.0	65.3	61.0	15.1	22.9						
16.0	59.3	59.9	15.1	17.9						
18.0	52.9	58.5	14.9	14.5						
20.0	45.9	56.7	13.2	12.0						
22.0	37.8	54.4	10.5	9.9						
24.0	27.6	51.3	8.6	8.4						
			Ángu	ılo de plu	ıma prin	cipal 83.0	[°]			
14.6	73.0	61.8		30.1						
16.0	69.2	61.3	15.1	27.6						
18.0	63.4	60.4	15.1	21.0						
20.0	57.3	59.2	15.1	16.7						
22.0	50.8	57.7	15.1	13.7						
24.0	43.4	55.7	12.3	11.3						
26.0	34.8	53.2	9.9	9.5						
28.0	23.5	49.6	8.2	8.0						
			Ángu	ılo de plu	ıma prin	cipal 75.0	[°]			
22.7	65.0	59.5		18.7						
24.0	61.3	58.8	15.1	16.8						
26.0	55.0	57.5	15.0	14.2						
28.0	48.2	55.9	14.3	12.1						
30.0	40.5	53.7	11.5	10.3						
32.0	31.2	50.9	9.5	8.8						
			Ángu	ılo de plu	ıma prin	cipal 65.0	[°]			
32.3	55.0	55.0		8.1						
34.0	49.2	53.7	9.1	6.9						
36.0	41.7	51.6	7.7	5.7						
38.0	32.7	48.9	6.4	4.6						
40.0	20.1	44.9	5.2	3.7						



Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

360° 2 - Vía ancha Valor de vuelco:

Lastre trasero [t]: 74.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 25.0	de plumí		1) 56.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0	78.0 75.6 73.2 70.8 68.3 63.2 57.9 52.2 46.0 39.0	65.6 65.4 65.1 64.7 64.3 63.4 62.2 60.7 58.9 56.7	15.1 15.1 15.1 15.1 15.1 14.6 12.7 10.4 8.8 7.4	30.1 27.8 23.7 20.3 18.0 14.3 11.9 10.0 8.6 7.4						
26.0	30.7	53.8	6.4	6.4						
					ıma prin	cipal 83.0	0[°]			
15.5 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0	73.0 71.7 66.7 61.6 56.1 50.3 43.9 36.6 27.5	64.7 64.5 63.7 62.7 61.4 59.9 57.9 55.5 52.3	15.1 15.1 15.0 14.4 11.9 10.0 8.4 7.1 6.2	21.5 21.5 16.6 13.5 11.2 9.6 8.2 7.1 6.2						
30.0	27.5	52.5				oin al 75 (2			
24.0 26.0 28.0 30.0 32.0 34.0 36.0	65.0 59.6 54.1 48.1 41.4 33.6 23.4	62.2 61.1 59.7 58.1 56.0 53.3 49.6	15.1 13.4 11.0 9.3 7.9 6.8 6.0	14.6 12.5 10.5 9.1 7.7 6.8 5.9	uma prin	ыраі <i>1</i> 5.	J []			
			Ánaı	ılo de plı	uma prin	cipal 65.0	0 [°]			
34.0 36.0 38.0 40.0 42.0	55.0 49.0 42.4 34.8 25.1	57.4 55.9 53.9 51.3 47.8	9.0 7.7 6.7 5.9	10.2 9.0 7.9 6.9 6.0						
			Ángu	ılo de plu	ıma prin	cipal 45.0	[°]			
51.0	35.0	43.1	2.2	,						



Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal: 2821-1

360°

2821-1 Cabeza de pluma principal:

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 74.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 25.0	de plumi		1) 59.5 r	n Plumín			
			Ángı	ılo de plu	uma prin	cipal 88.0	[°]			
10.0 11.0 12.0 13.0 14.0 16.0 20.0 22.0 24.0 26.0	78.0 75.7 73.4 70.9 68.5 63.4 58.1 52.4 46.2 39.2 30.9	65.6 65.4 65.1 64.7 64.3 63.4 62.2 60.8 59.0 56.8 53.8	15.1	28.3 28.2	uma prin	cipal 83.)[°]			
18.0 20.0 22.0	66.9 61.7 56.3	63.7 62.7 61.4	15.1 15.1 13.6	21.8 17.2 14.1						
24.0 26.0 28.0 30.0	50.5 44.1 36.7 27.7	59.9 58.0 55.6 52.3	12.2 10.1 8.3 7.1	11.8 10.0 8.5 7.3						
			Ángı	ılo de plu	uma prin	cipal 75.0	[°]			
24.0 26.0 28.0 30.0 32.0 34.0 36.0	65.0 59.8 54.2 48.2 41.5 33.7 23.6	62.2 61.1 59.8 58.1 56.0 53.4 49.7	15.1 13.4 11.4 9.4 7.9 6.7	17.1 14.5 12.4 10.7 9.2 7.8 6.7						
00.0	20.0	10.1			uma prin	cipal 65 (1°10			
34.0 36.0 38.0 40.0 42.0 43.0	55.0 49.1 42.5 34.9 25.3 18.7	57.4 55.9 53.9 51.3 47.8 45.4	7.6 6.3 5.2 4.2 3.7	6.9 5.8 4.7 3.8 3.0 2.6		- F 33.]			



N° de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 28.0	de plumi		1) 59.5 r	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0	D[°]			
10.6	78.0	68.5		28.0						
11.0	77.2	68.5	15.1	28.0						
12.0	75.1	68.2	15.1	24.6						
13.0	72.9	67.9	15.1	21.5						
14.0	70.8	67.5	15.1	18.8						
16.0	66.3	66.7	14.4	15.1						
18.0	61.7	65.7	13.4	12.5						
20.0	56.9	64.5	11.0	10.3						
22.0	51.8	63.0	8.9	8.7						
24.0	46.3	61.2	7.5	7.5						
26.0	40.1	59.0	6.4	6.4						
28.0 30.0	33.0 24.1	56.3 52.5	5.5 4.8	5.6 4.9						
30.0	24.1	32.3			ıma prin	oinal 92 () [°]			
			Angu		ıma prin	cipai os.i	J[]		1	
16.3	73.0	67.5		19.9						
18.0	69.4	66.9	15.1	17.3						
20.0 22.0	64.9 60.2	66.1 65.0	13.9 12.2	14.1 11.7						
24.0	55.3	63.7	9.8	9.7						
26.0	50.1	62.1	8.1	8.3						
28.0	44.4	60.2	7.0	7.2						
30.0	38.0	57.9	6.0	6.2						
32.0	30.4	54.9	5.2	5.4						
			Ánaı	ılo de plu	uma prin	cipal 75.0	1°10			
25.2	65.0	64.9		13.4						
26.0	63.2	64.5	13.9	13.2						
28.0	58.5	63.4	11.2	11.0					<u> </u>	
30.0	53.5	62.0	9.2	9.2						
32.0	48.1	60.3	7.7	8.0						
34.0	42.2	58.3	6.6	6.8						
36.0	35.4	55.7	5.7	5.9						
38.0	27.2	52.4	5.1	5.2						
			Ángu	ılo de plı	ıma prin	cipal 65.0	[°]			
35.7	55.0	59.9		9.2						
36.0	54.2	59.7	9.0	9.1						
38.0	48.9	58.1	7.9	8.0						
40.0	43.0	56.1	6.8	7.0						
42.0	36.5	53.7	5.9	6.1						
44.0	28.5	50.5	5.2	5.4						
46.0	17.4	45.8	4.5	4.7						



Nº de ident.: 9842523/95738/ 360°

Radio de descarga:

Pieza de articulación de pluma principal: 2821-1 2821-1 Cabeza de pluma principal:

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 74.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 28.0	de plumí	oal, Punt ín (2316- osición m	1) 62.5 r	n Plumín	dfall I		
			Ángı	ılo de plı	ıma prin	cipal 88.0	1°10			
10.7	78.0	68.6	15.1	30.1						
11.0 12.0 13.0 14.0	77.3 75.2 73.1 70.9	68.5 68.2 67.9 67.6	15.1 15.1 15.1 15.1	30.1 28.8 26.1 22.6						
16.0	66.5	66.7	15.1	17.8						
18.0 20.0 22.0 24.0	61.9 57.0 51.9 46.4	65.7 64.5 63.0 61.2	14.9 12.4 10.0 8.4	14.5 12.0 10.0 8.5						
26.0 28.0 30.0	40.3 33.2 24.2	59.1 56.3 52.6	7.0 5.9 5.0	7.2 6.1 5.2						
			Ángı	ılo de plu	ıma prin	cipal 83.0	1°10			
16.4	73.0	67.5	15.1	24.1						
18.0 20.0	69.5 65.0	67.0 66.1	15.1 15.1	20.8 16.5						
22.0 24.0 26.0	60.3 55.4 50.2	65.0 63.7 62.1	14.6 11.9 10.0	13.7 11.3 9.6						
28.0 30.0 32.0	38.1 30.6	57.9 54.9	8.3 6.9 5.9	8.1 6.9 5.9						
34.0	20.6	50.7	4.9 Ángu	5.0	ıma prin	oinal 75 () [° 1			
25.3	65.0	64.9	Angu	15.7	лна рин 		J []			
26.0	63.3	64.6	15.1	14.8						
28.0 30.0 32.0 34.0	58.6 53.6 48.2 42.3	63.4 62.0 60.3 58.3	13.3 10.8 9.0 7.6	12.7 10.7 9.1 7.7						
36.0	35.6	55.8	6.4	6.7						
38.0	27.4	52.4	5.5	5.7						
			Ángı		ıma prin	cipal 65.0	[°]			
35.7 36.0 38.0	55.0 54.3 49.0	59.9 59.8 58.1	7.5 6.3	6.0 5.9 4.9						
40.0 42.0	43.2 36.6	56.2 53.7	5.2 4.2	4.0 3.2						
44.0 46.0	28.7 19.4	50.5 45.9	3.3 2.5	2.4						



Nº de ident.: 9842523/95738/ 360°

Radio de descarga:

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal:

2821-1

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 74.0 0.0 Lastre central [t]:

	Inserciór	l	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0		na princip de plumí 0 [m] Po	ín (1916-	1) 62.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
11.2	78.0	71.5		25.5						
12.0	76.5	71.3	15.1	25.2						
13.0	74.6	71.0	15.1	21.7						
14.0	72.7	70.7	15.1	19.2						
16.0 18.0	68.8 64.7	70.0 69.1	15.1 13.0	15.5 12.7						
20.0	60.5	68.0	11.5	10.7						
22.0	56.1	66.7	9.4	9.0						
24.0	51.4	65.2	7.8	7.7						
26.0	46.5	63.4	6.7	6.7						
28.0	41.0	61.3	5.7	5.8						
30.0	34.8	58.7	5.0	5.1						
32.0	27.4	55.3	4.4	4.5						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
17.2	73.0	70.4		18.0						
18.0	71.4	70.1	15.1	17.8						
20.0	67.5	69.4	15.1	14.5						
22.0	63.4	68.4	12.6	11.9						
24.0	59.1	67.3	10.7	10.1						
26.0 28.0	54.6 49.9	65.9 64.3	8.8 7.4	8.6 7.4						
30.0	44.8	62.4	6.4	6.4						
32.0	39.1	60.2	5.6	5.6						
34.0	32.6	57.3	4.9	4.9						
36.0	24.5	53.6	4.3	4.4						
			Ángı	ılo de plu	ıma prin	cipal 75.0	1°10			
26.5	65.0	67.6	Ī	12.1		·				
28.0	61.9	66.9	12.2	11.3						
30.0	57.5	65.7	10.0	9.6						
32.0	53.0	64.2	8.3	8.1						
34.0	48.1	62.5	7.1	7.1						
36.0	42.8	60.5	6.1	6.2						
38.0	36.9	58.1	5.3	5.4						
40.0	29.9	55.0	4.7	4.8						
42.0	20.9	50.8	4.1	4.2						
			Angı	ılo de plu	ıma prin	cipal 65.0	[°]		1	
37.4	55.0	62.3	0.4	8.4						
38.0	53.6	62.0	8.4	8.2						
40.0	48.8	60.3	7.3	7.3						
42.0 44.0	43.6 37.8	58.4 56.0	6.3 5.5	6.4 5.6						
44.0 46.0	31.0	53.0	4.9	4.9						
48.0	22.4	49.0	4.3	4.4						
49.0	16.5	46.2	4.0	4.1						



Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal: Cabeza de pluma principal:

2821-1 2821-1

360° 2 - Vía ancha Valor de vuelco:

Lastre trasero [t]: 74.0 Lastre central [t]: 0.0

	entrar [t	1.		0.0						
	Inserciór	ì	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 31.0	na princip de plumí 0 [m] Po	n (2316-	1) 65.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
11.3 12.0 13.0 14.0 16.0	78.0 76.7 74.7 72.8 68.9 64.8	71.5 71.3 71.1 70.7 70.0 69.1	15.1 15.1 15.1 15.1 15.1	30.1 30.1 30.1 28.6 23.0						
20.0 22.0 24.0 26.0 28.0	60.6 56.2 51.6 46.6 41.1	68.0 66.8 65.3 63.5 61.3	15.0 13.1 11.7 10.2 8.6	15.9 13.6 11.8 10.3 8.9						
30.0 32.0	34.9 27.5	58.7 55.4	7.3 5.8	7.7 6.1						
				ılo de plu	ıma prin	cipal 83.0	[°]		ı	
17.3 18.0	73.0 71.6	70.4 70.2	15.1 15.1	26.7 26.6						
20.0 22.0 24.0 26.0 28.0	67.6 63.5 59.2 54.8 50.0	69.4 68.4 67.3 66.0 64.4	15.1 15.1 14.5 13.1 11.9	21.5 17.7 15.1 13.0 11.4						
30.0 32.0 34.0 36.0	44.9 39.2 32.7 24.7	62.5 60.2 57.4 53.7	10.2 8.8 7.6 6.7	10.0 8.8 7.8 6.9						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			•
26.5 28.0 30.0 32.0 34.0 36.0	65.0 62.0 57.6 53.1 48.2 42.9	67.6 66.9 65.7 64.3 62.6 60.6	15.1 14.2 12.0 10.5 9.1	14.3 12.8 11.1 9.6 8.2 7.1						
38.0 40.0 42.0	37.0 30.1 21.0	58.1 55.0 50.8	7.9 7.1 6.1	6.1 5.2 4.4						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
37.5 38.0	55.0 53.7	62.3 62.0	6.0	5.0 4.8						
40.0 42.0 44.0 46.0	48.9 43.7 37.9 31.9	60.4 58.4 56.0 53.1	5.0 4.0 3.2 2.4	3.9 3.1 2.4						



Nº de ident.: 9842523/95738/ Pieza

Radio de descarga: 360 $^{\circ}$

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 34.0	na princip de plumí 0 [m] Po	ín (1916-	1) 65.5 r	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]0			
11.9 12.0 13.0 14.0 16.0	78.0 77.8 76.0 74.3 70.7	74.4 74.4 74.1 73.9 73.2	15.1 15.1 15.1 15.1 15.1	23.1 23.1 22.1 19.4 15.6						
18.0 20.0 22.0 24.0 26.0	67.1 63.3 59.5 55.4 51.2	72.4 71.4 70.3 69.0 67.5	13.9 11.5 9.7 8.1 6.8	13.1 10.9 9.4 8.0 6.9						
28.0 30.0 32.0 34.0 36.0	46.6 41.7 36.2 29.8 21.7	65.7 63.6 61.0 57.9 53.7	5.9 5.1 4.5 4.0 3.5	6.0 5.2 4.6 4.1 3.6						
00.0	21.7	00.7		ılo de plu	uma prin	cipal 83.0	[°]C			
18.1 20.0 22.0 24.0	73.0 69.6 65.9 62.1	73.3 72.6 71.7 70.7	15.1 14.7 12.7 10.3	16.5 14.7 12.3 10.3						
26.0 28.0 30.0 32.0	58.2 54.1 49.7 45.1	69.6 68.2 66.6 64.7	8.7 7.4 6.4 5.6	8.8 7.6 6.6 5.8						
34.0 36.0	40.0 34.3	62.5 59.8	4.9 4.3	5.0 4.4						
38.0	27.5	56.4	3.8 Ángi	l 4.0 Ilo de plu	ıma nrin	cinal 75 (1 ° 1			
27.8	65.0	70.3	11.0	11.0	лна рин	Cipai 75.	J[]			
28.0 30.0 32.0	64.5 60.7 56.7	70.2 69.2 67.9	11.0 9.6 8.2	11.0 9.8 8.4						
34.0 36.0 38.0 40.0	52.5 48.1 43.3 38.0	66.5 64.8 62.8 60.4	7.0 6.1 5.3 4.6	7.3 6.4 5.6 4.9						
42.0 44.0	32.0 24.6	57.5 53.7	4.1 3.7	4.4 3.9						
				ılo de plu	ıma prin	cipal 65.0	0 [°]			
39.1 40.0 42.0 44.0	55.0 53.2 48.8 44.0	64.8 64.2 62.6 60.6	7.4 6.4 5.7	7.6 7.2 6.4 5.7						
46.0 48.0 50.0 52.0	38.8 32.9 25.7 15.7	58.3 55.5 51.9 46.7	4.9 4.4 3.9 3.4	5.0 4.5 3.9 3.4						



Nº de ident.: 9842523/95738/

Radio de descarga:

360°

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 74.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.		de plumi	oal, Punt ín (2316- osición m	1) 68.5 r	n Plumín			
			Ángı		ıma prin	cipal 88.	0[°]			
11.9	78.0	74.4		30.1						
12.0	77.9	74.4	15.1	30.1						
13.0 14.0	76.1 74.4	74.2 73.9	15.1 15.1	30.1 27.0						
16.0	70.8	73.9	15.1	21.6						
18.0	67.2	72.4	14.9	17.9						
20.0	63.4	71.5	14.5	15.0						
22.0	59.6	70.3	13.3	12.9						
24.0	55.5	69.0	11.2	11.1						
26.0	51.3	67.5	9.5	9.7						
28.0	46.7	65.7	8.3	8.6						
30.0	41.8	63.6	7.2	7.5						
32.0 34.0	36.3 29.9	61.1 58.0	6.3 5.3	6.6 5.5						
36.0	29.9	53.8	4.1	4.2						
00.0	21.0	00.0		•	ıma prin	cipal 83	1°10			
18.1	73.0	73.3	I	23.1			· []			
20.0	69.7	72.6	15.1	20.3						
22.0	66.0	71.8	15.1	16.9						
24.0	62.2	70.8	15.0	14.3						
26.0	58.3	69.6	13.2	12.3						
28.0	54.2	68.2	11.1	10.7						
30.0	49.9 45.2	66.6	9.5	9.4						
32.0 34.0	40.1	64.7 62.5	8.3 7.2	8.3 7.3						
36.0	34.4	59.8	6.3	6.4						
38.0	27.6	56.5	5.6	5.7						
			Ángı	ılo de plı	ıma prin	cipal 75.	0 [°]			
27.8	65.0	70.3		13.1		-				
28.0	64.7	70.3	15.1	12.9						
30.0	60.8	69.2	14.2	11.2						
32.0	56.8	68.0	12.5	9.7						
34.0	52.7	66.5	10.5	8.4						
36.0 38.0	48.2 43.4	64.8 62.8	9.1 7.9	7.3 6.3						
40.0	38.1	60.4	6.9	5.4						
42.0	32.1	57.6	6.2	4.6						
44.0	24.7	53.8	5.2	3.8						
			Ángı	ılo de plı	ıma prin	cipal 65.	0 [°]			
39.2	55.0	64.8		4.3						
40.0	53.3	64.3	5.0	4.0						
42.0	48.9	62.6	4.1	3.2						
44.0	44.1	60.7	3.2	2.5						
46.0	39.4	58.4	2.4							
47.0	36.6	57.0	2.1						l	



Nº de ident.: 9842523/95738/

360°

Pieza de articulación de pluma principal: Cabeza de pluma principal:

2821-1 2821-1

Radio de descarga: Valor de vuelco:

2 - Vía ancha 74.0

Lastre trasero [t]: Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
							_			
Alcan- ce	Ángu- o de	Altura de	Carga [t]							
[m]	plumín	rolda-	[,]	'''	[,]	[,]	[,]	[[,]	[[,]	[,]
` '	[°]	nas								
		[m]								
		38.	0 m Plum						-	-
			Cabeza					1		
					osición m	•				
40.5	70.0	77.0			ıma prin	cipal 88.0	ַנין (
12.5 13.0	78.0 77.2	77.3 77.2	15.1 15.1	22.5 22.5						
14.0	75.6	77.0	15.1	20.8						
16.0	72.3	76.4	15.1	16.8						
18.0	69.0	75.6	15.1	14.1						
20.0	65.7	74.8	12.7	11.9 10.2						
22.0 24.0	62.2 58.6	73.8 72.6	10.6 9.0	8.8						
26.0	54.9	71.2	7.7	7.6						
28.0	50.9	69.7	6.6	6.7						
30.0	46.7	67.9	5.8	6.0						
32.0	42.2	65.8	5.1	5.3						
34.0 36.0	37.3 31.7	63.4 60.4	4.5 4.1	4.6 4.2						
38.0	24.9	56.7	3.6	3.7						
					uma prin	cipal 83.0	l°1			
19.0	73.0	76.1	15.1	16.1	·					
20.0	71.3	75.8	15.1	15.9						
22.0	68.0	75.0	14.3	13.4						
24.0 26.0	64.6 61.1	74.1 73.1	12.0 10.1	11.3 9.8						
28.0	57.4	71.8	8.6	8.4						
30.0	53.6	70.4	7.4	7.4						
32.0	49.6	68.8	6.5	6.5						
34.0	45.3	66.9	5.7	5.8						
36.0 38.0	40.7 35.6	64.7 62.2	5.0 4.4	5.1 4.5						
40.0	29.7	59.0	4.0	4.1						
42.0	22.3	54.9	3.6	3.7						
			Ángı	ılo de plı	ıma prin	cipal 75.0	[°]C			
29.0	65.0	73.0	44.0	10.8						
30.0 32.0	63.3 59.8	72.6 71.5	9.4	10.8 9.3						
32.0 34.0	59.8 56.1	71.5	9.4 8.1	9.3 8.1						
36.0	52.2	68.7	7.0	7.1						
38.0	48.1	67.0	6.2	6.3						
40.0	43.7	65.0	5.5	5.6						
42.0	38.9	62.7	4.8	4.9						
44.0 46.0	33.6 27.2	59.9 56.5	4.3 3.9	4.4 4.0						
					ıma prin	cipal 65.0	1°1			
40.8	55.0	67.3		6.9						
42.0	52.8	66.5	7.3	6.5						
44.0	48.7	64.8	6.3	5.7						
46.0	44.4	62.9	5.6	5.1						
48.0 50.0	39.6 34.4	60.6 57.9	5.0 4.4	4.5 3.9						
55.0	16.4	57.9 47.1	3.4	3.9						
22.0										



Nº de ident.: 9842523/95738/ 360°

Radio de descarga:

Pieza de articulación de pluma principal: Cabeza de pluma principal:

2821-1 2821-1

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 74.0

Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 37.0	de plumi	oal, Punt n (2316- osición m	1) 71.5 r	n Plumín	dfall		
			Ángı		ıma prin	cipal 88.0	0 [°]			
12.5	78.0	77.4		28.1						
13.0	77.3	77.3	15.1	28.1						
14.0 16.0	75.7 72.4	77.0 76.4	15.1 15.1	25.7 20.4						
18.0	69.1	75.7	15.1	16.8						
20.0	65.8	74.8	13.4	14.1						
22.0	62.3	73.8	11.9	12.0						
24.0	58.7	72.6	10.3	10.4						
26.0	55.0	71.3	8.7	8.9						
28.0	51.0 46.9	69.7	7.5	7.8 6.8						
30.0 32.0	40.9	67.9 65.9	6.5 5.7	6.0						
34.0	37.4	63.4	4.9	5.2						
36.0	31.8	60.5	4.2	4.4						
38.0	25.0	56.8	3.2	3.3						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
19.0	73.0	76.1		19.6						
20.0	71.4	75.8	15.1	19.2						
22.0 24.0	68.1 64.7	75.1 74.2	15.1 13.5	15.9 13.3						
26.0	61.2	73.1	12.2	11.6						
28.0	57.5	71.9	10.2	9.9						
30.0	53.7	70.5	8.6	8.6						
32.0	49.7	68.8	7.4	7.6						
34.0	45.5	67.0	6.5	6.6						
36.0	40.8	64.8	5.6	5.7						
38.0 40.0	35.7 29.8	62.2 59.1	4.9 4.3	5.0 4.4						
42.0	22.5	55.0	3.7	3.8						
					ıma prin	cipal 75.0	[°]			
29.1	65.0	73.0		11.8						
30.0	63.4	72.6	13.6	11.1						
32.0	59.9	71.5	11.4	9.6						
34.0 36.0	56.2 52.3	70.2	9.7	8.4 7.3						
36.0 38.0	52.3 48.2	68.7 67.0	8.2 7.2	6.2						
40.0	43.8	65.1	6.2	5.3						
42.0	39.0	62.8	5.4	4.5						
44.0	33.7	60.0	4.8	3.8						
46.0	27.4	56.6	4.2	3.1						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
40.9	55.0	67.3		3.4						
42.0	52.9	66.5	3.8	3.0						
44.0	48.8	64.8	3.0	2.3						
46.0	44.8	62.9	2.2	l					l	



2821-1 2821-1

N° de ident.: 9842523/95738/ Pieza de articulación de pluma principal: Radio de descarga: 360 ° Cabeza de pluma principal:

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0		de plumi	ín (1916-	1) 71.5 r	n Plumír			
					osición m uma prin					
13.1	78.0	80.3	15.1	23.4		lipai oo.	J []			
14.0	76.7	80.1	15.1	23.4						
16.0	73.7	79.5	15.1	19.4						
18.0	70.7	78.8	15.1	16.2						
20.0 22.0	67.6 64.5	78.1 77.1	14.3 12.3	14.0 11.9						
24.0	61.2	76.1	10.8	10.5						
26.0	57.9	74.9	9.3	9.2						
28.0	54.4	73.5	8.1	8.1						
30.0	50.7	71.9	7.2	7.3						
32.0 34.0	46.9 42.7	70.1 68.1	6.4 5.7	6.6 5.9						
36.0	38.2	65.7	5.2	5.3						
38.0	33.2	62.9	4.7	4.8						
40.0	27.3	59.4	4.3	4.4						
42.0	19.9	54.8	3.8	4.0						
			Ángı	ılo de plı	ıma prin	cipal 83.0	0 [°]			
19.8	73.0	79.0		17.1						
20.0	72.8	79.0	15.1	17.1						
22.0 24.0	69.7 66.6	78.3 77.4	14.8 13.5	15.4 13.2						
26.0	63.4	76.5	11.4	11.4						
28.0	60.2	75.4	9.9	10.1						
30.0	56.8	74.1	8.6	8.9						
32.0 34.0	53.2 49.5	72.7 71.0	7.6 6.8	7.9 7.1						
36.0	45.6	69.2	6.1	6.4						
38.0	41.3	67.0	5.5	5.8						
40.0	36.7	64.5	4.9	5.2						
42.0 44.0	31.4 25.2	61.5 57.8	4.5 4.1	4.8 4.3						
77.0	25.2	51.0			ıma prin	cinal 75 (1°1	I		ı
30.3	65.0	75.8	,g	11.6						
32.0	62.3	74.9	11.4	11.1						
34.0	58.9	73.8	9.8	9.7						
36.0	55.5	72.5	8.6	8.6						
38.0 40.0	51.9 48.1	71.0 69.2	7.5 6.8	7.7 6.9						
42.0	44.1	67.3	6.1	6.2						
44.0	39.7	65.0	5.4	5.6						
46.0	34.9	62.3	4.9	5.1						
48.0 50.0	29.3 22.5	59.1	4.5 4.1	4.7						
50.0		55.0				oinal CE (1 0 1	I.	I	
42.6	55.0	69.7	Angl	110 de pil	uma prin	upai 05.0	\ \	l	I	I
44.0	52.4	68.7	6.8	5.6						
46.0	48.7	67.0	6.1	5.0						
48.0	44.7	65.1	5.4	4.4						
50.0	40.3	62.9	4.8	3.9						
55.0 58.0	27.1 15.8	55.3 47.5	3.4 2.7	2.7						
00.0	10.0	77.0	4.1							



Nº de ident.: 9842523/95738/

Radio de descarga: 360 $^{\circ}$

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 31.0	de plumí	oal, Punt n (1916- osición m	·1) 74.5 r	n Plumír	dfall 1		
			Ángu	ılo de plu	ıma prin	cipal 88.	1°10			
11.2	78.0	71.5		21.0	·					
12.0	76.5	71.3	15.1	21.0						
13.0	74.6	71.0	15.1 15.1	18.3						
14.0 16.0	72.7 68.8	70.7 70.0	14.4	16.2 13.0						
18.0	64.7	69.1	11.2	10.3						
20.0	60.5	68.0	8.8	8.5						
22.0	56.1	66.7	7.1	7.0						
24.0	51.4	65.2	5.8	5.8						
26.0 28.0	46.5 41.0	63.4 61.3	4.9 4.1	4.9 4.1						
30.0	34.8	58.7	3.5	3.5						
32.0	27.4	55.3	2.9	3.0						
			Ángu	ılo de plu	ıma prin	cipal 83.	0 [°]			
17.2	73.0	70.4		15.0						
18.0	71.4	70.1	15.1	15.0						
20.0 22.0	67.5 63.4	69.4 68.4	13.1 10.1	11.9 9.6						
22.0 24.0	59.1	67.3	8.2	7.9						
26.0	54.6	65.9	6.7	6.6						
28.0	49.9	64.3	5.6	5.6						
30.0	44.8	62.4	4.7	4.7						
32.0 34.0	39.1	60.2	4.0	4.0						
34.0 36.0	32.6 24.5	57.3 53.6	3.4 2.9	3.5 3.0						
00.0	20	00.0			ıma prin	cinal 75	1°10			
26.5	65.0	67.6	, ange	9.6			, ,			
28.0	61.9	66.9	8.8	9.0						
30.0	57.5	65.7	7.3	7.5						
32.0	53.0	64.2	6.0	6.3						
34.0	48.1 42.8	62.5	5.2	5.4						
36.0 38.0	36.9	60.5 58.1	4.4 3.7	4.6 3.9						
40.0	29.9	55.0	3.2	3.4						
42.0	20.9	50.8	2.8	2.9						
			Ángı	ılo de plu	ıma prin	cipal 65.	0[°]			
37.4	55.0	62.3		6.1						
38.0	53.6	62.0	6.3	5.8						
40.0 42.0	48.8 43.6	60.3 58.4	5.5 4.7	4.9 4.1						
44.0	37.8	56.0	4.0	3.4						
46.0	31.0	53.0	3.5	2.8						
48.0	22.4	49.0	3.0	2.2						
49.0	18.1	46.2	2.8							



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 40.0	de plumi		1) 74.5 r	n Plumír			
			Ángı	ılo de plı	uma prin	cipal 88.0	[°]C			
13.2 14.0 16.0 18.0 20.0	78.0 76.8 73.8 70.8 67.7	80.3 80.1 79.5 78.9 78.1	15.1 15.1 15.1 15.1 14.7	28.0 28.0 22.6 18.6 15.9						
22.0 24.0 26.0 28.0 30.0	64.5 61.3 57.9 54.5 50.8	77.2 76.1 74.9 73.5 72.0	13.3 12.4 10.7 9.1 7.9	13.5 11.9 10.3 9.1 8.0						
32.0 34.0 36.0 38.0 40.0	47.0 42.8 38.3 33.3 27.5	70.2 68.1 65.8 62.9 59.5	6.8 5.7 4.7 3.9 2.9	6.9 5.8 4.9 4.0 3.0						
			Ángu		uma prin	cipal 83.0	[°]			1
19.9 20.0 22.0 24.0 26.0	73.0 72.8 69.8 66.7 63.5	79.0 79.0 78.3 77.5 76.5	15.1 15.1 14.7 13.2	19.7 19.7 17.6 15.1 12.9						
28.0 30.0 32.0 34.0 36.0	60.2 56.8 53.3 49.6 45.7	75.4 74.1 72.7 71.1 69.2	11.9 10.1 8.7 7.7 6.8	11.4 9.9 8.7 7.8 6.9						
38.0 40.0 42.0 44.0	41.4 36.8 31.5 25.3	67.1 64.6 61.6 57.8	6.0 5.3 4.5 3.7	6.1 5.4 4.7 3.8						
			Ángı		uma prin	cipal 75.0	[°]			
30.3 32.0 34.0 36.0 38.0 40.0	65.0 62.3 59.0 55.6 52.0 48.2	75.8 75.0 73.8 72.5 71.0 69.3	11.9 10.4 9.1 7.9 6.8	10.7 9.5 8.3 7.2 6.2 5.3						
42.0 44.0 46.0 48.0 50.0	44.2 39.8 35.0 29.4 23.6	67.3 65.1 62.4 59.2 55.1	5.8 5.0 4.1 3.4 2.7	4.5 3.8 3.1 2.5						
			Ángı	ılo de plu	uma prin	cipal 65.0	[°]			
42.6 44.0 46.0	55.0 52.5 49.0	69.7 68.8 67.1	2.8 2.0	2.7 2.2						



Nº de ident.: 9842523/95738/

Radio de descarga:

360°

74.0

0.0

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal:

Valor de vuelco:

Lastre trasero [t]: Lastre central [t]: 2 - Vía ancha

2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 34.0	na princip de plumí 0 [m] Po	ín (1916-	·1) 77.5 r̀	n Plumín	dfall		
			Ángı	ılo de plı	ıma prin	cipal 88.0	0 [°]			
11.9 12.0 13.0 14.0 16.0	78.0 77.8 76.0 74.3 70.7	74.4 74.4 74.1 73.9 73.2	15.1 15.1 15.1 15.1 13.4	18.8 18.8 18.2 16.1 12.8						
18.0 20.0 22.0 24.0 26.0	67.1 63.3 59.5 55.4 51.2	72.4 71.4 70.3 69.0 67.5	11.3 8.8 7.1 5.8 4.8	10.4 8.4 7.0 5.8 4.9						
28.0 30.0 32.0 34.0	46.6 41.7 36.2 29.8	65.7 63.6 61.0 57.9	4.1 3.4 2.9 2.4	4.1 3.5 3.0 2.4						
			Ángı	ılo de plu	ıma prin	cipal 83.0	0 [°]			
18.1 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0	73.0 69.6 65.9 62.1 58.2 54.1 49.7 45.1 40.0 34.3 27.5	73.3 72.6 71.7 70.7 69.6 68.2 66.6 64.7 62.5 59.8 56.4	14.9 13.1 10.2 8.1 6.6 5.5 4.7 4.0 3.3 2.8 2.4	13.3 11.9 9.6 7.8 6.6 5.5 4.7 4.0 3.4 2.9 2.5						
			Ángı	ılo de plu	ıma prin	cipal 75.0	0 [°]			
27.8 28.0 30.0 32.0 34.0 36.0	65.0 64.5 60.7 56.7 52.5 48.1	70.3 70.2 69.2 67.9 66.5	8.5 8.5 7.5 6.3 5.3	8.4 8.4 7.4 6.3 5.3	·	·				
38.0 40.0 42.0 44.0	43.3 38.0 32.0 24.6	62.8 60.4 57.5 53.7	3.8 3.2 2.8 2.4	3.9 3.3 2.8 2.4	·	-11-05				
39.1 40.0 42.0 44.0	55.0 53.2 48.8 44.0	64.8 64.2 62.6 60.6 58.3	5.4 4.6 4.0 3.4	5.3 4.9 4.2 3.5	uma prin	cipai 65.(V[*]			

2.9

2.5 2.1

2.8

46.0

48.0

50.0

38.8

32.9

26.6

58.3

55.5 51.9



N° de ident.: 9842523/95738/

Radio de descarga: 360 $^{\circ}$

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 43.0	de plumí		1) 77.5 r	n Plumín			
			Ángu		ıma prin	cipal 88.0	[°]			
13.8 14.0 16.0 18.0 20.0	78.0 77.7 75.0 72.2 69.3	83.2 83.2 82.7 82.1 81.3	15.1 15.1 15.1 15.1 15.1	27.7 27.7 24.2 20.2 17.2						
22.0 24.0 26.0 28.0 30.0	66.4 63.5 60.4 57.3 54.0	80.5 79.5 78.4 77.2 75.8	13.9 12.6 11.5 9.9 8.6	14.9 13.0 11.5 10.1 9.0						
32.0 34.0 36.0 38.0 40.0	50.6 47.0 43.2 39.1 34.5	74.2 72.4 70.4 68.1 65.4	7.5 6.3 5.0 3.9 2.9	8.0 6.7 5.3 4.1 3.1						
					ıma prin	cipal 83.0	[°]			ı
20.8 22.0 24.0 26.0 28.0	73.0 71.3 68.4 65.5 62.5	81.9 81.5 80.7 79.8 78.8	15.1 15.1 15.1 14.1 12.7	19.6 19.2 16.4 14.2 12.5						
30.0 32.0 34.0 36.0 38.0	59.4 56.3 53.0 49.5 45.8	77.7 76.4 75.0 73.3 71.5	11.4 9.8 8.6 7.6 6.8	11.1 9.8 8.7 7.9 7.0						
40.0 42.0 44.0 46.0 48.0	41.9 37.7 33.0 27.5 20.7	69.3 66.9 64.0 60.6 56.1	6.0 5.4 4.7 3.6 2.6	6.3 5.6 4.8 3.7 2.6						
10.0	20	00.1			ıma prin	cipal 75.0	1°1C		Į.	
31.6 32.0 34.0 36.0 38.0	65.0 64.4 61.4 58.3 55.1	78.5 78.3 77.3 76.1 74.7	11.4 10.0 8.8 7.6	9.5 9.2 8.0 7.0 6.1	- Fill]			
40.0 42.0 44.0 46.0 48.0	51.7 48.2 44.5 40.4 36.0	73.2 71.5 69.6 67.3 64.8	6.5 5.6 4.7 3.9 3.1	5.2 4.4 3.7 3.0 2.4						
50.0	31.7	61.7	2.5 Ángu	ווס מס ביוי	ıma prin	cinal 65 (
44.5 45.0	55.0 54.1	72.2 71.8	2.3 2.1	no de pil	лна рип	ωμαι 00.I	J]			



Nº de ident.: 9842523/95738/

Radio de descarga: 360 $^{\circ}$

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

Valor de vuelco: 2 - Vía ancha Lastre trasero [t]: 74.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 34.0		n (2316-	1) 80.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
11.9 12.0 13.0 14.0 16.0	78.0 77.9 76.1 74.4 70.8	74.4 74.4 74.2 73.9 73.2	15.1 15.1 15.1 15.1	30.1 30.1 30.1 28.9 24.3						
18.0 20.0 22.0 24.0 26.0	67.2 63.4 59.6 55.5 51.3	72.4 71.5 70.3 69.0 67.5	15.1 15.1 14.4 9.6 5.8	20.4 16.9 13.9 9.4 5.9						
28.0	46.7	65.7	3.6	3.8	<u> </u>					
18.1	73.0	73.3	Angu	ılo de plu 23.9	ıma prin	cipai 83.0)[°]			
20.0 22.0 24.0 26.0	69.7 66.0 62.2 58.3	73.3 72.6 71.8 70.8 69.6	15.1 15.1 15.1 13.9	19.9 16.6 14.0						
28.0 30.0 32.0 34.0	54.2 49.9 45.2 40.1	68.2 66.6 64.7 62.5	9.6 6.7 4.1	10.1 8.6 6.8 4.1						
			Ángı	ılo de plı	ıma prin	cipal 75.0	D[°]			
27.8 28.0 30.0 32.0 34.0 36.0 38.0 40.0	65.0 64.7 60.8 56.8 52.7 48.2 43.4 38.1	70.3 70.3 69.2 68.0 66.5 64.8 62.8 60.4	12.6 10.6 8.9 7.3 5.9 4.6 3.4	9.3 9.2 7.6 6.3 5.2 4.1 3.2 2.3						
40.0 42.0	32.8	57.6	2.3	2.3						

Source:a9841388



N° de ident.: 9842523/95738/

Radio de descarga: 360 $^{\circ}$

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0		de plumí	oal, Punt ín (1916- osición m	1) 80.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
12.5 13.0 14.0 16.0 18.0	78.0 77.2 75.6 72.3 69.0	77.3 77.2 77.0 76.4 75.6	15.1 15.1 15.1 14.5 12.9	19.4 19.4 18.2 14.7 12.1						
20.0 22.0 24.0 26.0 28.0	65.7 62.2 58.6 54.9 50.9	74.8 73.8 72.6 71.2 69.7	10.5 8.5 7.1 6.0 5.2	10.0 8.4 7.1 6.1 5.3						
30.0 32.0 34.0 36.0	46.7 42.2 37.3 31.7	67.9 65.8 63.4 60.4	4.5 3.9 3.4 2.8	4.6 4.0 3.5 2.8						
				ılo de plu	ıma prin	cipal 83.0	[°]			
19.0 20.0 22.0 24.0 26.0	73.0 71.3 68.0 64.6 61.1	76.1 75.8 75.0 74.1 73.1	14.7 14.7 12.0 9.7 8.0	13.8 13.7 11.2 9.3 7.9						
28.0 30.0 32.0 34.0	57.4 53.6 49.6 45.3	71.8 70.4 68.8 66.9	6.8 5.8 5.1 4.4	6.8 5.9 5.2 4.5						
36.0 38.0 40.0 42.0	40.7 35.6 29.7 22.3	64.7 62.2 59.0 54.9	3.8 3.4 3.0 2.5	3.9 3.5 3.0 2.6			2.5.2			
29.0	65.0	73.0	Angl	110 de pil	uma prind	cipai 75.0) [·]		I	I
30.0 32.0 34.0	63.3 59.8 56.1	72.6 71.5 70.2	8.9 7.6 6.5	8.8 7.6 6.6						
36.0 38.0 40.0 42.0	52.2 48.1 43.7 38.9	68.7 67.0 65.0 62.7	5.6 4.9 4.3 3.7	5.7 5.0 4.4 3.8						
44.0 46.0	33.6 27.2	59.9 56.5	3.3 3.0	3.4 3.1						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
40.8 42.0 44.0 46.0	55.0 52.8 48.7 44.4	67.3 66.5 64.8 62.9	5.5 4.7 3.9	4.7 4.2 3.5 2.9						
48.0 50.0 51.0	39.6 34.9 32.0	60.6 57.9 56.3	3.2 2.5 2.2	2.3						



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal: 2
Cabeza de pluma principal: 2

2821-1 2821-1

Valor de vuelco: 2 - Vía ancha Lastre trasero [t]: 74.0

Lastre central [t]: 74.0

					1	1				
	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 37.0	de plumí	n (2316-	o de carç 1) 83.5 r nidfall (23	n Plumír	dfall 1		
			Ángı	ılo de plu	uma prin	cipal 88.	0 [°]			
12.5 13.0 14.0 16.0 18.0	78.0 77.3 75.7 72.4 69.1	77.4 77.3 77.0 76.4 75.7	15.1 15.1 15.1 15.1	28.2 28.2 27.5 22.5 18.5						
20.0 22.0 24.0 26.0 28.0	65.8 62.3 58.7 55.0 51.0	74.8 73.8 72.6 71.3 69.7	14.0 12.4 10.3 6.9 4.2	15.5 13.1 10.4 7.0 4.3						
30.0	46.9	67.9	2.7	2.9						
<u> </u>			Ángı		ıma prin	cipal 83.	0[°]			
19.0 20.0 22.0 24.0	73.0 71.4 68.1 64.7	76.1 75.8 75.1 74.2	15.1 15.1 14.2	20.4 20.0 16.7 14.0						
26.0 28.0 30.0 32.0 34.0	61.2 57.5 53.7 49.7 45.5	73.1 71.9 70.5 68.8 67.0	12.9 11.0 9.1 7.6 5.2	11.9 10.1 8.7 7.4 5.2						
36.0	40.8	64.8	3.1	3.0						
			Ángı		ıma prin	cipal 75.	0[°]			
29.1 30.0 32.0 34.0	65.0 63.4 59.9 56.2	73.0 72.6 71.5 70.2	10.2 8.5 7.1	8.2 7.5 6.2 5.1						
36.0 38.0 40.0 42.0	52.3 48.2 43.8 39.5	68.7 67.0 65.1 62.8	5.7 4.5 3.3 2.3	4.1 3.2 2.3						



Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal: 2821-1 2821-1 Cabeza de pluma principal:

360° 2 - Vía ancha Valor de vuelco:

Lastre trasero [t]: 74.0 Lastre central [t]: 0.0

	Inserción	ì	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.	0 m Plum Cabeza 40.0	de plumí		1) 83.5 ñ	n Plumín			
					ıma prin					
13.1	78.0	80.3	15.1	16.5						
14.0	76.7	80.1	15.1	16.5						
16.0	73.7	79.5	13.4	13.9						
18.0	70.7	78.8	11.3	11.2						
20.0	67.6	78.1	9.7	9.4						
22.0 24.0	64.5	77.1	7.8 6.5	7.7 6.5						
24.0 26.0	61.2 57.9	76.1 74.9	5.5	5.5						
28.0	54.4	73.5	4.6	4.7						
30.0	50.7	71.9	4.0	4.1						
32.0	46.9	70.1	3.4	3.5						
34.0	42.7	68.1	2.9	3.0						
36.0	38.2	65.7	2.5	2.6						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]C			
19.8	73.0	79.0		11.7						
20.0	72.8	79.0	11.5	11.7						
22.0	69.7	78.3	10.5	10.5						
24.0	66.6	77.4	8.9	8.7						
26.0 28.0	63.4 60.2	76.5 75.4	7.3 6.2	7.3 6.2						
30.0	56.8	74.1	5.3	5.3						
32.0	53.2	72.7	4.5	4.6						
34.0	49.5	71.0	3.9	4.0						
36.0	45.6	69.2	3.4	3.4						
38.0	41.3	67.0	2.9	3.0						
40.0	36.7	64.5	2.5	2.5						
42.0	31.4	61.5	2.1	2.2						
			Ángı		ıma prin	cipal 75.0) [°]		ı	
30.3	65.0	75.8		7.3						
32.0	62.3	74.9	7.0	7.0						
34.0	58.9	73.8	5.9	6.0						
36.0 38.0	55.5 51.9	72.5 71.0	5.1 4.3	5.1 4.4						
40.0	48.1	69.2	3.8	3.9						
42.0	44.1	67.3	3.3	3.3						
44.0	39.7	65.0	2.8	2.9						
46.0	34.9	62.3	2.4	2.5						
48.0	29.3	59.1	2.1	2.2						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
42.6	55.0	69.7		4.0						
44.0	52.4	68.7	4.5	3.5						
46.0	48.7	67.0	3.8	2.9						
48.0	44.7	65.1	3.1	2.3						
50.0 51.0	40.7 38.4	62.9 61.7	2.4 2.1							
31.0	JU. 4	01.7	4.1				1			



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 40.0	na princip de plumí 0 [m] Po	n (2316-	1) 86.5 r	n Plumín	dfall I		
			Ángu	ılo de plu	ıma prin	cipal 88.0	0 [°]			
13.2 14.0 16.0 18.0 20.0 22.0 24.0	78.0 76.8 73.8 70.8 67.7 64.5 61.3	80.3 80.1 79.5 78.9 78.1 77.2 76.1	15.1 15.1 15.1 15.1 14.7 12.1 10.2	26.3 26.3 21.8 18.0 15.3 12.7						
26.0 28.0 30.0	57.9 54.5 50.8	74.9 73.5 72.0	7.5 4.9 2.9	7.9 5.2 3.0						
			Ángu	ılo de plu	ıma prin	cipal 83.0	0[°]	1	1	
19.9 20.0 22.0 24.0 26.0 28.0 30.0	73.0 72.8 69.8 66.7 63.5 60.2 56.8	79.0 79.0 78.3 77.5 76.5 75.4 74.1	15.1 15.1 15.0 12.8 11.2 9.4	18.6 18.6 16.8 14.1 12.0 10.2 8.7						
32.0 34.0 36.0	53.3 49.6 45.7	72.7 71.1 69.2	8.0 6.7 4.6	7.4 6.4 4.6						
			Ángı	ılo de plu	ıma prin	cipal 75.0	0 [°]			
30.3 32.0 34.0 36.0 38.0 40.0 42.0	65.0 62.3 59.0 55.6 52.0 48.2 44.5	75.8 75.0 73.8 72.5 71.0 69.3 67.3	8.3 6.8 5.6 4.5 3.3 2.3	7.2 6.1 5.0 4.1 3.2 2.4	·					



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 43.0	de plumi	oal, Punt ín (1916- osición m	1) 86.5 r	n Plumín	dfall 1		
			Ángı	ılo de plı	ıma prin	cipal 88.0	[°]			
13.7	78.0	83.2		14.8		·				
14.0	77.6	83.2	15.1	14.8						
16.0	74.9	82.6	14.0	12.9						
18.0	72.1	82.0	11.2	10.5						
20.0	69.3 66.4	81.3 80.5	8.8 7.2	8.6 7.2						
24.0	63.4	79.5	5.9	5.9						
26.0	60.4	78.4	5.0	5.0						
28.0	57.2	77.1	4.2	4.2						
30.0	54.0	75.7	3.5	3.6						
32.0	50.5	74.2	3.0	3.1						
34.0	47.0	72.4	2.5	2.6						
			Ángı	ılo de plı	uma prin	cipal 83.0	[°]			
20.7	73.0	81.9		10.0						
22.0	71.2	81.5	9.6	9.8						
24.0	68.3	80.7	7.7	8.0						
26.0 28.0	65.4 62.4	79.8 78.8	6.4 5.4	6.7 5.6						
30.0	59.4	77.7	4.6	4.8						
32.0	56.2	76.4	3.9	4.1						
34.0	52.9	74.9	3.3	3.5						
36.0	49.4	73.3	2.9	3.0						
38.0	45.8	71.4	2.4	2.6						
			Ángı	ılo de plu	uma prin	cipal 75.0	[°]			
31.6	65.0	78.5	5.8	6.0						
32.0	64.4	78.3	5.7	6.0						
34.0	61.3	77.3	5.2	5.4						
36.0 38.0	58.2 55.0	76.1 74.7	4.4 3.8	4.7 4.0						
40.0	55.0 51.6	73.2	3.8	3.4						
42.0	48.1	71.5	2.8	2.9						
44.0	44.4	69.5	2.4	2.5						
			Ángı	ılo de plı	ıma prin	cipal 65.0] [°]			
44.3	55.0	72.2		3.5	·					
46.0	52.1	71.0	3.4	2.9						
48.0	48.6	69.3	2.9	2.4						
50.0	45.2	67.4	2.4							
51.0	43.3	66.3	2.1							



Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal: 360 ° Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 43.0	de plumí	n (2316-	o de carç 1) 89.5 r nidfall (23	n Plumír	dfall 1		
			Ángı	ılo de plu	ıma prin	cipal 88.0	0 [°]			
13.8 14.0 16.0 18.0 20.0	78.0 77.7 75.0 72.2 69.3	83.2 83.2 82.7 82.1 81.3	15.1 15.1 15.1 15.1 15.1	27.1 27.1 24.8 20.8 17.7						
22.0 24.0 26.0 28.0 30.0	66.4 63.5 60.4 57.3 54.0	80.5 79.5 78.4 77.2 75.8	13.1 9.9 7.6 5.2 3.2	14.3 10.7 8.1 5.5 3.4						
			Ángı	ılo de plu	ıma prin	cipal 83.0	0 [°]			
20.8 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0	73.0 71.3 68.4 65.5 62.5 59.4 56.3 53.0 49.5 45.8	81.9 81.5 80.7 79.8 78.8 77.7 76.4 75.0 73.3 71.5	15.1 15.1 15.1 14.3 12.8 11.4 9.0 7.0 5.5 3.9	18.6 16.7 14.0 11.9 10.1 8.6 7.3 6.2 5.3						
			Ángı	ılo de plu	ıma prin	cipal 75.0	0 [°]			
31.6 32.0 34.0 36.0 38.0 40.0	65.0 64.4 61.4 58.3 55.1	78.5 78.3 77.3 76.1 74.7 73.2	7.8 6.4 5.2 4.1	6.1 5.9 4.8 3.8 3.0 2.3						
40.0	51.7	73.2	3.2	2.3						



 N° de ident.: 9842523/95738/ Pieza de articulación de

Radio de descarga: 360 ° Valor de vuelco: 2 - Vía ancha

Lastre trasero [t]: 74.0

Lastre central [t]: 0.0

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

ce o de de plumín rolda-nas [m] 38.0 n	abeza (Carga [t]									
38.0 n Ca	abeza (a princip									
	38.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (1916-1) 89.5 m Plumín 46.0 [m] Posición midfall (1916)										
Ángulo de pluma principal 88.0 [°]											
14.4 78.0 86.1	15.0	13.8									
16.0 75.9 85.8	14.2	13.1									
18.0 73.3 85.2	11.1	10.6									
20.0 70.7 84.5	8.7	8.6									
22.0 68.0 83.7	7.1	7.2									
24.0 65.3 82.8	5.9	5.9									
26.0 62.5 81.8 28.0 59.6 80.7	4.9 4.2	5.0 4.2									
30.0 56.7 79.4	3.5	3.6									
32.0 53.6 78.0	2.9	3.0									
34.0 50.4 76.4	2.5	2.6									
			ıma prine	cipal 83.0	1°1						
21.6 73.0 84.7	8.7	9.0	ina pini	oipai oo.	, r						
22.0 72.5 84.6	8.7	9.0									
24.0 69.8 83.9	7.7	8.0									
26.0 67.1 83.1	6.4	6.7									
28.0 64.4 82.2	5.3	5.6									
30.0 61.6 81.1	4.6	4.8									
32.0 58.7 80.0	3.9	4.1									
34.0 55.7 78.6	3.3	3.5									
36.0 52.6 77.2	2.8	3.0									
38.0 49.3 75.5	2.4	2.5									
L	Angu		ıma prind	cipal 75.0)[°]						
32.8 65.0 81.2		5.4									
34.0 63.4 80.7	5.2	5.4									
36.0 60.5 79.6	4.5	4.6									
38.0 57.6 78.3 40.0 54.6 77.0	3.9	4.0 3.3									
40.0 54.6 77.0 42.0 51.4 75.4	2.8	2.9									
44.0 48.1 73.7	2.4	2.4									
	Ánau	ılo de plu	ıma prind	cipal 65.0	1°1						
46.0 55.0 74.6	3-	2.8									
48.0 51.9 73.2	2.9	2.3									
50.0 48.8 71.5	2.3										



Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal:

2821-1

360°

Cabeza de pluma principal:

2821-1

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 74.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 46.0	de plumi		1) 92.5 r	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0	[°]			
14.4 16.0 18.0 20.0 22.0	78.0 76.0 73.4 70.7 68.1	86.2 85.8 85.2 84.5 83.8	15.1 15.1 14.9 14.6	23.5 23.2 19.3 16.4 14.4						
24.0 26.0 28.0 30.0	65.3 62.6 59.7 56.7	82.9 81.9 80.7 79.5	11.2 8.3 6.2 4.2	11.2 8.7 6.6 4.4						
			Ángu	ılo de plu	ıma prin	cipal 83.0	[°]			
21.6	73.0	84.8		16.8						
22.0 24.0 26.0 28.0 30.0 32.0	72.5 69.9 67.2 64.5 61.6 58.8	84.7 84.0 83.1 82.2 81.2	15.1 15.1 14.2 12.3 10.6 9.0	16.7 14.1 11.9 10.1 8.6 7.3						
34.0 36.0 38.0 40.0	55.8 52.7 49.4 46.0	78.7 77.2 75.6 73.7	7.3 5.9 4.8 3.5	6.2 5.3 4.4 3.6						
			Ángu	ılo de plu	ıma prin	cipal 75.0	[°]C			
32.9 34.0 36.0 38.0 40.0	65.0 63.4 60.6 57.7 54.7	81.2 80.7 79.6 78.4 77.0 75.5	6.2 5.0 4.0 3.0 2.2	5.3 4.7 3.8 2.9 2.2	·		-			



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

										8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
) m Plum Cabeza 49.0	de plumi		1) 92.5 r	n Plumín			
			Ángu	ılo de plu	uma prin	cipal 88.	[°]C			
15.0 16.0 18.0 20.0 22.0 24.0 26.0	78.0 76.8 74.4 71.9 69.4 66.9 64.3	89.1 88.8 88.3 87.7 87.0 86.1 85.2	11.4 11.4 10.1 8.5 6.9 5.8 4.8	12.5 12.5 10.3 8.4 7.0 5.9 4.9						
28.0 30.0 32.0 34.0	61.7 58.9 56.2 53.3	84.2 83.0 81.7 80.2	4.0 3.4 2.9 2.4	4.1 3.5 2.9 2.5						
			Ángu	ılo de plu	uma prin	cipal 83.	[°]			
22.5 24.0 26.0 28.0 30.0	73.0 71.1 68.6 66.1 63.5	87.6 87.1 86.4 85.5 84.5	7.7 7.5 6.2 5.3 4.4	8.1 7.8 6.5 5.5						
32.0 34.0 36.0 38.0	60.8 58.1 55.2 52.3	83.4 82.2 80.9 79.4	3.8 3.2 2.7 2.3	4.0 3.4 2.8 2.4						
			Ángu	ılo de plu	uma prin	cipal 75.	[°]C			
34.1 36.0 38.0 40.0 42.0 44.0	65.0 62.5 59.8 57.1 54.2 51.2	83.9 83.0 81.9 80.6 79.2 77.7	4.4 3.7 3.2 2.7 2.2	4.7 4.5 3.8 3.3 2.7 2.3						
47.7 48.0 50.0	55.0 54.6 51.8	77.1 77.0 75.4	Ángu 2.5 2.2	2.3 2.2	uma prind	cipal 65.	[°]			



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

Valor de vuelco: 2 - Vía ancha

Lastre trasero [t]: Lastre central [t]: 74.0

0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 49.0	de plumi	ín (2316-	o de caro 1) 95.5 r nidfall (23	n Plumín	dfall I		
			Ángı	ılo de plı	ıma prin	cipal 88.0	[°]			
15.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0	78.0 76.8 74.4 72.0 69.5 67.0 64.4 61.7 59.0	89.1 88.9 88.3 87.7 87.0 86.2 85.2 84.2 83.0	15.1 15.1 14.7 13.8 11.8 8.8 6.5 4.7	22.1 22.1 19.1 16.3 14.1 11.6 8.9 6.8 5.0						
32.0	56.2	81.7	3.0	3.2			2.5.2			
22.5 24.0 26.0 28.0 30.0	73.0 71.2 68.7 66.1 63.5	87.6 87.1 86.4 85.5 84.6	15.1 13.7 11.8 10.0	15.7 13.9 11.7 9.9 8.4	uma prin	cipal 83.	0["]			
32.0 34.0 36.0 38.0 40.0	60.9 58.1 55.3 52.4 49.3 46.1	83.5 82.3 80.9 79.4 77.8 75.9	8.7 7.2 5.8 4.7 3.8 2.8	7.2 6.0 5.1 4.2 3.5						
					ıma prin	cipal 75.0	[°]			
34.2 36.0 38.0 40.0 41.0	65.0 62.6 59.9 57.3	83.9 83.0 81.9 80.7	5.6 4.6 3.5 2.6	4.3 3.5 2.7	,	,				



N° de ident.: 9842523/95738/

Radio de descarga: 360 $^{\circ}$

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 52.0	na princip de plumí) [m] Po	oal, Punt n (1916- osición m	o de carç ·1) 95.5 r nidfall (19	ga 3 - Mi n Plumín 916)	dfall		
			Ángı	ılo de plı	ıma prin	cipal 88.	D[°]			
15.6 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0	78.0 77.6 75.3 73.0 70.7 68.3 65.9 63.4 60.9 58.4	92.0 91.9 91.4 90.8 90.2 89.4 88.5 87.5 86.5 85.3	9.0 9.0 8.3 7.2 6.0 5.2 4.2 3.5 2.9 2.4	10.1 10.1 9.3 7.8 6.3 5.2 4.3 3.6 3.0 2.5						
			Ángu	ılo de plu	ıma prin	cipal 83.	1°10			
23.3 24.0 26.0 28.0 30.0 32.0	73.0 72.2 69.9 67.5 65.1	90.5 90.3 89.6 88.8 87.9	6.4 5.7 4.8 4.0	6.7 6.7 5.9 5.0 4.1						
34.0 36.0	60.1 57.5	85.8 84.5	2.8 2.3	2.9 2.4						
			Ángı	ılo de plu	ıma prin	cipal 75.	[°]			
35.4 36.0	65.0 64.2	86.6 86.4	3.6 3.6	3.7 3.7						
38.0 40.0 42.0	61.7 59.2 56.6	85.3 84.2 82.9	3.2 2.7 2.2	3.3 2.8 2.3						



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

Valor de vuelco: 2 - Vía ancha Lastre trasero [t]: 74.0

Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 52.0	de plumí		1) 98.5 r	n Plumín			
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]			
15.7 16.0 18.0 20.0 22.0 24.0	78.0 77.6 75.3 73.0 70.7 68.4	92.0 92.0 91.5 90.9 90.2 89.4	15.1 15.1 15.1 15.1 13.5	20.0 20.0 18.5 15.9 13.6						
26.0 28.0 30.0 32.0	66.0 63.5 61.0 58.4	88.6 87.6 86.5 85.3	9.4 6.8 4.9 3.6	9.2 6.9 5.2 3.8						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]0			
23.4 24.0 26.0 28.0 30.0	73.0 72.3 70.0 67.6 65.2	90.5 90.3 89.6 88.8 87.9	14.3 13.2 11.3 9.7	14.2 13.7 11.6 9.8 8.3						
32.0 34.0 36.0 38.0 40.0	62.7 60.2 57.6 54.9 52.2 49.3	86.9 85.8 84.6 83.2 81.7	8.3 7.3 5.9 4.7 3.7 2.9	7.0 5.9 4.9 4.1 3.3 2.7						
			Ángı	ılo de plu	ıma prin	cipal 75.0	0[°]			
35.4 36.0 38.0 40.0	65.0 64.3 61.8 59.4	86.6 86.4 85.4 84.2	4.2 3.2 2.3	3.5 3.3 2.4						



Nº de ident.: 9842523/95738/

Radio de descarga:

360°

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

2 - Vía ancha Valor de vuelco:

Lastre trasero [t]:

74.0

Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	0 m Plum Cabeza 13.0	de plumí	n (1916-	o de carç 1) 32.5 r nidfall (19	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
7.6 8.0 9.0 10.0 11.0 12.0 13.0 14.0	78.0 76.2 71.5 66.7 61.7 56.5 50.8 44.5 28.6	56.9 56.8 56.4 56.0 55.5 54.8 54.0 53.1 50.3	15.1 15.1 15.1 15.1 15.1 12.8 11.1 9.3 6.9 Ángu		ıma prin	cipal 83.	0[°]			
12.3 13.0 14.0 16.0 18.0	73.0 69.7 64.9 54.4 42.0	56.2 55.9 55.5 54.2 52.3	15.1 15.1 12.1 8.7	25.7 21.3 16.3 11.0 8.1						
10.0	12.0	02.0			ıma prin	cipal 75.0	[°]			
19.7 20.0 22.0 24.0	65.0 63.3 52.6 39.7	54.2 54.1 52.7 50.7	15.1 15.1 11.6 8.2	15.9 15.2 10.4 7.7	·	•				
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
28.3 30.0 32.0	55.0 45.1 29.5	50.3 48.9 46.2	8.1 6.2	10.9 8.6 6.6						
			Ángı	ılo de plu	ıma prin	cipal 45.0	[°]			
43.1 44.0 45.0	35.0 26.1 15.2	38.4 37.0 34.2	5.7 5.3	5.1 4.7						



Nº de ident.: 9842523/95738/

Radio de descarga:

360°

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 16.0	de plumí		1) 35.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	0 [°]			
8.2 9.0 10.0 11.0 12.0 13.0 14.0 16.0	78.0 75.1 71.3 67.5 63.5 59.3 54.9 45.3	59.8 59.6 59.3 58.8 58.4 57.8 57.1 55.3	15.1 15.1 15.1 15.1 14.1 12.5 9.8	30.1 30.0 24.3 19.5 16.0 13.7 11.9 9.3						
18.0	33.4	52.8	7.7	7.6						
<u> </u>			Ángı		ıma prin	cipal 83.0	0[°]			
13.2 14.0 16.0 18.0 20.0 22.0	73.0 69.9 61.9 53.2 43.2 30.6	59.0 58.7 57.8 56.4 54.6 51.8	15.1 15.1 15.1 12.0 9.3 7.4	25.9 22.1 15.1 11.2 8.9 7.4						
			Ángı	ılo de plu	ıma prin	cipal 75.0	1°10			
20.9 22.0 24.0 26.0 28.0	65.0 60.6 51.8 41.5 28.1	56.9 56.4 54.9 53.0 50.0	15.0 11.6 8.8 7.2	16.4 14.2 10.7 8.6 7.1	·					
			Ángu	ılo de plu	ıma prin	cipal 6 <u>5</u> .0	0 [°]			
30.1 32.0 34.0	55.0 45.7 33.9	52.8 51.2 48.7	9.7 7.6	11.5 9.3 7.5						
			Ángu		ıma prin	cipal 45.0	0[°]		1	
45.5 46.0 47.0	35.0 31.7 23.2	40.1 39.6 37.7	5.0 4.7	4.4 4.2 3.8						



360°

Cargas pluma principal + plumín abatible + midfall

Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 16.0	de plumí		1) 38.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	0 [°]			
8.3 9.0 10.0 11.0 12.0 13.0 14.0 16.0	78.0 75.3 71.6 67.7 63.7 59.5 55.2 45.5	59.8 59.6 59.3 58.9 58.4 57.8 57.1	15.1 15.1 15.1 15.1 15.1 15.1 15.1 15.1	30.1 30.1 30.1 27.4 22.7 19.3 16.5 12.9						
18.0	33.6	52.8	11.1	10.5						
			Angu		ıma prin	cipal 83.0	0[°]	1		
13.2 14.0 16.0 18.0 20.0 22.0	73.0 70.1 62.1 53.4 43.5 30.9	59.0 58.8 57.8 56.5 54.6 51.9	15.1 15.1 15.1 12.9 10.7	30.1 29.5 21.2 15.6 12.3 10.1						
			Ánaı	ılo de plu	ıma prin	cipal 75.0	1°10			
21.0 22.0 24.0 26.0 28.0	65.0 60.8 52.0 41.8 28.4	56.9 56.4 55.0 53.0 50.1	15.1 14.2 11.4 9.3	23.1 19.9 14.9 11.7 9.7	•					
			Ángu	ılo de plu	ıma prin	cipal 65.0	0[°]			
30.1 32.0 34.0	55.0 46.0 34.2	52.8 51.2 48.7	13.3 10.2	12.5 10.8 9.3						
			Ángı	ılo de plu	ıma prin	cipal 45.0	0[°]			
45.6 46.0 47.0	35.0 33.4 25.8	40.1 39.7 37.7	2.4 2.0	2.1						



Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal:

2821-1

360°

Cabeza de pluma principal:

2821-1

Valor de vuelco:	2 - Vía ancha
Lastre trasero [t]:	74.0
Lastre central [t]:	0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 19.0		n (1916-	1) 38.5 r	n Plumín			
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]			
8.8 9.0 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0	78.0 77.5 74.4 71.2 68.0 64.6 61.2 53.9 45.8 36.2	62.7 62.7 62.4 62.1 61.7 61.2 60.7 59.3 57.6 55.2	15.1 15.1 15.1 15.1 15.1 15.0 12.7 10.5 8.4	30.1 30.1 28.8 23.7 20.0 17.1 15.0 11.8 9.7 8.1						
22.0	23.1	51.6	7.0	6.8						
				ılo de plu	ıma prin	cipal 83.0	D[°]		ı	
14.1 16.0 18.0 20.0 22.0 24.0	73.0 66.7 59.8 52.4 44.1 34.1	61.9 61.1 60.1 58.7 56.8 54.3	15.1 15.1 14.1 11.0 8.9 7.4	25.2 18.7 14.3 11.4 9.4 7.9						
			Ánaı	ılo de plu	ıma prin	cipal 75.0	1°10			
22.2 24.0 26.0 28.0 30.0	65.0 58.7 51.2 42.7 32.3	59.6 58.6 57.2 55.2 52.5	15.0 12.1 9.6 7.9	16.6 13.7 11.0 9.1 7.7	, 					
			Ángı	ılo de plı	ıma prin	cipal 65.0	D[°]			
31.8 32.0 34.0 36.0 38.0	55.0 54.2 46.1 36.6 23.8	55.2 55.2 53.4 51.1 47.6	13.3 10.7 8.5 7.2	11.8 11.8 9.8 8.2 7.0	·					
			Ángu	ılo de plu	ıma prin	cipal 45.0	[°]			
48.0 50.0	35.0 21.1	41.8 38.3	3.9	3.9 3.3						



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

74.0

0.0

Pieza de articulación de pluma principal: 2821-1

Valor de vuelco: 2 - Vía ancha

Lastre trasero [t]: Lastre central [t]: Cabeza de pluma principal: 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 19.0	de plumí	n (2316-		n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
8.9 9.0 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0	78.0 77.7 74.6 71.4 68.1 64.8 61.4 54.1 46.0 36.4 23.4	62.7 62.7 62.5 62.1 61.7 61.2 60.7 59.4 57.6 55.2	15.1 15.1 15.1 15.1 15.1 15.1 15.1 15.1	30.1 30.1 30.1 30.0 28.0 23.6 20.5 15.9 12.8 10.4			21.0			
	70.0	04.0	Angu		ıma prin	cipal 83.0) [°]		I	
14.1 16.0 18.0 20.0 22.0 24.0	73.0 66.9 60.0 52.6 44.3 34.3	61.9 61.2 60.1 58.7 56.9 54.3	15.1 15.1 15.1 13.0 11.0	30.1 26.2 19.5 15.2 12.3 10.2						
			Ángu	ılo de plu	ıma prin	cipal 75.0	1°10			
22.3 24.0 26.0 28.0	65.0 58.9 51.4 42.9	59.6 58.7 57.2 55.3	15.1 15.1 15.1 12.9	22.8 18.6 14.7 12.0						
30.0	32.5	52.6	10.8	10.0			2.5.2			
31.8 32.0 34.0 36.0	55.0 54.4 46.3 36.8	55.2 55.2 53.5 51.1	13.1 11.6 9.7	11.1 11.0 9.5 8.3	ima prin	cipal 65.	עני <u>ן</u>			
38.0 39.0	24.1 17.0	47.7 44.8	8.2 7.4	7.2						



Nº de ident.: 9842523/95738/

Radio de descarga: 360 $^{\circ}$

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
	!		0 m Plum Cabeza 22.0		n (1916-	1) 41.5 r	n Plumín			
Ángulo de pluma principal 88.0 [°]										
9.5 10.0 11.0 12.0 13.0	78.0 76.6 73.9 71.1 68.3 65.5	65.7 65.5 65.3 64.9 64.5	15.1 15.1 15.1 15.1 15.1 15.1	30.1 29.7 24.6 20.4 17.7	·	•				
16.0 18.0 20.0 22.0 24.0	59.5 53.1 46.1 38.1 28.0	63.0 61.6 59.8 57.5	13.9 10.9 8.9 7.3 6.3	12.3 10.1 8.5 7.2 6.2						
20	20.0	0		ılo de plu	ıma prin	cinal 83 (1°10			
14.9 16.0 18.0 20.0 22.0 24.0 26.0 28.0	73.0 70.1 64.4 58.3 51.8 44.7 36.4 25.7	64.8 64.4 63.5 62.4 60.9 59.1 56.6 53.3	15.1 15.1 13.2 10.5 8.6 7.1 6.1	21.8 19.2 14.7 11.8 9.8 8.2 7.0 6.1						
			Ánaı	ılo de plu	ıma prin	cipal 75.0	1°10			
23.5 24.0 26.0 28.0 30.0 32.0 34.0	65.0 63.4 57.3 50.8 43.5 34.9 23.6	62.3 62.1 60.9 59.4 57.5 55.0 51.3	15.1 15.1 12.8 10.1 8.3 6.9 6.0	14.6 14.2 11.5 9.5 8.0 6.8 5.9						
			Ánaı	ılo de plu	ıma prin	cipal 65.0	1°10			
33.5 34.0 36.0 38.0 40.0	55.0 53.4 46.4 38.4 28.5	57.7 57.4 55.7 53.4 50.3	11.1 8.9 7.4 6.4	10.3 10.2 8.6 7.2 6.3						
50.4	35.0	43.5	Angı	ılo de plu 3.2	ıma prin	cipal 45.0	[°]			
53.0	19.5	38.8	3.1	2.6						



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal: 28

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	n 1 2 3 4 5 6 7					8			
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.	0 m Plum Cabeza 22.0	de plumi	n (2316-	o de carç 1) 44.5 r nidfall (23	n Plumín	dfall 1		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
9.5 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0	78.0 76.7 74.0 71.3 68.5 65.6 59.7 53.3 46.3 38.3	65.7 65.6 65.3 64.9 64.5 64.1 63.0 61.6 59.9 57.6	15.1 15.1 15.1 15.1 15.1 14.9 14.2 12.3 9.9	30.1 30.1 30.1 27.4 24.8 21.3 16.7 13.6 11.3 9.4						
24.0	28.2	54.5	8.2	8.0						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
15.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0	73.0 70.2 64.5 58.5 52.0 44.9 36.6 25.9	64.8 64.4 63.5 62.4 60.9 59.1 56.7 53.3	15.1 15.1 14.8 14.3 11.9 9.6 8.0	30.1 27.1 20.2 16.0 13.1 10.9 9.2 7.8						
			Ángı	ılo de plu	uma prin	cipal 75.0	l°1C			
23.5 24.0 26.0 28.0 30.0 32.0 34.0	65.0 63.6 57.5 50.9 43.6 35.1 23.8	62.4 62.2 61.0 59.5 57.5 55.0 51.4	15.1 14.7 12.4 10.2 8.5 7.2 Ángu	19.9 19.5 15.5 12.7 10.6 9.1 7.7	uma prin	cipal 65.	D[°]			
33.6 34.0 36.0 38.0 40.0 42.0	55.0 53.6 46.6 38.6 28.7 15.7	57.7 57.4 55.7 53.5 50.4 45.2	11.6 10.4 9.2 8.0 6.7	10.1 9.8 8.6 7.5 6.6						



Nº de ident.: 9842523/95738/

Radio de descarga:

360°

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
41.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (1916-1) 44.5 m Plumín 25.0 [m] Posición midfall (1916)										
			Ánaı	ılo de plu	ıma prin	cipal 88.	1°10			
10.1	78.0	68.6	15.1	27.6						
11.0 12.0 13.0 14.0	75.9 73.5 71.0 68.6	68.4 68.1 67.7 67.3	15.1 15.1 15.1 15.0	24.9 21.1 18.1 16.0						
16.0 18.0 20.0 22.0	63.5 58.2 52.5 46.4	66.4 65.2 63.8 62.0	13.6 11.5 9.1 7.7	12.7 10.5 8.8 7.5						
24.0 26.0	39.4 31.2	59.8 57.0	6.5 5.6	6.5 5.6						
				ılo de plu	ıma prin	cinal 83	1°10			
15.8 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0	73.0 72.6 67.6 62.5 57.2 51.4 45.1 38.0 29.4	67.6 67.6 66.8 65.8 64.6 63.1 61.3 59.0 55.9	15.1 15.0 13.4 10.9 8.8 7.5 6.3 5.5	19.3 19.3 15.3 12.2 10.1 8.6 7.3 6.3 5.5						
30.0	25.4	55.5		ılo de plu	ıma nrin	cinal 75 i) [°]			
24.7 26.0 28.0 30.0 32.0 34.0 36.0	65.0 61.7 56.3 50.5 44.1 36.8 27.8	65.1 64.4 63.2 61.6 59.7 57.3 54.1	13.2 10.5 8.5 7.2 6.2 5.4	13.0 11.8 9.8 8.4 7.1 6.2 5.4		ыраг <i>т</i> о.	5 []			
			Ángı	ılo de plu	ıma prin	cipal 65.	[°]			
35.2 36.0 38.0 40.0 42.0	55.0 52.8 46.6 39.7 31.6	60.1 59.7 57.9 55.7 52.9	9.2 7.7 6.6 5.7	9.1 8.9 7.6 6.5 5.8						
			Ángı	ılo de plu	ıma prin	cipal 45.	0 [°]			
52.9 55.0 56.0	35.0 24.9 18.1	45.2 41.8 39.3	2.7 2.4	2.7 2.3 2.1	-					



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

Inserción 1 2					3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 25.0	de plumí		1) 47.5 r	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0	D[°]			
10.1 11.0 12.0 13.0 14.0 16.0 20.0 22.0 24.0 26.0 15.9 16.0 18.0 20.0 22.0 24.0 26.0	78.0 76.0 73.6 71.2 68.7 63.7 58.3 52.7 46.5 39.6 31.4 73.0 72.7 67.8 62.7 57.3 51.6 45.3	68.6 68.4 68.1 67.4 66.4 65.3 63.9 62.1 59.9 57.0 67.6 66.9 65.9 64.7 63.2 61.3	15.1 15.1 15.1 15.1 15.1 15.1 13.4 11.2 9.4 7.8 6.7	30.1 30.1 29.4 25.1 22.2 17.2 14.1 11.7 9.9 8.3 7.2	uma princ					
28.0	38.2	59.0	8.3	8.1						
30.0	29.6	56.0	7.0	7.0	l		2.5.2			
24.8	65.0	65.1	Angu	ılo de plu 17.5	ıma prin	cipal 75.0	֓֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓			
26.0 28.0 30.0 32.0 34.0	61.9 56.4 50.6 44.2 36.9	64.5 63.2 61.7 59.8	15.1 14.1 11.8 9.8 8.1	16.0 13.2 11.1 9.4 8.1						
36.0	28.0	54.2	7.0	7.0		-:	2.5.2			
35.3 36.0 38.0 40.0 42.0	55.0 52.9 46.8 39.9 31.8	60.1 59.7 57.9 55.8 52.9	10.0 8.9 7.9 7.0	8.9 8.5 7.5 6.5 5.7	uma prind	ират 65.	7 []			
44.0	20.7	52.9 48.8	6.1	5.7						



2821-1

2821-1

 N° de ident.: 9842523/95738/ Pieza de articulación de pluma principal:

Radio de descarga: 360 $^{\circ}$ Cabeza de pluma principal:

	Inserciór	l	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 28.0	de plumí		1) 47.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
10.7	78.0	71.5		30.1						
11.0	77.4	71.5	15.1	30.1						
12.0	75.3	71.2	15.1	30.1						
13.0	73.2	70.9	15.1	28.9						
14.0	71.0	70.6	15.1	25.6						
16.0 18.0	66.6 62.0	69.7 68.7	15.1 15.1	20.9 17.5						
20.0	57.2	67.5	14.4	17.5						
22.0	52.1	66.1	13.7	13.2						
24.0	46.6	64.3	12.4	11.8						
26.0	40.5	62.1	10.9	10.5						
28.0	33.4	59.4	9.6	9.6						
30.0	24.6	55.8	8.7	8.7						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]C			
16.7	73.0	70.5	15.1	27.3						
18.0	70.2	70.1	15.1	24.7						
20.0	65.7	69.2	15.1	20.1						
22.0	61.1	68.2	15.1	17.0						
24.0 26.0	56.2 51.1	66.9 65.4	14.4 13.9	14.7 13.0						
28.0	45.5	63.5	12.1	11.5						
30.0	39.2	61.3	10.6	10.3						
32.0	32.0	58.4	9.5	9.4						
34.0	22.6	54.5	8.6	8.6						
			Ángu	ılo de plu	uma prin	cipal 75.0	[°]			
26.0	65.0	67.8		18.7						
28.0	60.3	66.7	15.1	16.5						
30.0	55.4	65.4	14.4	14.3						
32.0	50.2	63.9	13.5	12.7						
34.0 36.0	44.5 38.2	62.0 59.7	11.9 10.4	11.3 10.2						
38.0	30.7	59.7 56.7	9.4	9.3						
40.0	20.7	52.5	8.5	8.5						
		-			ıma prin	cipal 65 (1°10	•	•	
37.0	55.0	62.6	,gc	10.7						
38.0	52.3	61.9	11.6	10.7						
40.0	46.8	60.1	10.7	9.2						
42.0	40.7	58.0	9.8	8.4						
44.0	33.8	55.3	9.0	7.6						
46.0	25.1	51.7	8.2	6.8						
			Ángı	ılo de plu	ıma prin	cipal 45.0	0 [°]			
55.4	35.0	47.0		2.1						
57.0	29.2	44.5	2.1							



Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal: 360°

Cabeza de pluma principal:

2821-1 2821-1

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 74.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 19.0	de plumí		1) 50.5 r	n Plumín			
			Ángu	ılo de plu	uma prin	cipal 88.0	0 [°]			
8.8	78.0	62.7		30.1						
9.0	77.5	62.7	15.1	30.1						
10.0	74.4	62.4	15.1	30.1						
11.0	71.2	62.1	15.1	27.9						
12.0 13.0	68.0 64.6	61.7 61.2	15.1 15.1	25.1 21.3						
14.0	61.2	60.7	15.1	18.6						
16.0	53.9	59.3	15.0	14.6						
18.0	45.8	57.6	13.3	11.9						
20.0	36.2	55.2	10.5	9.7						
22.0	23.1	51.6	8.6	8.2						
			Ángı	ılo de plu	uma prin	cipal 83.0	0 [°]			
14.1	73.0	61.9	15.1	30.1						
16.0	66.7	61.1	15.1	23.6						
18.0	59.8	60.1	15.1	17.7						
20.0	52.4	58.7	15.1 12.7	14.0 11.4						
22.0 24.0	44.1 34.1	56.8 54.3	12.7	9.5						
24.0	J 54.1	34.3			ıma prin	cinal 75 (0 [°]			
00.0	05.0	50.0	Aligo			l	<u> </u>			
22.2 24.0	65.0 58.7	59.6 58.6	15.1	20.3 17.0						
26.0	51.2	57.2	14.8	13.5						
28.0	42.7	55.2	12.3	11.1						
30.0	32.3	52.5	9.9	9.4						
			Ángı	ılo de plu	ıma prin	cipal 65.0	0 [°]			
31.8	55.0	55.2		11.0	· ·					
32.0	54.2	55.2	13.8	10.8						
34.0	46.1	53.4	12.3	9.4						
36.0	36.6	51.1	10.8	8.1						
38.0	23.8	47.6	9.0	6.9						
			Ángı	ılo de plu	ıma prin	cipal 45.0	0[°]			
48.2	35.0	41.8	2.4							
49.0	30.2	40.4	2.2							

Source:a9841388



2821-1 2821-1

N° de ident.: 9842523/95738/

Radio de descarga: 360 $^{\circ}$

5738/ Pieza de articulación de pluma principal: 360 ° Cabeza de pluma principal:

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	0 m Plum Cabeza 28.0	de plumí	oal, Punt ín (2316- osición m	1) 50.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0] (°]			
10.8	78.0	71.6	15.1	30.1						
11.0	77.5	71.5	15.1	30.1						
12.0	75.4	71.2	15.1	30.1						
13.0	73.3	70.9	15.1	29.9						
14.0	71.1	70.6	15.1	29.0						
16.0	66.7	69.8	15.1	25.0						
18.0	62.1	68.8	15.1	20.6						
20.0	57.3	67.6	15.1	17.4						
22.0 24.0	52.2 46.7	66.1 64.3	15.1 13.9	15.0 13.2						
26.0	40.7	62.2	12.0	11.6						
28.0	33.6	59.5	10.5	10.3						
30.0	24.8	55.8	9.3	9.2						
00.0	20	00.0			ıma prin	cinal 83 (1°1			
16.7	73.0	70.5	, ange	30.1		l l	, i			
18.0	70.3	70.1	15.1	29.1						
20.0	65.8	69.2	15.1	23.9						
22.0	61.2	68.2	15.1	20.0						
24.0	56.4	66.9	15.1	16.8						
26.0	51.2	65.4	15.1	14.6						
28.0	45.6	63.6	13.3	12.8						
30.0	39.4	61.3	11.7	11.3						
32.0	32.1	58.5	10.4	10.2						
34.0	22.7	54.6	9.1	9.1						
					ıma prin	cipal 75.0	D[°]			
26.1	65.0	67.8	15.1	18.2						
28.0	60.5	66.8	15.1	16.1						
30.0 32.0	55.6 50.4	65.5 63.9	15.1 15.1	14.3 12.8						
32.0 34.0	50.4 44.7	63.9 62.0	15.1 13.4	12.8						
36.0	38.3	59.7	11.6	10.3						
38.0	30.8	56.8	10.3	9.2						
40.0	20.9	52.6	9.1	8.2						
					uma prin	cipal 65 (1°1			
37.0	55.0	62.6	, uigo	7.9						
38.0	52.4	61.9	8.7	7.4						
40.0	46.9	60.2	7.7	6.5						
42.0	40.9	58.0	6.8	5.7						
44.0	33.9	55.4	6.0	5.0						
46.0	25.2	51.8	5.3	4.3						
47.0	19.5	49.4	4.9	4.0						



Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal: 360°

2821-1 Cabeza de pluma principal: 2821-1

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 74.0 Lastre central [t]: 0.0

	Inserciór	rción 1 2 3 4 5 6 7 8						8		
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 22.0	de plumi		1) 53.5 r	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0	[°]			
9.5 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0	78.0 76.6 73.9 71.1 68.3 65.5 59.5 53.1 46.1 38.1	65.7 65.5 65.3 64.9 64.5 64.1 63.0 61.6 59.8 57.5	15.1 15.1 15.1 15.1 15.1 15.1 14.4 11.9 9.8 7.9	30.1 30.1 27.8 23.4 20.2 17.5 13.9 11.1 9.2 7.7						
24.0	28.0	54.4	6.6	6.5						
			Ángı	ılo de plı	ıma prin	cipal 83.0	[°]			
14.9 16.0 18.0 20.0 22.0 24.0 26.0 28.0	73.0 70.1 64.4 58.3 51.8 44.7 36.4 25.7	64.8 64.4 63.5 62.4 60.9 59.1 56.6 53.3	15.1 15.1 13.9 11.6 9.5 7.6 6.5	24.2 22.1 16.6 13.3 10.8 8.9 7.5 6.4						
20.0	20.7	00.0			ıma nrin	cinal 75 () [°]		ı	
23.5 24.0	65.0 63.4	62.3 62.1	15.1 15.1	16.1 16.1	ıma prin	cipai 75.) [·]			
26.0 28.0 30.0 32.0 34.0	57.3 50.8 43.5 34.9 23.6	60.9 59.4 57.5 55.0 51.3	14.6 11.4 9.2 7.5 6.4	12.8 10.5 8.7 7.4 6.3						
<u> </u>	20.0	00			ıma prin	cinal 65 (1 0 1			
33.5 34.0 36.0 38.0 40.0 42.0	55.0 53.4 46.4 38.4 28.5 15.2	57.7 57.4 55.7 53.4 50.3 45.1	12.2 10.0 8.2 6.9 5.8	9.9 9.6 8.4 7.3 6.3	апіа ріпі	ыраг оол	7 []			



Nº de ident.: 9842523/95738/

Radio de descarga: 360 $^{\circ}$

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	Inserciór	ı	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	0 m Plum Cabeza 31.0	de plumi	oal, Punt ín (2316- osición m	1) 53.5 r	n Plumín	dfall		
			Ángı	ılo de plı	ıma prin	cipal 88.0	D[°]			
11.4	78.0	74.5	15.1	30.1						
12.0	76.9	74.4	15.1	30.1						
13.0	74.9	74.1	15.1	30.1						
14.0	73.0	73.8	15.1	28.7						
16.0 18.0	69.1 65.0	73.0 72.2	15.1 15.1	23.9 19.5						
20.0	60.8	71.1	15.1	16.5						
22.0	56.5	69.8	13.8	14.2						
24.0	51.8	68.3	12.8	12.4						
26.0	46.9	66.6	11.4	11.0						
28.0	41.4	64.5	9.8	9.6						
30.0	35.3	61.9	8.5	8.6						
32.0	28.0	58.6	7.6	7.7						
			Ángı	ılo de plu	uma prin	cipal 83.0	[°]0			
17.6	73.0	73.4		28.0						
18.0	72.3	73.3	15.1	27.9						
20.0	68.3	72.5	15.1	22.9						
22.0	64.2	71.6	15.1	18.8						
24.0	60.0	70.5	14.8	16.1						
26.0 28.0	55.6 50.9	69.2 67.7	13.7 12.9	13.8 12.1						
30.0	45.9	65.8	11.1	10.7						
32.0	40.3	63.6	9.6	9.5						
34.0	34.0	60.9	8.4	8.5						
36.0	26.3	57.5	7.5	7.6						
			Ángı	ılo de plu	uma prin	cipal 75.0	1°10			
27.3	65.0	70.5	Ī	16.7	·					
28.0	63.6	70.2	15.1	16.0						
30.0	59.3	69.1	15.1	14.2						
32.0	54.9	67.7	13.3	12.7						
34.0	50.1	66.2	11.5	11.4						
36.0	45.0	64.3	10.1	10.2					-	
38.0 40.0	39.4 32.9	62.0 59.2	8.8 7.8	9.1 8.2						
40.0	24.9	59.2 55.6	7.6 7.1	7.4						
12.0		00.0			ıma prin	cinal 65 () [°]			
38.7	55.0	65.1	Ailgi	6.9			, j			
40.0	52.0	64.2	7.4	6.3						
42.0	47.1	62.4	6.5	5.5						
44.0	41.7	60.3	5.7	4.8						
46.0	35.6	57.8	5.0	4.2						
48.0	28.3	54.5	4.3	3.6						
50.0	18.4	49.9	3.7	3.0						



2821-1

2821-1

Nº de ident.: 9842523/95738/

Radio de descarga: 360 $^{\circ}$

Pieza de articulación de pluma principal: Cabeza de pluma principal:

	Inserciór)	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	0 m Plum Cabeza 22.0	de plumí	n (2316-	o de caro 1) 56.5 r nidfall (23	n Plumín	dfall 1		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
9.5 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0	78.0 76.7 74.0 71.3 68.5 65.6 59.7 53.3 46.3 38.3	65.7 65.6 65.3 64.9 64.5 64.1 63.0 61.6 59.9 57.6	15.1 15.1 15.1 15.1 15.1 15.1 14.9 13.4 10.6	30.1 30.1 30.1 28.6 26.9 23.2 18.1 14.6 12.1 10.1						
24.0	28.2	54.5	8.7	8.5						
			Ángı	ılo de plu	ıma prin	cipal 83.0	0 [°]			
15.0 16.0 18.0 20.0 22.0 24.0 26.0	73.0 70.2 64.5 58.5 52.0 44.9 36.6	64.8 64.4 63.5 62.4 60.9 59.1 56.7	15.1 15.1 15.1 15.1 12.8 10.3	30.1 29.2 22.0 17.4 14.1 11.7 9.8						
28.0	25.9	53.3	8.6	8.3						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
23.5 24.0 26.0 28.0 30.0 32.0	65.0 63.6 57.5 50.9 43.6 35.1	62.4 62.2 61.0 59.5 57.5 55.0	15.1 15.1 14.7 12.5 10.2	17.2 16.5 13.9 11.8 10.1 8.5						
34.0	23.8	51.4	8.5	7.2						
33.6	55.0	57.7	Ángu	ulo de plu	ıma prin	cipal 65.0	[°]	<u> </u>	<u> </u>	
34.0 36.0 38.0	53.6 46.6 38.6	57.4 55.7 53.5	8.4 7.1 5.8	6.5 5.3 4.3						
40.0 42.0	28.7 15.7	50.4 45.2	4.7 3.6	3.4						



2821-1 2821-1

Nº de ident.: 9842523/95738/ Pieza de articulación de pluma principal: Radio de descarga: 360 ° Cabeza de pluma principal:

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 25.0	de plumí	n (1916-		n Plumín			
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]			
10.1 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0	78.0 75.9 73.5 71.0 68.6 63.5 58.2 52.5 46.4 39.4	68.6 68.4 68.1 67.7 67.3 66.4 65.2 63.8 62.0 59.8	15.1 15.1 15.1 15.1 15.1 14.6 12.9 10.5 8.9 7.5	30.1 28.2 24.0 20.5 18.1 14.4 12.0 10.1 8.6 7.4						
26.0	31.2	57.0	6.5	6.5						
			Ángu	ılo de plu	ıma prin	cipal 83.0	[°]0			
15.8 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0	73.0 72.6 67.6 62.5 57.2 51.4 45.1 38.0 29.4	67.6 67.6 66.8 65.8 64.6 63.1 61.3 59.0 55.9	15.1 15.1 14.5 12.3 10.3 8.7 7.3 6.4	21.4 21.3 17.3 13.9 11.6 9.8 8.4 7.3 6.4						
			Ánaı	ılo de plu	ıma prin	cipal 75.0	1°1C			
24.7 26.0 28.0 30.0 32.0 34.0 36.0	65.0 61.7 56.3 50.5 44.1 36.8 27.8	65.1 64.4 63.2 61.6 59.7 57.3 54.1	14.6 11.9 9.9 8.4 7.2 6.3	14.5 13.5 11.3 9.6 8.2 7.1 6.3	•					
			Ánaı	ılo de plı	ıma prin	cipal 65.0	0 [°]			
35.2 36.0 38.0 40.0 42.0 44.0	55.0 52.8 46.6 39.7 31.6 20.5	60.1 59.7 57.9 55.7 52.9 48.7	9.7 8.1 7.0 6.2 5.5	9.1 8.6 7.6 6.6 5.8 5.1		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				



N° de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 25.0	de plumi		1) 59.5 r	n Plumín			
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]			
10.1 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0	78.0 76.0 73.6 71.2 68.7 63.7 58.3 52.7 46.5 39.6 31.4	68.6 68.4 68.1 67.8 67.4 66.4 65.3 63.9 62.1 59.9 57.0	15.1 15.1 15.1 15.1 15.1 14.3 12.9 11.2 9.2 7.6	30.1 30.1 30.1 26.5 24.0 18.6 15.1 12.5 10.6 8.9 7.6						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
15.9 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0	73.0 72.7 67.8 62.7 57.3 51.6 45.3 38.2 29.6	67.6 67.6 66.9 65.9 64.7 63.2 61.3 59.0 56.0	15.1 15.1 15.1 15.1 14.1 13.0 10.9 8.9 7.5	28.1 28.1 22.7 17.8 14.6 12.2 10.3 8.7 7.5						
					ıma prin	cipal 75 (1°10			
24.8 26.0 28.0 30.0 32.0 34.0 36.0	65.0 61.9 56.4 50.6 44.2 36.9 28.0	65.1 64.5 63.2 61.7 59.8 57.4 54.2	15.1 14.1 11.6 9.7 8.1 7.0	15.7 14.2 12.1 10.4 8.9 7.6 6.4			.]			
			Ángu	ılo de plu	ıma prin	cipal 65.0	D [°]			
35.3 36.0 38.0 40.0 42.0	55.0 52.9 46.8 39.9 31.8	60.1 59.7 57.9 55.8 52.9	6.9 5.7 4.6 3.6	5.8 5.4 4.3 3.4 2.6			-			
44.0	22.3	48.8	2.7							



Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal: 2821-1 2821-1 Cabeza de pluma principal:

360° 2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 74.0 0.0 Lastre central [t]:

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	0 m Plum Cabeza 28.0	de plumi		1) 59.5 r	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0	[°]			
10.7	78.0	71.5		27.8						
11.0 12.0 13.0	77.4 75.3 73.2	71.5 71.2 70.9	15.1 15.1 15.1	27.8 24.9 21.8						
14.0	71.0	70.6	15.1	18.9						
16.0 18.0 20.0	66.6 62.0 57.2	69.7 68.7 67.5	14.5 13.4 11.1	15.2 12.5 10.4						
22.0	52.1	66.1	9.0	8.8						
24.0	46.6	64.3	7.6	7.5						
26.0	40.5	62.1	6.5	6.5						
28.0 30.0	33.4 24.6	59.4 55.8	5.6 4.9	5.6 4.9						
30.0	24.0	55.6			ıma prin	cinal 83 () [°]			
16.7	73.0	70.5	15.1	19.8			<u> </u>			
18.0	70.2	70.3	15.1	18.1						
20.0	65.7	69.2	14.5	14.6						
22.0	61.1	68.2	13.3	12.2						
24.0	56.2	66.9	10.7	10.1						
26.0	51.1	65.4	8.7	8.6						
28.0	45.5	63.5	7.4	7.4						
30.0	39.2	61.3	6.3	6.3						
32.0	32.0	58.4	5.5	5.6						
34.0	22.6	54.5	4.8	4.9						
00.0	65.0	07.0	Angu	13.3	ıma prin	cipai 75.0	֓֓֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓			
26.0 28.0	60.3	67.8 66.7	12.8	11.7						
30.0	55.4	65.4	10.4	9.9						
32.0	50.2	63.9	8.6	8.4						
34.0	44.5	62.0	7.3	7.3						
36.0	38.2	59.7	6.3	6.3						
38.0	30.7	56.7	5.5	5.5						
40.0	20.7	52.5	4.8	4.8						
			Ángu	ılo de plu	ıma prin	cipal 65.0	D[°]			
37.0	55.0	62.6		8.1						
38.0	52.3	61.9	8.4	7.6						
40.0	46.8	60.1	7.2	6.7						
42.0	40.7	58.0	6.2	5.9						
44.0	33.8	55.3	5.4	5.2						
46.0 47.0	25.1 19.3	51.7 49.3	4.8 4.5	4.5 4.2						
47.0	13.3	4 3.3	4.J	۲.۷						



Nº de ident.: 9842523/95738/

Radio de descarga: 360 $^{\circ}$

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	Cabeza	de plumí	oal, Punt ín (2316- osición m	1) 62.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0) [°]			
10.8	78.0	71.6	15.1	30.1	·	·				
11.0	77.5	71.5	15.1	30.1						
12.0	75.4	71.2	15.1	29.1						
13.0	73.3	70.9	15.1	26.5						
14.0	71.1	70.6	15.1	22.8						
16.0	66.7	69.8	15.1	18.0						
18.0	62.1	68.8	15.1	14.6						
20.0	57.3	67.6	12.8	12.1						
22.0	52.2	66.1	10.5	10.1						
24.0	46.7	64.3	8.8	8.6						
26.0	40.6	62.2	7.3	7.3						
28.0	33.6	59.5	6.2	6.2						
30.0	24.8	55.8	5.2	5.3						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]C			
16.7	73.0	70.5		23.9						
18.0	70.3	70.1	15.1	21.9						
20.0	65.8	69.2	15.1	17.2						
22.0	61.2	68.2	15.1	14.2						
24.0	56.4	66.9	12.4	11.7						
26.0	51.2	65.4	10.3	9.9						
28.0	45.6	63.6	8.6	8.4						
30.0	39.4	61.3	7.2	7.1 6.1						
32.0 34.0	32.1 22.7	58.5 54.6	6.1 5.1	5.2						
34.0	22.1	34.0			ıma nrin	oinal 75 () [°]			
20.4	65.0	67.0			ıma prin	upai / 5.1	ווי		ı	
26.1 28.0	65.0 60.5	67.8 66.8	15.1 14.5	14.4 12.4						
30.0	55.6	65.5	12.3	10.6						
32.0	50.4	63.9	10.0	9.1						
34.0	44.7	62.0	8.4	7.8						
36.0	38.3	59.7	7.1	6.7						
38.0	30.8	56.8	6.1	5.7						
40.0	20.9	52.6	5.1	4.8						
			,		ıma prin	cipal 65.0	1°1		•	
37.0	55.0	62.6	<u> </u>	4.9						
38.0	52.4	61.9	5.6	4.4						
40.0	46.9	60.2	4.6	3.5						
42.0	40.9	58.0	3.6	2.8						
44.0	33.9	55.4	2.8	2.1						
45.0	30.8	53.7	2.4							



Nº de ident.: 9842523/95738/

Radio de descarga:

360°

Pieza de articulación de pluma principal: 2821-1

Cabeza de pluma principal: 2821-1

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 74.0 Lastre central [t]: 0.0

	entrar[t	1-		0.0						
	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	0 m Plum Cabeza 31.0	na princip de plumí 0 [m] Po	'n (1916-	1) 62.5 r	n Plumín	dfall		
			Ángu	ılo de plu	ıma prin	cipal 88.0	1°10			
11.3 12.0 13.0 14.0	78.0 76.7 74.8 72.9	74.5 74.3 74.0 73.7	15.1 15.1 15.1	25.3 25.3 21.9 19.4						
16.0 18.0 20.0 22.0 24.0	69.0 64.9 60.7 56.3 51.7	73.0 72.1 71.1 69.8 68.3	15.1 13.1 11.6 9.5 7.8	15.6 12.8 10.8 9.1 7.8						
26.0 28.0 30.0 32.0	46.7 41.3 35.1 27.8	66.5 64.4 61.8 58.5	6.7 5.8 5.0 4.4	6.7 5.8 5.1 4.5						
47.0	70.0	70.4		ılo de plu	ıma prin	cipal 83.0	[°]		1	
17.6 18.0 20.0	73.0 72.2 68.2	73.4 73.3 72.5	15.1 15.1 15.1	17.9 17.9 14.9						
22.0 24.0 26.0 28.0	64.1 59.9 55.5 50.8	71.6 70.5 69.2 67.6	13.0 11.1 9.1 7.7	12.3 10.4 8.8 7.6						
30.0 32.0 34.0 36.0	45.7 40.2 33.9 26.2	65.8 63.6 60.9 57.4	6.6 5.7 5.0 4.4	6.6 5.7 5.1 4.5						
00.0	20.2	01.1		ılo de plu	ıma prin	cipal 75.0	1°10			
27.3	65.0	70.5		12.1						
28.0 30.0 32.0 34.0 36.0	63.5 59.2 54.8 50.0 44.9	70.2 69.0 67.7 66.1 64.2	13.0 10.7 8.9 7.5 6.5	12.1 10.2 8.7 7.5 6.5						
38.0 40.0 42.0	39.3 32.8 24.8	62.0 59.2 55.5	5.6 5.0 4.4	5.7 5.0 4.5			2.0.1			
38.7	55.0	65.1	Angı	ılo de plu	urna prind	cipai 65.0) [·]			
40.0 42.0 44.0 46.0	51.9 46.9 41.5 35.4	64.1 62.4 60.3 57.7	8.1 6.9 6.0 5.3	6.9 6.1 5.3 4.7						
48.0 50.0	28.2 18.2	54.4 49.8	4.7 4.1	4.1 3.6						



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	0 m Plum Cabeza 31.0	de plumí	oal, Punt ín (2316- osición m	1) 65.5 r	n Plumír	dfall 1		
			Ánaı	ılo de plı	ıma prin	cipal 88.0	1°10			
11.4	78.0	74.5	15.1	30.1			, ,			
12.0	76.9	74.4	15.1	30.1						
13.0	74.9	74.1	15.1	30.0						
14.0	73.0	73.8	15.1	28.9						
16.0	69.1	73.0	15.1	23.1						
18.0	65.0	72.2	15.1	18.9						
20.0 22.0	60.8 56.5	71.1 69.8	15.1 13.5	16.0 13.7						
24.0	51.8	68.3	12.2	11.9						
26.0	46.9	66.6	10.6	10.3						
28.0	41.4	64.5	8.8	8.8						
30.0	35.3	61.9	7.3	7.6						
32.0	28.0	58.6	5.8	6.0						
			Ángı	ılo de plu	ıma prin	cipal 83.0	0 [°]			
17.6	73.0	73.4		26.5						
18.0	72.3	73.3	15.1	26.5						
20.0	68.3	72.5	15.1	22.1						
22.0	64.2	71.6	15.1	18.3						
24.0 26.0	60.0 55.6	70.5 69.2	14.8 13.3	15.6 13.3						
28.0	50.9	67.7	12.2	11.7						
30.0	45.9	65.8	10.6	10.3						
32.0	40.3	63.6	9.0	9.0						
34.0	34.0	60.9	7.8	8.0						
36.0	26.3	57.5	6.8	7.0						
		,	Ángu		ıma prin	cipal 75.0	0[°]			
27.3	65.0	70.5		13.0						
28.0	63.6	70.2	15.1	12.4						
30.0	59.3	69.1	13.6	10.7						
32.0 34.0	54.9 50.1	67.7 66.2	11.9 10.4	9.2 7.9						
36.0	45.0	64.3	9.0	6.8						
38.0	39.4	62.0	7.8	5.8						
40.0	32.9	59.2	6.6	4.9						
42.0	24.9	55.6	5.6	4.1						
			Ángı	ılo de plu	ıma prin	cipal 65.0	0 [°]			
38.7	55.0	65.1	4.2	4.0						
40.0 42.0	52.0 47.1	64.2 62.4	4.3 3.4	3.4 2.7						
42.0 44.0	47.1	60.3	2.6	2.1						
45.0	39.3	59.1	2.2							



360°

Cargas pluma principal + plumín abatible + midfall

N° de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 34.0		ín (1916-	1) 65.5 r	n Plumír			
			Ángı	ılo de plu	ıma prin	cipal 88.	0 [°]			
12.0	78.0	77.4	15.1	23.0						
13.0	76.2	77.2	15.1	22.2						
14.0 16.0	74.5 70.9	76.9 76.2	15.1 15.1	19.5 15.8						
18.0	67.3	75.4	14.1	13.2						
20.0	63.5	74.5	11.6	11.0						
22.0	59.7	73.4	9.8	9.4						
24.0	55.6	72.1	8.1	8.0						
26.0	51.4	70.5	6.8	6.9						
28.0	46.9	68.8	5.9	6.1						
30.0	41.9	66.7	5.2	5.3						
32.0 34.0	36.5 30.2	64.2 61.1	4.5 4.0	4.6 4.1						
36.0	22.2	57.0	3.5	3.6						
			Ángi	ılo de plu	ıma nrin	cinal 83	0 [0]			
40.4	70.0	70.0	Angu		ına pını İ	ыраі 65. Г	U j		1	
18.4 20.0	73.0 70.2	76.2 75.7	15.1	16.4 15.3						
22.0	66.6	74.9	13.1	12.7						
24.0	62.8	73.9	11.2	10.6						
26.0	58.9	72.8	9.4	9.1						
28.0	54.9	71.4	7.9	7.8						
30.0	50.6	69.9	6.8	6.8						
32.0	46.0	68.0	5.9	5.9						
34.0 36.0	41.0 35.4	65.9 63.3	5.1 4.5	5.2 4.5						
38.0	28.8	60.1	4.0	4.0						
40.0	20.3	55.7	3.5	3.6						
			Ángı	ılo de plu	ıma prin	cipal 75.	0 [°]			
28.5	65.0	73.2		11.0						
30.0	62.2	72.5	9.9	10.5						
32.0	58.3	71.3	8.3	9.0						
34.0 36.0	54.2 49.9	70.0 68.4	7.1 6.3	7.7 6.7						
38.0	49.9 45.2	66.5	5.5	5.9						
40.0	40.1	64.3	4.8	5.1						
42.0	34.4	61.6	4.2	4.6						
44.0	27.7	58.2	3.8	4.1						
			Ángı	ılo de plu	ıma prin	cipal 65.	0[°]			
40.4	55.0	67.5		6.6						
42.0	51.6	66.4	7.1	6.0						
44.0	47.1	64.6	6.1	5.3						
46.0 48.0	42.2 36.7	62.5 60.1	5.4 4.7	4.6 4.1						
50.0	30.5	57.0	4.2	3.5						
53.0	17.4	50.3	3.5	2.8						



N° de ident.: 9842523/95738/

Radio de descarga: 360 $^{\circ}$

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	nserción	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
,		41.0	0 m Plum Cabeza 34.0	de plumí	pal, Punt n (2316- osición m	1) 68.5 r	n Plumín	dfall		
					ıma prin					
12.0	78.0	77.4	, ange	30.1	l l	l l	,			
13.0	76.3	77.2	15.1	30.1						
14.0	74.6	76.9	15.1	27.2						
16.0	71.0	76.3	15.1	21.8						
18.0	67.4	75.5	15.1	18.1						
20.0	63.6	74.5	15.0	15.1						
22.0	59.8	73.4	14.1	13.0						
24.0	55.8	72.1	11.8	11.2						
26.0 28.0	51.5 47.0	70.6 68.8	10.0 8.7	9.8 8.6						
30.0	42.1	66.7	7.5	7.6						
32.0	36.6	64.2	6.5	6.7						
34.0	30.3	61.2	5.5	5.6						
36.0	22.3	57.1	4.2	4.2						
			Ángı	ılo de plı	ıma prin	cipal 83.0	1°10			
18.5	73.0	76.3	, <u>g</u> .	22.9			, ,			
20.0	70.3	75.8	15.1	21.1						
22.0	66.7	74.9	15.1	17.4						
24.0	62.9	73.9	15.0	14.7						
26.0	59.0	72.8	13.6	12.7						
28.0	55.0	71.5	11.4	10.9						
30.0	50.7	69.9	9.8	9.6						
32.0	46.1	68.1	8.5	8.5						
34.0 36.0	41.1 35.5	65.9 63.3	7.4 6.5	7.4 6.6						
38.0	28.9	60.1	5.7	5.8						
40.0	20.5	55.8	5.0	5.1						
			Ángı	ılo de plı	ıma prin	cipal 75 (1°10			
28.6	65.0	73.2	,gc	12.0						
30.0	62.3	72.5	13.5	10.8						
32.0	58.4	71.4	11.8	9.3						
34.0	54.3	70.0	10.3	8.1						
36.0	50.0	68.4	9.0	6.9						
38.0	45.3	66.5	7.8	5.9						
40.0	40.3	64.3	6.7	5.1						
42.0 44.0	34.5 27.8	61.6 58.3	5.7 4.8	4.3 3.5						
44 .0	21.0	აი.ა			ıma nri:-	oinal CC () [°]		l .	
40.4	55.0	07.5	Angl		ıma prin	cipai ob.(۱ ا ۱		1	
40.4 42.0	55.0 51.7	67.5 66.4	3.4	3.3 2.7						
42.0 44.0	47.2	64.7	2.6	2.7						
45.0	45.2	63.7	2.2							



Nº de ident.: 9842523/95738/

Radio de descarga: 360 $^{\circ}$

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		[m]								
		41.0) m Plum Cabeza	de plumi	ín (1916-	1) 68.5 r	n Plumín			
					osición m uma prin					
12.6	78.0	80.3	15.1	22.3			J]			
13.0	77.3	80.3	15.1	22.3						
14.0	75.7	80.0	15.1	21.0						
16.0	72.5	79.4	15.1	16.9						
18.0 20.0	69.2 65.9	78.7 77.8	15.1 12.8	14.2 12.0						
22.0	62.4	76.8	10.7	10.3						
24.0	58.8	75.7	9.1	8.9						
26.0	55.1	74.3	7.7	7.7						
28.0	51.1	72.8	6.7	6.8						
30.0 32.0	47.0 42.5	71.0 68.9	5.9 5.2	6.0 5.3						
34.0	42.5 37.6	66.5	5.2 4.6	4.7						
36.0	32.0	63.6	4.1	4.2						
38.0	25.3	59.9	3.7	3.8						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
19.3	73.0	79.1		16.1						
20.0	71.9	78.9	15.1	16.0						
22.0 24.0	68.6 65.2	78.2 77.3	14.4 12.4	13.7 11.6						
26.0	61.7	76.2	10.3	10.0						
28.0	58.1	75.0	8.8	8.7						
30.0	54.3	73.7	7.6	7.5						
32.0	50.4	72.1	6.6	6.7						
34.0 36.0	46.2 41.6	70.3 68.2	5.8 5.1	5.9 5.2						
38.0	36.6	65.6	4.5	4.6						
40.0	30.8	62.6	4.1	4.2						
42.0	23.8	58.7	3.6	3.8						
			Ángı		ıma prin	cipal 75.0	[°]			
29.8 30.0	65.0 64.7	75.9 75.9	11.3	10.8 10.8						
32.0	61.2	74.8	10.1	9.8						
34.0	57.5	73.6	8.6	8.6						
36.0	53.7	72.2	7.4	7.5						
38.0	49.7	70.6	6.6	6.6						
40.0 42.0	45.5 40.8	68.7 66.6	5.8 5.1	5.9 5.2						
44.0 44.0	35.7	64.0	4.5	4.6						
46.0	29.8	60.8	4.1	4.2						
48.0	22.6	56.7	3.7	3.8						
			Ángı		ıma prin	cipal 65.0	[°]0			
42.1	55.0	70.0		6.0						
44.0	51.3	68.6	6.4	5.3						
46.0 48.0	47.2 42.7	66.9	5.7 5.0	4.7						
48.0 50.0	42.7 37.8	64.8 62.4	5.0 4.4	4.1 3.6						
55.0	21.6	53.6	3.1	2.4						
56.0	16.6	50.7	2.8	2.2						



2821-1

2821-1

N° de ident.: 9842523/95738/ Pieza de articulación de pluma principal: Radio de descarga: 360 ° Cabeza de pluma principal:

	laass-!/			_	_				-	_
	Inserciór	1	1	2	3	4	5	6	7	8
Alcan-	Ángu-	Altura	Carga	Carga	Carga	Carga	Carga	Carga	Carga	Carga
ce	o de plumín	de rolda-	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]
[m]		nas								
	' '	[m]								
		41.0	0 m Plum	na princir	oal. Punt	o de caro	na 3 - Mi	dfall		
			Cabeza	de plumí	ín (2316-	·1) 71.5 r̀	n Plumín	1		
			37.0) [m] Po	osición m	nidfall (23	316)			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]C			
12.6	78.0	80.4		27.9						
13.0	77.4	80.3	15.1	27.9						
14.0	75.8	80.0	15.1	25.9						
16.0 18.0	72.6 69.3	79.4 78.7	15.1 15.1	20.6 16.9						
20.0	65.9	77.8	13.1	14.2						
22.0	62.5	76.8	11.5	12.1						
24.0	58.9	75.7	10.0	10.5						
26.0	55.2	74.3	8.5	9.0						
28.0	51.2	72.8	7.3	7.9						
30.0	47.1	71.0	6.4	6.9						
32.0	42.6	69.0	5.6	6.0						
34.0	37.7	66.6	4.9	5.2						
36.0	32.1	63.7	4.2	4.4						
38.0	25.4	60.0	3.2	3.3						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
19.4	73.0	79.1	15.1	19.4						
20.0	72.0	78.9	15.1	19.4						
22.0	68.7	78.2	15.1	16.3						
24.0	65.3	77.3	13.8	13.8						
26.0 28.0	61.8 58.2	76.3 75.1	12.3 10.5	11.8 10.2						
28.0 30.0	58.2 54.4	73.7	8.9	8.8						
32.0	50.5	72.1	7.6	7.7						
34.0	46.3	70.3	6.7	6.8						
36.0	41.7	68.2	5.8	5.9						
38.0	36.7	65.7	5.0	5.2						
40.0	31.0	62.7	4.4	4.6						
42.0	24.0	58.8	3.8	3.9						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
29.9	65.0	75.9	13.2	10.7						
30.0	64.8	75.9	13.1	10.6						
32.0	61.3	74.9	11.5	9.2						
34.0	57.6	73.6	10.0	8.0						
36.0	53.8	72.2	8.7	6.9						
38.0	49.8	70.6	7.5	5.9						
40.0	45.6	68.8	6.5	5.0						
42.0	41.0	66.6	5.5	4.2						
44.0 46.0	35.8 30.0	64.0 60.9	4.6 3.8	3.5 2.8						
48.0	22.7	56.8	3.0	2.0						
			,		ıma prin	cipal 65.0	1°10			
42.2	55.0	70.0	/ tingt		a piiii	 	- L J			
	55.0	70.0	2.2	2.5						
44.0	51.7	68.7	2.3			I	1		l .	1



N° de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]							
		41 (0 m Plum	na princir	nal Punt	o de caro	na 3 - Mi	dfall		
			Cabeza	de plumí		1) 71.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	D[°]			
13.2	78.0	83.3		23.2						
14.0	76.8	83.1	15.1	23.2						
16.0 18.0	73.9 70.9	82.5 81.9	15.1 15.1	19.4 16.3						
20.0	67.8	81.1	14.4	14.0						
22.0	64.6	80.2	12.3	12.0						
24.0	61.4	79.1	10.8	10.5						
26.0	58.0	77.9	9.4	9.2						
28.0	54.6	76.6	8.2	8.2						
30.0 32.0	50.9 47.1	75.0 73.2	7.2 6.4	7.3 6.6						
34.0	42.9	71.2	5.8	5.9						
36.0	38.5	68.8	5.2	5.3						
38.0	33.5	66.0	4.7	4.9						
40.0	27.7	62.6	4.3	4.4						
42.0	20.4	58.1	3.9	4.0						
			Ángı	ılo de plu	ıma prin	cipal 83.0	0 [°]			
20.2	73.0	82.0		17.0						
22.0	70.3	81.4	15.0	15.9						
24.0	67.2	80.6	13.3	13.6						
26.0 28.0	64.0 60.8	79.6 78.6	9.8	11.7 10.4						
30.0	57.4	77.3	8.6	9.1						
32.0	53.9	75.9	7.5	8.1						
34.0	50.2	74.3	6.8	7.3						
36.0	46.3	72.5	6.1	6.5						
38.0 40.0	42.1 37.6	70.4 68.0	5.4 4.9	5.9 5.3						
42.0	32.5	65.1	4.5	4.8						
44.0	26.4	61.5	4.1	4.4						
			Ánaı	ılo de plu	ıma prin	cipal 75.0	1°10			
31.1	65.0	78.7		11.6	- 1					
32.0	63.5	78.2	11.9	11.5						
34.0	60.2	77.1	10.3	10.1						
36.0	56.8	75.9	9.0	9.0						
38.0	53.3	74.5	7.9	8.0						
40.0 42.0	49.6 45.7	72.8 71.0	7.0 6.3	7.2 6.5						
44.0	41.4	68.8	5.7	5.8						
46.0	36.8	66.3	5.1	5.3						
48.0	31.6	63.3	4.7	4.9						
50.0	25.4	59.6	4.3	4.5						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
43.8	55.0	72.4		5.2						
44.0	54.7	72.4	6.2	5.2						
46.0	51.1	70.9	5.5	4.5						
48.0 50.0	47.2 43.1	69.1 67.1	4.8 4.2	4.0 3.4						
55.0	31.0	60.3	2.9	2.3						
58.0	21.7	54.1	2.2							



Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal: Cabeza de pluma principal:

2821-1 2821-1

360° 2 - Vía ancha

Valor de vuelco: Lastre trasero [t]: 74.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	0 m Plum Cabeza 31.0	de plumí		1) 74.5 r	n Plumín			
			Ángı	ılo de plı	ıma prin	cinal 88 (0 [°]			
11.3	78.0	74.5	79	20.8			, ,			
12.0	76.7	74.3	15.1	20.8						
13.0	74.8	74.0	15.1	18.5	İ					
14.0	72.9	73.7	15.1	16.4						
16.0	69.0	73.0	14.3	13.1						
18.0	64.9	72.1	11.3	10.4						
20.0	60.7	71.1	8.9	8.6						
22.0	56.3	69.8	7.2	7.0 5.8						
24.0 26.0	51.7 46.7	68.3 66.5	5.9 4.9	4.9						
28.0	41.3	64.4	4.9	4.9						
30.0	35.1	61.8	3.5	3.5						
32.0	27.8	58.5	2.9	3.0						
					ıma prin	cipal 83.0	D[°]			•
17.6	73.0	73.4	15.1	14.9						
18.0	72.2	73.3	15.1	14.9						
20.0	68.2	72.5	13.5	12.3						
22.0	64.1	71.6	10.6	9.9						
24.0	59.9	70.5	8.5	8.2						
26.0	55.5	69.2	6.9	6.8						
28.0 30.0	50.8 45.7	67.6	5.8 4.9	5.7 4.9						
32.0	40.2	65.8 63.6	4.9 4.1	4.9						
34.0	33.9	60.9	3.5	3.5						
36.0	26.2	57.4	3.0	3.1						
			Ángı		ıma prin	cipal 75.0	D[°]			
27.3	65.0	70.5		9.5						
28.0	63.5	70.2	8.8	9.5						
30.0	59.2	69.0	7.4	8.0						
32.0	54.8	67.7	6.2	6.7						
34.0	50.0	66.1	5.3	5.7						
36.0	44.9	64.2	4.5	4.9						
38.0 40.0	39.3 32.8	62.0 59.2	3.9 3.3	4.1 3.6						
40.0	32.6 24.8	59.2 55.5	2.9	3.1						
	-				uma prin	cipal 65.0	[°]			
38.7	55.0	65.1		5.1						
40.0	51.9	64.1	6.1	4.6						
42.0	46.9	62.4	5.1	3.8						
44.0 46.0	41.5 35.4	60.3 57.7	4.2 3.4	3.1 2.5						
48.0	29.0	54.4	2.7	2.5						
50.0	19.7	49.8	2.0							



N° de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.	0 m Plum Cabeza 40.0	de plumi	n (2316-		n Plumín			
			Ángi	ılo de pli	ıma prin	cipal 88.0	1°10			
13.3	78.0	83.3	15.1	27.8						
14.0 16.0 18.0	76.9 74.0 70.9	83.1 82.6 81.9	15.1 15.1 15.1	27.8 22.7 18.7						
20.0	67.9	81.1	14.7	15.9						
22.0 24.0 26.0 28.0	64.7 61.5 58.1 54.7	80.2 79.2 78.0 76.6	13.4 12.4 10.7 9.2	13.6 11.9 10.4 9.1						
30.0 32.0 34.0 36.0 38.0	51.0 47.2 43.0 38.6 33.6	75.1 73.3 71.2 68.9 66.1	8.0 6.8 5.7 4.7 3.8	8.1 7.0 5.8 4.9 4.0						
40.0	27.8	62.7	2.8	2.9						
					ıma prin	cipal 83.0	0[°]		1	
20.3 22.0 24.0 26.0 28.0	73.0 70.4 67.3 64.1 60.8	82.0 81.4 80.6 79.7 78.6	15.1 15.1 15.1 13.4 12.2	19.6 18.2 15.5 13.3 11.7						
30.0 32.0 34.0 36.0 38.0	57.5 54.0 50.3 46.4 42.2	77.4 76.0 74.4 72.6 70.5	10.4 9.0 7.8 6.9 6.1	10.2 8.9 8.0 7.1 6.2						
40.0 42.0 44.0	37.7 32.6 26.6	68.0 65.1 61.6	5.4 4.7 3.8	5.5 4.8 4.0						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
31.1 32.0	65.0 63.6	78.7 78.3	11.2	9.6 9.0						
34.0 36.0 38.0 40.0 42.0	60.3 56.9 53.4 49.7 45.8	77.2 75.9 74.5 72.9 71.0	9.8 8.5 7.4 6.3 5.4	7.8 6.8 5.9 5.0 4.2						
44.0 46.0 48.0	41.5 36.9 31.7	68.9 66.4 63.4	4.5 3.7 2.9	3.5 2.8 2.2						
				ılo de plu	ıma prin	cipal 65.0	D[°]			
44.0	55.0	72.4	2.1							



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	0 m Plun Cabeza 34.0		n (1916-	1) 77.5 r	n Plumín			
			Ánαι	ılo de plu	ıma nrin	rinal 88 I) [°]			
12.0	78.0	77.4	15.1	18.7	I Pini	l loo.	, j			
13.0 14.0 16.0	76.2 74.5 70.9	77.2 76.9 76.2	15.1 15.1 13.6	18.4 16.2 12.9						
18.0 20.0 22.0	67.3 63.5 59.7	75.4 74.5 73.4	11.4 8.9 7.2	8.5 7.1						
24.0 26.0 28.0	55.6 51.4 46.9	72.1 70.5 68.8	5.9 4.9 4.1	5.9 4.9 4.2						
30.0 32.0 34.0	41.9 36.5 30.2	66.7 64.2 61.1	3.5 2.9 2.4	3.5 3.0 2.4						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
18.4 20.0	73.0 70.2	76.2 75.7	13.8	13.3 12.4						
22.0 24.0 26.0	66.6 62.8 58.9	74.9 73.9 72.8	10.7 8.4 6.9	10.0 8.1 6.8						
28.0 30.0 32.0	54.9 50.6 46.0	71.4 69.9 68.0	5.7 4.8 4.1	5.7 4.9 4.1						
34.0 36.0 38.0	41.0 35.4 28.8	65.9 63.3 60.1	3.5 2.9 2.5	3.5 3.0 2.6						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
28.5	65.0	73.2		8.4						
30.0 32.0 34.0 36.0	62.2 58.3 54.2 49.9	72.5 71.3 70.0 68.4	8.1 6.7 5.6 4.8	8.0 6.7 5.6 4.8						
38.0 40.0 42.0	45.2 40.1 34.4	66.5 64.3 61.6	4.1 3.5 2.9	4.1 3.5 3.0						
44.0	27.7	58.2	2.6 Ángi	l 2.6 Ilo de plu	ıma nrin	cinal 65 () [° 1		ı	ı
40.4	55.0	67.5		4.4	ina pilii		, ,			
42.0 44.0 46.0 48.0 49.0	51.6 47.1 42.2 37.2 34.3	66.4 64.6 62.5 60.1 58.6	5.0 4.2 3.4 2.7 2.3	3.8 3.1 2.5						



N° de ident.: 9842523/95738/

Radio de descarga: 360 $^{\circ}$

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	0 m Plum Cabeza 43.0	de plumi	oal, Punt ín (2316- osición m	1) 77.5 r	n Plumín	dfall		
			Ángı	ılo de plı	ıma prin	cipal 88.0	[°]			
13.9	78.0	86.2	15.1	27.4	·	·				
14.0 16.0 18.0 20.0	77.9 75.1 72.3 69.5	86.2 85.7 85.1 84.4	15.1 15.1 15.1 15.1	27.4 24.4 20.3 17.3						
22.0	66.6	83.5	14.1	15.0						
24.0 26.0 28.0 30.0	63.6 60.6 57.5 54.2	82.6 81.5 80.2 78.9	12.9 12.0 10.2 8.8	13.0 11.6 10.2 9.0						
32.0	50.8	77.3	7.6	8.0						
34.0 36.0 38.0	47.2 43.4 39.3	75.5 73.5 71.2	6.3 5.0 3.9	6.7 5.3 4.1						
40.0	34.8	68.5	2.9	3.0						
			Ángı		ıma prin	cipal 83.0	[°]			
21.1 22.0 24.0 26.0 28.0	73.0 71.8 68.9 66.0 63.1	84.9 84.6 83.9 83.0 82.0	15.1 15.1 14.4 12.9	19.5 19.5 16.7 14.6 12.8						
30.0 32.0 34.0 36.0 38.0	60.0 56.9 53.6 50.1 46.5	80.9 79.6 78.2 76.6 74.8	11.7 10.1 8.8 7.8 6.9	11.4 10.0 8.9 8.1 7.2						
40.0 42.0 44.0 46.0 48.0	42.7 38.5 33.9 28.6 22.1	72.7 70.4 67.6 64.2 60.0	6.2 5.5 4.8 3.8 2.8	6.4 5.6 4.8 3.9 2.8						
10.0		00.0			ıma prin	cinal 75 () [°]		ı	
32.4 34.0 36.0 38.0 40.0	65.0 62.6 59.5 56.4 53.1	81.4 80.6 79.5 78.2 76.7	9.3 8.1 7.0 6.0	8.5 7.5 6.5 5.6 4.8	лпа рпп	ыраг 13.	<u> </u>			
42.0 44.0 46.0 48.0 50.0	49.6 45.9 42.0 37.8 33.6	75.1 73.3 71.1 68.7 65.9	5.1 4.2 3.4 2.7 2.0	4.0 3.3 2.7 2.1						



Nº de ident.: 9842523/95738/

Radio de descarga:

360°

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 34.0	de plumi		1) 80.5 r	n Plumín			
Ángulo de pluma principal 88.0 [°]										
12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0	78.0 76.3 74.6 71.0 67.4 63.6 59.8 55.8 51.5 47.0	77.4 77.2 76.9 76.3 75.5 74.5 73.4 72.1 70.6 68.8	15.1 15.1 15.1 15.1 14.9 14.3 9.5 5.7 3.5	30.1 30.1 29.1 24.5 20.6 17.0 14.2 9.4 5.8 3.6						
			Ángı		ıma prin	cipal 83.0	[°]	1	1	
18.5 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0	73.0 70.3 66.7 62.9 59.0 55.0 50.7 46.1 41.1	76.3 75.8 74.9 73.9 72.8 71.5 69.9 68.1 65.9	15.1 15.1 14.7 13.7 11.3 9.5 7.0 4.4	22.7 19.6 16.3 13.7 11.6 9.8 8.4 7.0 4.6						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
28.6	65.0	73.2		8.3						
30.0 32.0 34.0 36.0 38.0 40.0 41.0	62.3 58.4 54.3 50.0 45.3 40.3 38.0	72.5 71.4 70.0 68.4 66.5 64.3 63.1	9.9 8.3 6.8 5.4 4.1 3.0 2.4	7.2 5.9 4.9 3.8 2.9						



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	0 m Plum Cabeza 37.0	de plumí	ín (1916-		n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
12.6 13.0 14.0 16.0 18.0 20.0	78.0 77.3 75.7 72.5 69.2 65.9	80.3 80.3 80.0 79.4 78.7 77.8	15.1 15.1 15.1 14.7 12.9 10.6	19.3 19.3 18.4 14.9 12.2 10.1						
22.0 24.0 26.0 28.0	62.4 58.8 55.1 51.1	76.8 75.7 74.3 72.8	8.6 7.2 6.1 5.2	8.4 7.2 6.1 5.3						
30.0 32.0 34.0 36.0	47.0 42.5 37.6 32.0	71.0 68.9 66.5 63.6	4.6 4.0 3.5 2.9	4.6 4.1 3.5 2.9						
10.0	70.0	70.4	Angı		ıma prin	cipal 83.0	[°]	ı	ı	
19.3 20.0 22.0 24.0 26.0 28.0	73.0 71.9 68.6 65.2 61.7 58.1	79.1 78.9 78.2 77.3 76.2 75.0	14.5 12.4 10.1 8.2 7.0	13.7 13.7 11.5 9.6 8.1 7.0						
30.0 32.0 34.0 36.0 38.0	54.3 50.4 46.2 41.6 36.6	73.7 72.1 70.3 68.2 65.6	6.0 5.2 4.6 4.0 3.5	6.0 5.3 4.6 4.0 3.5						
40.0	30.8	62.6	3.0	3.1						
42.0	23.8	58.7	2.6 Ángi	ılo de pli	ıma prin	cipal 75.0	1°10	I.	I.	
29.8 30.0 32.0	65.0 64.7 61.2	75.9 75.9 74.8	8.9 8.1	8.8 8.8 8.0	pinit		- []			
34.0 36.0 38.0 40.0	57.5 53.7 49.7 45.5	73.6 72.2 70.6 68.7	6.9 5.9 5.2 4.5	7.0 6.0 5.3 4.6						
42.0 44.0 46.0 48.0	40.8 35.7 29.8 22.6	66.6 64.0 60.8 56.7	4.0 3.5 3.1 2.8	4.1 3.6 3.2 2.9						
40.1	55.0	70.0	Ångı		uma prin	cipal 65.0	[°]			
42.1 44.0 46.0	55.0 51.3 47.2	70.0 68.6 66.9	4.1 3.4	3.8 3.2 2.6						
48.0 50.0	43.1 38.2	64.8 62.4	2.7 2.0							



Nº de ident.: 9842523/95738/

Radio de descarga:

360 ° Cabeza de pluma principal:

Pieza de articulación de pluma principal:

2821-1 2821-1

	Lasile	entiai į t	1-		0.0						
		Inserciór	1	1	2	3	4	5	6	7	8
	Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			41.0	0 m Plum Cabeza 37.0	na princip de plumi 0 [m] Po	oal, Punt n (2316- osición m	o de caro 1) 83.5 r nidfall (23	ga 3 - Mi m Plumín 316)	dfall I		
				Ángu	ılo de plu	ıma prin	cipal 88.0	[°]			
1	12.6	78.0	80.4		28.0						

	41.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (2316-1) 83.5 m Plumín 37.0 [m] Posición midfall (2316)											
			Ángu	ılo de plu	ıma prind	cipal 88.0	[°]					
12.6	78.0	80.4		28.0								
13.0	77.4	80.3	15.1	28.0								
14.0	75.8	80.0	15.1	27.7								
16.0	72.6	79.4	15.1	22.7								
18.0	69.3	78.7	15.1	18.6								
20.0	65.9	77.8	14.2	15.7								
22.0	62.5	76.8	12.7	13.2								
24.0	58.9	75.7	10.6	10.6								
26.0	55.2	74.3	7.1	7.1								
28.0	51.2	72.8	4.2	4.3								
30.0	47.1	71.0	2.7	2.8								
			Ángu	ılo de plu	ıma prind	cipal 83.0	[°]					
19.4	73.0	79.1	15.1	20.3								
20.0	72.0	78.9	15.1	19.6								
22.0	68.7	78.2	15.1	16.3								
24.0	65.3	77.3	14.5	13.7								
26.0	61.8	76.3	13.1	11.6								
28.0	58.2	75.1	11.4	9.9								
30.0	54.4	73.7	9.4	8.4								
32.0	50.5	72.1	7.8	7.2								
34.0	46.3	70.3	5.6	5.6								
36.0	41.7	68.2	3.4	3.4								
			Ángu	ılo de plu	ıma prind	cipal 75.0	[°]					
29.9	65.0	75.9	9.5	7.2								
30.0	64.8	75.9	9.5	7.1								
32.0	61.3	74.9	7.9	5.8								
34.0	57.6	73.6	6.5	4.7								
36.0	53.8	72.2	5.2	3.8		Ť						
38.0	49.8	70.6	4.0	2.9								
40.0	45.6	68.8	2.9	2.0								
410	43.7	67.7	24									



Nº de ident.: 9842523/95738/ 360°

Radio de descarga:

Pieza de articulación de pluma principal: Cabeza de pluma principal:

2821-1 2821-1

Valor de vuelco: 2 - Vía ancha

Lastre trasero [t]:	74.0
Lastre central [t]:	0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	0 m Plum Cabeza 40.0	na princip de plumi 0 [m] Po	ín (1916-	1) 83.5 r	n Plumín	dfall I		
			Ángı	ılo de plı	ıma prin	cipal 88.0	D[°]			
13.2	78.0	83.3		16.4						
14.0	76.8	83.1	15.1	16.4						
16.0	73.9	82.5	13.4	13.9						
18.0	70.9	81.9	11.3	11.3						
20.0	67.8 64.6	81.1 80.2	9.7 7.9	9.4 7.8						
24.0	61.4	79.1	6.5	6.6						
26.0	58.0	77.9	5.5	5.6						
28.0	54.6	76.6	4.7	4.8						
30.0	50.9	75.0	4.0	4.1						
32.0	47.1	73.2	3.4	3.6						
34.0	42.9	71.2	3.0	3.1						
36.0	38.5	68.8	2.5	2.6						
			Ángı	ılo de plı	uma prin	cipal 83.0	O[°]			
20.2	73.0	82.0		11.6						
22.0	70.3	81.4	10.8	10.9						
24.0	67.2	80.6	9.2	9.0						
26.0	64.0	79.6	7.5	7.5						
28.0 30.0	60.8 57.4	78.6 77.3	6.4	6.4 5.5						
32.0	53.9	77.3 75.9	5.4 4.6	4.7						
34.0	50.2	74.3	4.0	4.1						
36.0	46.3	72.5	3.5	3.5						
38.0	42.1	70.4	3.0	3.0						
40.0	37.6	68.0	2.5	2.6						
42.0	32.5	65.1	2.2	2.3						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
31.1	65.0	78.7		7.3						
32.0	63.5	78.2	7.2	7.3						
34.0 36.0	60.2 56.8	77.1 75.9	6.3 5.4	6.3 5.5						
38.0	55.8	75.9 74.5	5.4 4.6	4.7						
40.0	49.6	72.8	4.0	4.1						
42.0	45.7	71.0	3.5	3.5						
44.0	41.4	68.8	3.0	3.1						
46.0	36.8	66.3	2.6	2.6						
48.0	31.6	63.3	2.3	2.3						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
43.8	55.0	72.4		3.2						
44.0	54.7	72.4	4.0	3.1						
46.0	51.1	70.9	3.2	2.5						
48.0 49.0	47.5 45.5	69.1 68.1	2.5 2.2							
49.0	40.0	00.1	۷.۷							



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	0 m Plum Cabeza 40.0	de plumí	oal, Punt ín (2316- osición m	1) 86.5 r	n Plumín	dfall I		
Ángulo de pluma principal 88.0 [°]										
13.3 14.0 16.0 18.0 20.0	78.0 76.9 74.0 70.9 67.9	83.3 83.1 82.6 81.9 81.1	15.1 15.1 15.1 15.1 14.8	26.1 26.1 22.0 18.2 15.4						
22.0 24.0 26.0 28.0 30.0	64.7 61.5 58.1 54.7 51.0	80.2 79.2 78.0 76.6 75.1	12.0 10.0 7.4 4.8 2.8	12.6 10.6 7.8 5.1 2.9						
			Ángu	ılo de plu	ıma prin	cipal 83.0	[°]			
20.3 22.0 24.0 26.0 28.0	73.0 70.4 67.3 64.1 60.8	82.0 81.4 80.6 79.7 78.6	15.1 15.1 15.1 13.1 11.5	18.4 16.4 13.8 11.6 9.9						
30.0 32.0 34.0 36.0 38.0	57.5 54.0 50.3 46.4 42.2	77.4 76.0 74.4 72.6 70.5	9.7 8.1 6.9 4.9 3.0	8.4 7.2 6.1 5.0 3.0						
			Ángu	ılo de plu	ıma prin	cipal 75.0	[°]C			
31.1 32.0 34.0 36.0 38.0 40.0 41.0	65.0 63.6 60.3 56.9 53.4 49.7 48.1	78.7 78.3 77.2 75.9 74.5 72.9 72.0	7.6 6.2 5.0 4.0 2.9 2.4	6.2 5.7 4.6 3.7 2.9	•					



Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

360° 2 - Vía ancha Valor de vuelco:

Lastre trasero [t]: 74.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	0 m Plum Cabeza 43.0	de plumí	oal, Punt n (1916- osición m	1) 86.5 r	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
13.8 14.0 16.0 18.0	78.0 77.8 75.0 72.2	86.2 86.2 85.7 85.1	15.1 14.2 11.3	14.6 14.6 13.1 10.6						
20.0 22.0 24.0	69.4 66.5 63.6	84.3 83.5 82.5	8.8 7.2 5.9	8.7 7.2 6.0						
26.0 28.0 30.0	60.5 57.4 54.1	81.4 80.2 78.8	5.0 4.2 3.5	5.1 4.3 3.6						
32.0 34.0 36.0	50.7 47.1 43.3	77.3 75.5 73.5	3.0 2.6 2.2	3.1 2.6 2.2		-:	0.00			
	70.0	24.0			ıma prin	cipai 83.	ן ו			
21.1 22.0 24.0	73.0 71.7 68.9	84.9 84.6 83.8	9.3 9.2 7.6	9.9 9.9 8.2						
26.0 28.0 30.0 32.0	66.0 63.0 59.9 56.8	83.0 82.0 80.9 79.6	6.4 5.4 4.6 3.9	6.9 5.8 5.0 4.2						
34.0 36.0 38.0	53.5 50.1 46.4	78.2 76.6 74.7	3.3 2.9 2.5	3.6 3.1 2.6						
40.0	42.6	72.7	2.1	2.2	<u> </u>					
22.2	65.0	01.4	Angı		ıma prin	cipai /5.0	\			
32.3 34.0 36.0 38.0 40.0	65.0 62.5 59.4 56.3 53.0	81.4 80.6 79.4 78.2 76.7	5.7 4.8 4.1 3.5	6.0 5.8 4.9 4.2 3.6						
42.0 44.0 46.0	49.5 45.9 42.0	75.1 73.2 71.1	3.0 2.6 2.2	3.1 2.7 2.2						
			Ángu		ıma prin	cipal 65.0	[°]			
45.6 46.0 48.0	55.0 54.3 51.1	74.9 74.7 73.1	3.2 2.6	2.7 2.5						
49.0	49.4	72.2	2.2							

Source:a9841388



Nº de ident.: 9842523/95738/ 360°

Radio de descarga:

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 74.0 Lastre central [t]: 0.0

Inserción			1	2	3	4	5	6	7	8	
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	
	41.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (2316-1) 89.5 m Plumín 43.0 [m] Posición midfall (2316)										
			Ángı	ılo de plı	ıma prin	cipal 88.	[°]				
13.9 14.0 16.0 18.0 20.0	78.0 77.9 75.1 72.3 69.5	86.2 86.2 85.7 85.1 84.4	15.1 15.1 15.1 15.1 15.1	26.9 26.9 25.0 21.0 17.8							
22.0 24.0 26.0 28.0 30.0	66.6 63.6 60.6 57.5 54.2	83.5 82.6 81.5 80.2 78.9	13.2 9.9 7.4 5.1 3.1	14.4 10.7 8.0 5.4 3.3							
			Ángı		uma prin	cipal 83.	1°10				
21.1 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0	73.0 71.8 68.9 66.0 63.1 60.0 56.9 53.6 50.1 46.5	84.9 84.6 83.9 83.0 82.0 80.9 79.6 78.2 76.6 74.8	15.1 15.1 14.7 13.0 11.6 9.3 7.2 5.6 4.0	17.6 16.3 13.7 11.5 9.8 8.3 7.0 6.0 5.0							
Ángulo de pluma principal 75.0 [°]											
32.4 34.0 36.0 38.0 40.0 41.0	65.0 62.6 59.5 56.4 53.3 51.6	81.4 80.6 79.5 78.2 76.7 75.9	5.8 4.6 3.6 2.7 2.2	5.2 4.3 3.4 2.6							



N° de ident.: 9842523/95738/

Radio de descarga:

360 ° Cabez

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

Inserción		1	2	3	4	5	6	7	8	
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
41.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (1916-1) 89.5 m Plumín 46.0 [m] Posición midfall (1916)										
	Ángulo de pluma principal 88.0 [°]									
14.5 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0	78.0 76.0 73.4 70.8 68.1 65.4 62.6 59.8 56.8 53.8	89.1 88.8 88.2 87.5 86.8 85.9 84.9 83.8 82.5 81.1	14.9 14.3 11.1 8.8 7.2 5.9 4.9 4.2 3.5 3.0	13.7 13.1 10.6 8.6 7.2 6.0 5.0 4.3 3.6 3.0						
34.0	50.6	79.5	2.5	2.6						
			Ángı	ılo de plu	ıma prin	cipal 83.0	l°1C			
22.0 24.0 26.0 28.0 30.0 32.0 34.0	73.0 70.3 67.6 64.9 62.1 59.2 56.2	87.7 87.0 86.2 85.3 84.3 83.2 81.9	9.0 8.3 6.7 5.7 4.8 4.1 3.5	9.0 8.3 6.9 5.8 4.9 4.2 3.6						
36.0	53.2	80.4	3.0	3.0						
38.0 40.0	49.9 46.6	78.8 77.0	2.5	2.6						
					uma prin	cipal 75 (1°10			
33.6 34.0 36.0	65.0 64.5 61.6	84.1 83.9 82.9	5.2 4.8	5.4 5.3 4.9	- III	S.pai 7 0.1	~			
38.0 40.0 42.0 44.0 46.0	58.8 55.8 52.7 49.4 46.0	81.7 80.4 78.9 77.3 75.5	4.1 3.5 2.9 2.5 2.1	4.2 3.6 3.0 2.6 2.2						
Ángulo de pluma principal 65.0 [°]										
47.3 48.0 49.0	55.0 54.1 52.5	77.3 76.9 76.1	2.4 2.1	2.1						



Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal:
360 ° Cabeza de pluma principal:

2821-1 2821-1

Valor de vuelco: 2 - Vía ancha Lastre trasero [t]: 74.0

Lastre central [t]: 74.0

Inserción			1	2	3	4	5	6	7	8	
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	
	41.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (2316-1) 92.5 m Plumín 46.0 [m] Posición midfall (2316)										
	Ángulo de pluma principal 88.0 [°]										
14.5 16.0 18.0 20.0 22.0 24.0	78.0 76.1 73.5 70.9 68.2 65.5	89.2 88.8 88.2 87.6 86.8	15.1 15.1 14.6 14.0	23.3 23.3 19.4 16.5 14.4							
26.0 28.0 30.0	62.7 59.8 56.9	84.9 83.8 82.5	8.1 6.1 4.1	8.6 6.5 4.3			2.0.2				
22.0	73.0	87.7	Angu	16.3	uma prin	cipai 83.0) [·]				
24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0	70.4 67.7 65.0 62.2 59.3 56.3 53.2 50.0	87.1 86.3 85.4 84.3 83.2 81.9 80.5 78.8	15.1 14.3 12.6 10.8 9.2 7.5 6.0 4.9	13.7 11.5 9.8 8.3 7.0 5.9 5.0 4.2							
40.0	46.6	77.0	3.6	3.4							
Ángulo de pluma principal 75.0 [°]											
33.7 34.0 36.0 38.0 40.0 41.0	65.0 64.5 61.7 58.8 56.0 54.5	84.1 84.0 82.9 81.8 80.5 79.7	5.5 4.4 3.4 2.5 2.1	4.4 4.2 3.3 2.5							



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

Valor de vuelco: 2 - Vía ancha Lastre trasero [t]: 74.0

Lastre trasero [t]: 74.0

Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	0 m Plum Cabeza 49.0	de plumí		1) 92.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
15.1 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0	78.0 76.9 74.5 72.0 69.5 67.0 64.4 61.8 59.1	92.1 91.9 91.3 90.7 90.0 89.2 88.2 87.2 86.0	11.2 11.2 10.0 8.5 6.9 5.8 4.8 4.1 3.5	12.4 12.4 10.3 8.5 7.0 5.9 4.9 4.1 3.5						
32.0	56.3	84.8	2.9	3.0						
34.0	53.4	83.3	2.4 Á	2.5		-iI 00 /	2			
22.8	73.0	90.6	Angu	110 de pil	ıma prin	cipai 83.0) [·]			
24.0 26.0 28.0 30.0	71.6 69.1 66.5 63.9	90.0 90.2 89.5 88.6	7.9 6.6 5.6 4.7	7.9 6.7 5.7						
32.0 34.0 36.0 38.0	61.3 58.6 55.8 52.9	86.6 85.4 84.1 82.7	4.0 3.4 2.8 2.4	4.1 3.5 2.9 2.5						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
34.9 36.0 38.0 40.0 42.0 44.0 46.0	65.0 63.5 60.9 58.1 55.3 52.4 49.3	86.8 86.3 85.2 84.0 82.7 81.2 79.5	4.6 4.0 3.4 2.9 2.4 2.0	4.7 4.7 4.1 3.5 2.9 2.4 2.1	-		-			



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal: 28

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	0 m Plum Cabeza 49.0	de plumí	oal, Punt n (2316- osición m	1) 95.5 r	n Plumín	dfall I		
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]			
15.1 16.0 18.0 20.0 22.0	78.0 77.0 74.5 72.1 69.6	92.1 91.9 91.4 90.7 90.0	15.1 15.1 14.8 14.1	21.9 21.9 19.1 16.4 14.1						
24.0 26.0 28.0 30.0 32.0	67.1 64.5 61.9 59.2 56.4	89.2 88.3 87.2 86.1 84.8	12.2 8.9 6.4 4.5 3.0	11.7 8.9 6.7 4.9 3.2						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
22.9 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0	73.0 71.6 69.1 66.6 64.0 61.4 58.6 55.8 52.9 49.9	90.6 90.3 89.5 88.7 87.7 86.7 85.5 84.2 82.7 81.1	15.1 13.5 11.8 9.9 8.6 7.2 5.9 4.7 3.8 2.9	14.8 13.4 11.3 9.6 8.1 6.8 5.7 4.8 4.0 3.3 2.5						
42.0	40.7	19.3			ıma nri:-	oinal 75 () [° 1			
24.0	65.0	00.0	Angı		ıma prin	cipai 75.0	ַן י			
34.9 36.0 38.0 40.0	65.0 63.6 60.9 58.4	86.8 86.3 85.3 84.1	3.9 2.9 2.0	3.5 3.0 2.2						



Nº de ident.: 9842523/95738/ 360°

Radio de descarga:

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 74.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0) m Plum Cabeza 52.0	na princip de plumí 0 [m] Po	n (1916-	1) 95.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
15.7 16.0 18.0 20.0 22.0 24.0 26.0 28.0	78.0 77.7 75.4 73.1 70.8 68.4 66.0 63.6	95.0 95.0 94.5 93.9 93.2 92.4 91.6 90.6	8.8 8.8 8.2 7.2 6.0 5.2 4.3 3.5	10.0 10.0 9.2 7.9 6.3 5.3 4.4 3.6						
30.0 32.0	61.1 58.5	89.5 88.3	3.0 2.4	3.0 2.5						
32.0	56.5	00.3		ılo de plu	ıma prin	cinal 83 () [°]			
23.7 24.0 26.0 28.0 30.0	73.0 72.7 70.3 68.0 65.6	93.5 93.4 92.7 91.9 91.0	6.3 5.9 4.9 4.2	6.6 6.6 6.1 5.1 4.3	лпа рпп	ыраг оз.ч				
32.0 34.0 36.0	63.1 60.6 58.0	90.0 88.9 87.7	3.5 2.9 2.4	3.6 3.0 2.5						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
36.1 38.0 40.0	65.0 62.7 60.2	89.5 88.6 87.5	3.4 2.8	3.7 3.6 2.9						
42.0 44.0	57.6 54.9	86.3 84.9	2.4	2.9 2.5 2.0						



N° de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

Valor de vuelco: 2 - Vía ancha Lastre trasero [t]: 74.0

Lastre trasero [t]: 74.0

Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0	0 m Plum Cabeza 13.0	de plumí		1) 32.5 r	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0	D[°]			
7.7 8.0 9.0 10.0 11.0 12.0 13.0 14.0	78.0 76.7 72.0 67.3 62.3 57.0 51.4 45.2 29.7	59.9 59.8 59.5 59.1 58.5 57.9 57.1 56.2 53.5	15.1 15.1 15.1 15.1 15.1 13.0 11.2 9.5 7.0	30.1 30.1 24.9 18.5 14.6 12.0 10.1 8.7 6.7						
			Ángı	ılo de plı	ıma prin	cipal 83.0	D[°]			
12.7 13.0 14.0 16.0 18.0 20.0	73.0 71.5 66.7 56.4 44.4 28.5	59.1 59.0 58.6 57.4 55.7 52.9	15.1 15.1 15.1 12.8 9.2 6.9	25.5 23.9 17.8 11.7 8.5 6.6						
20.0	26.5	52.9			ıma prin	cinal 75 (1 ° 1			
20.4 22.0 24.0 26.0	65.0 56.9 45.1 29.5	57.1 56.2 54.5 51.7	13.8 9.3 6.9	15.8 11.8 8.6 6.7	πια μιπι	ыраі <i>т</i> Э.	Y []			
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
29.6 30.0 32.0	55.0 52.8 40.1	53.0 52.8 50.8	10.9 7.7	10.8 10.4 7.7						
45.2 46.0 47.0	35.0 27.5 17.4	40.5 39.4 36.8	Ángu 4.3 3.9	3.9 3.6	uma prin	cipal 45.0	O [°]			



Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

360° 2 - Vía ancha Valor de vuelco:

Lastre trasero [t]: 74.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0	0 m Plum Cabeza 16.0	de plumí	oal, Punt n (1916- osición m	1) 35.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
8.3 9.0 10.0 11.0 12.0 13.0 14.0 16.0	78.0 75.5 71.7 67.9 63.9 59.8 55.4 45.8	62.8 62.6 62.3 61.9 61.4 60.8 60.2 58.4	15.1 15.1 15.1 15.1 14.1 12.2 9.4	30.1 29.9 24.8 19.8 16.3 13.9 12.0 9.4						
18.0	34.1	55.9	7.4	7.7						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
13.6 14.0 16.0 18.0 20.0 22.0	73.0 71.3 63.4 54.9 45.2 33.3	62.0 61.9 61.0 59.7 57.9 55.4	15.1 15.1 15.1 12.4 9.7 7.6	25.6 24.1 15.8 11.7 9.3 7.6						
			Ánαι	ılo de nlı	ıma prin	cinal 75 (l o l C			
21.7 22.0 24.0 26.0 28.0	65.0 63.8 55.3 45.7 33.9	59.8 59.7 58.4 56.7 54.2	15.1 13.0 9.8 7.6	16.3 16.1 11.8 9.3 7.6	and pilli	ограг <i>т</i> о	~ []			
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
31.3 32.0 34.0 36.0	55.0 52.0 41.8 28.5	55.5 55.1 53.1 50.2	11.6 8.8 7.1	11.4 10.8 8.5 7.0	·					
			Ángı	ılo de plu	ıma prin	cipal 45.0	[°]			
47.6 48.0 50.0	35.0 32.6 15.4	42.2 41.9 37.1	3.7 3.0	3.2 3.1						



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0	0 m Plum Cabeza 16.0		n (2316-	1) 38.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
8.4 9.0 10.0 11.0 12.0 13.0 14.0 16.0 13.6 14.0 16.0 18.0	78.0 75.7 72.0 68.1 64.1 60.0 55.6 46.1 34.3 73.0 71.5 63.6 55.1	62.8 62.7 62.3 61.9 61.4 60.9 60.2 58.5 56.0 61.9 61.0 59.7	15.1 15.1 15.1 15.1 15.1 15.1 15.1 15.1	30.1 30.1 30.1 28.0 23.0 19.6 16.7 13.0 10.5 ulo de plu 30.1 22.5 16.4						
20.0 22.0	45.4 33.5	58.0 55.4	13.4 11.0	12.8 10.4						
			Ángı	ılo de plu	ıma prin	cipal 75.0	1°10		•	
21.8 22.0 24.0 26.0 28.0	65.0 64.0 55.5 46.0 34.2	59.8 59.7 58.5 56.8 54.3	15.1 14.6 12.6 9.9	22.9 22.8 16.4 12.8 10.4		. , ,				
			Ángı	ılo de plu	ıma prin	cipal 65.0	D[°]			
31.4 32.0 34.0 36.0 37.0	55.0 52.2 42.0 28.8 18.9	55.5 55.1 53.1 50.2 48.0	12.5 11.0 9.5 8.5	10.8 10.3 8.9 7.6 7.0	·					



N° de ident.: 9842523/95738/

Radio de descarga:

360 ° Cab

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

Valor de vuelco: 2 - Vía ancha

Lastre trasero [t]: Lastre central [t]: 74.0 0.0

			-							
	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 19.0	de plumi	ín (1916-		n Plumír			
			Ángı	ılo de plu	ıma prin	cipal 88.	[°]			
9.0 10.0 11.0 12.0 13.0	78.0 74.7 71.6 68.3 65.0	65.7 65.5 65.1 64.7 64.3	15.1 15.1 15.1 15.1 15.1	30.1 28.8 24.0 20.3 17.3						
14.0 16.0 18.0 20.0 22.0	61.6 54.3 46.2 36.7 24.0	63.7 62.4 60.7 58.3 54.9	15.1 12.8 10.7 8.5 7.1	15.1 11.9 9.8 8.1 6.9						
			Ángu	ılo de plu	ıma prin	cipal 83.	[°]			
14.4 16.0 18.0 20.0 22.0 24.0 26.0	73.0 67.9 61.1 53.8 45.7 36.1 23.0	64.9 64.3 63.3 61.9 60.2 57.8 54.2	15.1 15.0 12.2 10.0 8.0 6.8	25.0 19.8 14.9 11.7 9.7 8.1 6.9						
			Ángu	ılo de plu	ıma prin	cipal 75.	D[°]			
23.0 24.0 26.0 28.0 30.0 32.0	65.0 61.5 54.2 46.1 36.6 23.8	62.5 62.0 60.7 59.0 56.6 53.1	15.1 13.2 10.6 8.4 7.1	16.5 14.9 11.8 9.8 8.1 7.0						
			Ángu	ılo de plu	ıma prin	cipal 65.	[°]			
33.1 34.0 36.0 38.0	55.0 51.4 42.9 32.5	58.0 57.3 55.4 52.7	12.4 9.7 8.0	11.8 11.0 9.1 7.7						

Ángulo de pluma principal 45.0 [°]

50.1

35.0

43.9



Nº de ident.: 9842523/95738/

Radio de descarga: 360 $^{\circ}$

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0	0 m Plum Cabeza 19.0	de plumí	oal, Punt ín (2316- osición m	1) 41.5 r	n Plumín	dfall I		
			Ángu	ılo de plu	ıma prin	cipal 88.0	1°10			
9.0 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0	78.0 74.9 71.7 68.5 65.2 61.7 54.5 46.4 37.0 24.3	65.7 65.5 65.2 64.8 64.3 63.8 62.4 60.7 58.4 54.9	15.1 15.1 15.1 15.1 15.1 15.1 13.6 10.7 8.7	30.1 30.1 29.9 28.4 23.9 20.7 16.0 12.9 10.5 8.7	uma prin					
16.0 18.0 20.0 22.0 24.0 26.0	68.1 61.3 54.0 45.9 36.3 23.3	64.3 63.3 62.0 60.2 57.8 54.3	15.1 15.1 15.1 13.2 10.6 8.7	27.7 20.4 15.7 12.8 10.5 8.7						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
23.0 24.0 26.0 28.0 30.0	65.0 61.7 54.4 46.3 36.8	62.5 62.1 60.7 59.0 56.7	15.1 15.1 14.0 11.5	21.3 19.8 15.9 13.0 10.7						
32.0	24.1	53.2	9.4	8.9	<u> </u>		2.5.2			
33.1	55.0	57.9	Angu	ılo de plu 9.6	uma prin	cipal 65.0	ַנֻין ט ו		I	
34.0 36.0 38.0	55.0 51.6 43.1 32.8	57.9 57.3 55.4 52.8	10.7 9.5 8.3	9.6 9.0 7.7 6.7						
40.0	17.1	48.5	7.3	5.7						



360°

Cargas pluma principal + plumín abatible + midfall

Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal: Cabeza de pluma principal:

2821-1 2821-1

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 74.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 22.0	de plumi		1) 41.5 r	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0	[°]			
9.6 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0	78.0 76.9 74.2 71.4 68.6 65.8 59.8 53.5 46.5 38.5 28.6	68.7 68.6 68.3 67.9 67.6 67.1 66.0 64.7 62.9 60.7 57.6	15.1 15.1 15.1 15.1 15.1 15.1 11.0 9.0 7.4 6.3 Ángu	30.1 29.8 24.8 20.6 17.9 15.6 12.4 10.1 8.5 7.2 6.3 Jlo de plu 21.6 20.4 15.3	uma prini	cipal 83.) [°]			
20.0 22.0 24.0 26.0 28.0	59.5 53.1 46.1 38.0 28.0	65.6 64.2 62.4 60.1 57.0	12.9 10.1 8.4 7.0 6.0	12.3 10.0 8.5 7.2 6.2						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
24.2 26.0 28.0 30.0 32.0 34.0	65.0 59.8 53.4 46.4 38.4 28.5	65.2 64.3 62.9 61.2 58.9 55.8	13.7 10.9 8.9 7.4 6.3	14.5 12.3 10.1 8.5 7.2 6.3						
			Áηgι	ılo de plu	ıma prin	cipal 6 <u>5</u> .0	[°]			
34.8 36.0 38.0 40.0 42.0	55.0 50.9 43.6 35.1 23.9	60.4 59.5 57.6 55.1 51.5	10.1 8.3 7.0 6.1	10.3 9.5 8.0 6.9 6.0						
			Ángu	ılo de plu	ıma prin	cipal 45.0	[°]			
52.6 54.0	35.0 28.6	45.6 43.5	2.1	2.1						



Nº de ident.: 9842523/95738/ 360°

Radio de descarga:

Pieza de articulación de pluma principal:

2821-1 Cabeza de pluma principal: 2821-1

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 74.0 0.0 Lastre central [t]:

	Inserciór	Ì	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 22.0		ín (2316-	1) 44.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
9.6 10.0 11.0 12.0 13.0 14.0 16.0 18.0	78.0 77.0 74.3 71.6 68.8 65.9 60.0 53.6	68.7 68.6 68.3 68.0 67.6 67.1 66.1 64.7	15.1 15.1 15.1 15.1 15.1 14.9 14.2	30.1 30.1 30.1 27.6 25.1 21.6 16.9 13.7						
20.0 22.0 24.0	46.7 38.7 28.9	63.0 60.7 57.6	12.5 10.0 8.3	11.4 9.5 8.1						
				ılo de plu	ıma prin	cipal 83.0	1°10	•	•	
15.4 16.0 18.0 20.0	73.0 71.2 65.6 59.6	67.8 67.6 66.7 65.6	15.1 15.1 15.1 14.7	30.1 28.7 21.2 16.6						
22.0 24.0 26.0 28.0	53.2 46.2 38.2 28.2	64.2 62.5 60.2 57.0	13.6 11.5 9.4 7.9	13.5 11.3 9.4 8.1						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
24.3 26.0 28.0 30.0 32.0 34.0	65.0 59.9 53.6 46.6 38.6 28.7	65.2 64.4 63.0 61.2 59.0 55.9	15.1 13.7 11.8 9.6 8.1	19.7 16.8 13.6 11.4 9.6 8.2						
			Ánaı	ılo de plı	ıma prin	cipal 65.0	0 [°]			
34.8 36.0 38.0 40.0 42.0	55.0 51.1 43.8 35.3 24.2	60.4 59.6 57.7 55.2 51.6 48.9	9.5 8.4 7.4 6.5	8.6 8.0 7.0 6.0 5.2						



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.	0 m Plum Cabeza 25.0	de plumí		1) 44.5 r	n Plumín			
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]			
10.2 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0	78.0 76.1 73.7 71.3 68.8 63.8 58.5 52.8 46.7 39.8	71.6 71.4 71.1 70.8 70.4 69.5 68.3 66.9 65.1 63.0	15.1 15.1 15.1 15.1 15.0 12.8 10.7 8.7 7.3 6.3	27.3 25.2 21.4 18.2 16.1 12.8 10.6 8.8 7.6 6.5						
26.0	31.7	60.1	5.4	5.7						
			Ángu	ılo de plu	uma prin	cipal 83.0	[°]			
16.2 18.0 20.0 22.0 24.0 26.0 28.0 30.0	73.0 68.6 63.5 58.2 52.5 46.3 39.4 31.1	70.6 70.0 69.0 67.9 66.4 64.6 62.4 59.5	15.1 15.1 13.5 11.3 9.1 7.6 6.5 5.6	19.1 15.8 12.6 10.4 8.8 7.5 6.5 5.7						
					ıma prin	cinal 75 (1 ° 1			
25.5	65.0	68.0		12.9	ania pilii	cipai 73.	J []			
26.0 28.0 30.0 32.0 34.0 36.0	63.7 58.4 52.8 46.6 39.7 31.6	67.8 66.6 65.2 63.4 61.2 58.4	14.4 11.4 9.1 7.7 6.5 5.7	12.8 10.6 8.8 7.6 6.5 5.7						
			Ánaı	ılo de plı	ıma prin	cipal 65.0	0 [°]			
36.5 38.0 40.0 42.0 44.0 46.0	55.0 50.6 44.2 37.0 28.0 16.7	62.9 61.8 59.9 57.5 54.3 49.2	8.6 7.2 6.2 5.5 4.7	9.1 8.3 7.2 6.2 5.5		,				



N° de ident.: 9842523/95738/

Radio de descarga:

360 ° Cabe:

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.	0 m Plum Cabeza 25.0	de plumi	oal, Punt ín (2316- osición m	1) 47.5 r	n Plumín	dfall		
			Ángı	ılo de plı	ıma prin	cipal 88.0	[°]			
10.3 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0	78.0 76.2 73.9 71.4 69.0 63.9 58.6 53.0 46.9 40.0	71.6 71.4 71.1 70.8 70.4 69.5 68.4 66.9 65.2 63.0	15.1 15.1 15.1 15.1 15.1 15.1 13.8 11.8 10.0 8.3	30.1 30.1 30.0 25.4 22.4 17.3 14.2 11.8 10.0 8.4						
26.0	31.8	60.2	7.0	7.2						
			Angı	<u>_</u>	ıma prin	cipal 83.0	D[°]			
16.2 18.0 20.0 22.0 24.0 26.0 28.0 30.0	73.0 68.7 63.6 58.3 52.6 46.5 39.5 31.3	70.6 70.0 69.1 67.9 66.5 64.7 62.5 59.6	15.1 15.1 13.9 12.3 10.4 8.6 7.2	26.6 21.8 17.1 14.0 11.6 9.8 8.4 7.2						
00.0	01.0	00.0			uma prin	cinal 75 () [°]			
25.6 26.0	65.0 63.9	68.0 67.8	15.1	17.3 17.3	ıma prini	сіраі 75.	J[]			
28.0 30.0 32.0 34.0 36.0	58.6 52.9 46.8 39.9	66.6 65.2 63.5 61.3 58.5	14.8 12.0 10.0 8.3 7.1	14.2 11.7 10.0 8.5 7.4						
					uma prin	cinal 65 (1°10			
36.6 38.0 40.0 42.0 44.0 46.0	55.0 50.8 44.4 37.1 28.2 17.0	62.9 61.8 59.9 57.5 54.3 49.3	8.0 7.1 6.2 5.4 4.7	7.5 6.8 5.9 5.1 4.4	and pill	о.раг 00.t	~ []			



Nº de ident.: 9842523/95738/

Radio de descarga: 360 $^{\circ}$

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 28.0	de plumí		1) 47.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	1°10			
10.8	78.0	74.5		30.1						
11.0 12.0 13.0 14.0	77.6 75.5 73.4 71.2	74.5 74.2 73.9 73.6	15.1 15.1 15.1 15.1	30.1 30.1 29.3 25.9						
16.0 18.0 20.0 22.0	66.8 62.2 57.4 52.3	72.8 71.8 70.6 69.1	15.1 15.1 14.4 13.7	21.1 17.6 15.2 13.3						
24.0	46.9	67.4	12.5	11.8						
26.0 28.0 30.0	40.8 33.8 25.2	65.3 62.6 59.0	10.9 9.7 8.7	10.6 9.6 8.8						
			Ángı	ılo de plu	uma prin	cipal 83.0	[°]			
17.1 18.0	73.0 71.0	73.5 73.2	15.1 15.1	27.0 25.7						
20.0 22.0 24.0	66.5 61.9 57.1	72.4 71.3 70.1	15.1 15.1 14.5	20.8 17.4 15.0						
26.0 28.0	52.0 46.5	68.7 66.9	13.9 12.4	13.2 11.8						
30.0 32.0 34.0	40.4 33.4 24.5	64.7 62.0 58.4	10.9 9.7 8.7	10.5 9.6 8.8						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
26.8 28.0	65.0 62.2	70.7 70.1	15.1	18.6 17.6						
30.0 32.0 34.0 36.0	57.4 52.3 46.8 40.7	68.9 67.4 65.7 63.5	14.9 13.8 12.5 10.9	15.1 13.2 11.8 10.6						
38.0 40.0	33.8 25.1	60.8 57.3	9.7 8.8	9.6 8.8						
					ıma prin	cipal 65.0	[°]			
38.2 40.0 42.0 44.0	55.0 50.3 44.7 38.3	65.3 64.0 62.1 59.8	9.9 9.0 8.3	9.4 8.6 7.8 7.1	,	•				
46.0 48.0 49.0	30.9 21.0 15.7	56.9 52.7 49.6	7.6 6.9 6.6	6.4 5.8						



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 19.0	de plumí		1) 50.5 r	n Plumín			
			Ángu	ılo de plu	ıma prin	cipal 88.0	0 [°]			
9.0 10.0 11.0 12.0 13.0	78.0 74.7 71.6 68.3 65.0	65.7 65.5 65.1 64.7 64.3	15.1 15.1 15.1 15.1 15.1	30.1 30.1 28.2 25.6 21.6	-					
14.0 16.0 18.0 20.0 22.0	61.6 54.3 46.2 36.7 24.0	63.7 62.4 60.7 58.3 54.9	15.1 15.0 13.5 10.6 8.7	18.8 14.7 12.0 9.8 8.3						
			Ángu	ılo de plu	ıma prin	cipal 83.0	0[°]			
14.4 16.0 18.0 20.0 22.0 24.0 26.0	73.0 67.9 61.1 53.8 45.7 36.1 23.0	64.9 64.3 63.3 61.9 60.2 57.8 54.2	15.1 15.1 15.1 13.2 10.5 8.6	30.0 24.8 18.6 14.5 11.9 9.8 8.3						
			Ángu	ılo de plu	ıma prin	cipal 75.0	0 [°]			
23.0 24.0 26.0 28.0 30.0 32.0	65.0 61.5 54.2 46.1 36.6 23.8	62.5 62.0 60.7 59.0 56.6 53.1	15.1 14.9 13.5 10.7 8.9	20.2 18.7 14.7 12.0 10.0 8.5						
					ıma prin	cipal 65.0	0 [°]			
33.1 34.0 36.0 38.0	55.0 51.4 42.9 32.5	58.0 57.3 55.4 52.7	11.5 10.2 9.0	9.6 9.0 7.7 6.7	-					



N° de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 28.0	de plumí		1) 50.5 r	n Plumín			
			Ángu	ılo de plu	ıma prin	cipal 88.0	1°10			
10.9	78.0	74.6	15.1	30.1	'					
11.0 12.0 13.0 14.0	77.7 75.6 73.5 71.3	74.5 74.3 74.0 73.6	15.1 15.1 15.1 15.1	30.1 30.1 30.0 28.9						
16.0	66.9	72.8	15.1	25.1						
18.0 20.0 22.0 24.0	62.4 57.6 52.5 47.0	71.8 70.6 69.2 67.4	15.1 15.0 14.8 13.6	20.7 17.5 15.1 13.2						
26.0	41.0	65.3	11.7	11.6						
28.0 30.0	34.0 25.3	62.6 59.1	10.2 9.0	10.3 9.3						
			Ángu	ılo de plu	uma prin	cipal 83.0	[°]			
17.1	73.0	73.5		30.1						
18.0	71.1	73.2	15.1	30.0						
20.0 22.0	66.7 62.1	72.4 71.4	15.1 15.1	24.8 20.5						
24.0 26.0 28.0	57.3 52.2 46.7	70.2 68.7 66.9	15.1 15.1 13.4	17.3 15.0 13.1						
30.0	40.6	64.8	11.6	11.6						
32.0	33.5	62.1	10.2	10.4						
34.0	24.7	58.4	9.0	9.3	<u> </u>					
26.0	65.0	70.7	Angu		ıma prin	cipal 75.0	ַנֻין ט		I	
26.8 28.0	65.0 62.3	70.7 70.1	15.1	16.7 15.6						
30.0 32.0	57.5 52.4	68.9 67.5	15.1 14.7	13.8 12.3						
34.0	46.9	65.7	13.3	11.0						
36.0	40.9	63.6	12.0	9.8						
38.0 40.0	33.9 25.2	60.9 57.3	10.8 9.5	8.8 7.8						
40.0	4 J. 4	31.3			uma prin	cipal 65 (1°10		I	
38.3	55.0	65.3	,gc	6.6			·			
40.0	50.5	64.0	6.9	5.9						
42.0	44.8	62.2	6.1	5.1						
44.0 46.0	38.5 31.0	59.9 56.9	5.3 4.6	4.4 3.8						
48.0 49.0	21.2 16.0	52.8 49.7	3.9 3.6	3.2						



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0) m Plum Cabeza 22.0	na princip de plumí) [m] Po	n (1916-	1) 53.5 r	n Plumín	dfall I		
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]C			
9.6	78.0	68.7	15.1	30.1						
10.0	76.9	68.6	15.1	30.1						
11.0	74.2	68.3	15.1	27.8						
12.0	71.4	67.9	15.1	23.7						
13.0	68.6	67.6	15.1	20.5						
14.0	65.8	67.1	15.1	17.8						
16.0	59.8	66.0	14.6	14.0						
18.0 20.0	53.5 46.5	64.7 62.9	12.0 9.9	11.3 9.3						
22.0	38.5	60.7	8.0	7.7						
24.0	28.6	57.6	6.6	6.6						
24.0	20.0	07.0		ılo de plu	ıma nrin	cinal 83 () [°]			
15.3	73.0	67.7	Ang.	24.0	лна рин Г	 	J []			
16.0	71.1	67.5	15.1	23.3						
18.0	65.4	66.7	15.1	17.4						
20.0	59.5	65.6	14.3	13.8						
22.0	53.1	64.2	11.3	11.1						
24.0	46.1	62.4	9.3	9.2						
26.0	38.0	60.1	7.5	7.7						
28.0	28.0	57.0	6.4	6.6						
			Ángι	ılo de plu	ıma prin	cipal 7 <u>5</u> .0	[°]			
24.2	65.0	65.2		15.9						
26.0	59.8	64.3	14.9	13.9						
28.0	53.4	62.9	12.3	11.2						
30.0	46.4	61.2	9.9	9.4						
32.0	38.4	58.9	8.0	7.8						
34.0	28.5	55.8	6.8	6.7						
<u> </u>			Angı	ılo de plu	ıma prin	cipal 65.0	[°]			
34.8	55.0	60.4	40.0	8.6						
36.0	50.9	59.5	10.0	7.9						
38.0 40.0	43.6 35.1	57.6 55.1	8.9 7.6	6.9 6.0						
40.0 42.0	23.9	55.1	6.5	5.1						
43.0	15.4	48.8	6.0	4.7						



Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal: 2821-1 2821-1 Cabeza de pluma principal:

360° 2 - Vía ancha Valor de vuelco:

Lastre trasero [t]: 74.0 Lastre central [t]: 0.0

		Inserciór	1	1	2	3	4	5	6	7	8
Cabeza de plumín (2316-1) 53.5 m Plumín 31.0 [m] Posición midfall (2316)	ce	o de plumín	de rolda- nas								Carga [t]
11.5			44.0	Cabeza	de plumi	ín (2316-	1) 53.5 r	n Plumín	dfall I		
12.0				Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
13.0	11.5	78.0	77.5								
14.0											
16.0				-							
18.0											
20.0 61.1 74.2 15.0 16.6 22.0 56.7 72.9 13.5 14.3 24.0 52.1 71.4 12.3 12.5 26.0 47.1 69.7 11.0 11.0 28.0 47.1 69.7 11.0 11.0 28.0 41.7 67.6 9.5 9.7 30.0 35.6 65.0 8.3 8.6 32.0 28.4 61.8 7.4 7.8											
22.0			_								
24.0 52.1 71.4 12.3 12.5 26.0 47.1 69.7 11.0 11.0 28.0 47.1 69.7 11.0 11.0 28.0 41.7 67.6 9.5 9.7 30.0 35.6 65.0 8.3 8.6 32.0 28.4 61.8 7.4 7.8											
28.0	24.0	52.1	71.4	12.3	i e						
30.0 35.6 65.0 8.3 8.6 7.4 7.8 Angulo de pluma principal 83.0 [°] 18.0 73.0 76.4 27.7 23.5 22.0 69.1 75.7 15.1 23.5 22.0 65.0 74.8 15.1 19.4 24.0 60.8 73.7 15.0 16.5 26.0 56.4 72.4 13.8 14.1 28.0 51.8 70.9 13.0 12.4 30.0 46.8 69.2 11.4 10.9 32.0 41.4 67.1 9.8 9.7 34.0 35.2 64.5 8.5 8.6 36.0 27.9 61.2 7.7 7.8 Angulo de pluma principal 75.0 [°] 28.1 65.0 73.4 15.1 13.6 32.0 56.6 71.2 14.3 12.2 34.0 52.0 69.7 12.6 10.9 36.0 47.1 67.9 11.1 9.7 38.0 41.7 65.9 9.6 8.7 40.0 35.6 63.3 8.4 7.8 42.0 28.3 60.0 7.8 4 Angulo de pluma principal 65.0 [°] Angulo de pluma principal 65.0 [°]	26.0	47.1	69.7	11.0	11.0						
32.0 28.4 61.8 7.4 7.8 Angulo de pluma principal 83.0 [°] 18.0 73.0 76.4 20.0 69.1 75.7 15.1 23.5 22.0 65.0 74.8 15.1 19.4 24.0 60.8 73.7 15.0 16.5 26.0 56.4 72.4 13.8 14.1 28.0 51.8 70.9 13.0 12.4 30.0 46.8 69.2 11.4 10.9 32.0 41.4 67.1 9.8 9.7 34.0 35.2 64.5 8.5 8.6 36.0 27.9 61.2 7.7 7.8 Angulo de pluma principal 75.0 [°] 28.1 65.0 73.4 30.0 61.0 72.4 15.1 13.6 32.0 56.6 71.2 14.3 12.2 34.0 52.0 69.7 12.6 10.9 36.0 47.1 67.9 11.1 9.7 38.0 41.7 65.9 9.6 8.7 40.0 35.6 63.3 8.4 7.8 42.0 28.3 60.0 7.6 6.9 Angulo de pluma principal 65.0 [°] Angulo de pluma principal 65.0 [°]	28.0	41.7	67.6	9.5	9.7						
Ángulo de pluma principal 83.0 [°] 18.0 73.0 76.4 27.7 20.0 69.1 75.7 15.1 23.5 22.0 65.0 74.8 15.1 19.4 24.0 60.8 73.7 15.0 16.5 26.0 56.4 72.4 13.8 14.1 28.0 51.8 70.9 13.0 12.4 30.0 46.8 69.2 11.4 10.9 32.0 41.4 67.1 9.8 9.7 34.0 35.2 64.5 8.5 8.6 36.0 27.9 61.2 7.7 7.8 Ángulo de pluma principal 75.0 [°] 28.1 65.0 73.4 15.1 13.6 30.0 61.0 72.4 15.1 13.6 32.0 56.6 71.2 14.3 12.2 34.0 52.0 69.7 12.6 10.9 36.0 47.1 67.9 11.1 9.7 38.0 41.7 65.9 9.6 8.7 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>											
18.0	32.0	28.4	61.8								
20.0 69.1 75.7 15.1 23.5 22.0 65.0 74.8 15.1 19.4 24.0 60.8 73.7 15.0 16.5 26.0 56.4 72.4 13.8 14.1 28.0 51.8 70.9 13.0 12.4 30.0 46.8 69.2 11.4 10.9 32.0 41.4 67.1 9.8 9.7 34.0 35.2 64.5 8.5 8.6 36.0 27.9 61.2 7.7 7.8				Ángı		ıma prin	cipal 83.0) [°]			
22.0 65.0 74.8 15.1 19.4 24.0 60.8 73.7 15.0 16.5 26.0 56.4 72.4 13.8 14.1 28.0 51.8 70.9 13.0 12.4 30.0 46.8 69.2 11.4 10.9 32.0 41.4 67.1 9.8 9.7 34.0 35.2 64.5 8.5 8.6 36.0 27.9 61.2 7.7 7.8				15.1	i						
24.0 60.8 73.7 15.0 16.5 26.0 56.4 72.4 13.8 14.1 28.0 51.8 70.9 13.0 12.4 10.9 32.0 41.4 67.1 9.8 9.7 34.0 35.2 64.5 8.5 8.6 36.0 27.9 61.2 7.7 7.8											
26.0 56.4 72.4 13.8 14.1 24 30.0 51.8 70.9 13.0 12.4 30.0 46.8 69.2 11.4 10.9 32.0 41.4 67.1 9.8 9.7 34.0 35.2 64.5 8.5 8.6 36.0 27.9 61.2 7.7 7.8					i						
28.0 51.8 70.9 13.0 12.4 30.0 46.8 69.2 11.4 10.9 32.0 41.4 67.1 9.8 9.7 34.0 35.2 64.5 8.5 8.6 36.0 27.9 61.2 7.7 7.8											
32.0 41.4 67.1 9.8 9.7 34.0 35.2 64.5 8.5 8.6 36.0 27.9 61.2 7.7 7.8 **Angulo de pluma principal 75.0 [°]** 28.1 65.0 73.4 15.1 13.6 32.0 56.6 71.2 14.3 12.2 34.0 52.0 69.7 12.6 10.9 36.0 47.1 67.9 11.1 9.7 38.0 41.7 65.9 9.6 8.7 42.0 28.3 60.0 7.6 6.9 **Angulo de pluma principal 65.0 [°]** 40.0 55.0 67.8 42.0 50.3 66.3 5.7 4.9 44.0 45.2 64.4 5.0 4.2					i	İ	İ				
34.0 35.2 64.5 8.5 8.6 36.0 27.9 61.2 7.7 7.8 Angulo de pluma principal 75.0 [°] 28.1 65.0 73.4 15.1 13.6 30.0 61.0 72.4 15.1 13.6 32.0 56.6 71.2 14.3 12.2 34.0 52.0 69.7 12.6 10.9 36.0 47.1 67.9 11.1 9.7 38.0 41.7 65.9 9.6 8.7 40.0 35.6 63.3 8.4 7.8 42.0 28.3 60.0 7.6 69.9 Angulo de pluma principal 65.0 [°] Angulo de pluma principal 65.0 [°]	30.0	46.8	69.2	11.4	10.9						
36.0 27.9 61.2 7.7 7.8					9.7						
Angulo de pluma principal 75.0 [°] 28.1 65.0 73.4 15.3 15.3 30.0 61.0 72.4 15.1 13.6 32.0 56.6 71.2 14.3 12.2 34.0 52.0 69.7 12.6 10.9 36.0 47.1 67.9 11.1 9.7 38.0 41.7 65.9 9.6 8.7 40.0 35.6 63.3 8.4 7.8 42.0 28.3 60.0 7.6 6.9 Angulo de pluma principal 65.0 [°] 40.0 55.0 67.8 5.7 42.0 50.3 66.3 5.7 4.9 44.0 45.2 64.4 5.0 4.2											
28.1 65.0 73.4 15.1 13.6 30.0 61.0 72.4 15.1 13.6 32.0 56.6 71.2 14.3 12.2 34.0 52.0 69.7 12.6 10.9 36.0 47.1 67.9 11.1 9.7 38.0 41.7 65.9 9.6 8.7 40.0 35.6 63.3 8.4 7.8 42.0 28.3 60.0 7.6 6.9 Angulo de pluma principal 65.0 [°] 40.0 55.0 67.8 5.7 4.9 44.0 45.2 64.4 5.0 4.2	36.0	27.9	61.2								
30.0 61.0 72.4 15.1 13.6 32.0 56.6 71.2 14.3 12.2 34.0 52.0 69.7 12.6 10.9 36.0 47.1 67.9 11.1 9.7 38.0 41.7 65.9 9.6 8.7 40.0 35.6 63.3 8.4 7.8 42.0 28.3 60.0 7.6 6.9 \$\$\$Argulo de pluma principal 65.0 [°]\$\$\$\$42.0 55.0 67.8 42.0 50.3 66.3 5.7 4.9 44.0 45.2 64.4 5.0 4.2				Ángı		ıma prin	cipal 75.0) [°]			
32.0 56.6 71.2 14.3 12.2 34.0 52.0 69.7 12.6 10.9 36.0 47.1 67.9 11.1 9.7 38.0 41.7 65.9 9.6 8.7 40.0 35.6 63.3 8.4 7.8 42.0 28.3 60.0 7.6 6.9 Angulo de pluma principal 65.0 [°] 40.0 55.0 67.8 5.7 4.9 44.0 45.2 64.4 5.0 4.2			-	15.4	i						
34.0 52.0 69.7 12.6 10.9 36.0 47.1 67.9 11.1 9.7 38.0 41.7 65.9 9.6 8.7 40.0 35.6 63.3 8.4 7.8 42.0 28.3 60.0 7.6 6.9											
36.0 47.1 67.9 11.1 9.7 38.0 41.7 65.9 9.6 8.7 40.0 35.6 63.3 8.4 7.8 42.0 28.3 60.0 7.6 6.9 Ángulo de pluma principal 65.0 [°] 40.0 55.0 67.8 5.7 4.9 44.0 45.2 64.4 5.0 4.2					ı						
38.0 41.7 65.9 9.6 8.7 40.0 35.6 63.3 8.4 7.8 42.0 28.3 60.0 7.6 6.9 Ángulo de pluma principal 65.0 [°] 40.0 55.0 67.8 42.0 50.3 66.3 5.7 4.9 44.0 45.2 64.4 5.0 4.2											
42.0 28.3 60.0 7.6 6.9 Ángulo de pluma principal 65.0 [°] 40.0 55.0 67.8 5.7 42.0 50.3 66.3 5.7 4.9 44.0 45.2 64.4 5.0 4.2					1						
Ángulo de pluma principal 65.0 [°] 40.0 55.0 67.8 5.7 42.0 50.3 66.3 5.7 4.9 44.0 45.2 64.4 5.0 4.2	40.0	35.6	63.3	8.4	7.8						
40.0 55.0 67.8 5.7 42.0 50.3 66.3 5.7 4.9 44.0 45.2 64.4 5.0 4.2	42.0	28.3	60.0	7.6	6.9						
42.0 50.3 66.3 5.7 4.9 44.0 45.2 64.4 5.0 4.2				Ángı	ılo de plu	ıma prin	cipal 65.0	[°]C			
44.0 45.2 64.4 5.0 4.2					1						
				-							
40.0 39.5 62.2 4.3 3.6					i						
49.0 22.1 50.4 2.6 2.0											
48.0 33.1 59.4 3.6 3.0					i						
52.0 15.2 50.1 2.5											



N° de ident.: 9842523/95738/

Radio de descarga: 360 $^{\circ}$

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0	0 m Plum Cabeza 22.0	de plumí	oal, Punt n (2316- osición m	1) 56.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
9.6	78.0	68.7		30.1						
10.0	77.0	68.6	15.1	30.1						
11.0	74.3	68.3	15.1	30.1						
12.0	71.6	68.0	15.1	28.7						
13.0	68.8	67.6	15.1	27.2						
14.0	65.9	67.1	15.1	23.4						
16.0	60.0	66.1	15.1	18.3						
18.0	53.6	64.7	14.9	14.7						
20.0	46.7	63.0	13.5	12.2						
22.0 24.0	38.7 28.9	60.7 57.6	10.8 8.8	10.2 8.6						
24.0	26.9	57.0				-:	2			
					ıma prin	cipai 83.0	ו י] טוי			
15.4	73.0	67.8	15.1	30.1						
16.0	71.2	67.6	15.1	30.0						
18.0 20.0	65.6 59.6	66.7 65.6	15.1 15.1	23.0 18.1						
22.0	53.2	64.2	15.1	14.5						
24.0	46.2	62.5	13.3	12.1						
26.0	38.2	60.2	10.7	10.1						
28.0	28.2	57.0	8.9	8.6						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
24.3	65.0	65.2		15.7						
26.0	59.9	64.4	15.1	13.6						
28.0	53.6	63.0	14.8	11.5						
30.0	46.6	61.2	13.4	9.7						
32.0	38.6	59.0	11.0	8.2						
34.0	28.7	55.9	9.1	6.9						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
34.8	55.0	60.4		5.5						
36.0	51.1	59.6	6.3	4.9						
38.0	43.8	57.7	5.1	3.8						
40.0	35.3	55.2	4.0	2.9						
42.0	24.2	51.6	3.0	2.1						
43.0	18.3	48.9	2.5							



Nº de ident.: 9842523/95738/

Radio de descarga: 360 $^{\circ}$

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0) m Plum Cabeza 25.0	de plumí	oal, Punt n (1916- osición m	1) 56.5 r	n Plumín	dfall		
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]C			
10.2 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0	78.0 76.1 73.7 71.3 68.8 63.8 58.5 52.8 46.7 39.8	71.6 71.4 71.1 70.8 70.4 69.5 68.3 66.9 65.1 63.0	15.1 15.1 15.1 15.1 15.1 14.0 12.2 10.0 8.5 7.2	29.9 28.5 24.2 20.7 18.3 14.5 12.1 10.1 8.7 7.5						
26.0	31.7	60.1	6.3	6.5						
					ıma prin	cipal 83.0	1°10			
16.2 18.0 20.0 22.0 24.0 26.0 28.0 30.0	73.0 68.6 63.5 58.2 52.5 46.3 39.4 31.1	70.6 70.0 69.0 67.9 66.4 64.6 62.4 59.5	15.1 15.1 14.4 12.7 10.5 8.9 7.5 6.5	21.2 17.9 14.3 11.9 10.0 8.6 7.4 6.5						
			Ánaı	ılo de plu	ıma prin	cipal 75.0	1°10			
25.5 26.0 28.0 30.0 32.0 34.0 36.0	65.0 63.7 58.4 52.8 46.6 39.7 31.6	68.0 67.8 66.6 65.2 63.4 61.2 58.4	15.1 12.8 10.5 8.9 7.6 6.6 Ángu	14.4 14.4 12.1 10.1 8.7 7.5 6.6 ulo de plu 7.9 7.1	uma prind	cipal 65.	0[°]			
40.0 42.0 44.0 46.0	44.2 37.0 28.0 16.7	59.9 57.5 54.3 49.2	7.9 6.9 6.1 5.4	6.2 5.4 4.7						



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0	0 m Plum Cabeza 25.0	de plumí	n (2316-	o de caro 1) 59.5 r nidfall (23	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
10.3	78.0	71.6	15.1	30.1						
11.0	76.2	71.4	15.1	30.1						
12.0	73.9	71.1	15.1	30.1						
13.0	71.4	70.8	15.1	26.9						
14.0	69.0	70.4	15.1	24.1						
16.0 18.0	63.9 58.6	69.5 68.4	15.1 14.2	18.7 15.3						
20.0	53.0	66.9	12.4	12.6						
22.0	46.9	65.2	10.7	10.7						
24.0	40.0	63.0	8.8	9.0						
26.0	31.8	60.2	7.4	7.7						
			Ánaı	ılo de plı	ıma prin	cipal 83.0	0 [°]			
16.2	73.0	70.6	,g.	27.8	,a p		, ,			
18.0	68.7	70.0	15.1	23.6						
20.0	63.6	69.1	15.1	18.5						
22.0	58.3	67.9	14.4	15.1						
24.0	52.6	66.5	13.1	12.5						
26.0	46.5	64.7	11.3	10.6						
28.0	39.5	62.5	9.2	9.0						
30.0	31.3	59.6	7.7	7.7			2.50.2			
			Angu		ıma prin	cipal 75.0	֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓		1	
25.6	65.0	68.0	45.4	14.3						
26.0	63.9	67.8	15.1	13.8						
28.0 30.0	58.6 52.9	66.6 65.2	15.1 12.9	11.7 10.0						
32.0	46.8	63.5	11.0	8.5						
34.0	39.9	61.3	9.1	7.2						
36.0	31.8	58.5	7.7	6.1						
			Ángu	ılo de plu	ıma prin	cipal 65.0	1°10	-	•	
36.6	55.0	62.9	I	4.5		i .				
38.0	50.8	61.8	4.9	3.8						
40.0	44.4	59.9	3.9	3.0						
42.0	37.1	57.5	2.9	2.2						
44.0	29.3	54.3	2.1							



Nº de ident.: 9842523/95738/

Radio de descarga:

360°

Pieza de articulación de pluma principal: 2821-1

Cabeza de pluma principal:

2821-1

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 74.0 0.0 Lastre central [t]:

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 28.0	de plumi	ín (1916-		n Plumín			
						cipal 88.0				
10.8	78.0	74.5	I	27.5			J []			
11.0	77.6	74.5	15.1	27.5						
12.0	75.5	74.2	15.1	25.2						
13.0	73.4	73.9	15.1	22.0						
14.0	71.2	73.6	15.1	19.1						
16.0	66.8	72.8	14.3	15.3						
18.0 20.0	62.2 57.4	71.8 70.6	12.7 10.6	12.6 10.5						
20.0	57.4 52.3	70.6 69.1	10.6 8.6	10.5 8.8						
24.0	46.9	67.4	7.3	7.6						
26.0	40.8	65.3	6.3	6.5						
28.0	33.8	62.6	5.4	5.7						
30.0	25.2	59.0	4.7	5.0						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
17.1	73.0	73.5	15.1	19.6						
18.0	71.0	73.2	15.1	18.8						
20.0	66.5	72.4	14.8	15.1						
22.0	61.9	71.3	13.3	12.5 10.4						
24.0 26.0	57.1 52.0	70.1 68.7	11.0 9.0	8.8						
28.0	46.5	66.9	7.6	7.6						
30.0	40.4	64.7	6.5	6.5						
32.0	33.4	62.0	5.6	5.7						
34.0	24.5	58.4	4.9	5.0						
			Ángı	ılo de plı	ıma prin	cipal 75.0	[°]			
26.8	65.0	70.7		13.2						
28.0	62.2	70.1	13.0	12.6						
30.0	57.4	68.9	10.6	10.5						
32.0	52.3	67.4	8.7	8.9						
34.0 36.0	46.8 40.7	65.7 63.5	7.4 6.4	7.7 6.6						
38.0	33.8	60.8	5.6	5.8						
40.0	25.1	57.3	4.9	5.1						
	-				uma prin	cipal 65.0	1°10			
38.2	55.0	65.3	l j	7.0						
40.0	50.3	64.0	7.7	6.2						
42.0	44.7	62.1	6.8	5.4						
44.0	38.3	59.8	6.0	4.7						
46.0	30.9	56.9	5.3	4.1						
48.0	21.0	52.7	4.6	3.5						
49.0	15.7	49.6	4.2	l				l	l	



N° de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 28.0	de plumí		1) 62.5 r	n Plumín			
			Ángu	ılo de plu	ıma prin	cipal 88.0	0 [°]			
10.9 11.0 12.0 13.0 14.0 16.0 20.0 22.0 24.0 26.0 28.0 30.0	78.0 77.7 75.6 73.5 71.3 66.9 62.4 57.6 52.5 47.0 41.0 34.0 25.3	74.6 74.5 74.3 74.0 73.6 71.8 70.6 69.2 67.4 65.3 62.6 59.1	15.1 15.1 15.1 15.1 15.0 14.7 12.5 10.1 8.4 7.1 6.0 5.1	30.1 30.1 29.4 26.7 23.0 18.2 14.7 12.2 10.2 8.7 7.3 6.3 5.3	uma princ	cipal 83.	0[°]			
17.1	73.0	73.5		23.7						
18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0	71.1 66.7 62.1 57.3 52.2 46.7 40.6 33.5 24.7	73.2 72.4 71.4 70.2 68.7 66.9 64.8 62.1 58.4	15.1 15.1 15.1 12.8 10.6 8.9 7.4 6.2 5.3	22.8 17.9 14.5 12.1 10.2 8.7 7.3 6.3 5.4						
			Ángu	ılo de plu	uma prin	cipal 75.0	0 [°]			
26.8 28.0 30.0 32.0 34.0 36.0 38.0 40.0	65.0 62.3 57.5 52.4 46.9 40.9 33.9 25.2	70.7 70.1 68.9 67.5 65.7 63.6 60.9 57.3	15.1 13.1 10.8 9.0 7.6 6.4 5.5	13.1 11.9 10.2 8.7 7.4 6.3 5.3 4.5						
			Ángu	ılo de plu	ıma prin	cipal 65.0	0 [°]			
38.3 40.0 42.0	55.0 50.5 44.8	65.3 64.0 62.2	3.8 2.9	3.7 3.0 2.3						



360°

Cargas pluma principal + plumín abatible + midfall

Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

Alcance		Inserción	1	1	2	3	4	5	6	7	8
Cabeza de plumín (1916-1) 62.5 m Plumín 31.0 [m] Posición midfall (1916) Angulo de pluma principal 88.0 [°] 11.4 78.0 77.5 25.0 25.0 13.0 75.0 77.1 15.1 22.1 14.0 73.1 76.8 15.1 19.6 16.0 69.2 76.1 15.1 15.7 18.0 65.1 75.2 13.2 12.9 20.0 80.9 74.1 11.6 10.9 22.0 56.6 72.9 9.5 9.2 24.0 52.0 71.4 7.9 7.8 26.0 47.0 69.6 6.7 6.8 28.0 41.6 67.5 5.8 5.9 30.0 35.5 65.0 5.1 5.1 32.0 28.2 61.7 4.5 4.5 4.5 Angulo de pluma principal 83.0 [°] 17.9 73.0 76.4 15.1 17.8 18.0 22.0 64.9 74.7 13.4 12.7 24.0 60.7 73.7 11.5 10.8 22.0 64.9 74.7 13.4 12.7 24.0 60.7 73.7 11.5 10.8 26.0 56.3 72.4 9.4 9.1 27.4 9.4 9.1 28.0 15.1 7.9 9 7.8 9.1 28.0 15.1 7.9 9 7.8 9.1 28.0 15.1 7.9 9 7.8 9.1 28.0 15.1 7.9 9 7.8 9.1 28.0 15.7 7.9 7.9 7.9 8.8 9.1 28.0 15.7 7.9 7.9 7.9 8.8 9.1 30.0 46.7 69.1 6.8 6.8 6.8 32.0 41.3 67.0 5.8 5.9 30.0 35.1 64.4 5.1 5.2 36.0 27.7 61.1 4.5 4.6 4.5 15.2 36.0 27.7 61.1 4.5 4.6 4.5 15.2 36.0 27.7 61.1 4.5 4.6 4.5 15.2 36.0 27.7 61.1 4.5 4.6 4.5 15.2 36.0 27.7 61.1 4.5 4.6 4.5 15.2 36.0 27.7 61.1 4.5 4.6 4.7 4.5 4.6 4.7 4.5 4.6 4.7 4.5 4.6 4.7 4.5 4.6 4.7 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5	ce	o de plumín	de rolda- nas								
11.4 78.0 77.5 25.0 25.0 12.0 76.9 77.3 15.1 25.0 14.0 78.0 77.1 15.1 22.1 14.0 73.1 76.8 15.1 19.6 16.0 69.2 76.1 15.1 15.7 15.7 15.1 22.1 14.0 73.1 76.8 15.1 19.6 16.0 69.2 76.1 15.1 15.7 15			44.0	Cabeza	de plumí	ín (1916-	1) 62.5 r	n Plumín	dfall I		
12.0 76.9 77.3 15.1 25.0 13.0 75.0 77.1 15.1 22.1 14.0 73.1 76.8 15.1 19.6 16.0 69.2 76.1 15.1 15.7 18.0 65.1 75.2 13.2 12.9 20.0 60.9 74.1 11.6 10.9 22.0 56.6 72.9 9.5 9.2 24.0 52.0 71.4 7.9 7.8 26.0 47.0 69.6 6.7 6.8 28.0 41.6 67.5 5.8 5.9 30.0 35.5 65.0 5.1 5.1 35.1 32.0 28.2 61.7 4.5 4.5 4.5 22.0 64.9 74.7 13.4 12.7 24.0 60.7 73.7 11.5 10.8 22.0 64.9 74.7 13.4 12.7 24.0 60.7 73.7 11.5 10.8 28.0 51.7 70.9 7.9 7.8 30.0 46.7 69.1 6.8 6.8 32.0 27.7 61.1 4.5 4.5 36.0 27.7 61.1 4.5 4.5 36.0 27.7 61.1 4.5 4.5 36.0 27.7 61.1 4.5 4.5 36.0 27.7 61.1 4.5 4.5 36.0 27.7 61.1 4.5 4.5 36.0 27.7 61.1 4.5 4.5 36.0 27.7 61.1 4.5 4.5 36.0 27.7 61.1 4.5 4.5 36.0 27.7 61.1 4.5 4.5 36.0 27.7 61.1 4.5 4.5 36.0 27.7 61.1 4.5 4.5 36.0 27.7 61.1 4.5 4.6 37.0 58.8 5.9 36.0 46.9 67.9 6.9 6.9 6.9 38.0 41.5 65.8 5.9 60.0 41.0 35.4 63.2 5.2 5.3 3.0 40.0 35.4 63.2 5.2 5.3 3.0 40.0 35.4 63.2 5.2 5.3 3.0 40.0 35.4 63.2 5.2 5.3 3.0 40.0 35.4 63.2 5.2 5.3 3.0 40.0 35.4 63.2 5.2 5.3 3.0 40.0 54.9 67.7 68.8 5.6 64.4 4.7 40.0 54.9 67.7 68.8 5.6 64.4 4.7 40.0 54.9 67.7 68.8 5.6 64.4 4.7 40.0 54.9 67.7 68.8 5.6 5.0 67.8 64.0 55.0 67.8 64.0 65.0 67.8 64.0 65.0 67.8 64.0 65.0				Ángı		ıma prin	cipal 88.0	0[°]			
13.0											
14.0 73.1 76.8 15.1 19.6 15.7 16.0 69.2 76.1 15.1 15.7 16.0 69.2 76.1 15.1 15.7 16.0 69.2 76.1 15.1 15.7 16.0 69.2 76.1 15.1 15.7 16.0 69.2 74.1 11.6 10.9 22.0 66.6 72.9 9.5 9.2 24.0 52.0 71.4 7.9 7.8 26.0 47.0 69.6 6.7 6.8 5.9 30.0 35.5 65.0 5.1 5.1 32.0 28.2 61.7 4.5 4.5 4.5 16.0 30.0 35.5 65.0 5.1 5.1 32.0 28.2 61.7 4.5 4.5 4.5 17.8 20.0 68.9 75.6 15.1 15.3 22.0 64.9 74.7 13.4 12.7 24.0 60.7 73.7 11.5 10.8 26.0 56.3 72.4 9.4 9.1 28.0 51.7 70.9 7.9 7.8 6.8 6.8 32.0 41.3 67.0 5.8 5.9 30.0 35.1 64.7 69.1 6.8 6.8 6.8 32.0 41.3 67.0 5.8 5.9 34.0 35.1 64.4 5.1 5.2 36.0 27.7 61.1 4.5 4.6 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16											
16.0 69.2 76.1 15.1 15.7 18.0 65.1 75.2 13.2 12.9 20.0 60.9 74.1 11.6 10.9 22.0 56.6 72.9 9.5 9.2 24.0 52.0 71.4 7.9 7.8 26.0 47.0 69.6 6.7 6.8 28.0 41.6 67.5 5.8 5.9 30.0 35.5 65.0 5.1 5.1 5.1 32.0 28.2 61.7 4.5 4.5 4.5 30.0 28.2 61.7 4.5 4.5 4.5 30.0 28.2 61.7 4.5 17.8 20.0 68.9 75.6 15.1 17.8 20.0 68.9 75.6 15.1 15.3 22.0 64.9 74.7 13.4 12.7 24.0 60.7 73.7 11.5 10.8 26.0 56.3 72.4 9.4 9.1 22.0 64.9 67.7 69.1 6.8 6.8 30.0 46.7 69.1 6.8 6.8 6.8 32.0 41.3 67.0 5.8 5.9 30.0 46.7 69.1 4.5 4.6 5.0 51.7 70.9 7.9 7.8 30.0 46.7 69.1 4.5 4.6 5.0 51.7 70.9 7.9 7.8 30.0 46.7 69.1 4.5 4.6 5.0 50.3 31.0 60.9 72.4 11.5 10.8 34.0 35.1 64.4 5.1 5.2 36.0 57.7 61.1 4.5 4.6 50.0 50.0 50.5 71.1 9.6 9.2 37.7 61.1 4.5 4.6 50.0 50.0 35.4 60.9 67.9 6.9 6.9 38.0 41.5 65.8 5.9 6.0 40.0 35.4 63.2 5.2 5.3 38.0 41.5 65.8 5.9 6.0 50.0 35.4 40.0 35.4 63.2 5.2 5.3 38.0 41.5 65.8 5.9 6.0 50.0 35.4 40.0 35.4 63.2 5.2 5.3 38.0 41.5 65.8 5.9 6.0 50.0 35.4 60.0 54.9 67.7 60.0 54.9 67.7 60.0 54.9 67.7 60.0 54.9 67.7 60.0 54.9 67.7 60.0 54.9 67.7 60.0 54.9 67.7 60.0 54.9 67.7 60.0 54.9 67.7 60.0 54.9 67.7 60.0 54.9 67.7 60.0 54.9 67.7 60.0 54.9 67.7 60.0 54.9 67.7 60.0 54.9 67.7 60.2 6.8 5.6 56.0 56.0 56.0 56.0 56.0 56.0 56.0											
18.0 65.1 75.2 13.2 12.9 20.0 60.9 74.1 11.6 10.9 22.0 56.6 72.9 9.5 9.2 24.0 52.0 71.4 7.9 7.8 26.0 47.0 69.6 6.7 6.8 5.9 30.0 35.5 65.0 5.1 5.1 32.0 28.2 61.7 4.5 4.5 4.5 22.0 68.9 75.6 15.1 17.8 22.0 68.9 75.6 15.1 15.3 22.0 68.9 75.6 15.1 15.3 22.0 68.9 75.6 15.1 15.3 22.0 64.9 74.7 13.4 12.7 24.0 60.7 73.7 11.5 10.8 28.0 51.7 70.9 7.9 7.8 6.8 6.8 32.0 41.3 67.0 5.8 5.9 30.0 35.1 64.4 5.1 5.2 36.0 27.7 61.1 4.5 4.5 4.6 32.0 41.3 67.0 5.8 5.9 34.0 35.1 64.4 5.1 5.2 36.0 27.7 61.1 4.5 4.6 4.5 4.6 32.0 46.9 67.9 6.9 6.9 6.9 34.0 35.4 63.2 5.2 5.3 32.0 55.5 67.8 60.0 4.6 4.7 69.9 6.9 6.9 6.9 38.0 41.5 65.8 5.9 6.0 40.0 35.4 63.2 5.2 5.3 42.0 28.1 60.0 4.6 4.7 4.7 4.7 4.7 4.7 4.7 4.7 4.7 4.7 4.7											
20.0 60.9 74.1 11.6 10.9 9.5 9.2 24.0 56.6 72.9 9.5 9.2 24.0 55.0 71.4 7.9 7.8 26.0 47.0 69.6 6.7 6.8 5.9 30.0 35.5 65.0 5.1 5.1 32.0 28.2 61.7 4.5 4.5 4.5											
24.0 52.0 71.4 7.9 7.8 26.0 47.0 69.6 6.7 6.8 28.0 41.6 67.5 5.8 5.9 30.0 35.5 65.0 5.1 5.1 32.0 28.2 61.7 4.5 4.5 Angulo de pluma principal 83.0 [°] 17.9 73.0 76.4 18.0 72.9 76.4 15.1 17.8 20.0 68.9 75.6 15.1 15.3 22.0 64.9 74.7 13.4 12.7 24.0 60.7 73.7 11.5 10.8 26.0 56.3 72.4 9.4 9.1 28.0 51.7 70.9 7.9 7.8 30.0 46.7 69.1 6.8 6.8 6.8 32.0 41.3 67.0 5.8 5.9 34.0 35.1 64.4 5.1 5.2 36.0 27.7 61.1 4.5 4.6 Angulo de pluma principal 75.0 [°] 28.0 65.0 73.4 30.0 60.9 72.4 11.5 10.8 32.0 41.3 67.0 5.8 5.9 34.0 35.1 64.4 5.1 5.2 36.0 27.7 61.1 4.5 4.6 Angulo de pluma principal 75.0 [°] 28.0 65.0 73.4 30.0 60.9 72.4 11.5 10.8 32.0 45.5 71.1 9.6 9.2 34.0 51.9 69.7 8.0 7.9 36.0 46.9 67.9 6.9 6.9 38.0 41.5 65.8 5.9 6.0 40.0 35.4 63.2 5.2 5.3 42.0 28.1 60.0 4.6 4.7 Angulo de pluma principal 65.0 [°] 39.9 55.0 67.8 40.0 54.9 67.7 6.9 6.9 40.0 54.9 67.7 6.3 6.3 42.0 50.1 66.2 6.8 5.6											
26.0											
28.0	24.0		71.4	7.9	7.8						
30.0 35.5 65.0 5.1 5.1 4.5 4.5 Angulo de pluma principal 83.0 [°] 17.9 73.0 76.4 15.1 17.8 17.8 20.0 68.9 75.6 15.1 15.3 22.0 64.9 74.7 13.4 12.7 24.0 60.7 73.7 11.5 10.8 26.0 56.3 72.4 9.4 9.1 28.0 51.7 70.9 7.9 7.8 5.9 30.0 46.7 69.1 6.8 6.8 32.0 41.3 67.0 5.8 5.9 34.0 35.1 64.4 5.1 5.2 36.0 27.7 61.1 4.5 4.6 Angulo de pluma principal 75.0 [°] 28.0 65.0 73.4 12.0											
32.0 28.2 61.7											
Angulo de pluma principal 83.0 [°] 17.9											
17.9	32.0	20.2	01.7								
18.0 72.9 76.4 15.1 17.8 20.0 68.9 75.6 15.1 15.3 22.0 64.9 74.7 13.4 12.7 24.0 60.7 73.7 11.5 10.8 26.0 56.3 72.4 9.4 9.1 28.0 51.7 70.9 7.9 7.8 30.0 46.7 69.1 6.8 6.8 32.0 41.3 67.0 5.8 5.9 34.0 35.1 64.4 5.1 5.2 36.0 27.7 61.1 4.5 4.6 36.0 27.7 61.1 9.6 9.2 34.0 51.9 69.7 8.0 7.9 36.0 46.9 67.9 6.9 6.9 38.0 41.5 65.8 5.9 6.0 41.5 65.0 67.8 41.0 41.5 65.8 5.9 6.0 41.5 65.0 67.8 41.0 41.5 65.8 5.9 6.0 41.5 65.0 67.8 41.0 41.5 65.8 5.9 6.0 41.5 65.0 67.8 41.0 41.5 65.8 5.9 6.0 41.5 65.0 67.8 41.5 65.8 5.9 60.0 41.5 65.0 67.8 41.5 65.8 5.0 67.8 41.5 65.0 67.8 41.5 65.0 67.8 41.5 67.				Angu	ılo de plu	uma prin	cipal 83.0	0 [°]			
20.0 68.9 75.6 15.1 15.3 22.0 64.9 74.7 13.4 12.7 24.0 60.7 73.7 11.5 10.8 26.0 56.3 72.4 9.4 9.1 28.0 51.7 70.9 7.9 7.8 30.0 46.7 69.1 6.8 6.8 32.0 41.3 67.0 5.8 5.9 34.0 35.1 64.4 5.1 5.2 36.0 27.7 61.1 4.5 4.6											
22.0 64.9 74.7 13.4 12.7 24.0 60.7 73.7 11.5 10.8 26.0 56.3 72.4 9.4 9.1 28.0 51.7 70.9 7.9 7.8 30.0 46.7 69.1 6.8 6.8 32.0 41.3 67.0 5.8 5.9 34.0 35.1 64.4 5.1 5.2 36.0 27.7 61.1 4.5 4.6											
24.0 60.7 73.7 11.5 10.8 26.0 56.3 72.4 9.4 9.1 70.9 7.9 7.8 30.0 46.7 69.1 6.8 6.8 32.0 41.3 67.0 5.8 5.9 34.0 35.1 64.4 5.1 5.2 36.0 27.7 61.1 4.5 4.6											
26.0 56.3 72.4 9.4 9.1 7.9 7.8 30.0 46.7 69.1 6.8 6.8 5.9 32.0 41.3 67.0 5.8 5.9 34.0 35.1 64.4 5.1 5.2 36.0 27.7 61.1 4.5 4.6											
28.0 51.7 70.9 7.9 7.8 30.0 46.7 69.1 6.8 6.8 6.8 32.0 41.3 67.0 5.8 5.9 34.0 35.1 64.4 5.1 5.2 36.0 27.7 61.1 4.5 4.6											
30.0											
34.0 35.1 64.4 5.1 5.2 4.6 Angulo de pluma principal 75.0 [°] 28.0 65.0 73.4 12.0	30.0	46.7	69.1	6.8	6.8						
36.0 27.7 61.1 4.5 4.6 Ángulo de pluma principal 75.0 [°] 28.0 65.0 73.4 12.0 30.0 60.9 72.4 11.5 10.8 32.0 56.5 71.1 9.6 9.2 34.0 51.9 69.7 8.0 7.9 36.0 46.9 67.9 6.9 6.9 38.0 41.5 65.8 5.9 6.0 41.5 65.8 5.9 6.0 41.5 65.8 5.9 6.0 41.5 65.8 5.9 6.0 42.0 28.1 60.0 4.6 4.7 Ángulo de pluma principal 65.0 [°] 39.9 55.0 67.8 6.3 6.3 42.0 50.1 66.2 6.8 5.6		41.3									
Ángulo de pluma principal 75.0 [°] 28.0 65.0 73.4 12.0											
28.0 65.0 73.4 12.0 30.0 60.9 72.4 11.5 10.8 32.0 56.5 71.1 9.6 9.2 34.0 51.9 69.7 8.0 7.9 36.0 46.9 67.9 6.9 6.9 38.0 41.5 65.8 5.9 6.0 40.0 35.4 63.2 5.2 5.3 42.0 28.1 60.0 4.6 4.7 \$\$\$Argulo de pluma principal 65.0 [°]\$\$\$ \$\$\$aggle \$4.0 \$54.9 \$67.7 \$6.8 \$6.8 \$5.6 \$6.8 \$5.6 \$\$\$\$\$\$\$\$aggle \$6.3 \$6.3 \$6.3 \$6.3 \$6.3 \$6.3 \$6.3 \$6.3	36.0	27.7	61.1								
30.0 60.9 72.4 11.5 10.8 32.0 56.5 71.1 9.6 9.2 34.0 51.9 69.7 8.0 7.9 6.9 6.9 38.0 41.5 65.8 5.9 6.0 41.5 65.8 5.9 6.0 40.0 35.4 63.2 5.2 5.3 42.0 28.1 60.0 4.6 4.7 Angulo de pluma principal 65.0 [°] 39.9 55.0 67.8 6.3 6.3 6.3 42.0 50.1 66.2 6.8 5.6				Angı	ılo de plu	uma prin	cipal 75.0	0[°]			
32.0 56.5 71.1 9.6 9.2 34.0 51.9 69.7 8.0 7.9 6.9 6.9 38.0 41.5 65.8 5.9 6.0 40.0 35.4 63.2 5.2 5.3 42.0 28.1 60.0 4.6 4.7 Angulo de pluma principal 65.0 [°] 39.9 55.0 67.8 6.4 40.0 54.9 67.7 6.3 42.0 50.1 66.2 6.8 5.6											
34.0 51.9 69.7 8.0 7.9 6.9 6.9 38.0 41.5 65.8 5.9 6.0 40.0 35.4 63.2 5.2 5.3 42.0 28.1 60.0 4.6 4.7 Angulo de pluma principal 65.0 [°] 39.9 55.0 67.8 6.4 40.0 54.9 67.7 6.3 42.0 50.1 66.2 6.8 5.6											
36.0 46.9 67.9 6.9 6.9 6.9 38.0 41.5 65.8 5.9 6.0 40.0 35.4 63.2 5.2 5.3 42.0 28.1 60.0 4.6 4.7 Angulo de pluma principal 65.0 [°] \$\frac{\text{Angulo de pluma principal 65.0 [°]}}{\text{40.0 54.9 67.7 6.3 42.0 50.1 66.2 6.8 5.6}}			i I								
38.0 41.5 65.8 5.9 6.0 40.0 35.4 63.2 5.2 5.3 42.0 28.1 60.0 4.6 4.7 Ángulo de pluma principal 65.0 [°] 39.9 55.0 67.8 40.0 54.9 67.7 6.3 42.0 50.1 66.2 6.8 5.6											
40.0 35.4 63.2 5.2 5.3 4.6 4.7 Angulo de pluma principal 65.0 [°] 39.9 55.0 67.8 6.4 6.3 42.0 50.1 66.2 6.8 5.6											
42.0 28.1 60.0 4.6 4.7 Ángulo de pluma principal 65.0 [°] 39.9 55.0 67.8 6.4 40.0 54.9 67.7 6.3 42.0 50.1 66.2 6.8 5.6											
39.9 55.0 67.8 6.4 40.0 54.9 67.7 6.3 42.0 50.1 66.2 6.8 5.6											
40.0 54.9 67.7 6.3 42.0 50.1 66.2 6.8 5.6				Ángu	ılo de plu	uma prin	cipal 65.0	0 [°]			
42.0 50.1 66.2 6.8 5.6	39.9	55.0	67.8		6.4						
▼ 440 450 644 ▼ 61 49											
	44.0	45.0	64.4	6.1	4.9						
46.0 39.4 62.1 5.3 4.2											
50.0 25.0 55.7 4.0 3.1											
51.0 19.9 53.3 3.7 2.9											



Nº de ident.: 9842523/95738/

Radio de descarga: 360° Pieza de articulación de pluma principal: 2821-1 2821-1 Cabeza de pluma principal:

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 74.0 0.0 Lastre central [t]:

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0	Cabeza	de plumi	pal, Punt ín (2316- osición m	1) 65.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	1°10			
11.5 12.0 13.0 14.0 16.0	78.0 77.1 75.1 73.2 69.3	77.5 77.4 77.1 76.8 76.1	15.1 15.1 15.1 15.1 15.1	30.1 30.1 29.9 29.2 23.2	·					
18.0 20.0 22.0 24.0 26.0	65.2 61.1 56.7 52.1 47.1	75.2 74.2 72.9 71.4 69.7	15.1 15.1 13.3 11.8 10.2	19.0 16.1 13.8 11.9 10.3						
28.0 30.0 32.0	41.7 35.6 28.4	67.6 65.0 61.8	8.5 7.0 5.6 Ángi	8.8 7.5 6.0	uma prin	cinal 83 (1°10			
18.0	73.0	76.4	79	26.3		5.pa. 55.	, <u>, , , , , , , , , , , , , , , , , , </u>			
20.0 22.0 24.0 26.0 28.0 30.0	69.1 65.0 60.8 56.4 51.8 46.8	75.7 74.8 73.7 72.4 70.9 69.2	15.1 15.1 15.1 13.3 11.8 10.4	22.8 18.8 16.0 13.7 11.9 10.5						
32.0 34.0	41.4 35.2	67.1 64.5	8.9 7.7	9.2 8.1						
36.0	27.9	61.2	6.8	7.2						
			Ángı	ılo de plı	ıma prin	cipal 75.0	[°]			
28.1 30.0	65.0 61.0	73.4 72.4	12.8	11.8 10.2						
32.0 34.0 36.0 38.0 40.0	56.6 52.0 47.1 41.7 35.6 28.3	71.2 69.7 67.9 65.9 63.3	11.2 9.7 8.4 7.2 6.1	8.7 7.5 6.4 5.4 4.5						
72.0		00.0			uma prin	cipal 65 (1°10	1	ı	
40.0 42.0 43.0	55.0 50.3 48.1	67.8 66.3 65.4	2.7 2.3	2.9 2.1			~			



Nº de ident.: 9842523/95738/

Radio de descarga:

360°

Pieza de articulación de pluma principal: Cabeza de pluma principal:

2821-1 2821-1

Valor de vuelco:

2 - Vía ancha 74.0

Lastre trasero [t]: Lastre central [t]: 0.0

Inserción			1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
44.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (1916-1) 65.5 m Plumín 34.0 [m] Posición midfall (1916)										
			Ángı		ıma prin	cipal 88.0	[°]			
12.1 13.0 14.0 16.0 18.0 20.0 22.0 24.0 26.0	78.0 76.4 74.6 71.1 67.5 63.7 59.9 55.9 51.6	80.4 80.2 79.9 79.3 78.5 77.5 76.4 75.1 73.6	15.1 15.1 15.1 15.1 14.2 11.7 9.8 8.2 6.9	22.7 22.4 19.6 15.8 13.2 11.0 9.5 8.1 7.0						
28.0 30.0 32.0 34.0	47.1 42.2 36.8 30.5	71.9 69.8 67.3 64.3	6.0 5.2 4.5 4.0	5.3 4.6 4.1						
36.0	22.7	60.3	3.6	3.6			2.5.2			
18.8	73.0	79.2	Angu	16.3	ıma prin	cipai 83.0	֓֓֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓		ı	
20.0 22.0 24.0 26.0 28.0	70.9 67.3 63.5 59.7 55.6	78.8 78.0 77.1 76.0 74.7	15.1 14.3 11.6 9.7 8.1	15.7 13.1 10.9 9.4 8.0						
30.0 32.0 34.0 36.0 38.0	51.4 46.8 41.9 36.4 30.1	73.1 71.4 69.3 66.8 63.7	6.9 6.0 5.3 4.6 4.1	7.0 6.1 5.3 4.6 4.1						
40.0	22.1	59.6	3.6 Ápgu	Jo do plu	ıma prin	cipal 75 () [°]			
29.3 30.0 32.0 34.0	65.0 63.7 59.8 55.8	76.1 75.8 74.7 73.4	11.0 9.3 7.9	10.9 10.9 9.4 8.1	ina pilii	O.pai 7 3.	, <u>)</u>			
36.0 38.0 40.0 42.0 44.0	51.6 47.1 42.2 36.7 30.5	71.9 70.1 68.1 65.6 62.5	6.8 6.0 5.2 4.6 4.1	7.1 6.2 5.4 4.8 4.3						
46.0 22.6 58.5 3.6 3.8										
41.7 42.0 44.0 46.0 48.0	55.0 54.3 50.0 45.3 40.3	70.2 70.1 68.5 66.6 64.4	6.6 5.8 5.1 4.5	5.6 5.5 4.8 4.2 3.6	лпа рпп	ыраг оо.	7 []			
50.0 54.0	34.6 18.9	61.7 53.8	3.9 2.8	3.1 2.2						



Nº de ident.: 9842523/95738/ 360°

Radio de descarga:

Pieza de articulación de pluma principal: 2821-1 2821-1 Cabeza de pluma principal:

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 74.0 0.0 Lastre central [t]:

Inserción			1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0	0 m Plun Cabeza 34.0	de plumí	n (2316-	o de caro 1) 68.5 n nidfall (23	n Plumín	dfall		
Ángulo de pluma principal 88.0 [°]										
12.1	78.0	80.4	, ange	30.1	lina pini	l l	, ,			
13.0	76.5	80.2	15.1	30.1						
14.0	74.7	79.9	15.1	27.4					İ	
16.0	71.2	79.3	15.1	21.9						
18.0	67.6	78.5	14.9	18.2						
20.0	63.8	77.6	14.4	15.2						
22.0	60.0	76.5	13.4	13.1						
24.0	56.0	75.2	11.3	11.3						
26.0 28.0	51.7 47.2	73.7 71.9	9.6 8.3	9.8 8.6						
30.0	42.3	69.8	7.2	7.5						
32.0	36.9	67.4	6.3	6.6						
34.0	30.7	64.3	5.3	5.5						
36.0	22.8	60.3	4.0	4.1						
			Ánaı	ılo de plu	ıma prin	cipal 83.0	1°10			
18.9	73.0	79.2	15.1	22.7						
20.0	71.0	78.9	15.1	21.8						
22.0	67.4	78.1	15.1	18.0						
24.0	63.6	77.1	14.9	15.0						
26.0	59.8	76.0	14.0	13.0						
28.0	55.7	74.7	11.8	11.2						
30.0	51.5	73.2	10.0	9.8						
32.0	46.9	71.4	8.7	8.7						
34.0 36.0	42.0 36.6	69.3 66.8	7.6 6.6	7.6 6.7						
38.0	30.2	63.7	5.8	6.0						
40.0	22.3	59.7	5.1	5.2						
			Ángi	ılo de plı	ıma prin	cipal 75.0	1°10			
29.4	65.0	76.1	7 11.90	10.8	piiii					
30.0	63.8	75.9	12.7	10.3						
32.0	59.9	74.7	11.1	8.9						
34.0	55.9	73.5	9.7	7.6						
36.0	51.7	71.9	8.4	6.5						
38.0	47.2	70.2	7.2	5.6						
40.0	42.3	68.1	6.1	4.7						
42.0 44.0	36.9 30.6	65.6 62.6	5.2 4.3	3.9 3.2						
46.0	22.7	58.6	3.5	2.6						
Ángulo de pluma principal 65.0 [°]										
41.7	55.0	70.2	Angu	2.3	IIII PIIII		, j			
42.0	54.4	70.2	2.7	2.3						
43.0	52.6	69.3	2.3							



2821-1

2821-1

Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal:
360 ° Cabeza de pluma principal:

Valor de vuelco: 2 - Vía ancha

Lastre trasero [t]: 74.0

Lastre central [t]: 0.0

Lastre	central [t]:		0.0								
	Inserciór	1	1	2	3	4	5	6	7	8		
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]		
	44.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (1916-1) 68.5 m Plumín 37.0 [m] Posición midfall (1916)											
Ángulo de pluma principal 88.0 [°]												
12.7	78.0	83.3	15.1	22.1								
13.0 14.0 16.0	77.5 75.9 72.7	83.3 83.0 82.4	15.1 15.1 15.1	22.1 21.1 17.0								
18.0 20.0	69.4 66.0	81.7 80.9	15.0 12.9	14.2 12.0								
22.0 24.0 26.0	62.6 59.0 55.3	79.9 78.7 77.4	10.7 9.1 7.8	10.3 9.0 7.8								
28.0 30.0 32.0	51.3 47.2 42.7	75.9 74.1 72.1	6.7 5.9 5.2	6.8 6.0 5.3								
34.0 36.0 38.0	37.8 32.3 25.7	69.7 66.8 63.1	4.6 4.1 3.7	4.7 4.2 3.8								
	1		Ŭ		ıma prin	cipal 83.	[°]		1			
19.7 20.0 22.0	73.0 72.5 69.2	82.1 82.0 81.3	15.1 15.1 14.6	16.0 15.9 14.0								
24.0 26.0	65.8 62.4	80.4 79.4	12.8 10.6	12.0 10.2								
28.0 30.0 32.0 34.0	58.8 55.0 51.1 46.9	78.3 76.9 75.4 73.6	9.1 7.8 6.8 6.0	8.9 7.7 6.8 6.1								
36.0 38.0 40.0	42.5 37.5 32.0	71.5 69.1 66.2	5.2 4.6 4.1	5.3 4.7 4.3								
42.0	25.3	62.5	3.7	3.8								
			Ángı		ıma prin	cipal 75.0	[°]					
30.6 32.0 34.0	65.0 62.5 58.9	78.8 78.2 77.0	10.8 9.1	10.8 10.4 9.0								
36.0 38.0 40.0	55.2 51.3 47.2	75.7 74.1 72.4	7.8 6.8 6.1	7.9 6.9 6.2								
42.0 44.0 46.0	42.7 37.8 32.3	70.3 67.9 65.0	5.3 4.7 4.2	5.4 4.8 4.4								
48.0	25.6	61.4	3.8	3.9								
Ángulo de pluma principal 65.0 [°]												
43.4 44.0	55.0 53.8	72.7 72.3	5.7	5.0 4.8								
46.0 48.0 50.0	49.8 45.6 41.0	70.7 68.9 66.7	5.0 4.4 3.8	4.2 3.6 3.1								
55.0 57.0	27.3 19.3	59.1 54.3	2.5 2.0									



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

Inserción			1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
	44.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (2316-1) 71.5 m Plumín 37.0 [m] Posición midfall (2316)									
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
12.7	78.0	83.4		27.6	·	·				
13.0 14.0 16.0 18.0	77.6 76.0 72.8 69.5	83.3 83.1 82.5 81.7	15.1 15.1 15.1 15.1	27.6 26.1 20.7 17.0						
20.0	66.1	80.9	13.6	14.3						
22.0 24.0 26.0 28.0	62.7 59.1 55.4 51.4	79.9 78.7 77.4 75.9	12.1 10.5 8.9 7.6	12.2 10.5 9.1 7.9						
30.0	47.3	74.1	6.6	6.9						
32.0 34.0 36.0 38.0	42.8 38.0 32.4 25.8	72.1 69.7 66.8 63.2	5.7 4.9 4.2 3.2	6.0 5.2 4.4 3.3						
36.0	25.6	03.2			uma prin	cinal 83 () [°]			
19.7	73.0	82.1	Angu	19.3	лна рин І	upai 63.	J []		I	I
20.0 22.0 24.0 26.0	72.6 69.3 65.9 62.5	82.0 81.3 80.5 79.5	15.1 15.1 14.2 12.5	19.3 19.2 16.7 14.1 12.1						
28.0	58.9	78.3	10.8	10.4						
30.0 32.0 34.0	55.1 51.2 47.0	77.0 75.4 73.6	9.1 7.8 6.8	9.0 7.9 6.9						
36.0 38.0	42.6 37.6	71.6 69.2	5.9 5.1	6.1 5.3						
40.0	32.1	66.2	4.5	4.7						
42.0	25.4	62.6	3.9 Ángu	ulo de plu	ıma prin	cinal 75 (1 ° 1		l	
30.6	65.0	78.8	Angu	9.6	 	ыраі <i>і</i> Э.і	, I			
30.6	62.6	78.8 78.2	10.8	9.6 8.6						
34.0	59.0	77.0	9.3	7.5						
36.0	55.3	75.7	8.1	6.4						
38.0	51.4	74.2	6.9	5.5						
40.0 42.0	47.3 42.8	72.4 70.4	5.9 5.0	4.6 3.8						
44.0	37.9	68.0	4.1	3.1						
46.0	32.4	65.1	3.3	2.5						
48.0 49.0	26.6 22.8	61.5 59.2	2.6 2.2							