

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]
	ļ	20.0		de plumi	pal, Punt n (2316- osición m	1) 53.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	D[°]			
10.7 11.0 12.0 13.0	78.0 77.4 75.5 73.5	53.5 53.4 53.2 52.9	15.1 15.1 15.1 15.1	30.1 30.1 30.1 29.4						
14.0 16.0 18.0	71.6 67.6 63.5	52.5 51.8 50.8	15.1 15.1 15.1	26.6 22.2 18.1						
20.0 22.0 24.0 26.0	59.3 54.8 50.0 44.9	49.7 48.3 46.7 44.9	14.4 13.2 12.2 10.4	15.4 13.2 11.6 10.1						
28.0 30.0 32.0	39.3 32.8 24.8	42.6 39.8 36.1	8.9 7.8 6.9	8.8 7.9 7.0						
45.4	70.0	50.5			ıma prin	cipal 83.0	0[°]		I	1
15.1 16.0 18.0 20.0	73.0 71.2 67.2 63.1	52.5 52.2 51.4 50.5	15.1 15.1 15.1 15.1	28.8 27.3 21.8 17.9						
22.0 24.0 26.0 28.0	58.8 54.3 49.5 44.4	49.3 48.0 46.3 44.4	14.3 13.2 12.1 10.3	15.2 13.0 11.4 10.0						
30.0 32.0 34.0	38.6 32.0 23.8	42.1 39.2 35.4	8.8 7.8 6.9	7.9 7.0	ıma nrin	oinal 75 /	0.1.01			
21.9	65.0	50.2	Angu	18.9	ıma prin İ	lipai 75.	J []			
22.0 24.0 26.0 28.0 30.0	64.8 60.6 56.2 51.5 46.5	50.2 49.1 47.9 46.3 44.6	15.1 15.1 14.2 12.7 11.1	18.9 16.3 14.0 12.1 10.7						
32.0 34.0 36.0	41.1 34.9 27.4	42.4 39.8 36.4	9.5 8.3 7.4	9.4 8.4 7.5						
00.0	55.0	40.0	Angı		ıma prin	cipal 65.0	D[°]		ı	
29.8 30.0 32.0 34.0 36.0 38.0 40.0	55.0 54.7 49.9 44.8 39.1 32.6 24.5	46.0 46.0 44.4 42.5 40.2 37.4 33.7	13.4 11.7 10.1 8.7 7.6 6.8	12.6 12.6 11.1 9.8 8.6 7.7 6.9						
	, 1.0				ıma prin	cipal 45.0	[°]C			
43.0 44.0 46.0 47.0	35.0 31.5 23.1 17.4	33.8 32.6 28.6 26.0	7.5 6.6 6.2	6.5 6.1 5.3 4.9	,	•				



Nº de ident.: 9842523/95738/

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

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

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 22.0	de plumí		1) 56.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.	[°]			
8.8 9.0 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0	78.0 77.4 74.7 72.0 69.2 66.4 63.5 57.4 50.8 43.5 34.9 23.6	44.7 44.7 44.4 44.1 43.7 43.2 42.7 41.5 40.0 38.1 35.6 31.9	15.1 15.1 15.1 15.1 15.1 15.1 15.1 12.8 10.4 8.3 6.9 Ángu	30.1 30.1 30.1 29.1 27.9 24.0 20.7 16.3 13.2 10.8 8.9 7.4 Jlo de plu	uma princ	cipal 83.	D [°]			
13.0	71.4	43.8	15.1	30.1						
14.0 16.0 18.0 20.0 22.0 24.0	68.6 62.9 56.7 50.1 42.7 33.9	43.4 42.4 41.2 39.6 37.7 35.0 31.2	15.1 15.1 15.0 14.6 11.5 9.2 7.5	26.9 20.3 16.0 13.0 10.7 8.9						
20.0	22.1	31.2			ıma prin	cipal 75.	1°1C			
18.1 20.0 22.0 24.0 26.0 28.0	65.0 59.3 52.9 45.8 37.7 27.5	42.1 41.0 39.6 37.8 35.5 32.3	15.1 14.6 12.9 10.2 8.4	21.5 17.7 14.2 11.7 9.7 8.2						
			Ángu	ılo de plu	ıma prin	cipal 65.	0 [°]			
24.7 26.0 28.0 30.0 32.0	55.0 50.6 43.3 34.6 23.1	38.6 37.7 35.8 33.2 29.5	14.4 11.4 9.1 7.6	14.0 12.8 10.6 8.8 7.4						
			Ángu	ılo de plu	ıma prin	cipal 45.	[°]			
35.6 36.0 38.0	35.0 33.2 21.0	28.6 28.4 24.4	9.0 7.5	6.4 6.2 5.0						

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

	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]
		20.0	0 m Plum Cabeza 25.0	de plumí	n (2316-	o de carç 1) 59.5 r nidfall (23	n Plumín	dfall 1		
			Ángı	ılo de plı	ıma prin	cipal 88.0	1°10			
9.4	78.0	47.6	79	30.1	a p	J. Par 55.	, ,			
10.0	76.6	47.5	15.1	30.1						
11.0	74.2	47.2	15.1	30.1						
12.0	71.8	46.9	15.1	27.3						
13.0	69.4	46.5	15.1	24.6						
14.0	66.9	46.1	15.1	21.6						
16.0	61.7	45.1	15.1	16.9						
18.0	56.3	43.8	13.5	13.7						
20.0 22.0	50.5 44.1	42.3 40.4	12.1 10.0	11.3 9.5						
24.0	36.8	37.9	8.1	7.9						
26.0	27.8	34.7	6.7	6.7						
20.0	21.0	0			ıma prin	cipal 83.0	1°10			
13.3	73.0	46.8	7 1190	28.8	I III pini	l loc.	J []	l	1	
14.0	73.0	46.6 46.6	15.1	28.0						
16.0	66.4	45.8	15.1	21.1						
18.0	61.2	44.7	15.1	16.7						
20.0	55.7	43.4	13.5	13.5						
22.0	49.9	41.9	12.2	11.3						
24.0	43.4	39.9	9.8	9.4						
26.0	36.0	37.4	8.0	7.9						
28.0	26.7	34.1	6.7	6.7						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
19.4	65.0	44.8	15.1	18.7						
20.0	63.3	44.5	15.1	18.4						
22.0	58.0	43.3	15.1	14.9						
24.0	52.3	41.9	12.9	12.2						
26.0 28.0	46.1 39.1	40.1 37.8	10.9 8.8	10.2 8.6						
30.0	39.1	34.9	8.8 7.4	7.3						
50.0	50.0	54.5			ıma nrin	cipal 65.0) [° 1	<u> </u>	<u> </u>	1
26.4	55.0	41.1	Angl	12.3	ina pilli	oipai 03.1	~ []			
28.0	50.3	39.9	12.0	11.1						
30.0	43.9	38.0	9.7	9.3						
32.0	36.5	35.6	7.9	7.8						
34.0	27.5	32.3	6.7	6.7						
			Ángı	ılo de plu	ıma prin	cipal 45.0	[°]			
38.1	35.0	30.4		5.4						
40.0	25.9	27.4	6.4	4.5						
41.0	19.5	25.0	5.8	4.0						



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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]
		20.0	0 m Plum Cabeza 28.0	de plumi	oal, Punt n (2316- osición m	1) 62.5 r	n Plumín	dfall		
			Ángu	ılo de plu	ıma prin	cipal 88.0	1°10			
10.0	78.0	50.6		30.1	·	·				
11.0	76.0	50.3	15.1	29.8						
12.0	73.8	50.0	15.1	27.9						
13.0	71.7	49.7	15.1	23.8						
14.0 16.0	69.5 65.0	49.3 48.5	15.1 15.1	20.9 16.4						
18.0	60.4	47.4	14.5	13.3						
20.0	55.5	46.1	11.6	10.9						
22.0	50.2	44.5	9.4	9.1						
24.0	44.6	42.6	7.8	7.7						
26.0	38.2	40.3	6.4	6.4						
28.0 30.0	30.7 20.7	37.3 33.1	5.4 4.4	5.4 4.4						
30.0	20.7	33.1			ıma prin	rinal 83 () [°]			
14.2	73.0	49.7	Aligo	24.5			J []		I	
16.0	69.1	49.7	15.1	24.5						
18.0	64.6	48.1	15.1	16.0						
20.0	59.9	47.0	14.2	13.2						
22.0	55.0	45.7	11.4	10.8						
24.0	49.7	44.1	9.4	9.1						
26.0 28.0	43.9 37.5	42.2 39.8	7.8 6.4	7.6 6.4						
30.0	29.8	36.7	5.4	5.4						
			Ángı	ılo de plı	ıma prin	cipal 75.0	D[°]			
20.6	65.0	47.5		15.7						
22.0	61.8	46.8	14.9	14.4						
24.0	57.0	45.6	12.9	11.8						
26.0 28.0	51.9 46.3	44.1 42.3	10.3 8.5	9.8 8.3						
30.0	40.3	40.1	7.0	7.0						
32.0	33.1	37.4	5.9	5.9						
34.0	24.1	33.7	5.0	5.0						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
28.1	55.0	43.6		10.1						
30.0	50.1	42.2	9.2	8.9						
32.0 34.0	44.4 38.0	40.3 37.9	7.6 6.4	7.6 6.4						
34.0 36.0	30.4	37.9 34.9	5.4	5.3						
					ıma prin	cipal 45.0	1°10		•	•
40.5	35.0	32.1	I	4.6		· ·				
42.0	29.2	30.0	5.5	3.9						
44.0	18.3	25.5	4.5	3.1						



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal: 2821-1

Cabeza de pluma principal: 2821-1

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]								
			m Plum							
			Cabeza 31.0	de plumí) [m] Po	n (2316- osición m	1) 65.5 r nidfall (23	n Plumín 316)	1		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]0			
10.7	78.0	53.5	15.1	30.1 30.1						
11.0 12.0	77.4 75.5	53.4 53.2	15.1 15.1	30.1						
13.0	73.5	52.9	15.1	29.9						
14.0	71.6	52.5	15.1	26.4						
16.0 18.0	67.6 63.5	51.8 50.8	15.1 15.1	21.4 17.5						
20.0	59.3	49.7	14.3	14.8						
22.0	54.8	48.3	12.6	12.6						
24.0	50.0	46.7	11.4	10.9						
26.0	44.9	44.9	9.3	9.1						
28.0 30.0	39.3 32.8	42.6 39.8	7.5 6.0	7.4 6.0						
32.0	24.8	36.1	4.4	4.4						
			Ánai	ılo de plı	ıma prin	cipal 83 (0 [°]			
15.1	73.0	52.5	15.1	27.2	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	J.pu. 00.	, <u>, , , , , , , , , , , , , , , , , , </u>			
16.0	71.2	52.2	15.1	26.2						
18.0	67.2	51.4	15.1	21.1						
20.0	63.1	50.5	15.1	17.2						
22.0 24.0	58.8 54.3	49.3 48.0	14.2 12.7	14.6 12.5						
26.0	49.5	46.3	11.4	10.9						
28.0	44.4	44.4	9.7	9.5						
30.0	38.6	42.1	8.3	8.2						
32.0	32.0	39.2	6.9	6.8						
34.0	23.8	35.4	5.0 Ángi	Jo de pli	ıma prin	cipal 75 (1°10			
21.9	65.0	50.2	, ange	17.9	I III	oipai 70.	,			
22.0	64.8	50.2	15.1	17.9						
24.0	60.6	49.1	15.1	15.7						
26.0	56.2	47.9	14.1	13.5						
28.0 30.0	51.5 46.5	46.3 44.6	12.1 10.5	11.6 10.2						
32.0	41.1	42.4	9.0	8.9						
34.0	34.9	39.8	7.7	7.8						
36.0	27.4	36.4	6.2 Ángi	Ilo de niu	ıma prin	rinal 65 (1 ° 1			
20.0	55.0	46.0	Angu		лна рин	sipai 03.1	- []		l	
29.8 30.0	55.0 54.7	46.0 46.0	12.5	12.0 12.0						
32.0	49.9	44.4	11.1	10.6						
34.0	44.8	42.5	9.5	9.1						
36.0	39.1	40.2	7.5	7.4						
38.0 40.0	32.6 24.5	37.4 33.7	6.0 4.1	5.9 4.0						
70.0	27.5	55.1			ıma prin	cipal 45.0	[°]C	<u> </u>	<u> </u>	1
43.0	35.0	33.8	9	3.7		,				
44.0	31.5	32.6	4.6	3.3						
46.0	23.1	28.6	3.6	2.6						
47.0	17.4	26.0	3.2	2.2						



2821-1

2821-1

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

2 - Vía ancha Valor de vuelco:

Lastre t	rasero [1	t]:		74.0						
Lastre o	central [t	:]:		0.0						
	Inserciór	า	1	2	3	4	5	6	7	8
Alcan-	Ángu-	Altura	Carga	Carga	Carga	Carga	Carga	Carga	Carga	Carga
ce	o de	de	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]
[m]	plumín	rolda-	1,,1	1,1	[,]	[,]	1,1	[,]	1,1	[[,]
[]	[°]	nas								
	' '	[m]								
	•	20.0	0 m Plum	na princir	oal. Punt	o de car	na 3 - Mi	dfall	•	
			Cabeza	de plumí	ín (2316-	·1) 68.5 r	n Plumír			
34.0 [m] Posición midfall (2316)										
			Ángı	ılo de plu	ıma prin	cipal 88.	0 [°]			
11.3	78.0	56.4	15.1	30.1						
12.0	76.8	56.3	15.1	30.1						
13.0	75.0	56.0	15.1	28.1						
14.0	73.3	55.7	15.1	25.6						
16.0	69.7	55.0	15.1	20.4						
18.0	66.0	54.1	15.0	16.8						
20.0 22.0	62.2 58.3	53.1	14.8 12.9	14.1 12.0						
22.0 24.0	54.2	52.0 50.6	12.9	10.3						
26.0	49.9	49.0	9.0	8.9						
28.0	45.2	47.1	7.5	7.4						
30.0	40.1	44.9	6.1	6.1						
32.0	34.4	42.2	4.9	5.0						
34.0	27.6	38.8	3.7	3.7						
			Ángı	ılo de plı	ıma prin	cipal 83.	0 [°]			
15.9	73.0	55.4		23.5						
16.0	72.9	55.4	15.1	23.5						
18.0	69.3	54.7	15.1	19.9						
20.0	65.6	53.8	15.1	16.4						
22.0	61.9	52.8	14.9	14.0						
24.0	57.9	51.6	12.7	11.9						
26.0	53.8	50.2	10.6	10.2						
28.0	49.4	48.6	9.1	9.0						
30.0	44.7	46.7	7.8	7.8						
32.0	39.6	44.4	6.7	6.8						
34.0	33.8	41.7	5.7	5.8						
36.0	26.9	38.2	4.3	4.3	ı	I	I	1	I	ı

			Aligu	ilo de pic	anna pinn	cipai 13.	o []		
23.2	65.0	52.9	15.1	15.3					
24.0	63.4	52.6	15.0	15.1					
26.0	59.5	51.4	12.4	12.8					
28.0	55.5	50.1	10.5	11.0					
30.0	51.2	48.6	8.9	9.5					
32.0	46.7	46.8	7.8	8.4					
34.0	41.7	44.7	6.8	7.3					
36.0	36.2	42.2	6.0	6.4					
38.0	29.8	39.1	4.9	5.2					
40.0	21.7	34.9	3.7	3.9					
			Ángu	ılo de plu	ıma prin	cipal 65.	0 [°]		
31.6	55.0	48.5		10.0					
32.0	54.1	48.3	10.2	10.0					
34.0	49.8	46.6	8.9	8.8					
36.0	45.1	44.8	7.6	7.6					
38.0	40.0	42.5	6.1	6.1					
40.0	34.2	39.8	5.0	5.0					
42.0	27.4	36.4	3.5	3.4					
			Ángu	ılo de plu	ıma prin	cipal 45.	0 [°]		
45.5	35.0	35.5		3.0					
46.0	33.3	35.0	3.9	2.9					
48.0	26.3	31.5	3.0	2.2					
50.0	18.1	26.4	2.2						

Ángulo de pluma principal 75.0 [°]



Nº de ident.: 9842523/95738/ 360°

Radio de descarga:

Pieza de articulación de pluma principal: 2821-1 2821-1 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]
) m Plum	na princir	al Punt	o do car	na 3 Mi	dfall		
			0 m Plum Cabeza 37.0	de plumí		1) 71.5 r	n Plumín			
					ıma prin					
11.9	78.0	59.4		28.9						
12.0 13.0	77.9 76.3	59.4 59.1	15.1	28.9 27.4						
14.0	76.3 74.7	58.8	15.1 15.1	24.0						
16.0	71.4	58.2	15.1	19.1						
18.0	68.1	57.4	14.7	15.8						
20.0 22.0	64.7 61.2	56.5 55.5	13.1 11.9	13.2 11.3						
24.0	57.5	54.2	9.9	9.6						
26.0	53.7	52.8	8.3	8.2						
28.0	49.7	51.2	7.1	7.1						
30.0 32.0	45.5 40.9	49.3 47.2	5.8 4.7	5.9 4.7						
34.0	35.7	44.6	3.7	3.8						
36.0	29.8	41.4	2.8	2.8						
			Ángı		ıma prin	cipal 83.0	[°]			
16.8	73.0	58.3	45.4	19.9						
18.0 20.0	71.1 67.7	57.9 57.1	15.1 15.1	18.9 15.6						
22.0	64.3	56.2	13.3	13.0						
24.0	60.8	55.1	11.8	11.2						
26.0 28.0	57.2 53.3	53.9 52.4	9.8 8.2	9.5 8.2						
30.0	49.3	50.8	7.1	7.1						
32.0	45.0	48.9	6.1	6.2						
34.0 36.0	40.4 35.2	46.7 44.1	5.2 4.5	5.3 4.6						
38.0	29.2	40.8	3.3	3.3						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]0			
24.4	65.0	55.7	10.0	12.9						
26.0 28.0	62.3 58.7	54.9 53.7	12.9 10.6	12.0 10.3						
30.0	54.9	52.4	8.9	8.8						
32.0	51.0	50.8	7.6	7.6						
34.0 36.0	46.8 42.3	49.0 47.0	6.6 5.7	6.7 5.8						
38.0	42.3 37.4	44.5	4.9	5.0						
40.0	31.7	41.6	4.0	4.0						
42.0	25.0	37.8	3.0 Ángi	lo de nli	ıma prin	rinal 65 (1 ° 1		l	
33.3	55.0	50.9	Angt	8.1	ina pilli	oipai 03.	- []			
34.0	53.6	50.9	8.0	8.1						
36.0	49.6	48.9	6.9	7.0						
38.0	45.3	47.0	6.0	6.0						
40.0 42.0	40.7 35.6	44.8 42.2	4.8 3.8	4.8 3.8						
44.0	29.7	39.1	2.7	2.7						
			Ángı	ılo de plu	uma prin	cipal 45.0	[°]			
47.9	35.0	37.3		2.3						
48.0	34.8	37.1	2.2	2.2						
50.0	29.4	34.1	2.3							



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 Lastre central [t]: 0.0

I	Inserciór	Ì	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]							
		20.0	0 m Plum	na princir	oal. Punt	o de caro	aa 3 - Mi	dfall	!	!
			Cabeza	de plumí		1) 74.5 r	n Plumín			
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]			
12.5	78.0	62.3		28.8						
13.0 14.0	77.3 75.8	62.2 62.0	15.1 15.1	28.8 26.6						
16.0	72.9	61.4	15.1	21.4						
18.0	69.8	60.7	15.1	17.6						
20.0	66.7	59.8	14.1	14.9						
22.0	63.5	58.9	12.8	12.7						
24.0	60.3	57.8	11.5	11.0 9.2						
26.0 28.0	56.9 53.3	56.5 55.1	9.5 7.8	9.2 7.8						
30.0	49.6	53.4	6.5	6.6						
32.0	45.7	51.6	5.1	5.2						
34.0	41.5	49.4	3.9	3.9						
36.0	36.8	46.9	2.8	2.8						
			Ángu	ılo de plu	ıma prin	cipal 83.0	0 [°]			
17.7	73.0	61.2		20.0						
18.0	72.5	61.1	15.1	20.0						
20.0	69.5	60.4	15.1	17.3						
22.0	66.4	59.5	14.5	14.7						
24.0 26.0	63.2 59.9	58.5 57.4	12.9 11.5	12.6 11.0						
28.0	56.5	56.1	9.7	9.5						
30.0	53.0	54.7	8.3	8.4						
32.0	49.2	53.0	7.1	7.2						
34.0	45.3	51.2	5.7	5.8						
36.0	41.0	49.0	4.5	4.6						
38.0 40.0	36.3 31.0	46.4 43.4	3.4 2.6	3.5 2.6						
			Ángu	ılo de plu	ıma prin	cipal 75.0	0 [°]			
25.7	65.0	58.4		13.1						
26.0	64.5	58.3	12.6	13.1						
28.0	61.3	57.2	11.3	11.7						
30.0 32.0	57.9 54.4	56.0 54.6	9.7 8.3	10.3 8.9						
34.0	54.4 50.8	53.1	7.3	7.9						
36.0	46.9	51.3	6.4	6.9						
38.0	42.8	49.2	5.5	5.9						
40.0	38.3	46.8	4.8	5.1						
42.0 44.0	33.2 27.4	44.0 40.6	4.0 2.8	4.2 2.9						
44.0	41.4	40.0			.ma :=::::	oinal CE t	1 0 1 0 1		I	1
			Angu		ıma prin	Jipai 65.	ן ו		1	
35.0 36.0	55.0 53.2	53.4 52.8	8.2	8.4 8.3						
38.0	49.5	51.1	7.2	7.3						
40.0	45.6	49.2	6.3	6.3						
42.0	41.3	47.1	4.5	4.5						
44.0	36.7	44.6	3.0	3.0						
			Ángu	ılo de plu	ıma prin	cipal 45.0	[°]0			
50.6	35.0	39.0	2.1							



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]
		20.0	0 m Plum Cabeza 43.0	de plumi	pal, Punt ín (2316- osición m	1) 77.5 n	n Plumín	dfall		
			Ángı	ılo de plı	ıma prin	cipal 88.0) [°]			
13.2	78.0	65.2	15.1	28.5						
14.0	76.8	65.0	15.1	28.5						
16.0	74.1	64.5	15.1	23.1						
18.0	71.3	63.8	15.1	19.1						
20.0 22.0	68.4 65.5	63.1 62.2	14.9	16.4 14.0						
24.0	62.5	61.2	11.6	12.2						
26.0	59.5	60.1	9.9	10.3						
28.0	56.3	58.8	7.8	8.2						
30.0	53.0	57.3	6.1	6.5						
32.0	49.5	55.7	4.8	5.1						
34.0	45.9	53.8	3.7	3.9						
36.0	42.0	51.7	2.7	2.8						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]C			
18.6	73.0	64.0	15.1	19.9						
20.0	71.0	63.6	15.1	19.0						
22.0	68.1	62.8	15.1	16.1						
24.0 26.0	65.2 62.2	61.9 60.9	13.8 12.4	13.9 12.1						
28.0	59.1	59.7	10.8	10.5						
30.0	56.0	58.4	9.0	8.8						
32.0	52.6	56.9	7.5	7.6						
34.0	49.2	55.3	6.2	6.3						
36.0	45.5	53.4	4.9	4.9						
38.0	41.5	51.3	3.6	3.6						
40.0	37.3	48.8	2.6	2.6						
				 	ıma prin	cipal 75.0) [°]			
27.0	65.0	61.1	13.7	13.1						
28.0 30.0	63.4 60.4	60.6 59.5	13.7 11.7	13.0 11.3						
30.0 32.0	57.3	59.5 58.3	11.7	10.1						
34.0	54.0	56.9	8.8	8.8						
36.0	50.6	55.3	7.7	7.9						
38.0	47.0	53.5	6.5	6.6						
40.0	43.2	51.5	5.2	5.3						
42.0	39.0	49.2	4.1	4.2						
44.0	34.5	46.4	3.2	3.3						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]C			
36.7	55.0	55.9		8.1						
38.0	52.9	55.0	8.2	7.5						
40.0	49.4	53.4	6.6	6.5						
42.0 44.0	45.8 41.8	51.5 49.4	5.2 3.5	5.1 3.5						
46.0	37.6	46.9	2.2	2.1						
	00						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	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]
		20.0	0 m Plum Cabeza 34.0	de plumí	n (2316-	o de carç 1) 80.5 r nidfall (23	n Plumín	dfall I		
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]C			
11.3 12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0	78.0 76.8 75.0 73.3 69.7 66.0 62.2 58.3 54.2	56.4 56.3 56.0 55.7 55.0 54.1 53.1 52.0 50.6	15.1 15.1 15.1 15.1 15.1 15.0 14.9 12.2 7.7	30.1 30.1 29.6 27.9 22.7 18.5 14.9 11.1 7.1						
26.0	49.9	49.0	4.2	4.1						
28.0	45.2	47.1	2.7	2.7						
			Angu		ıma prin	cipal 83.0	0[°]			1
15.9 16.0 18.0 20.0	73.0 72.9 69.3 65.6	55.4 55.4 54.7 53.8	15.1 15.1 15.1	24.8 24.8 22.5 18.5						
22.0 24.0 26.0 28.0 30.0	61.9 57.9 53.8 49.4 44.7	52.8 51.6 50.2 48.6 46.7	15.1 12.5 8.6 5.9 3.7	15.3 11.8 8.3 5.8 3.5						
			Ángı	ılo de plu	ıma prin	cipal 75.0	1°10			
23.2 24.0 26.0 28.0 30.0 32.0	65.0 63.4 59.5 55.5 51.2 46.7	52.9 52.6 51.4 50.1 48.6 46.8	15.1 15.1 14.4 12.3 9.5	16.2 15.4 13.1 11.1 9.2 7.0	·					
34.0	41.7	44.7	4.6	4.4						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
31.6 32.0 34.0 36.0	55.0 54.1 49.8 45.1	48.5 48.3 46.6 44.8	10.5 8.2 5.1	8.0 7.7 6.4 4.8						
38.0	40.0	42.5	2.5	2.3						



Nº de ident.: 9842523/95738/

Radio de descarga:

360°

Pieza de articulación de pluma principal:

2821-1

Valor de vuelco:

Cabeza de pluma principal:

2821-1

2 - Vía ancha 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]
		20.	0 m Plum Cabeza 37.0	na princip de plumí 0 [m] Po	n (2316-	1) 83.5 r	n Plumín	dfall 1		
			Ángı	ılo de plu	ıma prin	cipal 88.0] [°]			
11.9 12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0 26.0	78.0 77.9 76.3 74.7 71.4 68.1 64.7 61.2 57.5 53.7	59.4 59.4 59.1 58.8 58.2 57.4 56.5 55.5 54.2 52.8	15.1 15.1 15.1 15.1 15.1 15.1 13.1 11.5 8.4 5.1	28.8 28.8 28.8 25.8 21.0 17.4 13.8 11.2 7.9 4.8	·					
28.0	49.7	51.2	2.6	2.5						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
16.8 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0	73.0 71.1 67.7 64.3 60.8 57.2 53.3 49.3 45.0	58.3 57.9 57.1 56.2 55.1 53.9 52.4 50.8 48.9	15.1 15.1 13.9 12.5 9.3 6.3 4.1 2.8	20.6 20.6 16.9 14.1 11.9 8.8 6.1 4.2 2.8						
			Ángı	ılo de plu	ıma prin	cipal 75.0	1°10			
24.4 26.0 28.0 30.0 32.0 34.0 36.0	65.0 62.3 58.7 54.9 51.0 46.8 42.3	55.7 54.9 53.7 52.4 50.8 49.0 47.0	14.0 11.4 9.3 7.3 5.4 3.3	13.2 12.9 10.9 9.0 7.1 5.3 3.1	•					
				ılo de plu	ıma prin	cipal 65.0	1°10			
33.3 34.0 36.0 38.0	55.0 53.6 49.6 45.3	50.9 50.5 48.9 47.0	8.0 6.2 3.6	6.9 6.5 5.4 3.5	•					
40.0	41.1	44.8	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

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]
		20.0	0 m Plum Cabeza 40.0	na princip de plumí 0 [m] Po	n (2316-	1) 86.5 r	n Plumín	dfall		
			Ángı	ılo de plı	ıma prin	cipal 88.0	D[°]			
12.5 13.0 14.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0	78.0 77.3 75.8 72.9 69.8 66.7 63.5 60.3 56.9 53.3	62.3 62.2 62.0 61.4 60.7 59.8 58.9 57.8 56.5 55.1	15.1 15.1 15.1 15.1 13.4 10.6 8.5 5.5 3.1	27.0 27.0 25.7 20.7 16.9 13.7 10.7 8.2 5.4 3.0						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]C			
17.7 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0	73.0 72.5 69.5 66.4 63.2 59.9 56.5 53.0 49.2	61.2 61.1 60.4 59.5 58.5 57.4 56.1 54.7 53.0	15.1 15.1 14.6 12.4 10.5 7.2 4.6 3.0	18.8 18.8 16.8 14.2 12.0 10.0 6.9 4.5 3.0						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
25.7 26.0 28.0 30.0 32.0 34.0 36.0	65.0 64.5 61.3 57.9 54.4 50.8 46.9	58.4 58.3 57.2 56.0 54.6 53.1 51.3	12.9 11.8 9.9 7.6 5.7 4.2	12.3 12.3 11.3 9.7 7.5 5.7 4.1						
L			Angı	ılo de plu	ıma prin	cipal 65.0	[°]		ı	
35.0 36.0 38.0 40.0 41.0	55.0 53.2 49.5 45.6 43.8	53.4 52.8 51.1 49.2 48.2	7.0 4.6 2.5 2.0	5.9 5.4 4.4 2.5						



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:

74.0

Lastre trasero [t]: 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]
		20.0	0 m Plum Cabeza 43.0	de plumí	oal, Punt n (2316- osición m	1) 89.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
13.2 14.0 16.0 18.0 20.0 22.0 24.0	78.0 76.8 74.1 71.3 68.4 65.5 62.5	65.2 65.0 64.5 63.8 63.1 62.2 61.2	15.1 15.1 15.1 15.1 15.1 11.4 8.1	27.7 27.7 23.5 19.6 16.8 12.1 8.3						
26.0 28.0	59.5 56.3	60.1 58.8	5.7 3.5	5.6 3.4						
			Ángı	ılo de plu	ıma prin	cipal 83.0	1°10			
18.6	73.0	64.0	15.1	19.7						
20.0 22.0 24.0 26.0 28.0 30.0 32.0	71.0 68.1 65.2 62.2 59.1 56.0 52.6	63.6 62.8 61.9 60.9 59.7 58.4 56.9	15.1 15.1 13.2 10.3 7.8 5.1 3.0	19.6 16.6 13.4 10.2 7.6 5.0 2.9						
			Ángu	ılo de plu	ıma prin	cipal 75.0	[°]			
27.0 28.0 30.0 32.0 34.0 36.0	65.0 63.4 60.4 57.3 54.0 50.6	61.1 60.6 59.5 58.3 56.9 55.3	13.7 13.7 12.0 10.3 7.0 4.5	12.3 11.3 9.7 8.3 6.8 4.4						
38.0	47.0	53.5	3.0	3.0						
00.7	55.0	55.0	Angu		ıma prin	cipal 65.0	[°]			
36.7 38.0 40.0 41.0	55.0 52.9 49.4 47.6	55.9 55.0 53.4 52.5	5.6 3.3 2.2	5.0 4.4 3.1 2.1						



N° 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]: 74.0

	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]
		20.0	0 m Plum Cabeza 46.0	na princip de plumí 0 [m] Po	n (2316-	1) 92.5 r	n Plumín	dfall I		
			Ángı	ılo de plı	ıma prin	cipal 88.0	D[°]			
13.8 14.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0	78.0 77.7 75.2 72.6 69.9 67.2 64.5 61.7 58.8	68.2 68.1 67.6 67.0 66.3 65.5 64.6 63.5 62.4	15.1 15.1	24.0 24.0 22.0 18.4 15.5 12.7 8.9 6.0 4.1 Jlo de plu	uma princ	cipal 83.	0[°]			
22.0 24.0 26.0 28.0 30.0 32.0	69.6 66.9 64.2 61.4 58.5 55.5	66.0 65.2 64.2 63.2 62.0 60.7	15.0 14.2 10.8 8.1 5.8 3.6	15.5 13.4 10.3 8.0 5.7 3.5						
			Ángu	ılo de plu	ıma prin	cipal 75.0	[°]			
28.2 30.0 32.0 34.0 36.0 38.0	65.0 62.5 59.7 56.7 53.6 50.4	63.8 63.0 61.8 60.6 59.1 57.5	11.3 9.4 7.8 5.3 3.3	11.1 9.7 8.3 7.1 5.3 3.3						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
38.5 40.0	55.0 52.6	58.3 57.2	4.4	4.2 3.6						
42.0	49.3	55.6	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

	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]
		20.0	0 m Plum Cabeza 49.0	de plumí	oal, Punt ín (2316- osición m	1) 95.5 r	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
14.4 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0	78.0 76.1 73.7 71.2 68.7 66.1 63.6 60.9 58.2	71.1 70.7 70.2 69.5 68.7 67.9 66.9 65.8 64.6	15.1 15.1 14.3 13.5 9.8 6.5 4.1 2.9	22.6 21.9 18.2 15.1 12.8 9.2 6.3 4.2 2.9						
					uma prin	cipal 83.0	1°10			
20.3 22.0 24.0 26.0 28.0 30.0	73.0 70.9 68.4 65.9 63.3 60.6	69.8 69.2 68.4 67.6 66.6 65.5	15.1 13.7 11.3 8.3 6.1	15.7 15.4 13.2 10.8 8.1 6.2						
32.0	57.9	64.3	4.0	4.1	<u> </u>					
29.5 30.0 32.0 34.0 36.0 38.0	65.0 64.3 61.7 59.0 56.2 53.3	66.5 66.3 65.3 64.1 62.8 61.4	10.2 9.5 7.8 6.1 3.8	10.0 9.6 8.2 7.0 5.9 3.7	uma prin	сіраі 75.(ט [°]			
40.2 42.0 43.0	55.0 52.3 50.8	60.8 59.5 58.7	Ángu 3.1 2.2	3.3 2.6 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

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]
		20.0	0 m Plum Cabeza 52.0	de plumi	oal, Punt ín (2316- osición m	1) 98.5 r	n Plumín	dfall I		
			Ángı	ılo de plı	ıma prin	cipal 88.0	[°]C			
15.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0	78.0 76.9 74.6 72.3 70.0 67.6 65.2 62.7 60.2	74.0 73.8 73.3 72.7 72.0 71.2 70.3 69.3 68.2	15.1 15.1 14.1 11.9 9.6 6.6 4.2 2.7	20.4 20.4 17.5 14.6 11.8 9.2 6.4 4.1 2.8	uma prin	cinal 83 (0.10			
21.2	73.0	72.6	Aligo	14.2			<u> </u>			
22.0 24.0 26.0 28.0 30.0 32.0 34.0	72.1 69.7 67.4 64.9 62.5 59.9 57.3	72.4 71.7 70.9 70.0 68.9 67.8 66.6	15.0 13.4 11.4 8.6 6.2 4.5 3.0	14.2 12.8 11.2 8.4 6.2 4.5 3.0						
			Ángu	ılo de plu	ıma prin	cipal 75.0	[°]			
30.8 32.0 34.0 36.0 38.0	65.0 63.5 61.0 58.4 55.8	69.3 68.7 67.6 66.4 65.1	8.8 7.7 6.4 4.5	8.9 8.1 6.9 5.8 4.5						
41.9 42.0 44.0	55.0 54.9 52.3	63.2 63.2 61.7	Ángu 2.6 2.1	2.5 2.5	uma prind	cipal 65.0	0 [°]			



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]
		20.0	0 m Plum Cabeza c 55.0	de plumír	า (2316-1	o de caro 1) 101.5 nidfall (23	m Plumíı	dfall n		
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]			
15.7	78.0	77.0	15.1	18.0						
16.0	77.6	76.9	15.1	18.0						
18.0	75.5	76.4	15.1	16.6						
20.0	73.3	75.8	14.9	14.2						
22.0	71.1	75.2	11.7	11.2						
24.0	68.9	74.4	9.2	9.1						
26.0	66.6	73.6	6.6	6.5						
28.0	64.3	72.6	4.3	4.3						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
22.1	73.0	75.5	12.8	12.4						
24.0	70.9	74.9	12.5	12.1						
26.0	68.7	74.1	10.5	10.4						
28.0	66.4	73.3	8.7	8.7						
30.0	64.1	72.3	6.3	6.3						
32.0	61.7	71.3	4.4	4.4						
34.0	59.3	70.1	3.2	3.2						
			Ángι	ılo de plu	ıma prin	cipal 75.0	[°]C			
32.0	65.0	72.0		7.6						
34.0	62.7	71.0	7.2	6.7						
36.0	60.3	69.9	6.0	5.6						
38.0	57.9	68.7	5.0	4.7						
40.0	55.4	67.4	3.4	3.3						
41.0	54.1	66.6	2.6	2.5						



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]
			0 m Plum Cabeza 16.0	de plumí		1) 38.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	0 [°]			
7.7 8.0 9.0 10.0 11.0 12.0 13.0 14.0	78.0 76.7 73.0 69.1 65.2 61.1 56.8 52.3	41.8 41.7 41.4 41.1 40.6 40.0 39.4 38.6	15.1 15.1 15.1 15.1 15.1 15.1 14.9 14.8	30.1 30.1 30.1 29.5 24.6 21.2 18.0 15.5						
16.0 18.0	42.1 29.0	36.7 33.8	12.1 9.7	12.3 10.2						
10.0	20.0	00.0			ıma prin	cipal 83 (1°10			
11.0 12.0 13.0 14.0	73.0 69.4 65.4 61.3	41.2 40.8 40.4 39.8	15.1 15.1 15.1	30.1 30.0 25.5 21.3	•	•				
16.0 18.0 20.0	52.5 42.4 29.4	38.4 36.5 33.7	15.1 12.8 10.8	15.7 12.3 10.2						
			Ángı		ıma prin	cipal 75.0	0[°]			
16.3 18.0 20.0 22.0	65.0 58.0 48.8 37.9	39.5 38.6 37.0 34.8	15.1 14.8 11.9	24.2 18.5 14.1 11.2						
			Ángı	ılo de plu	ıma prin	cipal 65.0	0 [°]			
22.5 24.0 26.0	55.0 48.0 36.8	36.5 35.3 33.0	12.8 9.9	15.4 13.0 10.4						
			Ángı	ılo de plu	ıma prin	cipal 45.0	0[°]			
32.8 34.0 35.0	35.0 26.1 18.1	27.3 25.6 23.0	8.3 7.6	9.9 8.9						



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]
		23.0	0 m Plum Cabeza 19.0	de plumi	oal, Punt ín (2316- osición m	1) 41.5 r	n Plumín	dfall I		
			Ángu	ılo de plu	uma prin	cipal 88.0	0 [°]			
8.3 9.0 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0	78.0 75.7 72.6 69.4 66.1 62.7 59.1 51.6 43.2 32.9	44.8 44.6 44.3 43.9 43.4 42.9 42.3 40.9 39.0 36.3	15.1 15.1 15.1 15.1 15.1 15.1 14.8 14.1 11.5 9.1	30.1 30.1 30.1 29.9 25.0 21.5 18.8 14.6 11.8 9.6						
	•		Ángı	ılo de plı	ıma prin	cinal 83 (0 [°]			
11.9 12.0 13.0 14.0 16.0 18.0 20.0 22.0	73.0 72.8 69.5 66.2 59.3 51.9 43.4 33.2	44.0 44.0 43.7 43.2 42.1 40.7 38.8 36.2	15.1 15.1 15.1 15.1 15.1 12.6 10.5	30.1 30.1 29.1 25.5 18.9 14.7 11.9 9.8	·					
	00.2	00.2			uma prin	rinal 75 (1°10			
17.6 18.0 20.0 22.0 24.0 26.0	65.0 63.6 56.5 48.7 39.7 28.3	42.2 42.1 40.9 39.3 37.1 34.1	15.1 15.1 14.7 12.0 9.8	23.4 22.7 17.1 13.7 11.1 9.2		o.pai 70.	~ []			
					ıma prin	cipal 65.0	1°10			
24.2 26.0 28.0 30.0	55.0 48.0 38.9 27.1	38.9 37.5 35.3 32.2	14.3 11.4 9.2	15.2 12.8 10.4 8.7	and print		~ []			
			Ángu	ılo de plu	ıma prin	cipal 45.0	0 [°]			
35.3 36.0 38.0	35.0 30.9 16.5	29.0 28.2 23.4	9.9 8.0	9.2 8.7						



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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]
) m Plum Cabeza 22.0	de plumí		1) 44.5 r	n Plumír			
			Ángı	ılo de plu	ıma prin	cipal 88.	0 [°]			
8.9 9.0 10.0 11.0 12.0	78.0 77.7 75.0 72.3 69.5	47.7 47.7 47.4 47.1 46.7	15.1 15.1 15.1 15.1 15.1	30.1 30.1 30.1 28.4 26.7						
13.0 14.0 16.0 18.0 20.0	66.7 63.8 57.7 51.2 43.9	46.3 45.8 44.6 43.1 41.2	15.1 15.1 14.6 13.9 11.3	22.7 19.6 15.5 12.7 10.4						
22.0 24.0	35.4 24.3	38.7 35.2	9.0 7.4	8.7 7.3						
					ıma prin	cipal 83.	1°10			
12.8 13.0 14.0	73.0 72.5 69.7	46.9 46.9 46.5	15.1 15.1	30.1 30.1 26.7	·	•				
16.0 18.0 20.0 22.0 24.0	63.9 57.9 51.4 44.1 35.7	45.6 44.4 42.9 41.0 38.6	15.1 13.9 12.4 10.1 8.2	19.8 15.6 12.7 10.5 8.8						
26.0	24.7	35.1	7.0	7.4		oin al 75 i	0.001			
18.9 20.0 22.0 24.0 26.0 28.0	65.0 61.6 55.4 48.6 41.0 31.8	45.0 44.4 43.1 41.5 39.4 36.6	15.1 14.5 13.2 10.6 8.7	20.3 18.1 14.4 11.9 9.9 8.4	uma prind	cipai 75.	0[]			
				ılo de plu	ıma prin	cipal 65.	0 [°]			
26.0 28.0 30.0 32.0	55.0 48.0 40.3 30.9	41.4 39.8 37.6 34.8	12.3 9.8 8.1	13.3 11.2 9.3 7.9	•					
37.8 38.0 40.0 41.0	35.0 33.8 21.9 15.2	30.8 30.8 26.9 23.7	Ángu 8.6 7.3 6.7	8.2 8.1 7.0	ıma prind	cipal 45.	0[°]			



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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]
		23.0	0 m Plum Cabeza 25.0	de plumi	oal, Punt ín (2316- osición m	1) 47.5 r	n Plumín	dfall		
			Ánaı	ılo de plu	ıma prin	cipal 88.0	1°10			
9.5	78.0	50.6	Ī	30.1	'					
10.0	76.9	50.5	15.1	30.1						
11.0	74.5	50.2	15.1	30.1						
12.0 13.0	72.1 69.6	49.9 49.5	15.1 15.1	26.5 23.5						
14.0	67.2	49.1	15.1	20.5						
16.0	62.0	48.1	15.1	16.1						
18.0	56.6	46.9	12.5	13.1						
20.0	50.8	45.4	10.4	10.9						
22.0 24.0	44.4 37.2	43.5 41.1	8.7 7.2	9.1 7.7						
24.0 26.0	28.3	41.1 37.9	6.1	6.6						
20.0	20.0	01.0			uma prin	cipal 83.0	1°10			
13.7	73.0	49.8	15.1	27.7						
14.0	72.2	49.7	15.1	27.7						
16.0	67.3	48.9	15.1	20.7						
18.0	62.2	47.9	15.1 12.6	16.2						
20.0 22.0	56.8 51.0	46.7 45.2	12.6	13.1 11.0						
24.0	44.6	43.3	8.8	9.2						
26.0	37.4	40.9	7.3	7.8						
28.0	28.6	37.8	6.3	6.7						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
20.1	65.0	47.7		17.8						
22.0 24.0	60.1 54.6	46.7 45.4	15.1 13.1	15.0 12.3						
24.0 26.0	48.6	43.7	11.1	10.4						
28.0	42.0	41.7	9.1	8.7						
30.0	34.2	39.1	7.5	7.5						
32.0	24.4	35.4	6.4	6.4	<u> </u>					
			Angı		ıma prin	cipal 65.0	D[°]			
27.7	55.0	43.8	40.7	11.7						
28.0 30.0	54.1 48.0	43.7 42.0	12.7	11.7 9.7						
30.0	48.0	42.0 39.9	8.5	9.7 8.2						
34.0	33.5	37.2	7.1	7.1						
36.0	23.3	33.5	6.1	6.1						
			Angı		ıma prin	cipal 45.0	[°]			
40.2	35.0	32.5		7.1						
42.0	26.6	29.7	6.5	6.3						
43.0	20.4	27.4	6.0	5.8						



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

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

Alcance Angu- o de Tolor Altura o de Tolor		Inserciór	1	1	2	3	4	5	6	7	8
Cabeza de plumín (2316-1) 50.5 m Plumín 28.0 [m] Posición midfall (2316) 10.1	ce	o ďe plumín	de rolda- nas					Carga [t]			
10.1 78.0 53.6 30.1 11.0 76.2 53.4 15.1 30.1 12.0 74.1 53.1 15.1 30.1 13.0 71.9 52.7 15.1 29.5 18.0 60.6 50.4 15.1 19.5 22.0 55.7 49.1 15.1 14.2 24.0 44.9 45.7 13.1 12.4 22.0 63.6 65.3 51.5 15.1 19.5 22.0 55.7 49.1 15.1 14.2 24.0 24.0 44.9 45.7 13.1 12.4 22.0 23.0 21.3 36.4 8.6			23.0	Cabeza	de plumí	ín (2316-	1) 50.5 r	n Plumín	dfall I		
11.0				Ángı		ıma prin	cipal 88.0	[°]			
12.0											
13.0											
14.0 69.7 52.4 15.1 29.0											
16.0 65.3 51.5 15.1 19.5 19.5 20.0 55.7 49.1 15.1 19.5 22.0 50.5 47.6 15.1 19.5 22.0 50.5 47.6 15.1 19.5 22.0 50.5 47.6 15.1 14.2 24.0 44.9 45.7 13.1 12.4 26.0 38.5 43.4 11.2 10.9 28.0 31.1 40.5 9.8 9.7 30.0 21.3 36.4 86 8.6 36 30.0 21.3 36.4 86 8.6 36 30.0 21.3 36.4 86 8.6 36 30.0 21.3 36.4 86 8.6 36 30.0 21.3 36.4 8.6 86 86 30.0 21.3 36.4 86 8.6 30.0 21.3 36.4 86 8.6 30.0 21.3 36.4 86 8.6 30.0 21.3 36.4 86 8.6 30.0 21.3 36.4 86 8.6 30.0 21.3 36.4 86 8.6 30.0 21.3 36.4 86 8.6 30.0 21.3 36.4 86 8.6 30.0 21.3 36.4 86 8.6 30.0 21.3 36.0 36.3 40.3 15.1 28.6 36 36.0 36.0 21.5 11.0 28.6 36 36.0 36.0 36.0 36.0 36.0 36.0 36.0											
20.0 55.7 49.1 15.1 16.5 22.0 50.5 47.6 15.1 14.2 24.0 44.9 44.9 45.7 13.1 12.4 28.0 31.1 40.5 9.8 9.7 30.0 21.3 36.4 8.6 8.6 8.6 8.6											
22.0	18.0	60.6	50.4	15.1	19.5						
24.0											
26.0 38.5 43.4 11.2 10.9 9.8 9.7 30.0 21.3 36.4 8.6 8.6 8.6											
28.0 31.1 40.5 9.8 9.7 36.4 8.6 8.6 8.6 8.6 8.6 8.6 8.6 8.6 8.6 8.6											
30.0 21.3 36.4 8.6 8.6 8.6											
14.6											
16.0				Ángı	ılo de plu	ıma prin	cipal 83.0	D[°]			
18.0 65.4 51.3 15.1 23.6 20.0 60.8 50.2 15.1 19.7 22.0 55.9 48.9 15.1 16.5 24.0 50.7 47.4 14.9 14.3 26.0 45.0 45.5 13.0 12.5 28.0 38.7 43.2 11.3 11.0 30.0 31.3 40.3 10.0 9.8 32.0 21.6 36.3 8.7 8.7	14.6	73.0	52.7	15.1	30.1						
20.0 60.8 50.2 15.1 19.7 22.0 55.9 48.9 15.1 16.5 24.0 50.7 47.4 14.9 14.3 26.0 45.5 13.0 12.5 28.0 38.7 43.2 11.3 11.0 30.0 31.3 40.3 10.0 9.8 32.0 21.6 36.3 8.7 8.7 21.4 65.0 50.4 22.0 63.6 50.1 15.1 22.1 22.1 24.0 58.9 49.0 15.1 18.4 26.0 53.9 47.6 15.1 15.6 28.0 48.5 46.0 14.6 13.7 30.0 42.7 43.9 12.6 12.0 32.0 36.0 41.4 11.0 10.6 34.0 27.9 38.2 9.7 9.5 Angulo de pluma principal 65.0 [°] 29.4 55.0 46.3 15.1 10.0 10.6 33.0 53.5 45.9 14.8 14.9 32.0 48.1 44.2 12.6 12.9 34.0 42.1 42.2 10.9 11.3 36.0 35.4 39.6 9.5 10.1 38.0 27.1 36.3 8.5 9.1 Angulo de pluma principal 45.0 [°] Angulo de pluma principal 45.0 [°]											
22.0											
24.0											
26.0											
28.0 38.7 43.2 11.3 11.0 30.0 31.3 40.3 10.0 9.8 32.0 21.6 36.3 8.7 8.7											
32.0 21.6 36.3 8.7 8.7 Angulo de pluma principal 75.0 [°] 21.4 65.0 50.4 22.6 22.0 63.6 50.1 15.1 22.1 22.1 24.0 58.9 49.0 15.1 18.4 26.0 53.9 47.6 15.1 15.6 28.0 48.5 46.0 14.6 13.7 30.0 42.7 43.9 12.6 12.0 32.0 36.0 41.4 11.0 10.6 34.0 27.9 38.2 9.7 9.5 Angulo de pluma principal 65.0 [°] 29.4 55.0 46.3 15.1 31.1 31.1 31.1 31.1 31.1 31.1 31											
Ángulo de pluma principal 75.0 [°] 21.4 65.0 50.4 22.6 22.0 63.6 50.1 15.1 22.1											
21.4 65.0 50.4 22.6 22.6 22.0 63.6 50.1 15.1 22.1 22.1 22.1 22.0 58.9 49.0 15.1 18.4 26.0 53.9 47.6 15.1 15.6 28.0 48.5 46.0 14.6 13.7 30.0 42.7 43.9 12.6 12.0 32.0 36.0 41.4 11.0 10.6 34.0 27.9 38.2 9.7 9.5	32.0	21.6	36.3	8.7	8.7						
22.0 63.6 50.1 15.1 22.1 24.0 58.9 49.0 15.1 18.4 26.0 53.9 47.6 15.1 15.6 28.0 48.5 46.0 14.6 13.7 30.0 42.7 43.9 12.6 12.0 32.0 36.0 41.4 11.0 10.6 34.0 27.9 38.2 9.7 9.5 Angulo de pluma principal 65.0 [°]				Ángı		ıma prin	cipal 75.0	[°]			
24.0 58.9 49.0 15.1 18.4 26.0 53.9 47.6 15.1 15.6 28.0 48.5 46.0 14.6 13.7 30.0 42.7 43.9 12.6 12.0 32.0 36.0 41.4 11.0 10.6 34.0 27.9 38.2 9.7 9.5				15.4							
26.0											
28.0											
32.0 36.0 41.4 11.0 10.6 34.0 27.9 38.2 9.7 9.5 Angulo de pluma principal 65.0 [°] 29.4 55.0 46.3 15.1 30.0 53.5 45.9 14.8 14.9 32.0 48.1 44.2 12.6 12.9 34.0 42.1 42.2 10.9 11.3 36.0 35.4 39.6 9.5 10.1 38.0 27.1 36.3 8.5 9.1 Angulo de pluma principal 45.0 [°] 42.7 35.0 34.2 6.2 44.0 29.7 32.4 7.0 5.7											
34.0 27.9 38.2 9.7 9.5 Ángulo de pluma principal 65.0 [°] 29.4 55.0 46.3 15.1 30.0 53.5 45.9 14.8 14.9 32.0 48.1 44.2 12.6 12.9 34.0 42.1 42.2 10.9 11.3 36.0 35.4 39.6 9.5 10.1 38.0 27.1 36.3 8.5 9.1 Ángulo de pluma principal 45.0 [°] 42.7 35.0 34.2 6.2 44.0 29.7 32.4 7.0 5.7											
Ángulo de pluma principal 65.0 [°] 29.4 55.0 46.3 15.1 30.0 53.5 45.9 14.8 14.9 32.0 48.1 44.2 12.6 12.9 34.0 42.1 42.2 10.9 11.3 36.0 35.4 39.6 9.5 10.1 38.0 27.1 36.3 8.5 9.1 Ángulo de pluma principal 45.0 [°] 42.7 35.0 34.2 6.2 44.0 29.7 32.4 7.0 5.7											
29.4 55.0 46.3 15.1 30.0 53.5 45.9 14.8 14.9 32.0 48.1 44.2 12.6 12.9 34.0 42.1 42.2 10.9 11.3 36.0 35.4 39.6 9.5 10.1 38.0 27.1 36.3 8.5 9.1 Angulo de pluma principal 45.0 [°] 42.7 35.0 34.2 6.2 44.0 29.7 32.4 7.0 5.7	34.0	27.9	38.2			L					
30.0 53.5 45.9 14.8 14.9 32.0 48.1 44.2 12.6 12.9 34.0 42.1 42.2 10.9 11.3 36.0 35.4 39.6 9.5 10.1 38.0 27.1 36.3 8.5 9.1 Angulo de pluma principal 45.0 [°] 42.7 35.0 34.2 6.2 44.0 29.7 32.4 7.0 5.7				Angı		ıma prin	cipal 65.0	[°]			
32.0				14.0							
34.0 42.1 42.2 10.9 11.3 36.0 35.4 39.6 9.5 10.1 38.0 27.1 36.3 8.5 9.1				-							
36.0 35.4 39.6 9.5 10.1 38.0 27.1 36.3 8.5 9.1 Angulo de pluma principal 45.0 [°] 42.7 35.0 34.2 6.2 44.0 29.7 32.4 7.0 5.7											
Ángulo de pluma principal 45.0 [°] 42.7	36.0	35.4	39.6	9.5	10.1						
42.7 35.0 34.2 44.0 29.7 32.4 7.0 5.7	38.0	27.1	36.3			<u> </u>					
44.0 29.7 32.4 7.0 5.7	46.7	05.0	04.0	Angu		uma prin	cipal 45.0	[°]			
				7.0							
1 +0.0 15.2 20.0	46.0	19.2	28.0	6.1	4.9						



Nº de ident.: 9842523/95738/

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

Lastre central [t]:

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

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]
		23.0	0 m Plum Cabeza	de plumí		1) 53.5 r	n Plumín			
					ıma prin					
10.8 11.0 12.0 13.0 14.0	78.0 77.6 75.7 73.7 71.8	56.5 56.5 56.2 55.9 55.6	15.1 15.1 15.1 15.1 15.1	30.1 30.1 30.1 29.7 26.9	-					
16.0 18.0 20.0 22.0 24.0	67.8 63.7 59.5 55.0 50.3	54.8 53.9 52.7 51.4 49.8	15.1 15.1 14.5 13.3 12.5	22.6 18.5 15.7 13.5 11.8						
26.0 28.0 30.0 32.0	45.2 39.6 33.1 25.2	48.0 45.7 42.9 39.3	10.7 9.2 7.9 7.1	10.3 9.1 8.1 7.2						
15.4	73.0	EE E	Angu	ulo de plu 28.9	ıma prin	cipal 83.0	[°]	l	<u> </u>	
16.0 18.0 20.0 22.0 24.0	71.9 67.9 63.8 59.6 55.2	55.5 55.4 54.6 53.6 52.5 51.2 49.6	15.1 15.1 15.1 14.6 13.5	28.5 22.8 18.6 15.8 13.5						
28.0 30.0 32.0 34.0	45.4 39.7 33.3 25.5	47.8 45.5 42.8 39.2	10.8 9.2 8.1 7.2	10.4 9.2 8.2 7.3						
			Ángu		ıma prin	cipal 75.0	[°]			
22.7 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0	65.0 62.2 57.9 53.4 48.5 43.2 37.4 30.5 21.7	53.1 52.5 51.3 49.9 48.2 46.2 43.8 40.8 36.6	15.1 14.9 13.3 12.0 10.3 8.9 7.9 7.0	19.0 17.5 15.0 12.9 11.4 10.0 8.9 8.0 7.1						
30.0	21.7	30.0			ıma prin	cipal 65.0	1°1C			
31.1 32.0 34.0 36.0 38.0 40.0	55.0 53.0 48.1 42.8 36.8 29.9 20.7	48.7 48.2 46.5 44.5 42.0 38.9 34.6	11.9 10.2 8.9 7.8 7.0 6.3	12.7 12.3 10.7 9.5 8.4 7.6 6.7						
					ıma prin	cipal 45.0	0 [°]			
45.1 46.0 48.0 49.0	35.0 32.0 23.7 18.1	35.9 34.9 31.0 28.5	6.1 5.3 4.9	5.3 4.9 4.3 3.9						



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]
		23.0	0 m Plum Cabeza 22.0	de plumí	oal, Punt n (2316- osición m	1) 56.5 r	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	0 [°]			
8.9	78.0	47.7	15.1	30.1						
9.0	77.7	47.7	15.1	30.1						
10.0 11.0	75.0 72.3	47.4 47.1	15.1 15.1	30.1 29.3						
12.0	69.5	46.7	15.1	28.2						
13.0	66.7	46.3	15.1	24.6						
14.0	63.8	45.8	15.1	21.3						
16.0	57.7	44.6	14.9	16.8						
18.0	51.2	43.1	14.7	13.6						
20.0	43.9	41.2	12.1	11.2						
22.0	35.4	38.7	9.6	9.2						
24.0	24.3	35.2	7.8	7.7						
			Ángı	ılo de plu	ıma prin	cipal 83.0	0[°]			
12.8	73.0	46.9		30.1						
13.0	72.5	46.9	15.1	30.1						
14.0	69.7	46.5 45.6	15.1 15.1	28.3 21.5						
16.0 18.0	63.9 57.9	45.6 44.4	15.1	16.9						
20.0	51.4	42.9	15.1	13.7						
22.0	44.1	41.0	12.3	11.3						
24.0	35.7	38.6	9.8	9.4						
26.0	24.7	35.1	8.0	7.8						
			Ángı	ılo de plu	ıma prin	cipal 75.0	0 [°]			
18.9	65.0	45.0		21.6						
20.0	61.6	44.4	15.1	19.7						
22.0	55.4	43.1	15.0	15.6						
24.0	48.6	41.5	14.3	12.8						
26.0	41.0	39.4	11.4	10.6						
28.0	31.8	36.6	9.3	8.9		-:	0.00			
00.0	55.0	44.	Angu		ıma prin	cipai 65.0	ַנין <u>ו</u>			
26.0 28.0	55.0 48.0	41.4 39.8	13.3	14.2 12.0						
28.0 30.0	48.0	39.8 37.6	10.7	10.0						
32.0	30.9	34.8	8.7	8.5						
02.0		00			ıma prin	cinal 45 (0101			
37.8	35.0	30.8	,gc	5.1	ZIIIG PIIII	J. Pai 10.	~ <u> </u>			
38.0	33.8	30.8	7.2	5.0						
40.0	21.9	26.9	5.8	4.0						
41.0	15.2	23.7	5.2		1		l	1		



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]
		23.0	0 m Plum Cabeza 25.0	de plumi	oal, Punt ín (2316- osición m	1) 59.5 r	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	1°10			
9.5	78.0	50.6	Ī	30.1	'					
10.0	76.9	50.5	15.1	30.1						
11.0	74.5	50.2	15.1	30.1						
12.0 13.0	72.1 69.6	49.9 49.5	15.1 15.1	27.8 25.1						
14.0	67.2	49.1	15.1	22.1						
16.0	62.0	48.1	15.1	17.3						
18.0	56.6	46.9	13.7	14.1						
20.0 22.0	50.8 44.4	45.4 43.5	12.3 10.3	11.6 9.8						
24.0	37.2	41.1	8.3	8.2						
26.0	28.3	37.9	6.9	6.9						
			Ángı	ılo de plı	ıma prin	cipal 83.0	D[°]			
13.7	73.0	49.8	15.1	29.0						
14.0	72.2	49.7	15.1	29.0						
16.0 18.0	67.3 62.2	48.9 47.9	15.1 15.1	22.5 17.5						
20.0	56.8	46.7	13.1	14.2						
22.0	51.0	45.2	11.4	11.8						
24.0	44.6	43.3	9.5	9.9						
26.0	37.4	40.9	7.8	8.3						
28.0	28.6	37.8	6.6	7.1						
00.4	05.0	47.7	Angu	10 de plu 18.8	ıma prin	cipal 75.0	[°]			
20.1 22.0	65.0 60.1	47.7 46.7	15.1	16.1						
24.0	54.6	45.4	13.7	13.3						
26.0	48.6	43.7	12.0	11.2						
28.0	42.0	41.7	9.7	9.4						
30.0 32.0	34.2 24.4	39.1 35.4	8.0 6.8	8.0 6.8						
52.0	<u> </u>	UU.T			ıma prin	cipal 65.0	1°1C			1
27.7	55.0	43.8	9	12.4		. ,,				
28.0	54.1	43.7	13.5	12.4						
30.0	48.0	42.0	11.2	10.5						
32.0	41.3	39.9 37.2	9.2	8.9						
34.0 36.0	33.5 23.3	37.2 33.5	7.6 6.5	7.6 6.5						
00.0	20.0	00.0			ıma prin	cipal 45.0	1°1C			1
40.2	35.0	32.5	gc	4.2		. p.s 3				
42.0	26.6	29.7	4.9	3.4						
43.0	20.4	27.4	4.3	3.0						



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

	Ingoroján		1		3	4		6	7	0
	Inserciór		1	2		-	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]								
			0 m Plum							
			Cabeza		ín (2316- osición m			ı		
					ıma prin					
10.1	78.0	53.6	Angu	30.1	лна рин 	 	J []			
11.0	76.0	53.4	15.1	30.1						
12.0	74.1	53.1	15.1	28.2						
13.0	71.9	52.7	15.1	24.4						
14.0	69.7	52.4	15.1	21.3						
16.0	65.3	51.5	15.1	16.8						
18.0	60.6	50.4	14.7	13.7						
20.0 22.0	55.7 50.5	49.1 47.6	11.8 9.7	11.2 9.4						
24.0	44.9	45.7	8.1	7.9						
26.0	38.5	43.4	6.7	6.6						
28.0	31.1	40.5	5.6	5.6						
30.0	21.3	36.4	4.7	4.7						
			Ángu	ılo de plu	ıma prin	cipal 83.0	[°]			
14.6	73.0	52.7	15.1	24.6						
16.0	69.9	52.2	15.1	21.5						
18.0	65.4	51.3	15.1	16.9						
20.0	60.8	50.2	14.8	13.8						
22.0 24.0	55.9 50.7	48.9 47.4	12.0 9.9	11.3 9.6						
26.0	45.0	45.5	8.2	8.0						
28.0	38.7	43.2	6.8	6.8						
30.0	31.3	40.3	5.7	5.8						
32.0	21.6	36.3	4.8	4.8						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
21.4	65.0	50.4		15.9						
22.0	63.6	50.1	15.1	15.8						
24.0 26.0	58.9 53.9	49.0 47.6	14.0 11.4	12.9 10.7						
28.0	48.5	46.0	9.4	9.1						
30.0	42.7	43.9	7.8	7.6						
32.0	36.0	41.4	6.5	6.5						
34.0	27.9	38.2	5.5	5.5						
			Ángu	ılo de plu	ıma prin	cipal 65.0	[°]			
29.4	55.0	46.3		10.3						
30.0	53.5	45.9	10.7	10.2						
32.0	48.1	44.2	8.7	8.5						
34.0 36.0	42.1 35.4	42.2 39.6	7.3 6.1	7.2 6.2						
38.0	27.1	36.3	5.3	5.3						
			Ángı	ılo de plu	ıma prin	cipal 45.0	0 [°]			
42.7	35.0	34.2		3.5			-			
44.0	29.7	32.4	4.1	2.9						
46.0	19.2	28.0	3.1	2.2						

Source:a9841388



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 Lastre central [t]: 0.0

Alcan o de		Inserciór	1	1	2	3	4	5	6	7	8
Cabeza de plumín (2316-1) 65.5 m Plumín 31.0 [m] Posición midfall (2316) Angulo de pluma principal 88.0 [°] 10.8	се	o de plumín	de rolda- nas								
Angulo de pluma principal 88.0 (°) 10.8				Cabeza	de plumí	n (2316-	1) 65.5 r	n Plumín			
10.8							<u> </u>				
11.0	10.8	78.0	56.5			лпа рпп	cipai oo.i) 			
13.0		i .	56.5	15.1							
14.0 71.8 55.6 15.1 26.8 16.0 67.8 54.8 15.1 21.9 18.0 63.7 53.9 15.1 17.9 20.0 59.5 52.7 14.5 15.1 22.9 24.0 50.3 49.8 11.6 11.2 26.0 45.2 48.0 10.0 9.8 30.0 33.1 42.9 7.4 7.5 32.0 25.2 39.3 6.4 6.4 6.4 4.6					i						
18.0 63.7 53.9 15.1 17.9 20.0 59.5 52.7 14.5 15.1 22.0 55.0 51.4 12.8 12.9 24.0 50.3 49.8 11.6 11.2 26.0 45.2 48.0 10.0 9.8 39.6 45.7 8.6 8.5 30.0 33.1 42.9 7.4 7.5 32.0 25.2 39.3 6.4 6.4 6.4 57.1 20.0 20.0 63.8 53.6 15.1 12.0 20.0 63.8 53.6 15.1 18.0 67.9 54.6 15.1 22.0 20.0 63.8 53.6 15.1 18.0 22.0 59.6 52.5 14.5 15.3 22.0 59.6 52.5 14.5 15.3 22.0 59.6 52.5 14.5 15.3 22.0 59.6 52.5 14.5 15.3 20.0 33.3 42.8 7.5 7.7 32.0 33.3 42.8 7.5 7.7 32.0 33.3 42.8 7.5 7.7 32.0 33.3 42.8 7.5 7.7 32.0 33.3 42.8 7.5 7.7 34.0 25.5 39.2 6.7 6.8 54.0 52.5 13.0 12.9 12.4 30.0 48.5 49.9 12.9 12.4 30.0 48.5 49.9 12.9 12.4 30.0 48.5 48.2 11.4 10.9 33.0 36.5 40.8 7.4 7.5 38.0 30.5 40.8 42.0 7.9 6.6 40.0 29.9 38.9 7.0 5.6 6.5 6.5 6.5 40.0 42.0 29.9 38.9 7.0 5.6 6.6 40.0 29.9 38.9 7.0 5.6 6.6 40.0 29.9 38.9 7.0 5.6 6.6 40.0 29.9 38.9 7.0 5.6 6.6 40.0 29.9 38.9 7.0 5.6 6.6 40.0 29.9 38.9 7.0 5.6 6.6 40.0 29.9 38.9 7.0 5.6 6.6 40.0 29.9 38.9 7.0 5.6 6.6 40.0 29.9 38.9 7.0 5.6 6.6 40.0 29.9 38.9 7.0 5.6 6.6 40.0 29.9 38.9 7.0 5.6 6.6 40.0 29.9 38.9 7.0 5.6 6.6 40.0 29.9 38.9 7.0 5.6 6.6 40.0 29.9 38.9 7.0 5.6 6.8 40.0 29.9 38.9 7.0 5.6 6.8 40.0 29.9 38.9 7.0 5.6 6.8 40.0 29.9 38.9 7.0 5.6 6.8 40.0 29.9 38.9 7.0 5.6 6.8 40.0 2											
20.0			54.8								
22.0 55.0 51.4 12.8 12.9 26.0 45.2 48.0 10.0 9.8 28.0 39.6 45.7 8.6 8.5 30.0 33.1 42.9 7.4 7.5 32.0 25.2 39.3 6.4 6.4		i .			i						
24.0											
28.0		l l									
30.0 33.1 42.9 7.4 7.5 6.4 6.4 32.0 25.2 39.3 6.4 6.4 6.4 Angulo de pluma principal 83.0 [°] 15.4 73.0 55.5 27.3 16.0 71.9 55.4 15.1 27.3 18.0 67.9 54.6 15.1 22.0 20.0 63.8 53.6 15.1 18.0 22.0 59.6 52.5 14.5 15.3 24.0 55.2 51.2 13.0 13.0 26.0 50.4 49.6 11.9 11.4 28.0 45.4 47.8 10.2 9.9 30.0 39.7 45.5 8.7 8.7 32.0 33.3 42.8 7.5 7.7 34.0 25.5 39.2 6.7 6.8 Angulo de pluma principal 75.0 [°] 22.7 65.0 53.1 24.0 62.2 52.5 15.1 14.5 26.0 57.9 51.3 15.1 14.5 28.0 45.4 49.9 12.9 12.4 30.0 48.5 48.2 11.4 10.9 32.0 43.2 46.2 9.7 9.5 34.0 37.4 43.8 8.4 8.4 36.0 30.5 40.8 7.4 7.5 38.0 21.7 36.6 6.5 6.5 Angulo de pluma principal 65.0 [°] 31.1 55.0 48.7 31.1 55.0 48.7 32.0 53.0 48.2 12.6 10.5 34.0 42.8 44.5 9.2 7.7 38.0 36.8 42.0 7.9 6.6 40.0 29.9 38.9 7.0 5.6 42.0 20.7 34.6 6.1 4.7 Angulo de pluma principal 45.0 [°]	26.0	45.2		10.0	9.8						
32.0 25.2 39.3 6.4 6.4 6.4					i						
Ángulo de pluma principal 83.0 [°] 15.4 73.0 55.5 27.3 16.0 71.9 55.4 15.1 22.0 18.0 67.9 54.6 15.1 22.0 20.0 63.8 53.6 15.1 18.0 22.0 59.6 52.5 14.5 15.3 24.0 55.2 51.2 13.0 13.0 26.0 50.4 49.6 11.9 11.4 28.0 45.4 47.8 10.2 9.9 30.0 39.7 45.5 8.7 8.7 32.0 33.3 42.8 7.5 7.7 34.0 25.5 39.2 6.7 6.8 Ángulo de pluma principal 75.0 [°] 22.7 65.0 53.1 18.0 24.0 62.2 52.5 15.1 17.0 26.0 57.9 51.3 15.1 14.5 28.0 53.4 49.9 12.9 12.4 30.0 48.5 48.2 11.4 10.9 32.0 43.2 46.2 9.7 9.5 34.0 37.4 43.8 8.4 8.4 36.0 30.5											
16.0 71.9 55.4 15.1 27.3 18.0 67.9 54.6 15.1 22.0 20.0 63.8 53.6 15.1 18.0 22.0 59.6 52.5 14.5 15.3 24.0 55.2 51.2 13.0 13.0 26.0 50.4 49.6 11.9 11.4 28.0 45.4 47.8 10.2 9.9 30.0 39.7 45.5 8.7 8.7 32.0 33.3 42.8 7.5 7.7 34.0 25.5 39.2 6.7 6.8 34.0 25.5 39.2 6.7 6.8 34.0 25.5 39.2 6.7 6.8 34.0 25.5 39.2 6.7 6.8 34.0 25.5 39.2 6.7 6.8 34.0 25.5 39.2 6.7 6.8 34.0 25.5 39.2 6.7 6.8 34.0 25.5 39.2 6.7 6.8 34.0 25.5 39.2 6.7 6.8 34.0 25.5 39.2 6.7 6.8 34.0 25.5 39.2 6.7 6.8 34.0 25.5 39.2 6.7 6.8 34.0 25.5 39.2 6.7 6.8 34.0 25.5 39.2 6.7 6.8 34.0 25.5 39.2 6.7 6.8 34.0 25.5 39.2 6.7 6.8 34.0 25.5 39.2 6.7 6.8 34.0 25.5 39.2 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50	02.0	20.2	00.0			ıma prin	cipal 83.0	[°]			
18.0 67.9 54.6 15.1 22.0 20.0 63.8 53.6 15.1 18.0 22.0 59.6 52.5 14.5 15.3 24.0 55.2 51.2 13.0 13.0 26.0 50.4 49.6 11.9 11.4 28.0 45.4 47.8 10.2 9.9 30.0 39.7 45.5 8.7 8.7 32.0 33.3 42.8 7.5 7.7 34.0 25.5 39.2 6.7 6.8	15.4	73.0	55.5		27.3	·					
20.0 63.8 53.6 15.1 18.0 22.0 59.6 52.5 14.5 15.3 24.0 55.2 51.2 13.0 13.0 26.0 50.4 49.6 11.9 11.4 28.0 45.4 47.8 10.2 9.9 30.0 39.7 45.5 8.7 8.7 32.0 33.3 42.8 7.5 7.7 34.0 25.5 39.2 6.7 6.8		i .			i						
22.0											
24.0 55.2 51.2 13.0 13.0 26.0 50.4 49.6 11.9 11.4 28.0 45.4 47.8 10.2 9.9 30.0 39.7 45.5 8.7 8.7 32.0 33.3 42.8 7.5 7.7 34.0 25.5 39.2 6.7 6.8 Angulo de pluma principal 75.0 [°] 22.7 65.0 53.1 18.0 24.0 62.2 52.5 15.1 17.0 26.0 57.9 51.3 15.1 14.5 28.0 53.4 49.9 12.9 12.4 30.0 48.5 48.2 11.4 10.9 32.0 43.2 46.2 9.7 9.5 34.0 37.4 43.8 8.4 8.4 36.0 30.5 40.8 7.4 7.5 38.0 21.7 36.6 6.5 6.5 Angulo de pluma principal 65.0 [°] 31.1 55.0 48.7 11.2 32.0 53.0 48.2 12.6 10.5 34.0 48.1 46.5 10.6 9.0 36.0 42.8 44.5 9.2 7.7 38.0 36.8 42.0 7.9 6.6 40.0 29.9 38.9 7.0 5.6 42.0 20.7 34.6 6.1 4.7 Angulo de pluma principal 45.0 [°] 45.1 35.0 35.9 3.2 2.6 46.0 32.0 34.9 3.2 2.3		i i			i						
28.0		i .			i						
30.0 39.7 45.5 8.7 8.7 32.0 33.3 42.8 7.5 7.7 34.0 25.5 39.2 6.7 6.8 Angulo de pluma principal 75.0 [°] 22.7 65.0 53.1 18.0 26.0 57.9 51.3 15.1 17.0 26.0 57.9 51.3 15.1 14.5 28.0 53.4 49.9 12.9 12.4 30.0 48.5 48.2 11.4 10.9 32.0 43.2 46.2 9.7 9.5 38.0 21.7 36.6 6.5 6.5 6.5 Angulo de pluma principal 65.0 [°] 31.1 55.0 48.7 11.2 32.0 53.0 48.2 12.6 10.5 34.0 48.1 46.5 10.6 9.0 36.0 42.8 44.5 9.2 7.7 38.0 36.8 42.0 7.9 6.6 40.0 29.9 38.9 7.0 5.6 40.0 42.0 20.7 34.6 6.1 4.7 Angulo de pluma principal 45.0 [°] 45.1 35.0 35.0 35.9 4.9 3.2 2.3		i .			i						
32.0 33.3 42.8 7.5 7.7 34.0 25.5 39.2 6.7 6.8 Angulo de pluma principal 75.0 [°] 22.7 65.0 53.1 18.0 26.0 57.9 51.3 15.1 14.5 28.0 53.4 49.9 12.9 12.4 30.0 48.5 48.2 11.4 10.9 32.0 43.2 46.2 9.7 9.5 38.0 30.5 40.8 7.4 7.5 38.0 21.7 36.6 6.5 6.5 Angulo de pluma principal 65.0 [°] 31.1 55.0 48.7 11.2 11.2 2.0 53.0 48.2 12.6 10.5 34.0 48.1 46.5 10.6 9.0 36.0 42.8 44.5 9.2 7.7 38.0 36.8 42.0 7.9 6.6 40.0 29.9 38.9 7.0 5.6 40.0 29.9 38.9 7.0 5.6 42.0 20.7 34.6 6.1 4.7 Angulo de pluma principal 45.0 [°] 45.1 35.0 35.9 36.9 3.2 2.6 46.0 32.0 34.9 3.2 2.3											
Angulo de pluma principal 75.0 [°] Ángulo de pluma principal 75.0 [°] 22.7 65.0 53.1 18.0 24.0 62.2 52.5 15.1 17.0 26.0 57.9 51.3 15.1 14.5 28.0 53.4 49.9 12.9 12.4 30.0 48.5 48.2 11.4 10.9 32.0 43.2 46.2 9.7 9.5 34.0 37.4 43.8 8.4 8.4 36.0 30.5 40.8 7.4 7.5 38.0 21.7 36.6 6.5 6.5 31.1 55.0 48.7 11.2 32.0 53.0 48.2 12.6 10.5 34.0 48.1 46.5 10.6 9.0 36.0 42.8 44.5 9.2 7.7 38.0 36.8 42.0 7.9 6.6 40.0 29.9 38.9 7.0 5.6 42.0 20.7 34.6 6.1 4.7 Ángulo de pluma principal 45.0 [°]		i i	i I		i						
22.7 65.0 53.1 18.0 24.0 62.2 52.5 15.1 17.0 26.0 57.9 51.3 15.1 14.5 28.0 53.4 49.9 12.9 12.4 30.0 48.5 48.2 11.4 10.9 32.0 43.2 46.2 9.7 9.5 34.0 37.4 43.8 8.4 8.4 36.0 30.5 40.8 7.4 7.5 38.0 21.7 36.6 6.5 6.5					i						
24.0 62.2 52.5 15.1 17.0 26.0 57.9 51.3 15.1 14.5 28.0 53.4 49.9 12.9 12.4 30.0 48.5 48.2 11.4 10.9 32.0 43.2 46.2 9.7 9.5 34.0 37.4 43.8 8.4 8.4 36.0 30.5 40.8 7.4 7.5 38.0 21.7 36.6 6.5 6.5				Ángu	ılo de plu	ıma prin	cipal 75.0	[°]			
26.0 57.9 51.3 15.1 14.5 28.0 53.4 49.9 12.9 12.4 30.0 48.5 48.2 11.4 10.9 32.0 43.2 46.2 9.7 9.5 34.0 30.5 40.8 7.4 7.5 38.0 21.7 36.6 6.5 6.5											
28.0 53.4 49.9 12.9 12.4 30.0 48.5 48.2 11.4 10.9 32.0 43.2 46.2 9.7 9.5 34.0 37.4 43.8 8.4 8.4 36.0 30.5 40.8 7.4 7.5 38.0 21.7 36.6 6.5 6.5					i						
30.0		i i	i I		i						
34.0 37.4 43.8 8.4 8.4 8.4 36.0 30.5 40.8 7.4 7.5 38.0 21.7 36.6 6.5 6.5 6.5											
36.0 30.5 40.8 7.4 7.5 38.0 21.7 36.6 6.5 6.5											
38.0 21.7 36.6 6.5 6.5		i i	i I		i						
31.1 55.0 48.7 11.2 32.0 53.0 48.2 12.6 10.5 34.0 48.1 46.5 10.6 9.0 36.0 42.8 44.5 9.2 7.7 38.0 36.8 42.0 7.9 6.6 40.0 29.9 38.9 7.0 5.6 42.0 20.7 34.6 6.1 4.7 Angulo de pluma principal 45.0 [°] 45.1 35.0 35.9 2.6 46.0 32.0 34.9 3.2 2.3		i i			i						
32.0 53.0 48.2 12.6 10.5 34.0 48.1 46.5 10.6 9.0 36.0 42.8 44.5 9.2 7.7 38.0 36.8 42.0 7.9 6.6 40.0 29.9 38.9 7.0 5.6 42.0 20.7 34.6 6.1 4.7 Angulo de pluma principal 45.0 [°] 45.1 35.0 35.9 2.6 46.0 32.0 34.9 3.2 2.3				Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
34.0	31.1	55.0	48.7					_			
36.0		i i			1						
38.0 36.8 42.0 7.9 6.6 40.0 29.9 38.9 7.0 5.6 42.0 20.7 34.6 6.1 4.7											
40.0 29.9 38.9 7.0 5.6 42.0 20.7 34.6 6.1 4.7 Angulo de pluma principal 45.0 [°] 45.1 35.0 35.9 2.6 46.0 32.0 34.9 3.2 2.3											
Ángulo de pluma principal 45.0 [°] 45.1 35.0 35.9 2.6	40.0	29.9	38.9	7.0	5.6						
45.1 35.0 35.9 2.6 46.0 32.0 34.9 3.2 2.3	42.0	20.7	34.6								
46.0 32.0 34.9 3.2 2.3				Ángı		ıma prin	cipal 45.0	[°]			
				2.0							
40.U 24.0 31.U 2.4	46.0 48.0	32.0 24.8	34.9 31.0	3.2 2.4	2.3						



N° 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

	entral [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]
		23.0	0 m Plum Cabeza 34.0	na princip de plumí 0 [m] Po	oal, Punt ín (2316- osición m	o de caro 1) 68.5 r nidfall (23	ga 3 - Mi n Plumír 316)	dfall 1		
			Ángı	ılo de plı	uma prin	cipal 88.0	0 [°]			
11.4	78.0	59.4	15.1	30.1						
12.0 13.0	76.9 75.2	59.3 59.0	15.1 15.1	30.1 28.4						
14.0	73.4	58.7	15.1	26.4						
16.0	69.9	58.0	15.1	20.7						
18.0	66.2	57.2	15.1	17.1						
20.0	62.5	56.2	15.0	14.4						
22.0 24.0	58.5 54.4	55.0 53.7	13.2 11.0	12.3 10.5						
26.0	50.1	52.1	9.3	9.2						
28.0	45.5	50.2	8.1	8.0						
30.0	40.4	48.0	7.0	7.0						
32.0	34.7	45.4	6.0	6.2						
34.0	28.0	42.0	5.2	5.4			2.50.3			
			Angu		ıma prin	cipai 83.0	<u>[[]</u>	1	1	
16.3	73.0	58.4	45.4	23.6						
18.0 20.0	70.0 66.3	57.8 57.0	15.1 14.7	20.9 17.2						
22.0	62.6	56.0	13.8	14.5						
24.0	58.6	54.8	12.1	12.4						
26.0	54.6	53.5	10.1	10.7						
28.0 30.0	50.2 45.6	51.9 50.0	8.8 7.6	9.4 8.2						
32.0	40.6	47.8	6.6	7.1						
34.0	34.9	45.2	5.8	6.3						
36.0	28.2	41.9	5.1	5.5						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
23.9	65.0	55.8		15.5						
24.0 26.0	64.9 61.1	55.8 54.8	15.1 14.4	15.5 13.7						
28.0	57.1	53.6	12.6	11.8						
30.0	52.9	52.1	10.5	10.2						
32.0	48.5	50.4	9.1	9.0						
34.0 36.0	43.7	48.5 46.1	7.8	7.8 6.9						
36.0	38.5 32.5	43.3	6.8 6.0	6.1						
40.0	25.2	39.6	5.3	5.4						
			Ángu	ılo de plu	ıma prin	cipal 65.0] °]			
32.8	55.0	51.2		10.1	·					
34.0	52.5	50.4	10.0	9.4						
36.0	48.1	48.7	8.5	8.1						
38.0 40.0	43.3 38.0	46.7 44.3	7.4 6.4	7.0 6.0						
42.0	31.9	41.4	5.7	5.1						
44.0	24.5	37.6	5.0	4.2						
			Ángu	ılo de plu	ıma prin	cipal 45.0	[°]			
47.6	35.0	37.7		2.0			_			
48.0	34.3	37.3	2.6							
49.0	31.2	35.7	2.2							



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]
		23.	0 m Plum Cabeza	na princip	pal, Punt	o de caro	ga 3 - Mi n Plumír	dfall		
			37.0	0 [m] Po	osición m	nidfall (23	316)	•		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
12.0	78.0	62.4 62.1	15.1	29.1 27.8						
13.0 14.0	76.4 74.8	61.9	15.1	24.4						
16.0	71.6	61.2	15.1	19.5						
18.0	68.3	60.5	14.7	16.1						
20.0	64.9	59.6	12.5	13.4						
22.0 24.0	61.4 57.7	58.5 57.3	11.0 9.3	11.5 9.8						
26.0	53.9	55.9	7.9	8.4						
28.0	50.0	54.3	6.8	7.4						
30.0	45.7	52.4	5.9	6.4						
32.0	41.1	50.3	5.1	5.5						
34.0	36.0	47.7 44.6	4.5	4.8 4.1						
36.0 38.0	30.2 23.0	40.6	3.8 3.2	3.4						
00.0	20.0	.0.0			ıma prin	cipal 83 (1°10			
17.2	73.0	61.3	15.1	20.0			, ,			
18.0	71.7	61.0	15.1	19.8						
20.0	68.4	60.2	15.1	16.2						
22.0	65.0	59.3	13.6	13.5						
24.0 26.0	61.5 57.8	58.3 57.1	12.3 10.3	9.9						
28.0	54.1	55.7	8.6	8.5						
30.0	50.1	54.1	7.4	7.5						
32.0	45.8	52.3	6.4	6.5						
34.0	41.2	50.1	5.5	5.6						
36.0 38.0	36.2 30.3	47.6 44.5	4.8 4.2	4.9 4.3						
40.0	23.2	40.5	3.6	3.7						
					ıma prin	cipal 75.0	1°10	•		
25.2	65.0	58.6	Ī	13.0						
26.0	63.6	58.2	13.9	12.9						
28.0	60.1	57.1	11.5	11.0						
30.0	56.4	55.8	9.7	9.5						
32.0 34.0	52.5 48.5	54.4 52.7	8.2 7.1	8.2 7.2						
36.0	44.1	50.7	6.1	6.2						
38.0	39.3	48.4	5.3	5.4						
40.0	34.0	45.7	4.7	4.8						
42.0	27.8	42.3	4.1	4.2						
44.0	19.7	37.7	3.5 Ángi	Ilo de nli	ıma prin	cinal 65 () [° 1	ı	ı	
34.6	55.0	53.7	Ailgo	8.2	лпа рпп	cipai 05.	<u> </u>			
36.0	52.2	52.7	7.7	7.8						
38.0	48.1	50.9	6.7	6.8						
40.0	43.7	49.0	5.8	5.9						
42.0 44.0	38.9 33.5	46.6 43.9	5.0 4.4	5.2 4.4						
46.0	27.2	40.4	3.8	3.7						
48.0	18.9	35.7	3.2	3.0						



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

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

Radio de descarga: 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]
		23.0	0 m Plum Cabeza 40.0	de plumi	pal, Punt n (2316- osición m	1) 74.5 r	n Plumín	dfall		
			Ángı	ılo de plı	ıma prin	cipal 88.0	[°]			
12.6	78.0	65.3		28.9						
13.0 14.0	77.5 76.0	65.2 65.0	15.1 15.1	28.9 27.1						
16.0	73.0	64.4	15.1	21.8						
18.0	70.0	63.7	15.1	17.9						
20.0	66.9	62.9	13.9	15.2						
22.0 24.0	63.7 60.4	61.9 60.8	12.2 10.9	13.0 11.4						
26.0	57.1	59.6	9.3	9.8						
28.0	53.5	58.2	8.1	8.6						
30.0	49.8	56.5	7.0	7.6						
32.0	45.9	54.7	6.2	6.7						
34.0 36.0	41.7 37.1	52.6 50.1	5.4 4.7	5.8 5.0						
38.0	31.9	47.1	4.7	4.2						
40.0	25.7	43.4	3.0	3.1						
			Ángı	ılo de plu	ıma prin	cipal 83.0	1°10			
18.1	73.0	64.1	15.1	20.1						
20.0	70.1	63.5	15.1	18.1						
22.0	67.0	62.7	14.7	15.4						
24.0	63.8	61.7	12.5	13.1						
26.0 28.0	60.5 57.1	60.6 59.4	11.0 9.4	11.5 9.9						
30.0	53.6	58.0	8.1	8.7						
32.0	49.9	56.3	7.2	7.7						
34.0	46.0	54.5	6.3	6.8						
36.0 38.0	41.8 37.2	52.4 49.9	5.6 4.9	6.0 5.3						
40.0	32.0	47.0	4.2	4.5						
42.0	25.9	43.3	3.3	3.5						
			Ángı	ılo de plu	uma prin	cipal 75.0	[°]			
26.5	65.0	61.3		13.2						
28.0	62.5	60.5	13.4	12.6						
30.0	59.2	59.4	11.3	10.9						
32.0 34.0	55.8 52.2	58.1 56.6	9.7 8.3	9.5 8.4						
36.0	48.4	54.9	7.3	7.5						
38.0	44.4	53.0	6.4	6.6						
40.0	40.1	50.7	5.7	5.8						
42.0 44.0	35.3 29.8	48.1 44.9	5.0 4.5	5.2 4.6						
46.0	23.1	40.9	3.9	4.0						
					ıma prin	cipal 65 (1°10			
36.3	55.0	56.1	7 11.90	8.1						
38.0	51.9	54.9	7.9	7.2						
40.0	48.1	53.2	6.9	6.2						
42.0	44.1	51.2	6.2	5.3						
44.0 46.0	39.7 34.8	48.9 46.3	5.4 4.8	4.5 3.8						
46.0 48.0	34.8 29.3	46.3	4.8 3.9	3.8						
50.0	22.4	38.9	2.9	2.5						
51.0	18.1	36.2	2.4	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 [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 43 (de plumi		1) 77.5 r	n Plumín			
					ıma prin					
13.3	78.0	68.2	15.1	28.6	IIIa piiii	l l l l l l l l l l l l l l l l l l l				
14.0	77.0	68.1	15.1	28.6						
16.0 18.0	74.2 71.4	67.5 66.9	15.1 15.1	23.4 19.4						
20.0	68.6	66.1	15.1	16.7						
22.0	65.7	65.3	13.6	14.3						
24.0	62.7	64.3	12.6	12.5						
26.0	59.6	63.1	11.3	11.0						
28.0 30.0	56.5 53.2	61.8 60.4	9.8 8.5	9.7 8.6						
32.0	49.7	58.8	7.4	7.6						
34.0	46.1	56.9	6.2	6.4						
36.0	42.2	54.8	5.1	5.2						
38.0 40.0	38.0 33.3	52.4 49.6	4.1 3.2	4.2 3.3						
40.0	33.3	49.0			ıma prin	cinal 83 (1 ° 1			
18.9	73.0	67.0	7 (119)	20.0	IIIIa piiii	l loo.	<u>ا ا</u>		1	
20.0	71.5	66.7	15.1	19.7						
22.0	68.7	65.9	15.1	16.7						
24.0	65.8	65.0	14.1	14.4						
26.0 28.0	62.8 59.7	64.0 62.9	12.8 11.5	12.6 11.1						
30.0	56.5	61.6	9.9	9.8						
32.0	53.3	60.2	8.6	8.7						
34.0	49.8	58.6	7.6	7.8						
36.0	46.2 42.3	56.7	6.6 5.8	6.8						
38.0 40.0	38.1	54.6 52.2	5.6 5.1	5.3						
42.0	33.4	49.4	4.4	4.4						
44.0	28.0	46.0	3.3	3.3						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
27.7	65.0	64.0		13.3						
28.0	64.6	63.9	13.9	13.3						
30.0 32.0	61.6 58.5	62.9 61.7	12.6 10.9	12.1 10.7						
34.0	55.3	60.3	9.5	9.4						
36.0	51.9	58.8	8.2	8.4						
38.0	48.4	57.1	7.3	7.6						
40.0 42.0	44.7 40.7	55.2 53.0	6.5 5.8	6.7 6.0						
44.0	36.3	50.4	5.2	5.3						
46.0	31.4	47.4	4.4	4.5						
48.0	25.7	43.7	3.5	3.6						
			Angı		ıma prin	cipal 65.0) [°]			
38.0	55.0 51.6	58.6 57.1	77	7.0						
40.0 42.0	51.6 48.1	57.1 55.4	7.7 6.7	6.1 5.2						
44.0	44.4	53.5	5.7	4.5						
46.0	40.3	51.2	4.9	3.8						
48.0	35.9	48.6	4.1	3.1						
50.0 53.0	31.0 22.5	45.6 39.5	3.3 2.2	2.5						
JJ.U	۷۷.5	JJ.Ü	۷.۷		I	I	I	<u> </u>		



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]
		23.0	0 m Plum Cabeza 34.0	na princip de plumí 0 [m] Po	n (2316-	1) 80.5 r	n Plumín	dfall		
				ılo de plu		<u> </u>				
11.4	78.0	59.4	15.1	30.1	I III	l l				
12.0 13.0 14.0	76.9 75.2 73.4	59.3 59.0 58.7	15.1 15.1 15.1	30.1 29.9 28.2						
16.0 18.0 20.0 22.0 24.0	69.9 66.2 62.5 58.5 54.4	58.0 57.2 56.2 55.0 53.7	15.1 15.1 15.1 13.5 10.1	23.1 19.2 15.9 12.9 9.9						
26.0 28.0	50.1 45.5	52.1 50.2	7.5 5.0	7.5 4.9						
20.0	40.0	30.2		ılo de plu	ıma nrin	cinal 83 () [°]		ı	
16.3 18.0 20.0	73.0 70.0 66.3	58.4 57.8 57.0	15.1 15.1	25.1 23.7 19.4	The print					
22.0 24.0	62.6 58.6	56.0 54.8	15.1 14.1	16.0 13.6						
26.0 28.0 30.0 32.0	54.6 50.2 45.6 40.6	53.5 51.9 50.0 47.8	11.8 10.1 7.5 5.0	11.5 9.9 7.2 4.9						
34.0	34.9	45.2	3.0	3.0						
			Ángı	ılo de plu	ıma prin	cipal 75.0] (°)			
23.9 24.0 26.0 28.0	65.0 64.9 61.1 57.1	55.8 55.8 54.8 53.6	15.1 15.0 14.0	15.3 15.2 12.8 10.9						
30.0 32.0 34.0 36.0	52.9 48.5 43.7 38.5	52.1 50.4 48.5 46.1	11.5 9.7 8.0 6.6	9.3 7.9 6.6 5.5						
38.0	32.5	43.3	5.2	4.4						
40.0	25.2	39.6	3.2	3.0			2			
05.5		I	Angu	ılo de plu	ıma prin	cipal 65.0	<u>[[]</u>		ı	1
32.8 34.0 36.0 38.0	55.0 52.5 48.1 43.3	51.2 50.4 48.7 46.7	8.7 7.2 5.8	6.8 6.2 5.0 4.0						
40.0 42.0 44.0	38.0 31.9 25.4	44.3 41.4 37.6	4.5 3.4 2.2	3.0 2.2						



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 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]
		23.0	0 m Plum Cabeza 37.0	de plumí	oal, Punt n (2316- osición m	1) 83.5 r	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
12.0	78.0	62.4		29.0	i i	i i				
13.0 14.0 16.0	76.4 74.8 71.6	62.1 61.9 61.2	15.1 15.1 15.1	29.0 26.3 21.4						
18.0 20.0	68.3 64.9	60.5 59.6	15.1 13.8	17.8 14.7						
22.0 24.0 26.0 28.0	61.4 57.7 53.9	58.5 57.3 55.9	12.8 10.4 7.7 5.6	12.4 9.8 7.4						
30.0	50.0 45.7	54.3 52.4	3.9	5.5 3.8						
30.0	45.7	32.4			ıma prin	cinal 83 () [°]			
17.2	73.0	61.3	15.1	20.7	Іпа ріпі		J []			
18.0 20.0 22.0	71.7 68.4 65.0	61.0 60.2 59.3	15.1 15.1 15.1 13.9	20.6 17.7 14.8						
24.0 26.0 28.0	61.5 57.8 54.1	58.3 57.1 55.7	11.9 10.1 8.4	12.5 10.6 8.9						
30.0	50.1	54.1	7.1	7.7						
32.0 34.0	45.8 41.2	52.3 50.1	5.2 3.4	5.5 3.5						
04.0	71.2	00.1			ıma prin	cinal 75 (1°10			
25.2	65.0	58.6	7 (1190	13.5	IIIIa piiii	l l	<u>ا ا</u>			
26.0 28.0 30.0	63.6 60.1 56.4	58.2 57.1 55.8	14.4 12.5 10.5	12.9 11.0 9.3						
32.0	52.5	54.4	8.7	8.0						
34.0	48.5	52.7	7.4	6.8						
36.0	44.1	50.7	6.1	5.6						
38.0	39.3	48.4 45.7	5.0	4.6 3.7						
40.0 42.0	34.0 27.8	45.7	4.1 2.8	2.7						
42.0	27.0	72.0			ıma prin	cinal 65 (1°10			
34.6	55.0	53.7	, «190	5.8	Pilli	J. Par 00.	~ L J			
36.0 38.0	52.2 48.1	52.7 50.9	7.1 5.7	5.0 4.0						
40.0	43.7	49.0	4.5	3.1						
42.0 44.0	38.9 34.1	46.6 43.9	3.3 2.3	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

	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]
		23.0	0 m Plum Cabeza 40.0	de plumí	oal, Punt ín (2316- osición m	1) 86.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
12.6	78.0	65.3		27.1	·	·				
13.0	77.5	65.2	15.1	27.1						
14.0	76.0	65.0	15.1	26.1						
16.0	73.0	64.4	15.1	21.1						
18.0	70.0	63.7	15.1	17.3						
20.0	66.9	62.9	14.2	14.7						
22.0 24.0	63.7 60.4	61.9 60.8	12.5 11.2	12.4 10.7						
26.0	57.1	59.6	8.3	8.0						
28.0	53.5	58.2	5.9	5.8						
30.0	49.8	56.5	4.1	4.1						
32.0	45.9	54.7	2.9	2.9						
			Ángı	ılo de plu	ıma prin	cipal 83.0	1°10			
18.1	73.0	64.1	15.1	18.9	<u> </u>	·				
20.0	70.1	63.5	15.1	17.5						
22.0	67.0	62.7	15.1	14.9						
24.0	63.8	61.7	12.9	12.6						
26.0	60.5	60.6	11.4	11.0						
28.0	57.1	59.4	9.5	9.2						
30.0	53.6	58.0	7.9	7.8						
32.0	49.9	56.3	6.6	6.6 4.5						
34.0	46.0	54.5	4.5							
<u> </u>			Angı		ıma prin	cipal 75.0	[°]		1	
26.5	65.0	61.3	10.0	12.4						
28.0 30.0	62.5 59.2	60.5 59.4	12.8 10.6	11.1 9.4						
32.0	55.8	59. 4 58.1	9.1	8.0						
34.0	52.2	56.6	7.8	6.8						
36.0	48.4	54.9	6.8	5.8						
38.0	44.4	53.0	5.3	4.7						
40.0	40.1	50.7	4.0	3.8						
42.0	35.3	48.1	3.0	3.0						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
36.3	55.0	56.1		4.9						
38.0	51.9	54.9	5.7	4.1						
40.0	48.1	53.2	4.4	3.2						
42.0	44.1	51.2	3.4	2.4						
44.0	40.1	48.9	2.4							



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:

74.0

Lastre trasero [t]: 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 43.0	de plumí		1) 89.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
13.3 14.0 16.0 18.0 20.0	78.0 77.0 74.2 71.4 68.6	68.2 68.1 67.5 66.9 66.1	15.1 15.1 15.1 15.1 15.1	27.9 27.9 23.9 20.0 17.1	·	•				
22.0 24.0 26.0 28.0 30.0	65.7 62.7 59.6 56.5 53.2	65.3 64.3 63.1 61.8 60.4	13.2 11.3 9.5 6.7 4.4	14.0 11.5 9.3 6.6 4.4						
32.0	49.7	58.8	2.7	2.7						
			Angı		ıma prin	cipal 83.0	[°]		1	
18.9 20.0 22.0 24.0	73.0 71.5 68.7 65.8	67.0 66.7 65.9 65.0	15.1 15.1 14.5	19.9 19.9 17.2 14.9						
26.0 28.0 30.0 32.0 34.0	62.8 59.7 56.5 53.3 49.8	64.0 62.9 61.6 60.2 58.6	12.9 11.5 8.8 6.6 4.9	12.8 11.0 8.6 6.6 5.1						
36.0	46.2	56.7	3.5	3.6						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]C			
27.7 28.0 30.0 32.0	65.0 64.6 61.6 58.5	64.0 63.9 62.9 61.7	13.9 13.0 11.1	11.2 11.0 9.4 8.0						
34.0 36.0 38.0 40.0 42.0	55.3 51.9 48.4 44.7 40.7	60.3 58.8 57.1 55.2 53.0	9.5 8.1 6.7 5.2 3.5	6.8 5.7 4.8 3.9 3.0						
72.0	70.7	55.0			uma prin	cinal 65 t	1 0 1			
38.0 40.0 42.0 44.0	55.0 51.6 48.1 44.7	58.6 57.1 55.4 53.5	4.3 3.2 2.2	4.0 3.1 2.3	ина рпп	ыраі 65.	J []			



Nº de ident.: 9842523/95738/

Radio de descarga:

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

360°

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]
23.0 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 [°]										
13.9 14.0 16.0 18.0	78.0 77.9 75.3 72.7	71.2 71.2 70.7 70.0	15.1 15.1 15.1 15.1	24.1 24.1 22.4 18.7	•	•				
20.0 22.0 24.0 26.0 28.0	70.1 67.4 64.6 61.8 58.9	69.3 68.5 67.6 66.6 65.4	15.1 14.3 11.4 9.3 7.2	15.8 13.6 11.2 9.3 7.2						
30.0	55.9	64.1	4.9	5.0						
32.0 52.8 62.6 3.0 3.1										
Ángulo de pluma principal 83.0 [°]										
19.8 20.0 22.0 24.0	73.0 72.8 70.1 67.4	69.9 69.8 69.1 68.3	15.1 15.1 14.4	17.0 17.0 16.1 13.9						
26.0 28.0 30.0 32.0	64.7 61.9 59.0 56.0	67.4 66.4 65.2 63.9	12.5 10.7 8.9 6.9	12.0 10.5 8.8 6.8						
34.0 36.0 38.0	52.9 49.7 46.3	62.4 60.8 59.0	5.2 3.9 2.9	5.2 4.0 2.9						
Ángulo de pluma principal 75.0 [°]										
29.0 30.0 32.0	65.0 63.6 60.8	66.7 66.3 65.2	11.5 10.3	10.2 9.4 8.0						
34.0 36.0 38.0 40.0 42.0	57.9 54.8 51.7 48.4 44.9	64.0 62.6 61.1 59.4 57.4	8.8 7.6 6.5 5.5 4.0	6.8 5.7 4.8 4.0 3.1						
42.0 44.9 57.4 4.0 5.1										
39.7 40.0 42.0	55.0 54.6 51.4	61.0 60.9 59.4	4.3 3.2	3.2 3.1 2.4	urna prind	cipai 65.0) [·]			
44.0	48.4	57.7	2.3	l					l	



Nº de ident.: 9842523/95738/

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

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

Lasile	ciliai [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]			
	23.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (2316-1) 95.5 m Plumín 49.0 [m] Posición midfall (2316) Ángulo de pluma principal 88.0 [°]												
			Ángı	ılo de plı	ıma prin	cipal 88.	0 [°]						
14.5 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0	78.0 76.2 73.8 71.3 68.8 66.3 63.7 61.0 58.3 55.5	74.1 73.8 73.2 72.5 71.8 70.9 70.0 68.9 67.7 66.4	15.1 15.1 14.7 14.2 11.7 9.2 7.4 5.3 3.4	22.8 22.2 18.5 15.7 13.7 11.2 9.1 7.5 5.3 3.4									
	Ángulo de pluma principal 83.0 [°]												
20.7 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0	73.0 71.4 68.9 66.4 63.8 61.1 58.4 55.6 52.6 49.6	72.7 72.3 71.6 70.7 69.8 68.7 67.5 66.2 64.7 63.0	15.1 14.1 12.6 10.6 9.2 7.3 5.4 3.9 2.8	15.9 15.9 13.7 12.0 10.4 9.2 7.3 5.4 3.9 2.9									
			Ángı		ıma prin	cipal 75.	0 [°]		1				
30.3 32.0 34.0 36.0 38.0 40.0 42.0 44.0	65.0 62.7 60.1 57.3 54.4 51.5 48.4 45.1	69.4 68.6 67.5 66.2 64.9 63.3 61.6 59.7	10.2 8.8 7.6 6.4 5.3 4.2 3.2	9.0 7.8 6.6 5.6 4.7 3.9 3.1 2.3									
			Ángı		ıma prin	cipal 65.	0 [°]						
41.4	55.0	63.5	3.0	2.4									

42.0

44 0

54.2 51.4 63.2 61.6



N° de ident.: 9842523/95738/ Pieza

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

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

	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	n (2316-		n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
15.1 16.0 18.0 20.0	78.0 77.0 74.7 72.4	77.0 76.8 76.3 75.7	15.1 15.1 14.6	20.6 20.6 17.8 15.3						
22.0 24.0 26.0 28.0 30.0	70.1 67.7 65.3 62.9 60.3	75.0 74.2 73.3 72.3 71.2	13.1 11.6 9.1 7.1 5.5	13.1 11.2 9.0 7.2 5.7						
32.0	57.7	70.0	3.9 Ángu	4.0	ıma nrin	oinal 02 () [° 1			
21.6	73.0	75.6	15.1	14.4	ıma prini	cipal 83.0)		1	
22.0 24.0 26.0 28.0	72.5 70.2 67.8 65.4	75.5 75.8 74.0 73.1	15.1 15.1 14.1 11.9 10.2	14.4 13.4 11.6 10.1						
30.0 32.0 34.0 36.0 38.0	62.9 60.4 57.8 55.2 52.4	72.1 71.0 69.8 68.4 66.9	8.7 7.5 5.7 4.0 2.7	8.8 7.7 5.8 4.1 2.7						
			Ángu	ılo de plu	ıma prin	cipal 75.0	0 [°]			
31.5 32.0 34.0 36.0 38.0 40.0 42.0 44.0	65.0 64.4 62.0 59.4 56.8 54.1 51.3 48.4	72.2 72.0 70.9 69.8 68.5 67.1 65.6 63.8	8.9 8.4 7.3 6.1 5.1 4.1 3.1	8.0 7.7 6.5 5.4 4.5 3.7 3.0 2.3	•					
44.0	48.4	03.8			ıma prin	cipal 65.0	1°10		l	
43.3	55.0	65.9	2.2	do pic	a piiii	5.pai 50.	- []			



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

	l				0	4	-	_	-	
	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 o 55.0	de blumíi		1) 101.5`	m Plumí			
			Ángı	ılo de plı	uma prin	cipal 88.0	[°]			
15.8 16.0 18.0 20.0 22.0 24.0 26.0 30.0 32.0 34.0 22.4 24.0 26.0 30.0 30.0 32.0	78.0 77.7 75.6 73.4 71.2 69.0 66.8 64.5 62.1 59.7 57.2 73.0 71.3 69.1 66.8 64.5	80.0 79.9 79.4 78.9 78.2 77.4 76.6 75.7 74.7 73.5 72.3	15.1 15.1 15.1 15.1 12.8 10.9 8.8 6.9 5.3 4.1 2.9 Ángu	18.1 18.1 17.0 14.4 12.3 10.7 8.8 6.9 5.4 4.2 3.0 Jlo de plu 12.6 12.5 10.8 10.9	uma prin	cipal 83.0)[°]			
32.0 34.0 36.0 38.0	62.2 59.8 57.3 54.8	74.4 73.3 72.1 70.7	6.9 5.8 4.2 2.8	7.2 6.0 4.3 2.8						
			Ángu	ılo de plu	ıma prin	cipal 75.0	[°]			
32.8 34.0 36.0 38.0 40.0	65.0 63.6 61.2 58.8 56.3	74.9 74.3 73.3 72.1 70.8 69.4	7.4 6.7 5.7 4.7 3.8	7.0 6.3 5.2 4.3 3.5 2.8						
44.0 46.0	51.1 48.6	67.8 66.1	2.9 2.0	2.1						



Nº de ident.: 9842523/95738/

Radio de descarga:

360 ° Cabeza de pluma principal:

Pieza de articulación 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 plumi		1) 38.5 r	n Plumín					
	Ángulo de pluma principal 88.0 [°]											
7.8 8.0 9.0 10.0 11.0 13.0 14.0 16.0 18.0	78.0 77.1 73.4 69.5 65.6 61.5 57.3 52.8 42.7 29.8	44.8 44.8 44.5 44.1 43.6 43.1 42.5 41.7 39.8 37.0 44.2 44.0 43.5 43.5	15.1 15.1 15.1 15.1 15.1 15.1 15.1 12.7 10.3 Ángu	30.1 30.1 30.1 30.1 30.1 25.0 21.4 18.2 15.7 12.4 10.2 ulo de plu 30.1 30.0 27.4	uma prind	cipal 83.	0[°]					
16.0 18.0	54.2 44.4	41.7 39.9	15.1 13.2	16.3 12.8								
20.0	32.2	37.3	11.1	10.5								
			Ángı	ılo de plu	ıma prin	cipal 75.	0 [°]					
17.1 18.0 20.0 22.0 24.0	65.0 61.3 52.5 42.4 29.4	42.4 42.0 40.6 38.7 35.8	15.1 15.1 12.8 10.5	24.0 20.8 15.4 12.1 10.0								
			Ángı	ılo de plu	uma prin	cipal 65.	0 [°]					
23.8 24.0 26.0 28.0	55.0 54.0 44.2 31.8	39.2 39.1 37.3 34.6	15.1 12.3 9.7	15.3 15.2 11.9 9.7								
35.0	35.0	29.4	Angu	ılo de plu 8.8	ıma prin	cipal 45.	0 [°]					
36.0 37.0	27.2 16.3	28.0 25.5	8.8 8.0	8.1 7.4								



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]			
			0 m Plum Cabeza 19.0	de plumí	n (2316-		n Plumín						
	Ángulo de pluma principal 88.0 [°]												
8.4 9.0 10.0 11.0 12.0 13.0 14.0	78.0 76.1 72.9 69.7 66.4 63.0 59.5	47.8 47.6 47.3 46.9 46.5 46.0 45.4	15.1 15.1 15.1 15.1 15.1 15.1	30.1 30.1 30.1 30.1 25.5 21.9 19.1									
16.0 18.0 20.0	52.1 43.6 33.5	44.0 42.1 39.5	15.1 12.5 9.9	14.9 12.0 9.8									
	Ángulo de pluma principal 83.0 [°]												
12.3 13.0 14.0 16.0 18.0 20.0 22.0	73.0 70.7 67.5 60.6 53.3 45.1 35.3	47.0 46.8 46.4 45.3 44.0 42.1 39.7	15.1 15.1 15.1 15.1 12.8 10.3	30.1 29.7 27.3 20.0 15.4 12.4 10.2									
				ılo de pli	ıma prin	cipal 75.0	1°1						
18.4 20.0 22.0 24.0 26.0	65.0 59.3 51.9 43.4 33.2	45.1 44.3 42.8 40.9 38.3	15.1 15.1 13.0 10.8	23.3 19.0 14.8 12.0 10.0									
			Ángu	ılo de plu	ıma prin	cipal 65.0	[°]0						
25.5 26.0 28.0 30.0	55.0 53.1 44.8 35.0	41.6 41.3 39.5 37.0	15.1 13.4 10.5	15.2 14.7 11.9 9.8									
L			Angı		ıma prin	cipal 45.0	[°]						
37.4 38.0 40.0	35.0 31.6 17.8	31.2 30.6 25.9	9.3 8.0	7.6 7.3									



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]
		26.0	0 m Plum Cabeza 22.0	de plumi	oal, Punt ín (2316- osición m	1) 44.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	0[°]			
9.0 10.0 11.0 12.0 13.0 14.0 16.0 20.0 22.0 24.0	78.0 75.3 72.6 69.8 67.0 64.1 58.0 51.5 44.3 35.9 25.0 73.0 70.7 65.0	50.7 50.4 50.1 49.8 49.3 48.8 47.7 46.2 44.3 41.9 38.4	15.1 15.1 15.1	30.1 28.4 20.9	uma prind	cipal 83.	0[°]			
18.0 20.0 22.0 24.0 26.0	59.0 52.6 45.5 37.3 27.0	47.6 46.2 44.4 42.0 38.8	14.6 13.6 11.3 9.1 7.7	16.4 13.2 11.0 9.2 7.8						
			Ángı	ılo de plu	ıma prin	cipal 75.0	0 [°]			
19.6 20.0 22.0 24.0 26.0 28.0 30.0	65.0 63.9 57.9 51.4 44.1 35.7 24.6	47.9 47.7 46.5 45.1 43.2 40.7 37.2	15.1 15.0 14.0 11.6 9.4 7.8	20.3 20.1 15.8 12.8 10.7 9.0 7.6						
			Ángı		ıma prin	cipal 65.0	0[°]		1	
27.2 28.0 30.0 32.0 34.0	55.0 52.4 45.3 37.1 26.7	44.1 43.6 41.8 39.4 36.1	14.3 11.4 9.1 7.7	13.3 12.7 10.5 8.8 7.5		oinal 45 t	0.103			
Ángulo de pluma principal 45.0 [°] 39.9 35.0 32.9 6.8 40.0 34.4 32.7 6.7 42.0 22.8 29.3 7.3 5.8 43.0 16.5 26.3 6.8										



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: Lastre trasero [t]: 2 - Vía ancha

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]	
		26.	0 m Plum Cabeza 25.0	de plumí		1) 47.5 r	n Plumín				
			Ángı	ılo de plı	ıma prin	cipal 88.0	0 [°]				
9.6 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0	78.0 77.1 74.7 72.3 69.9 67.4 62.3 56.9 51.1	53.6 53.5 53.3 53.0 52.6 52.2 51.2 49.9 48.4	15.1 15.1 15.1 15.1 15.1 15.1 12.7 10.6	30.1 30.1 30.1 27.0 23.8 20.8 16.3 13.3 11.1							
22.0 24.0	44.8 37.6	46.6 44.2	8.8 7.3	9.3 7.8							
26.0	28.9	41.1	6.3	6.7		-:	2.0.1				
14.0	73.0	52.8	Angı	110 de pil	uma prind	cipai 83.0	ا ر ا				
16.0 18.0 20.0 22.0	68.2 63.1 57.8 52.1	52.0 51.1 49.9 48.4	15.1 15.1 13.4 11.6	21.8 16.9 13.7 11.4							
24.0 26.0 28.0	45.8 38.8 30.4	46.6 44.4 41.4	9.7 8.0 6.8	9.6 8.1 7.0							
			Ángı	ılo de plu	ıma prin	cipal 75.0	0[°]				
20.9 22.0 24.0 26.0 28.0 30.0 32.0	65.0 62.2 56.8 51.0 44.6 37.4 28.6	50.6 50.1 48.8 47.3 45.4 43.1 39.9	15.1 14.2 11.9 9.8 8.1 6.9	17.8 16.3 13.3 11.1 9.4 8.0 6.9							
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]				
28.9 30.0 32.0 34.0 36.0	55.0 51.9 45.7 38.6 30.2	46.5 45.8 44.0 41.7 38.7	11.9 9.7 8.0 6.8	11.7 10.9 9.2 7.8 6.8							
	Ángulo de pluma principal 45.0 [°]										
42.3 44.0 46.0	35.0 27.2 15.3	34.6 32.1 26.7	6.4 5.5	5.8 5.1							



Nº de ident.: 9842523/95738/

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

Valor de vuelco: 2 - Vía ancha

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

ce [m] plumín [°] plumín [°] de roldanas [m] [t]	
Cabeza de plumín (2316-1) 50.5 m Plumín 28.0 [m] Posición midfall (2316) Angulo de pluma principal 88.0 [°] 10.2 78.0 56.6 30.1 15.1 30.1 12.0 76.4 56.4 15.1 30.1 13.0 76.4 56.4 15.1 30.1 13.0 72.1 55.8 15.1 29.5 14.0 70.0 55.4 15.1 29.0 16.0 65.5 54.5 15.1 29.0 16.0 60.9 53.5 15.1 19.7 20.0 56.0 52.2 15.1 16.7 22.0 50.8 50.7 15.1 14.4 24.0 45.2 48.8 13.2 12.6 26.0 38.9 46.5 11.4 11.0 28.0 31.5 43.6 10.0 9.8 30.0 21.9 39.6 8.8 8.7 Angulo de pluma principal 83.0 [°] 14.9 73.0 55.6 30.1 29.5 15.1 20.7 15.1 14.4 22.0 56.8 50.7 15.1 20.0 9.8 30.0 21.9 39.6 8.8 8.7 30.0 21.9 39.6 8.8 8.7 30.0 21.9 39.6 8.8 8.7 30.0 21.9 39.6 8.8 3.7 30.1 20.0 61.6 53.4 15.1 20.4 22.0 56.8 52.2 15.1 17.1 24.6 22.0 56.8 52.2 15.1 17.1 24.6 22.0 56.8 52.2 15.1 17.1 22.4 24.0 46.1 48.9 13.4 12.9 28.0 39.9 46.7 11.7 11.3 30.0 32.8 43.9 10.4 10.1 32.0 23.7 40.1 9.1 9.0 \$Angulo de pluma principal 75.0 [°] 22.2 65.0 53.3 22.5 4 15.1 19.6 \$Angulo de pluma principal 75.0 [°]	Carga [t]
10.2	
11.0 76.4 56.4 15.1 30.1 12.0 74.3 56.1 15.1 30.1 13.0 72.1 55.8 15.1 29.5 14.0 70.0 55.4 15.1 29.0 16.0 65.5 54.5 15.1 29.7 20.0 56.0 52.2 15.1 16.7 22.0 50.8 50.7 15.1 14.4 22.0 45.2 48.8 13.2 12.6 26.0 38.9 46.5 11.4 11.0 28.0 31.5 43.6 10.0 9.8 30.0 21.9 39.6 8.8 8.7 21.0 21.9 39.6 8.8 8.7 21.0 21.0 56.2 54.4 15.1 24.6 22.0 56.8 52.2 15.1 15.1 24.6 22.0 56.8 52.2 15.1 15.1 24.6 22.0 56.8 52.2 15.1 29.5 12.0 24.0 61.6 53.4 15.1 20.4 22.0 56.8 52.2 15.1 17.1 24.6 22.0 56.8 52.2 15.1 17.1 24.6 22.0 56.8 52.2 15.1 17.1 20.4 22.0 56.8 52.2 15.1 17.1 20.4 22.0 56.8 52.2 15.1 17.1 20.4 22.0 56.8 52.2 15.1 17.1 20.4 22.0 56.8 52.2 15.1 17.1 20.4 22.0 39.9 46.7 11.7 11.3 30.0 32.8 43.9 10.4 10.1 32.0 23.7 40.1 9.1 9.0 \$\$\$Angulo de pluma principal 75.0 [°]\$\$\$\$Angulo de pluma principal 75.0 [°]\$\$\$\$\$Angulo de pluma principal 75.0 [°]\$\$\$\$\$\$2.2 5.5 2.2 5.1 5.1 5.1 5.1 5.1 5.1 5.1 5.1 5.1 5.1	
12.0 74.3 56.1 15.1 30.1 14.0 72.1 55.8 15.1 29.5 15.1 29.5 16.0 65.5 54.5 15.1 29.0 16.0 65.5 54.5 15.1 19.7 18.0 60.9 53.5 15.1 19.7 18.0 60.9 53.5 15.1 19.7 19.7 19.0 19.8 19.7 19.0 19.8 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	
13.0 72.1 55.8 15.1 29.5 14.0 70.0 55.4 15.1 29.0 16.0 65.5 54.5 15.1 23.7 18.0 60.9 53.5 15.1 19.7 20.0 56.0 52.2 15.1 16.7 22.0 50.8 50.7 15.1 14.4 24.0 45.2 48.8 13.2 12.6 26.0 38.9 46.5 11.4 11.0 28.0 31.5 43.6 10.0 9.8 30.0 21.9 39.6 8.8 8.7 Angulo de pluma principal 83.0 [°] 14.9 73.0 55.6 30.1 16.0 70.7 55.3 15.1 29.5 18.0 66.2 54.4 15.1 29.5 18.0 66.2 54.4 15.1 20.4 22.0 56.8 52.2 15.1 17.1 24.0 51.7 50.7 15.1 14.7 26.0 46.1 48.9 13.4 12.9 28.0 39.9 46.7 11.7 11.3 30.0 23.8 43.9 10.4 10.1 32.0 23.7 40.1 9.1 9.0 Angulo de pluma principal 75.0 [°] 22.2 65.0 53.3 40.9 10.4 10.1 32.0 23.7 40.1 9.1 9.0 Angulo de pluma principal 75.0 [°]	
14.0 70.0 55.4 15.1 29.0 16.0 65.5 54.5 15.1 23.7 18.0 60.9 53.5 15.1 19.7 20.0 56.0 52.2 15.1 16.7 22.0 50.8 50.7 15.1 14.4 24.0 45.2 48.8 13.2 12.6 26.0 38.9 46.5 11.4 11.0 28.0 31.5 43.6 10.0 9.8 30.0 21.9 39.6 8.8 8.7 Angulo de pluma principal 83.0 [°] 14.9 73.0 55.6 30.1 16.0 70.7 55.3 15.1 29.5 18.0 66.2 54.4 15.1 24.6 20.0 61.6 53.4 15.1 20.4 22.0 56.8 52.2 15.1 17.1 24.0 51.7 50.7 15.1 14.7 26.0 46.1 48.9 13.4 12.9 28.0 39.9 46.7 11.7 11.3 30.0 32.8 43.9 10.4 10.1 32.0 23.7 40.1 9.1 9.0 Angulo de pluma principal 75.0 [°] 22.2 65.0 53.3 22.5 24.0 60.8 52.4 15.1 19.6	
18.0 60.9 53.5 15.1 19.7 20.0 56.0 52.2 15.1 16.7 22.0 50.8 50.7 15.1 14.4 24.0 45.2 48.8 13.2 12.6 26.0 38.9 46.5 11.4 11.0 28.0 31.5 43.6 10.0 9.8 30.0 21.9 39.6 8.8 8.7 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	
20.0 56.0 52.2 15.1 16.7 24.0 45.2 48.8 13.2 12.6 26.0 38.9 46.5 11.4 11.0 28.0 31.5 43.6 10.0 9.8 30.0 21.9 39.6 8.8 8.7	
22.0	
24.0	
26.0 38.9 46.5 11.4 11.0 9.8 30.0 21.9 39.6 8.8 8.7 Angulo de pluma principal 83.0 [°] 14.9 73.0 55.6 30.1 29.5 18.0 66.2 54.4 15.1 24.6 22.0 56.8 52.2 15.1 17.1 24.6 22.0 56.8 52.2 15.1 17.1 24.0 24.0 51.7 50.7 15.1 14.7 26.0 46.1 48.9 13.4 12.9 28.0 39.9 46.7 11.7 11.3 30.0 32.8 43.9 10.4 10.1 32.0 23.7 40.1 9.1 9.0 Angulo de pluma principal 75.0 [°] 22.2 65.0 53.3 22.5 22.5 22.5 22.5 23.3 24.0 60.8 52.4 15.1 19.6	
28.0 31.5 43.6 10.0 9.8 8.7 Angulo de pluma principal 83.0 [°] 14.9 73.0 55.6 30.1 29.5 18.0 66.2 54.4 15.1 24.6 20.0 61.6 53.4 15.1 20.4 22.0 56.8 52.2 15.1 17.1 24.6 22.0 46.1 48.9 13.4 12.9 28.0 39.9 46.7 11.7 11.3 30.0 32.8 43.9 10.4 10.1 32.0 23.7 40.1 9.1 9.0 Angulo de pluma principal 75.0 [°] 22.2 65.0 53.3 22.5 24.0 60.8 52.4 15.1 19.6	
Ángulo de pluma principal 83.0 [°] 14.9 73.0 55.6 30.1 16.0 70.7 55.3 15.1 29.5 18.0 66.2 54.4 15.1 24.6 20.0 61.6 53.4 15.1 20.4 22.0 56.8 52.2 15.1 17.1 24.0 51.7 50.7 15.1 14.7 26.0 46.1 48.9 13.4 12.9 28.0 39.9 46.7 11.7 11.3 30.0 32.8 43.9 10.4 10.1 32.0 23.7 40.1 9.1 9.0 Ángulo de pluma principal 75.0 [°] 22.2 65.0 53.3 22.5 24.0 60.8 52.4 15.1 19.6	
14.9 73.0 55.6 30.1 15.1 29.5 18.0 18.0 66.2 54.4 15.1 24.6 20.0 61.6 53.4 15.1 20.4 22.0 56.8 52.2 15.1 17.1 24.0 51.7 50.7 15.1 14.7 26.0 46.1 48.9 13.4 12.9 28.0 39.9 46.7 11.7 11.3 30.0 32.8 43.9 10.4 10.1 32.0 23.7 40.1 9.1 9.0 Angulo de pluma principal 75.0 [°] 22.2 65.0 53.3 22.5 24.0 60.8 52.4 15.1 19.6	
16.0 70.7 55.3 15.1 29.5 18.0 66.2 54.4 15.1 24.6 20.0 61.6 53.4 15.1 20.4 22.0 56.8 52.2 15.1 17.1 24.0 51.7 50.7 15.1 14.7 26.0 46.1 48.9 13.4 12.9 28.0 39.9 46.7 11.7 11.3 30.0 32.8 43.9 10.4 10.1 32.0 23.7 40.1 9.1 9.0 Angulo de pluma principal 75.0 [°] 22.2 65.0 53.3 22.5 24.0 60.8 52.4 15.1 19.6	
18.0 66.2 54.4 15.1 24.6 20.0 61.6 53.4 15.1 20.4 22.0 56.8 52.2 15.1 17.1 24.0 51.7 50.7 15.1 14.7 26.0 46.1 48.9 13.4 12.9 28.0 39.9 46.7 11.7 11.3 30.0 32.8 43.9 10.4 10.1 32.0 23.7 40.1 9.1 9.0 Angulo de pluma principal 75.0 [°] 22.2 65.0 53.3 22.5 24.0 60.8 52.4 15.1 19.6	
20.0 61.6 53.4 15.1 20.4 22.0 56.8 52.2 15.1 17.1 24.0 51.7 50.7 15.1 14.7 26.0 46.1 48.9 13.4 12.9 28.0 39.9 46.7 11.7 11.3 30.0 32.8 43.9 10.4 10.1 32.0 23.7 40.1 9.1 9.0 Angulo de pluma principal 75.0 [°] 22.2 65.0 53.3 22.5 24.0 60.8 52.4 15.1 19.6	
22.0 56.8 52.2 15.1 17.1 24.0 51.7 50.7 15.1 14.7 26.0 46.1 48.9 13.4 12.9 28.0 39.9 46.7 11.7 11.3 30.0 32.8 43.9 10.4 10.1 32.0 23.7 40.1 9.1 9.0 Angulo de pluma principal 75.0 [°] 22.2 65.0 53.3 22.5 24.0 60.8 52.4 15.1 19.6	
24.0 51.7 50.7 15.1 14.7 26.0 46.1 48.9 13.4 12.9 28.0 39.9 46.7 11.7 11.3 30.0 32.8 43.9 10.4 10.1 32.0 23.7 40.1 9.1 9.0 Angulo de pluma principal 75.0 [°] 22.2 65.0 53.3 22.5 24.0 60.8 52.4 15.1 19.6	
28.0 39.9 46.7 11.7 11.3 30.0 32.8 43.9 10.4 10.1 32.0 23.7 40.1 9.1 9.0 Angulo de pluma principal 75.0 [°] 22.2 65.0 53.3 22.5 24.0 60.8 52.4 15.1 19.6	
30.0 32.8 43.9 10.4 10.1 32.0 23.7 40.1 9.1 9.0 Angulo de pluma principal 75.0 [°] 22.2 65.0 53.3 22.5 24.0 60.8 52.4 15.1 19.6	
32.0 23.7 40.1 9.1 9.0 Ángulo de pluma principal 75.0 [°] 22.2 65.0 53.3 22.5 24.0 60.8 52.4 15.1 19.6	
Ángulo de pluma principal 75.0 [°] 22.2 65.0 53.3 22.5 24.0 60.8 52.4 15.1 19.6	
22.2 65.0 53.3 24.0 60.8 52.4 15.1 19.6	
24.0 60.8 52.4 15.1 19.6	
26.0 55.9 51.1 15.1 16.6	
28.0 50.7 49.5 15.1 14.5	
30.0 45.0 47.7 13.4 12.7	
32.0 38.7 45.4 11.6 11.2 34.0 31.3 42.5 10.3 10.0	
34.0 31.3 42.5 10.3 10.0 36.0 21.6 38.4 9.0 8.9	
Ángulo de pluma principal 65.0 [°]	
30.7 55.0 49.0 14.7	
32.0 51.5 48.1 14.8 13.5	
34.0 46.0 46.3 12.7 11.9	
36.0 39.8 44.0 10.9 10.6	
38.0 32.6 41.2 9.6 9.4	
Ángulo de pluma principal 45.0 [°]	
44.8 35.0 36.3 4.9 4.9 4.5 5.6 4.5	
48.0 20.0 30.4 4.8 3.8	



N° de ident.: 9842523/95738/

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

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

	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]								
			0 m Plum							
			Cabeza 31.0	de plumi) [m] Po	n (2316- osición m	1) 53.5 r nidfall (23	n Plumin 316)			
					ıma prin					
10.9	78.0	59.5	15.1	30.1						
11.0	77.8	59.5	15.1	30.1						
12.0	75.9	59.2	15.1	30.1						
13.0 14.0	73.9 72.0	58.9 58.6	15.1 15.1	30.1 27.2						
16.0	68.0	57.8	15.1	22.9						
18.0	63.9	56.9	15.1	18.7						
20.0	59.7	55.8	14.6	15.9						
22.0	55.3	54.5	13.4	13.6						
24.0	50.6	52.9	12.6	12.0						
26.0 28.0	45.5 39.9	51.1 48.8	10.9 9.3	10.5 9.2						
30.0	33.5	46.1	8.1	8.2						
32.0	25.7	42.5	7.2	7.3						
			Ángu	ılo de plu	ıma prin	cipal 83.0	[°]			
15.8	73.0	58.5		28.8						
16.0	72.6	58.5	15.1	28.8						
18.0	68.7	57.7	15.1	23.6						
20.0 22.0	64.6 60.4	56.8 55.7	15.1 14.8	19.3 16.3						
24.0	56.0	54.4	13.7	14.0						
26.0	51.3	52.9	13.0	12.2						
28.0	46.3	51.1	11.2	10.7						
30.0	40.8	49.0	9.6	9.4						
32.0 34.0	34.6 27.1	46.3 42.9	8.3 7.4	8.4 7.5						
34.0	21.1	42.5			uma prin	cinal 75 (1 ° 1		I	
23.4	65.0	56.0	Ange	19.0	Jina pini	J.pui 70.	· []			
24.0	63.8	55.8	15.1	18.8						
26.0	59.6	54.7	15.1	15.9						
28.0	55.2	53.3	13.9	13.7						
30.0	50.4	51.8	12.6	12.0						
32.0 34.0	45.3 39.7	49.9 47.7	10.9 9.4	10.6 9.3						
36.0	33.3	44.9	8.3	8.4						
38.0	25.5	41.3	7.4	7.5						
			Ángı	ılo de plı	ıma prin	cipal 65.0	[°]			
32.4	55.0	51.5		12.7						
34.0	51.2	50.3	11.9	11.7						
36.0 38.0	46.2 40.7	48.5 46.3	10.3 8.9	10.3 9.1						
40.0	34.4	43.7	7.8	8.1						
42.0	26.9	40.2	7.0	7.3						
			Ángı	ılo de plu	ıma prin	cipal 45.0	[°]			
47.2	35.0	38.1		4.1						
48.0	32.4	37.2	4.7	3.8						
50.0 51.0	24.3	33.4 30.9	4.0	3.2 2.9						
31.0	18.9	30.8	3.6	2.9	I				I	



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]	
			0 m Plum Cabeza 22.0	de plumi		1) 56.5 r	n Plumín				
			Ángı	ılo de plı	ıma prin	cipal 88.	0 [°]				
9.0 78.0 50.7 15.1 30.1 10.0 75.3 50.4 15.1 30.1 11.0 72.6 50.1 15.1 29.5 12.0 69.8 49.8 15.1 28.3 13.0 67.0 49.3 15.1 25.0 14.0 64.1 48.8 15.1 21.6 16.0 58.0 47.7 15.0 17.0 18.0 51.5 46.2 14.8 13.8 20.0 44.3 44.3 12.4 11.4 22.0 35.9 41.9 9.8 9.4 24.0 25.0 38.4 8.1 7.9 Angulo de pluma principal 83.0 [°] 13.2 73.0 49.9 15.1 30.1 14.0 70.7 49.6 15.1 29.9 16.0 65.0 48.7 15.1 22.7 18.0 59.0 47.6 15.1 17.7 20.0 52.6 46.2 15.1 14.2											
			Ángı	ılo de plu	ıma prin	cipal 75.	0[°]				
19.6 20.0 22.0 24.0 26.0 28.0 30.0	65.0 63.9 57.9 51.4 44.1 35.7 24.6	47.9 47.7 46.5 45.1 43.2 40.7 37.2	15.1 15.1 14.8 12.5 10.1 8.3	21.6 21.6 17.1 13.8 11.5 9.6 8.1							
ļ			Angu		ıma prin	cipal 65.	0[°]	1	1		
27.2 28.0 30.0 32.0 34.0	55.0 52.4 45.3 37.1 26.7	44.1 43.6 41.8 39.4 36.1	15.1 12.4 9.9 8.3	13.6 12.7 10.7 9.0 7.5							
39.9 40.0 42.0 43.0	35.0 34.4 22.8 16.5	32.9 32.7 29.3 26.3	4.2 3.6	3.9 3.8 2.9	uma prin	cipal 45.	0[°]				



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 25.0	de plumí		1) 59.5 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 20.0 22.0 24.0 26.0	10.0 77.1 53.5 15.1 30.1 11.0 74.7 53.3 15.1 30.1 12.0 72.3 53.0 15.1 28.1 13.0 69.9 52.6 15.1 25.3 14.0 67.4 52.2 15.1 22.5 16.0 62.3 51.2 15.1 17.6 18.0 56.9 49.9 13.8 14.3 20.0 51.1 48.4 12.5 11.8 22.0 44.8 46.6 10.5 9.9 24.0 37.6 44.2 8.5 8.3												
				28.9		·							
16.0 18.0	68.2 63.1	52.0 51.1	15.1 15.1	23.4 18.2									
20.0 22.0 24.0 26.0 28.0	57.8 52.1 45.8 38.8 30.4	49.9 48.4 46.6 44.4 41.4	13.6 11.8 9.9 8.2 6.9	14.8 12.3 10.3 8.7 7.4									
26.0	30.4	41.4			ıma prin	oinal 75 () [°]						
20.9 22.0 24.0 26.0 28.0 30.0 32.0	65.0 62.2 56.8 51.0 44.6 37.4 28.6	50.6 50.1 48.8 47.3 45.4 43.1 39.9	15.1 14.6 12.7 10.6 8.7 7.4	18.8 17.7 14.4 12.0 10.1 8.6 7.3	лпа рпп	ыраг 7 3.1	×[]						
32.0	20.0	38.8			uma prin	cinal 65 () [°]						
28.9	55.0	46.5	Angu	12.3		upai 05.	7 []						
30.0 32.0 34.0 36.0	51.9 45.7 38.6 30.2	45.8 44.0 41.7 38.7	12.9 10.5 8.6 7.3	11.3 9.5 8.1 6.8									
	Ángulo de pluma principal 45.0 [°]												
42.3 44.0 46.0	35.0 27.2 15.3	34.6 32.1 26.7	3.4 2.4	3.0 2.4									



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 28.0	de plumí	n (2316-		n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0) [°]			
10.2	78.0	56.6		30.1						
11.0	76.4	56.4	15.1	30.1						
12.0 13.0	74.3 72.1	56.1 55.8	15.1 15.1	28.3 24.8						
14.0	70.0	55.4	15.1	21.6						
16.0	65.5	54.5	14.9	17.0						
18.0	60.9	53.5	14.5	13.9						
20.0	56.0	52.2	11.6	11.4						
22.0	50.8	50.7	9.4	9.6						
24.0 26.0	45.2 38.9	48.8 46.5	7.9 6.6	8.1 6.8						
28.0	31.5	43.6	5.6	5.8						
30.0	21.9	39.6	4.6	4.8						
			Ángu	ılo de plu	ıma prin	cipal 83.0	[°]			
14.9	73.0	55.6		24.6						
16.0	70.7	55.3	15.1	22.8						
18.0	66.2	54.4	15.1	17.7						
20.0 22.0	61.6 56.8	53.4 52.2	15.1 12.5	14.4 11.8						
24.0	51.7	50.7	10.3	9.9						
26.0	46.1	48.9	8.6	8.4						
28.0	39.9	46.7	7.1	7.1						
30.0	32.8	43.9	6.0	6.0						
32.0	23.7	40.1	5.0	5.1						
00.0	05.0	500	Angı		ıma prin	cipal 75.0	[°]		ı	
22.2 24.0	65.0 60.8	53.3 52.4	14.6	15.9 13.9						
26.0	55.9	51.1	12.5	11.5						
28.0	50.7	49.5	10.1	9.7						
30.0	45.0	47.7	8.4	8.2						
32.0	38.7	45.4	7.0	7.0						
34.0 36.0	31.3 21.6	42.5 38.4	6.0 5.0	6.0 5.0						
55.0	L 1.U	JU. 4			ıma prin	cipal 65.0	1°10		1	
30.7	55.0	49.0	gc	10.3	piiii		- L J			
32.0	51.5	48.1	10.0	9.6						
34.0	46.0	46.3	8.2	8.1						
36.0	39.8	44.0	6.9	6.9						
38.0 40.0	32.6 23.4	41.2 37.4	5.9 5.0	5.9 5.0						
40.0	23.4	31.4			ıma nrin	cipal 45.0) [°]		<u> </u>	
44.8	35.0	36.3	, 11190	2.3	ZIIIG PIIII	J.pai ∓0.	- L J			
46.0	31.1	34.7	2.7	2.5						
47.0	26.7	32.8	2.3	1	1			1	1	



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]
		26.0	0 m Plum Cabeza 31.0	na princip de plumí 0 [m] Po	ín (2316-	1) 65.5 r	n Plumín	dfall		
				ılo de plu	ıma prin	cipal 88.0	[°]			
10.9 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0	78.0 77.8 75.9 73.9 72.0 68.0 63.9 59.7 55.3 50.6	59.5 59.5 59.2 58.9 58.6 57.8 56.9 55.8 54.5 52.9	15.1 15.1 15.1 15.1 15.1 15.1 15.1 14.6 13.0 11.8	30.1 30.1 30.1 30.1 27.1 22.1 18.1 15.3 13.1 11.4						
28.0 30.0	39.9 33.5	48.8 46.1	8.7 7.5	8.7 7.6						
32.0	25.7	42.5	6.1 Ángi	l 6.2 Ilo de plu	ıma prin	cipal 83.0	1°10			
15.8	73.0	58.5		27.2						
16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0	72.6 68.7 64.6 60.4 56.0 51.3 46.3 40.8 34.6	58.5 57.7 56.8 55.7 54.4 52.9 51.1 49.0 46.3	15.1 15.1 15.1 14.9 13.3 12.2 10.6 9.0 7.8	27.2 22.7 18.6 15.8 13.4 11.7 10.2 9.0 7.9						
34.0	27.1	42.9	6.8 Ápgu	l 7.0 Ilo de plu	ıma prin	oinal 75 () [°]			
23.4 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0	65.0 63.8 59.6 55.2 50.4 45.3 39.7 33.3 25.5	56.0 55.8 54.7 53.3 51.8 49.9 47.7 44.9 41.3	15.1 15.1 13.7 12.0 10.4 8.9 7.8 6.9	18.0 18.0 15.3 13.2 11.5 10.1 8.9 7.9 6.9	·					
	55.0	54.5	Angı	ılo de plu	ıma prin	cipal 65.0	[°]		ı	
32.4 34.0 36.0 38.0 40.0 42.0	55.0 51.2 46.2 40.7 34.4 26.9	51.5 50.3 48.5 46.3 43.7 40.2	11.6 10.1 8.7 7.6 6.4	10.0 8.8 7.5 6.4 5.4 4.5						
				ılo de plu	ıma prin	cipal 45.0	[°]			
47.4	35.0	38.1	2.0							



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

Luotio	Cittai [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]
		26.0	0 m Plum Cabeza 34.0	na princip de plumi 0 [m] Po	oal, Punt ín (2316- osición m	o de caro 1) 68.5 r nidfall (23	ga 3 - Mi n Plumín 316)	dfall		
			,		uma prin					
11.5	78.0	62.4	15.1	30.1			J []			
12.0 13.0 14.0	77.1 75.4 73.6	62.3 62.1 61.8	15.1 15.1 15.1	30.1 28.7 26.5						
16.0 18.0 20.0	70.1 66.4 62.7	61.1 60.2 59.2	15.1 15.1 15.1	20.9 17.3 14.5						
22.0 24.0 26.0	58.7 54.7 50.3	58.1 56.7 55.1	13.4 11.2 9.5	12.5 10.7 9.4						
28.0 30.0 32.0	45.7 40.7 35.1	53.3 51.1 48.5	8.2 7.1 6.2	8.2 7.1 6.3						
34.0 36.0	28.4 19.7	45.2 40.7	5.2 4.2	5.3 4.3						
					ıma prin	cipal 83.0	[°]			
16.7 18.0 20.0	73.0 70.6 67.0	61.4 60.9 60.1	15.1 15.1 15.1	23.6 21.9 17.8						
22.0 24.0 26.0	63.3 59.4 55.3	59.1 58.0 56.7	14.6 13.2 11.1	14.9 12.8 11.0						
28.0 30.0 32.0	51.0 46.5 41.5	55.2 53.4 51.2	9.5 8.2 7.1	9.6 8.4 7.4						
34.0 36.0 38.0	36.0 29.6 21.3	48.7 45.5 41.3	6.2 5.5 4.8	6.5 5.7 5.0						
00.0	20	11.0	,		ıma prin	cipal 75.0	[°]			
24.7 26.0 28.0	65.0 62.6 58.6	58.7 58.1 57.0	15.1 13.4	15.4 14.7 12.6						
30.0 32.0 34.0	54.6 50.2 45.6	55.6 54.0 52.2	11.3 9.6 8.4	10.8 9.5 8.3						
36.0 38.0 40.0	40.6 34.9 28.2	50.0 47.3 44.0	7.2 6.3 5.6	7.3 6.5 5.7						
					uma prin	cipal 65.0	[°]			
34.1 36.0 38.0 40.0	55.0 50.9 46.4 41.4	53.9 52.5 50.7 48.6	9.4 8.1	9.0 7.8 6.7						
42.0 44.0 46.0	35.9 29.4 21.1	46.1 42.9 38.6	7.1 6.2 5.5 4.7	5.8 4.9 4.1 3.3						



Nº de ident.: 9842523/95738/

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

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

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 37.0		n (2316-	1) 71.5 r	n Plumín			•
			Ángı	ılo de plu	ıma prin	cipal 88.0	D[°]			
12.1	78.0	65.4		28.9						
13.0 14.0	76.6 75.0	65.2 64.9	15.1 15.1	28.1 24.7						
16.0	71.8	64.3	15.1	19.7						
18.0	68.4	63.5	14.9	16.3						
20.0	65.0	62.6	13.0 11.8	13.6						
22.0 24.0	61.6 57.9	61.6 60.4	10.0	11.7 10.0						
26.0	54.2	59.0	8.4	8.6						
28.0	50.2	57.4	7.2	7.5						
30.0 32.0	45.9 41.4	55.5 53.4	6.2 5.4	6.5 5.6						
34.0	36.3	50.9	4.7	4.9						
36.0	30.5	47.8	4.0	4.1						
38.0	23.4	43.8	3.2	3.3						
				ılo de plu	ıma prin	cipal 83.0	D[°]			
17.6	73.0	64.2	15.1	20.0						
18.0 20.0	72.3 69.0	64.1 63.4	15.1 15.1	20.0 16.7						
22.0	65.6	62.5	14.0	14.0						
24.0	62.1	61.5	12.5	12.0						
26.0 28.0	58.5 54.8	60.3 58.9	10.7 9.0	10.3 8.8						
30.0	50.8	57.4	7.6	7.7						
32.0	46.6	55.6	6.6	6.7						
34.0	42.1	53.5	5.7	5.8						
36.0 38.0	37.1 31.5	51.0 48.1	5.0 4.3	5.1 4.5						
40.0	24.7	44.3	3.8	3.8						
			Ángu	ılo de plu	ıma prin	cipal 75.0	[°]C			
26.0	65.0	61.5		13.0						
28.0 30.0	61.5 57.8	60.4 59.2	12.4 10.5	11.7 10.1						
32.0	54.1	59.2 57.8	8.8	8.7						
34.0	50.1	56.2	7.5	7.6						
36.0	45.8	54.4	6.6	6.6						
38.0 40.0	41.2 36.2	52.2 49.7	5.7 5.0	5.8 5.1						
42.0	30.3	46.6	4.4	4.5						
44.0	23.2	42.6	3.8	3.8						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
35.8 36.0	55.0 54.7	56.4	Ω 1	7.9						
36.0 38.0	54.7 50.7	56.4 54.8	8.1 7.4	7.8 6.7						
40.0	46.5	53.0	6.4	5.8						
42.0	42.0	50.9	5.6	4.9						
44.0 46.0	37.0 31.3	48.4 45.4	4.8 4.3	4.1 3.4						
48.0	24.5	41.6	3.7	2.8						
50.0	16.3	36.1	3.0							

Source:a9841388



Nº de ident.: 9842523/95738/

360°

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

Radio de descarga:

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	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		[m]								
		26.0	0 m Plum Cabeza	de plumi		1) 74.5 r	n Plumír			
					ıma prin					
12.7	78.0	68.3	Aligo	28.8		l loc.	<u> </u>			
13.0	77.6	68.3	15.1	28.8						
14.0 16.0	76.2 73.2	68.0 67.4	15.1 15.1	27.4 22.0						
18.0	70.1	66.7	15.1	18.1						
20.0	67.0	65.9	14.2	15.4						
22.0 24.0	63.9 60.6	65.0 63.9	12.7 11.6	13.1 11.5						
26.0	57.2	62.6	9.9	10.0						
28.0	53.7	61.2	8.5	8.7						
30.0 32.0	50.0 46.1	59.6 57.8	7.4 6.4	7.7 6.7						
34.0	41.9	55.7	5.5	5.8						
36.0	37.3	53.2	4.8	5.0						
38.0 40.0	32.2 26.1	50.3 46.7	3.0	4.2 3.1						
40.0	20.1	40.7			ıma prin	cinal 83	1°10			
18.4	73.0	67.1	, ange	20.1		l local				
20.0	70.6	66.6	15.1	18.8						
22.0	67.5	65.8	15.1	15.9						
24.0 26.0	64.4 61.1	64.9 63.8	13.3 11.9	13.5 11.8						
28.0	57.8	62.6	10.2	10.2						
30.0	54.3	61.2	8.7	9.0						
32.0 34.0	50.6 46.7	59.6 57.8	7.6 6.7	8.0 7.1						
36.0	42.6	55.8	5.9	6.2						
38.0	38.1	53.4	5.2	5.5						
40.0 42.0	33.0 27.1	50.5 47.0	4.6 3.7	4.8 3.9						
44.0	19.6	42.4	2.9	3.0						
			Ángı	ılo de plu	ıma prin	cipal 75.	0 [°]			
27.2	65.0	64.2		13.2						
28.0	63.8	63.8	14.0	13.2						
30.0 32.0	60.5 57.1	62.8 61.5	12.0 10.4	11.5 10.1						
34.0	53.6	60.1	8.8	8.8						
36.0	49.9	58.5	7.7	7.9						
38.0 40.0	46.0 41.8	56.6 54.5	6.8 6.0	7.0 6.2						
42.0	37.2	52.1	5.3	5.5						
44.0	32.0	49.1	4.8	4.9						
46.0	25.9	45.5	4.2 Ángu	4.3	.ma ==:-	oinal CF	0 [0]			
27.5	EE 0	E0.0	Angı		ıma prin	cipal 65.	o [·]		I	
37.5 38.0	55.0 54.2	58.8 58.6	8.3	6.9 6.7						
40.0	50.5	57.0	7.3	5.7						
42.0	46.7	55.2	6.3	4.9						
44.0 46.0	42.5 38.0	53.1 50.7	5.3 4.5	4.1 3.4						
48.0	32.9	47.9	3.7	2.8						
50.0	27.0	44.4	3.0	2.2						
52.0	20.5	39.7	2.3	l	l				l	



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

се	Angu- o de plumín [°] 78.0 77.1 74.4 71.6 68.7	Altura de rolda-nas [m] 26.0	Carga [t] O m Plum Cabeza 43.0 Ángu	de plumí) [m] Po	n (2316-	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
14.0 16.0 18.0	77.1 74.4 71.6	71.2 71.1	Cabeza 43.0 Ángu	de plumí) [m] Po	n (2316-	o de carç	na 3 - Mi	dfall		
14.0 16.0 18.0	77.1 74.4 71.6	71.1	Ángı				n Plumín	l		
14.0 16.0 18.0	77.1 74.4 71.6	71.1								
16.0 18.0	74.4 71.6		10.1	28.5	лна рин		J[]			
18.0	71.6	706	15.1	28.5						
		69.9	15.1 15.1	23.6 19.6						
	00.7	69.2	15.1	16.8						
22.0	65.8	68.3	13.7	14.4						
24.0 26.0	62.9 59.8	67.3 66.2	12.7 11.5	12.6 11.2						
28.0	56.6	64.9	9.9	9.8						
30.0	53.3	63.5	8.6	8.7						
32.0 34.0	49.9 46.3	61.9 60.0	7.6 6.3	7.8 6.4						
36.0	42.4	57.9	5.1	5.2						
38.0	38.2	55.5	4.0	4.1						
40.0	33.5	52.7	3.1	3.2			2.5.2			
			Angu		ıma prind	cipai 83.0	֓֓֓֓֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓			
19.3 20.0	73.0 72.0	70.0 69.8	15.1	20.0 20.0						
22.0	69.2	69.0	15.1	17.1						
24.0	66.3	68.2	14.4	14.9						
26.0 28.0	63.3 60.3	67.2 66.1	13.0 11.8	12.9 11.5						
30.0	57.1	64.9	10.2	10.1						
32.0	53.9	63.5	8.8	8.9						
34.0 36.0	50.5 46.9	61.9 60.1	7.8 6.9	8.0 7.1						
38.0	43.0	58.0	6.1	6.3						
40.0	38.9	55.7	5.4	5.6						
42.0 44.0	34.3 29.1	52.9 49.7	4.8 3.7	4.9 3.7						
46.0	22.8	45.5	2.6	2.6						
			Ángı	ılo de plu	ıma prind	cipal 75.0	[°]			
28.5	65.0	66.9	Ŭ	13.3						
30.0	62.8	66.2	13.4	12.6						
32.0 34.0	59.7 56.5	65.1 63.8	11.5 10.1	11.1 9.8						
36.0	53.3	62.3	8.7	8.7						
38.0	49.8	60.7	7.7	7.6						
40.0 42.0	46.2 42.3	58.9 56.8	6.9 6.1	6.7 5.8						
44.0	38.1	54.4	5.5	5.0						
46.0	33.4	51.6	4.9	4.3						
48.0 50.0	28.0 21.4	48.2 43.8	4.2 3.5	3.7 3.1						
		-			ıma prind	cipal 65.0	0 [°]		-	
39.3	55.0	61.3		5.9						
40.0	53.8	60.8	7.0	5.6						
42.0 44.0	50.4 46.8	59.3 57.4	6.0 5.1	4.8 4.0						
46.0	40.8	57.4 55.4	4.2	3.3						
48.0	38.8	53.0	3.5	2.7						
50.0 52.0	34.2 29.6	50.3 47.0	2.8 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

	entral [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]
		26.0	0 m Plum Cabeza 34.0	de plumí	ín (2316-	o de carç 1) 80.5 r nidfall (23	n Plumín	dfall 1		
			Ángı	ılo de plu	ıma prin	cipal 88.0	D[°]			
11.5 12.0 13.0 14.0 16.0	78.0 77.1 75.4 73.6 70.1	62.4 62.3 62.1 61.8 61.1	15.1 15.1 15.1 15.1 15.1	30.1 30.1 30.1 28.4 23.5						
18.0 20.0 22.0 24.0 26.0	66.4 62.7 58.7 54.7 50.3	60.2 59.2 58.1 56.7 55.1	15.1 15.1 13.5 9.6 6.6	19.5 16.1 13.0 9.4 6.7						
28.0	45.7	53.3	4.3	4.4						
					ıma prin	cipal 83.0	[°]			
16.7 18.0 20.0 22.0	73.0 70.6 67.0 63.3	61.4 60.9 60.1 59.1	15.1 15.1 15.1 15.1	25.0 24.5 20.1 16.6						
24.0 26.0 28.0 30.0 32.0	59.4 55.3 51.0 46.5 41.5	58.0 56.7 55.2 53.4 51.2	14.5 11.9 10.0 7.5 5.0	14.1 11.8 10.1 7.6 5.0						
34.0	36.0	48.7	2.8	2.8						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
24.7 26.0 28.0 30.0	65.0 62.6 58.6 54.6	58.7 58.1 57.0 55.6	15.1 14.4 12.5	14.0 12.5 10.6 9.0						
32.0 34.0 36.0 38.0 40.0	50.2 45.6 40.6 34.9 28.2	54.0 52.2 50.0 47.3 44.0	10.4 8.8 7.4 6.2 4.2	7.6 6.3 5.2 4.2 3.3						
40.0	20.2	14.0			ıma prin	cipal 65.0	1°10			
34.1 36.0 38.0 40.0	55.0 50.9 46.4 41.4	53.9 52.5 50.7 48.6	6.5 5.2	5.7 4.6 3.6	ana pilir	o.pui 00.t	× 1 J			

3.9

40.0

42.0

41.4

36.4

48.6

46.1



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 Lastre central [t]: 0.0

	Inserción	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]
		26.0	0 m Plum Cabeza 37.0	de plumí	oal, Punt n (2316- osición m	1) 83.5 r	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	D[°]			
12.1	78.0	65.4		28.9	·	i i				
13.0	76.6	65.2	15.1	28.9						
14.0	75.0	64.9	15.1	26.7						
16.0	71.8	64.3	15.1	21.7						
18.0	68.4	63.5	15.1	18.0						
20.0	65.0	62.6	13.9	14.9						
22.0 24.0	61.6 57.9	61.6 60.4	12.9 10.4	12.6 9.8						
24.0 26.0	57.9 54.2	59.0	7.3	7.1						
28.0	50.2	57.4	4.9	4.9						
30.0	45.9	55.5	3.3	3.4						
00.0	10.0	00.0			ıma prin	cinal 83 (l ° l			
17.6	73.0	64.2	15.1	20.7	IIIa piiii	l loc.	<u> </u>			
17.0	72.3	64.1	15.1	20.7						
20.0	69.0	63.4	15.1	18.4						
22.0	65.6	62.5	14.5	15.4						
24.0	62.1	61.5	12.8	12.9						
26.0	58.5	60.3	11.1	11.0					İ	
28.0	54.8	58.9	9.2	9.3						
30.0	50.8	57.4	7.7	8.0						
32.0	46.6	55.6	5.7	5.8						
34.0	42.1	53.5	3.6	3.7						
			Ángι	ılo de plu	ıma prin	cipal 75.0	[°]C			
26.0	65.0	61.5		12.6						
28.0	61.5	60.4	13.7	10.6						
30.0	57.8	59.2	11.3	9.0						
32.0	54.1	57.8	9.4	7.7						
34.0	50.1	56.2	7.9	6.5						
36.0	45.8	54.4	6.7	5.3						
38.0 40.0	41.2 36.2	52.2 49.7	5.6 4.7	4.3 3.4						
40.0 42.0	30.2	49.7 46.6	3.5	2.6						
72.0	50.5	70.0			ıma prin	cinal 65 (1 ° 1			
25.0	EE A	FC 4	Ailgi		лна рин		, i		I	
35.8 36.0	55.0 54.7	56.4 56.4	6.4	4.7 4.6						
38.0	50.7	54.8	5.1	3.6						
40.0	46.5	53.0	3.9	2.7						
42.0	42.4	50.9	2.8							
43.0	40.0	49.7	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]
		26.0	0 m Plum Cabeza 40.0	de plumi	oal, Punt ín (2316- osición m	1) 86.5 r	n Plumín	dfall I		
			Ángı	ılo de plı	ıma prin	cipal 88.0	D[°]			
12.7	78.0	68.3		27.0						
13.0	77.6	68.3	15.1	27.0						
14.0	76.2	68.0	15.1	26.4						
16.0	73.2	67.4	15.1	21.3						
18.0	70.1	66.7	15.1	17.5						
20.0	67.0	65.9	14.3	14.8						
22.0	63.9	65.0	12.6	12.6						
24.0	60.6	63.9	11.4	10.9						
26.0	57.2	62.6	8.2	7.9						
28.0	53.7	61.2	5.6	5.5						
30.0	50.0	59.6	3.5	3.6						
32.0	46.1	57.8	2.5	2.5						
			Ángı	ılo de plı	ıma prin	cipal 83.0	[°]C			
18.4	73.0	67.1		18.9						
20.0	70.6	66.6	15.1	18.1						
22.0	67.5	65.8	15.1	15.3						
24.0	64.4	64.9	13.0	13.0						
26.0	61.1	63.8	11.2	11.3						
28.0	57.8	62.6	9.5	9.7						
30.0	54.3	61.2	8.0	8.3						
32.0	50.6	59.6	6.9	7.2						
34.0	46.7	57.8	4.9	5.0						
36.0	42.6	55.8	3.0	3.0						
			Ángı	ılo de plu	uma prin	cipal 75.0	[°]			
27.2	65.0	64.2		11.4						
28.0	63.8	63.8	13.1	10.7						
30.0	60.5	62.8	11.5	9.1						
32.0	57.1	61.5	9.8	7.7						
34.0	53.6	60.1	8.3	6.5						
36.0	49.9	58.5	7.2	5.5						
38.0	46.0	56.6	6.1	4.5						
40.0	41.8	54.5	5.1	3.6						
42.0	37.2	52.1	4.0	2.8						
44.0	32.0	49.1	3.0	2.0						
			Angı		ıma prin	cipal 65.0	["]		ı	
37.5	55.0	58.8	l	3.9						
38.0	54.2	58.6	5.0	3.7						
40.0	50.5	57.0	3.8	2.8						
42.0	47.0	55.2	2.8							
43.0	45.0	54.2	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° 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]
		26.0	0 m Plum Cabeza 43.0	de plumí	oal, Punt ín (2316- osición m	1) 89.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	l°1C			
13.4 14.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0	78.0 77.1 74.4 71.6 68.7 65.8 62.9 59.8 56.6	71.2 71.1 70.6 69.9 69.2 68.3 67.3 66.2 64.9	15.1 15.1 15.1 15.1 15.1 12.9 10.7 8.7 6.1	27.8 27.8 24.1 20.2 17.3 14.0 11.2 8.9 6.2						
30.0	53.3	63.5	3.9	4.0						
			Ángu	ılo de plu	ıma prin	cipal 83.0	1°10			
19.3 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0	73.0 72.0 69.2 66.3 63.3 60.3 57.1 53.9 50.5 46.9	70.0 69.8 69.0 68.2 67.2 66.1 64.9 63.5 61.9 60.1	15.1 15.1 14.8 13.2 12.1 9.5 7.4 5.8 4.2 2.7	19.9 19.8 17.7 15.4 13.2 11.3 9.3 7.5 6.1 4.3						
00.0	.0.0	00.0			ıma prin	cinal 75 () [°]			
28.5 30.0 32.0 34.0 36.0 38.0 40.0 42.0 44.0	65.0 62.8 59.7 56.5 53.3 49.8 46.2 42.3 38.1	66.9 66.2 65.1 63.8 62.3 60.7 58.9 56.8 54.4	12.3 10.5 8.9 7.6 6.2 5.0 3.9 2.9	10.1 9.0 7.6 6.4 5.4 4.5 3.6 2.8 2.0						
L			Angı		ıma prin	cipai 65.0	ו ["]			
39.3 40.0 42.0 43.0	55.0 53.8 50.6 48.9	61.3 60.8 59.3 58.4	3.7 2.6 2.1	3.0 2.7						



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 46.0		n (2316-	1) 92.5 r	n Plumín			
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]C			
14.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0	78.0 75.4 72.8 70.2 67.5 64.8 62.0 59.1 56.1 53.0	74.2 73.7 73.1 72.4 71.6 70.7 69.6 68.5 67.2 65.7	15.1 15.1 15.1 15.1 14.4 11.3 9.0 6.9 4.7 2.8	24.1 22.7 19.0 16.0 13.8 11.2 9.2 7.1 4.8 2.9						
			Ángu	ılo de plu	ıma prin	cipal 83.0	[°]C			
20.2 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0	73.0 70.6 67.9 65.2 62.4 59.5 56.6 53.5 50.3 46.9	72.8 72.2 71.5 70.6 69.5 68.4 67.1 65.7 64.1 62.3	15.1 15.1 14.6 13.0 11.0 9.5 7.6 6.1 4.9 3.6	17.0 16.6 14.2 12.4 10.8 9.4 7.6 6.2 5.1 3.8						
				ılo de plu	ıma nrin	cinal 75 (1 ° 1		!	
29.8 30.0 32.0 34.0 36.0 38.0 40.0 42.0 44.0	65.0 64.7 61.9 59.0 56.0 52.9 49.7 46.3 42.7	69.6 69.6 68.5 67.4 66.0 64.6 63.0 61.1 59.0	11.5 10.3 8.8 7.4 6.2 5.0 4.0 3.0	9.1 9.0 7.6 6.4 5.4 4.5 3.7 2.9 2.1	тна рин	Spai 13.	, j			
		00.0	-	ılo de plu	ıma prin	cipal 65 (1°10			
41.0	55.0	63.7	, wigo	2.3	IIII PIIII		·			
42.0 43.0	53.6 52.1	63.1 62.3	2.6 2.1	-						



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]
		26.0	0 m Plum Cabeza 49.0		n (2316-	1) 95.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
14.6 16.0 18.0 20.0 22.0	78.0 76.3 73.9 71.5 69.0	77.1 76.8 76.2 75.6 74.8	15.1 15.1 14.7 14.2	22.7 22.5 18.6 15.9 13.8						
24.0 26.0 28.0 30.0 32.0	66.4 63.8 61.2 58.4 55.6	74.0 73.0 72.0 70.8 69.4	11.8 9.1 7.2 5.1 3.3	11.3 9.1 7.4 5.3 3.4						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
21.1 22.0 24.0 26.0 28.0	73.0 71.8 69.4 66.8 64.2	75.7 75.4 74.7 73.9 72.9	15.1 15.1 14.5 13.0 11.0	15.9 15.9 14.1 12.4 10.7						
30.0 32.0 34.0 36.0 38.0 40.0	61.6 58.9 56.1 53.2 50.2 47.0	71.9 70.7 69.4 68.0 66.3 64.5	9.4 7.9 6.2 4.8 3.7 2.9	9.5 7.9 6.3 5.0 3.9						
				ılo de plu	ıma prin	cipal 75.0	1°10			
31.0 32.0 34.0 36.0 38.0 40.0 42.0 44.0 45.0	65.0 63.8 61.1 58.4 55.6 52.6 49.6 46.4 45.0	72.3 71.9 70.8 69.6 68.3 66.8 65.2 63.4 62.4	9.9 8.4 7.0 5.9 4.8 3.8 2.8 2.4	8.0 7.4 6.2 5.2 4.3 3.5 2.8 2.0						



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	Ángu- o de	Altura de	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga
[m]	plumín	rolda-	[1]	[[,]	[1]	[[,	[,,]	[,]	[[,]	[[,]
1	[°]	nas								
		[m]								
	0	26.	0 m Plun	na princip	al, Punt	o de caro	a 3 - Mi	dfall	2	2
			Cabeza	de plumí	n (2316-	1) 98.5 r	n Plumín			
			52.0	0 [m] Po	osición m	nidfall (23	316)			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
15.2	78.0	80.0		20.6						
16.0	77.1 74.9	79.9 79.3	15.1 15.1	20.6						
18.0 20.0	74.9	79.3 78.7	15.1	18.0 15.4						
22.0	70.2	78.0	13.2	13.2						
24.0	67.9	77.3	11.8	11.4						
26.0	65.4	76.4	9.1	9.0						
28.0	63.0	75.4	7.0	7.2						
30.0	60.5	74.3	5.4	5.6						
32.0	57.9	73.1	3.8	4.0			2.5.2			
			Angı	ılo de plu	ıma prin	cipal 83.0)[°]			
21.9	73.0	78.6	45.4	14.4						
22.0 24.0	72.9 70.6	78.6 77.9	15.1 14.5	14.4 13.7						
26.0	68.2	77.9	12.2	11.9						
28.0	65.8	76.2	10.5	10.4						
30.0	63.4	75.3	9.0	9.1						
32.0	60.9	74.2	7.8	8.1						
34.0	58.3	73.0	6.3	6.5						
36.0 38.0	55.6 52.9	71.7 70.2	4.9	5.0 3.8						
40.0	50.1	68.6	3.7 2.7	2.9						
40.0	00.1	00.0		ılo de plu	ıma nrin	cinal 75 (1 ° 1		ı	ı
32.3	65.0	75.1	,gc	7.1	Jina pini		<u> </u>			
34.0	62.9	74.3	8.0	6.1						
36.0	60.4	73.1	6.7	5.0						
38.0	57.8	71.9	5.6	4.1						
40.0	55.2	70.6	4.5	3.4						
42.0	52.4	69.1	3.6	2.7						
44.0 45.0	49.5 48.3	67.4 66.5	2.7 2.3	2.0						
40.0	40.3	00.5	2.3	I		I				l



N° 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]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan-		Altura						_	-	
ce	Ángu- o de	de	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
[m]	plumín	rolda-		[[.]	[[]	[[]				
' '	[°]	nas								
		[m]								
			0 m Plum							
		(Cabeza d					n		
<u> </u>						nidfall (23				
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
15.9	78.0	83.0	15.1	18.1						
16.0 18.0	77.9 75.7	83.0 82.5	15.1 15.1	18.1 17.1						
20.0	73.5	81.9	15.1	14.6						
22.0	71.4	81.2	13.0	12.5						
24.0	69.1	80.5	11.0	10.8						
26.0	66.9	79.7	9.0	8.9						
28.0	64.6	78.7	6.9	7.0						
30.0	62.2	77.7	5.3	5.5						
32.0	59.8	76.6	4.1	4.2						
34.0	57.4	75.3	2.9	3.0						
			Angu		ıma prin	cipal 83.0	0[°]	1	1	
22.8	73.0	81.5		12.6						
24.0	71.7	81.1	13.0	12.6						
26.0 28.0	69.5 67.2	80.4 79.5	11.4 9.7	11.1 9.8						
30.0	64.9	78.6	8.3	8.4						
32.0	62.6	77.6	7.2	7.4						
34.0	60.2	76.5	6.2	6.4						
36.0	57.8	75.3	4.8	4.9						
38.0	55.3	73.9	3.6	3.7						
40.0	52.7	72.4	2.6	2.6						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
33.6	65.0	77.8		6.0						
34.0	64.5	77.6	7.5	5.8						
36.0	62.2	76.6	6.3	4.8						
38.0	59.8	75.4	5.2	3.9						
40.0	57.3	74.2	4.1	3.1						
42.0 44.0	54.8 52.3	72.8 71.3	3.2 2.4	2.4						
44.0 45.0	52.3	71.3	2.4							
45.0	J 31.0	10.5	4.1							



Nº de ident.: 9842523/95738/

Radio de descarga:

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

2821-1 2821-1

Valor de vuelco:

360°

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 [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]
		29.0	0 m Plum Cabeza 13.0	de plumí	oal, Punt ín (1916- osición m	1) 32.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
7.2 8.0 9.0 10.0 11.0 12.0 13.0 14.0	78.0 74.2 69.5 64.7 59.6 54.1 48.3 41.7	44.9 44.6 44.3 43.8 43.2 42.5 41.7 40.6	15.1 15.1 15.1 15.1 14.1 12.1 10.5 8.8	30.1 29.9 21.8 16.6 13.4 11.1 9.5 8.2						
14.0	41.7	40.0			ıma prin	cinal 83 (1 ° 1			l
10.8	73.0	44.3	Aligo	26.7			<u> </u>			
11.0 12.0 13.0 14.0 16.0 18.0	72.3 67.5 62.5 57.3 45.6 30.2	44.2 43.8 43.3 42.7 41.0 38.3	15.1 15.1 15.1 13.2 9.7 7.1	26.3 19.2 15.0 12.3 8.9 6.8						
			Ángı	ılo de plu	ıma prin	cipal 75.0	D[°]			
16.6 18.0 20.0 22.0	65.0 57.6 45.9 30.6	42.6 41.8 40.1 37.4	15.1 12.1 8.4 6.4	16.3 12.3 8.9 6.9	·		- -			
			Ángı		ıma prin	cipal 65.0	[°]			1
23.3 24.0 26.0	55.0 50.9 37.5	39.4 38.9 36.8	11.0 7.8	11.1 10.0 7.5						
			Ángı	ılo de plu	ıma prin	cipal 45.0	[°]			
34.6 36.0	35.0 19.9	29.9 27.4	6.1	7.0 6.0						



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]
		29.0	0 m Plum Cabeza 16.0	de plumí	oal, Punt n (1916- osición m	1) 35.5 r	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
7.8 8.0 9.0 10.0 11.0 12.0 13.0	78.0 77.3 73.5 69.7 65.8 61.7 57.5 53.0	47.8 47.8 47.5 47.1 46.7 46.1 45.5 44.8	15.1 15.1 15.1 15.1 15.1 15.1 13.4 12.1	30.1 30.1 28.7 22.7 18.3 15.3 13.1 11.4						
16.0 18.0	43.0 30.3	42.9 40.1	9.5 7.5	9.0 7.4						
			Ángı	ılo de plı	ıma prin	cipal 83.0	1°10			
11.7 12.0 13.0 14.0 16.0 18.0 20.0	73.0 71.9 68.1 64.1 55.6 46.1 34.4	47.1 47.0 46.6 46.2 44.9 43.2 40.8	15.1 15.1 15.1 12.8 10.1 7.8	26.8 26.0 20.5 16.7 12.2 9.6 7.8						
20.0	04.4	40.0			ıma prin	cinal 75 () [°]			
17.8 18.0 20.0 22.0 24.0	65.0 64.3 55.8 46.3 34.7	45.3 45.3 44.0 42.3 39.9	15.1 13.5 10.1 7.8	16.8 16.8 12.2 9.6 7.8	μιια ριπι	ыраг 73.	S []			
			Ángu	ılo de plu	ıma prin	cipal 65.0	[°]			
25.0 26.0 28.0 30.0	55.0 50.3 39.8 25.6	41.9 41.2 39.1 35.9	11.2 8.5 7.0	11.7 10.4 8.3 6.9						
			Ángı		ıma prin	cipal 45.0	[°]			
37.0 38.0 39.0	35.0 27.9 17.6	31.6 30.3 27.9	7.0 6.3	7.6 6.9 6.3						



Nº de ident.: 9842523/95738/

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

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

Ce		Inserciór	1	1	2	3	4	5	6	7	8
Cabeza de plumín (2316-1) 38.5 m Plumín 16.0 [m] Posición midfall (2316) Angulo de pluma principal 88.0 [°] 7.9	ce	o de plumín	de rolda- nas		Carga [t]		Carga [t]	Carga [t]			Carga [t]
7.9				Cabeza	de plumí	n (2316-	1) 38.5 r	n Plumín			
8.0 77.5 47.8 15.1 30.1 9.0 73.8 47.5 15.1 30.1 10.0 69.9 47.1 15.1 30.1 11.0 66.0 46.7 15.1 25.3 12.0 62.0 46.2 15.1 21.7 13.0 57.7 45.5 15.1 18.4 14.0 64.3 46.2 10.8 10.3 11.0 68.3 46.7 15.1 29.5 14.0 64.3 43.3 13.7 13.3 20.0 34.7 40.8 11.4 10.7				Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
9.0 73.8 47.5 15.1 30.1 11.0 66.9 47.1 15.1 30.1 11.0 66.0 46.7 15.1 25.3 12.0 62.0 46.2 15.1 21.7 13.0 57.7 45.5 15.1 18.4 14.0 53.3 44.8 15.1 15.8 16.0 43.3 42.9 13.1 12.5 18.0 30.6 40.2 10.8 10.3	7.9	78.0	47.8	15.1	30.1						
10.0 69.9 47.1 15.1 30.1 11.0 66.0 46.7 15.1 25.3 12.0 62.0 46.2 15.1 21.7 13.0 57.7 45.5 15.1 18.4 14.0 53.3 44.8 15.1 15.8 16.0 43.3 42.9 13.1 12.5 18.0 30.6 40.2 10.8 10.3 Angulo de pluma principal 83.0 [°] 11.8 73.0 47.1 15.1 30.1 12.0 72.2 47.1 15.1 30.1 13.0 68.3 46.7 15.1 29.5 14.0 64.3 46.2 15.1 23.8 16.0 46.3 43.3 13.7 13.3 20.0 34.7 40.8 11.4 10.7 Angulo de pluma principal 75.0 [°] 17.9 65.0 45.3 15.1 23.8 18.0 64.5 45.3 15.1 23.8 20.0 36.1 44.1 15.1 17.1 22.0 46.6 42.4 14.0 13.2 24.0 35.0 40.0 11.3 10.6 Angulo de pluma principal 65.0 [°] 25.0 55.0 41.9 15.2 17.1 28.0 40.1 39.1 11.7 10.9 30.0 25.9 36.0 9.4 9.1 Angulo de pluma principal 45.0 [°]	8.0	77.5	47.8	15.1	30.1						
11.0 66.0 46.7 15.1 25.3 12.0 62.0 46.2 15.1 21.7 13.0 57.7 45.5 15.1 18.4 14.0 53.3 44.8 15.1 15.8 16.0 43.3 42.9 13.1 12.5 18.0 30.6 40.2 10.8 10.3 18.0 30.6 40.2 10.8 10.3 18.0 72.2 47.1 15.1 30.1 12.0 72.2 47.1 15.1 30.1 13.0 68.3 46.7 15.1 29.5 14.0 64.3 46.2 15.1 23.8 16.0 55.9 45.0 15.1 17.1 18.0 46.3 43.3 13.7 13.3 20.0 34.7 40.8 11.4 10.7 17.1 18.0 64.5 45.3 18.0 64.5 45.3 15.1 23.8 18.0 64.5 45.3 15.1 23.8 18.0 64.5 45.3 15.1 23.8 18.0 64.5 45.3 15.1 23.8 18.0 64.5 45.3 15.1 23.8 18.0 64.5 45.3 15.1 23.8 20.0 56.1 44.1 15.1 17.1 22.0 46.6 42.4 14.0 13.2 24.0 35.0 40.0 11.3 10.6 11.3 10.6											
12.0 62.0 46.2 15.1 21.7 13.0 57.7 45.5 15.1 18.4 14.0 53.3 44.8 15.1 15.8 16.0 43.3 42.9 13.1 12.5 18.0 30.6 40.2 10.8 10.3											
13.0											
14.0 53.3 44.8 15.1 15.8 16.0 43.3 42.9 13.1 12.5 18.0 30.6 40.2 10.8 10.3 Magulo de pluma principal 83.0 [°] 11.8 73.0 47.1 15.1 30.1 12.0 72.2 47.1 15.1 30.1 13.0 68.3 46.7 15.1 29.5 14.0 64.3 46.2 15.1 23.8 16.0 55.9 45.0 15.1 17.1 18.0 46.3 43.3 13.7 13.3 20.0 34.7 40.8 11.4 10.7 Magulo de pluma principal 75.0 [°] 17.9 65.0 45.3 12.8 12.8 12.8 12.8 12.9 12.9 12.9 12.9 12.9 12.9 12.9 12.9			1								
16.0											
18.0 30.6 40.2 10.8 10.3											
Ángulo de pluma principal 83.0 [°] 11.8 73.0 47.1 15.1 30.1 12.0 72.2 47.1 15.1 30.1 13.0 68.3 46.7 15.1 29.5 14.0 64.3 46.2 15.1 23.8 16.0 55.9 45.0 15.1 17.1 18.0 46.3 43.3 13.7 13.3 20.0 34.7 40.8 11.4 10.7 Ángulo de pluma principal 75.0 [°] 17.9 65.0 45.3 23.8 20.0 56.1 44.1 15.1 23.8 20.0 56.1 44.1 15.1 17.1 22.0 46.6 42.4 14.0 13.2 24.0 35.0 40.0 11.3 10.6 Ángulo de pluma principal 65.0 [°] 25.0 55.0 41.9 15.2 26.0 50.6 41.2 14.7 13.7 28.0 40.1 39.1 11.7 10.9 30.0 25.9 <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>				-							
11.8						ıma nrin	cinal 83 (1 0 1			
12.0 72.2 47.1 15.1 30.1 13.0 68.3 46.7 15.1 29.5 14.0 64.3 46.2 15.1 23.8 16.0 55.9 45.0 15.1 17.1 18.0 46.3 43.3 13.7 13.3 20.0 34.7 40.8 11.4 10.7 Angulo de pluma principal 75.0 [°] 17.9 65.0 45.3 23.8 18.0 64.5 45.3 15.1 23.8 20.0 56.1 44.1 15.1 17.1 22.0 46.6 42.4 14.0 13.2 24.0 35.0 40.0 11.3 10.6 Angulo de pluma principal 65.0 [°] 25.0 55.0 41.9 15.2 26.0 50.6 41.2 14.7 13.7 28.0 40.1 39.1 11.7 10.9 30.0 25.9 36.0 9.4 9.1 Angulo de pluma principal 45.0 [°] 37.1 35.0 31.6 7.4	44.0	70.0	47.4					J []		ı	
13.0 68.3 46.7 15.1 29.5 14.0 64.3 46.2 15.1 23.8 16.0 55.9 45.0 15.1 17.1 18.0 46.3 43.3 13.7 13.3 20.0 34.7 40.8 11.4 10.7											
14.0 64.3 46.2 15.1 23.8 16.0 55.9 45.0 15.1 17.1 18.0 46.3 43.3 13.7 13.3 20.0 34.7 40.8 11.4 10.7			i .	-							
18.0											
20.0 34.7 40.8 11.4 10.7 Ángulo de pluma principal 75.0 [°] 17.9 65.0 45.3 23.8 23.8 20.0 56.1 44.1 15.1 17.1 22.0 46.6 42.4 14.0 13.2 24.0 35.0 40.0 11.3 10.6 Angulo de pluma principal 65.0 [°] 25.0 55.0 41.9 15.2 26.0 50.6 41.2 14.7 13.7 28.0 40.1 39.1 11.7 10.9 30.0 25.9 36.0 9.4 9.1 Ángulo de pluma principal 45.0 [°] 37.1 35.0 31.6 7.4	16.0	55.9	45.0	15.1	17.1						
Ángulo de pluma principal 75.0 [°] 17.9 65.0 45.3 23.8 18.0 64.5 45.3 15.1 23.8 20.0 56.1 44.1 15.1 17.1 22.0 46.6 42.4 14.0 13.2 24.0 35.0 40.0 11.3 10.6 Ángulo de pluma principal 65.0 [°] 25.0 55.0 41.9 15.2 26.0 50.6 41.2 14.7 13.7 28.0 40.1 39.1 11.7 10.9 30.0 25.9 36.0 9.4 9.1 Ángulo de pluma principal 45.0 [°] 37.1 35.0 31.6 7.4	18.0	46.3	43.3	13.7	13.3						
17.9 65.0 45.3 23.8 23.8 20.0 56.1 44.1 15.1 17.1 22.0 46.6 42.4 14.0 13.2 24.0 35.0 40.0 11.3 10.6	20.0	34.7	40.8	11.4	10.7						
18.0 64.5 45.3 15.1 23.8 20.0 56.1 44.1 15.1 17.1 22.0 46.6 42.4 14.0 13.2 24.0 35.0 40.0 11.3 10.6				Ángı	ılo de plu	ıma prin	cipal 75.0	[°]C			
20.0 56.1 44.1 15.1 17.1 22.0 46.6 42.4 14.0 13.2 24.0 35.0 40.0 11.3 10.6	17.9	65.0	45.3		23.8						
22.0	•			-							
24.0 35.0 40.0 11.3 10.6											
Ángulo de pluma principal 65.0 [°] 25.0 55.0 41.9 15.2 26.0 50.6 41.2 14.7 13.7 28.0 40.1 39.1 11.7 10.9 30.0 25.9 36.0 9.4 9.1 Ángulo de pluma principal 45.0 [°] 37.1 35.0 31.6 7.4				-							
25.0 55.0 41.9 15.2 26.0 50.6 41.2 14.7 13.7 28.0 40.1 39.1 11.7 10.9 30.0 25.9 36.0 9.4 9.1 Angulo de pluma principal 45.0 [°] 37.1 35.0 31.6 7.4	24.0	35.0	40.0								
26.0 50.6 41.2 14.7 13.7 28.0 40.1 39.1 11.7 10.9 30.0 25.9 36.0 9.4 9.1 Angulo de pluma principal 45.0 [°] 37.1 35.0 31.6 7.4				Angu		ıma prin	cipal 65.0	[°]			
28.0											
30.0 25.9 36.0 9.4 9.1 Ángulo de pluma principal 45.0 [°] 37.1 35.0 31.6 7.4											
Ángulo de pluma principal 45.0 [°] 37.1 35.0 31.6 7.4		_									
37.1 35.0 31.6 7.4	30.0	25.9	J 30.U			ıma nrin	oinal 45 f) [°]		ı	
		05.0	24.0	Angu		лна рпп	upai 45.	ν[]		I	
				0.0							
38.0 28.2 30.3 8.8 6.8 39.0 18.0 28.0 8.1 6.2			i								



N° de ident.: 9842523/95738/ Pieza de

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

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

	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]
		29.	0 m Plum Cabeza 19.0	de plumí	oal, Punt ín (1916- osición m	1) 38.5 r	n Plumín	dfall		
			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 18.0 20.0	78.0 76.2 73.1 69.9 66.6 63.2 59.7 52.3 43.9 33.9	50.7 50.6 50.3 49.9 49.5 49.0 48.4 47.0 45.1 42.6	15.1 15.1 15.1 15.1 15.1 14.4 12.4 10.0 8.0	30.1 30.0 27.2 22.4 18.9 16.2 14.3 11.3 9.3 7.8						
20.0	00.0	12.0			ıma prin	cipal 83.0	1°10			
12.6 13.0 14.0 16.0 18.0 20.0 22.0	73.0 71.7 68.5 61.7 54.5 46.4 37.0	50.0 49.9 49.5 48.5 47.2 45.5	15.1 15.1 15.1 13.1 10.8 8.5 7.1	25.9 25.0 20.8 15.4 12.0 9.9 8.2 6.9						
24.0	24.4	39.7			ıma prin	cinal 75 () [°]			
19.1 20.0 22.0 24.0 26.0 28.0	65.0 61.9 54.7 46.6 37.2 24.8	48.0 47.6 46.3 44.6 42.3 38.9	14.7 11.8 9.4 7.7 6.6	16.9 15.4 12.1 9.9 8.2 7.0	ania pilli	σιραι <i>1</i> σ.ι	~ []			
20.0	20	00.0			uma prin	cipal 65.0	1°10			
26.7	55.0	44.4	9	12.0		. ,,				
28.0 30.0 32.0	50.0 41.3 30.4	43.4 41.4 38.5	11.9 9.4 7.8	10.7 8.9 7.5						
			Ángı		ıma prin	cipal 45.0	[°]		1	
39.5 40.0 42.0	35.0 32.1 15.9	33.3 32.8 28.4	7.9 6.7	7.9 7.7 6.6						



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

Radio de descarga: 360 °

360 ° Cabeza de pluma principal: Vía ancha

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]
		29.0	0 m Plum Cabeza 19.0	na princip de plumí) [m] Po	n (2316-	1) 41.5 r	n Plumín	dfall 1		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
8.5 9.0 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0	78.0 76.4 73.2 70.0 66.8 63.4 59.9 52.5 44.1 34.1	50.8 50.6 50.3 50.0 49.5 49.0 48.5 47.0 45.2 42.6	15.1 15.1 15.1 15.1 15.1 15.1 15.1 15.1	30.1 30.1 30.1 30.1 26.0 22.2 19.4 15.1 12.2 9.9						
20.0	0	12.0		ılo de plu	ıma prin	cinal 83 (1°10			
12.7 13.0 14.0 16.0 18.0 20.0 22.0 24.0	73.0 71.9 68.7 61.9 54.7 46.6 37.2 24.7	50.0 49.9 49.5 48.5 47.2 45.5 43.2 39.8	15.1 15.1 15.1 15.1 14.7 12.8 10.2 8.4	30.1 30.1 28.6 21.1 16.1 13.0 10.6 8.8	,					
				ılo de plu	ıma prin	cinal 75 (1°10			
19.1 20.0 22.0 24.0 26.0 28.0	65.0 62.1 54.8 46.8 37.5 25.0	48.0 47.6 46.3 44.6 42.3 39.0	15.1 15.1 14.1 11.6 9.5	23.3 21.2 16.2 13.1 10.8 9.0]			
20.0	20.0	00.0		ılo de plu	ıma prin	cinal 65 (1°10			
26.8 28.0 30.0 32.0	55.0 50.2 41.5 30.7	44.3 43.5 41.4 38.6	14.7 12.3 9.9	15.2 13.6 11.1 9.3	лпа рпп	ыраі 03.1	7 []			
			Ángı	ılo de plu	ıma prin	cipal 45.0	[°]			
39.5 40.0 42.0	35.0 32.3 16.3	33.3 32.9 28.5	7.6 6.5	6.3 6.1 5.1						



360°

Cargas pluma principal + plumín abatible + midfall

Nº 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 22.0	de plumi		1) 41.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	0 [°]			
9.1 10.0 11.0 12.0 13.0 14.0 16.0 20.0 22.0 24.0 13.5 14.0 16.0 22.0 24.0	78.0 75.4 72.7 70.0 67.1 64.2 58.2 51.7 44.5 36.2 25.5	53.7 53.4 53.1 52.8 52.3 51.9 50.7 49.2 47.4 45.0 41.6 52.9 52.7 51.9 50.8 49.4	15.1 15.1 15.1 14.1 11.1 9.1	22.4 21.5 15.9 12.6 10.3 8.6	uma prin	cipal 83.	0[°]			
24.0 26.0	38.8 29.0	45.5 42.4	7.5 6.4	7.3 6.3						
			Ángı	ılo de plı	ıma prin	cipal 75.0	0[°]			
20.4	65.0	50.8	15.1	14.8						
22.0 24.0 26.0 28.0 30.0	60.1 53.8 46.8 38.9 29.2	49.9 48.5 46.8 44.6 41.6	14.1 11.2 9.1 7.5 6.4	12.6 10.3 8.6 7.3 6.3						
			Ángı	ılo de plı	ıma prin	cipal 65.0	0 [°]			
28.4 30.0 32.0 34.0	55.0 49.8 42.3 33.5	46.8 45.6 43.7 41.0	9.8 8.1 6.8	10.5 9.2 7.8 6.7						
			Ángı	ılo de plu	ıma prin	cipal 45.0	0 [°]			
42.0 44.0 45.0	35.0 23.4 17.2	35.0 31.6 28.8	6.0 5.6	6.8						



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) 44.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.	[°]			
9.1 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0	78.0 75.6 72.9 70.1 67.3 64.4 58.4 51.9 44.7 36.4 25.7	53.7 53.5 53.2 52.8 52.4 51.9 50.7 49.3 47.4 45.0 41.6	15.1 15.1 15.1 15.1 15.1 14.7 14.1 11.7 9.3 7.8	30.1 30.1 28.9 26.9 23.5 20.3 16.0 13.0 10.8 9.0 7.6	uma prin	cinal 83	0 (° 1			
13.5	73.0	52.9	Angu	30.1			J []			
14.0 16.0 18.0 20.0 22.0 24.0	71.7 66.1 60.1 53.8 46.9 38.9	52.7 51.9 50.8 49.5 47.7 45.5 42.5	15.1 15.1 15.0 14.5 12.5 10.0 8.3	29.8 22.1 17.1 13.7 11.4 9.5 8.1						
26.0	29.2	42.5			ıma prin	cinal 75 i	1 ° 1			
20.4	65.0	50.8	Aligo	20.3		lipai 75.	7 J			
22.0 24.0 26.0 28.0 30.0	60.3 54.0 47.0 39.1 29.4	49.9 48.6 46.9 44.6 41.6	15.1 14.3 12.7 10.2 8.5	17.2 13.8 11.5 9.6 8.2						
			Ángı	ılo de plu	ıma prin	cipal 65.	D[°]			
28.5 30.0 32.0 34.0	55.0 49.9 42.5 33.7	46.8 45.7 43.7 41.1	13.1 10.5 8.6	13.3 11.8 9.9 8.4	·					
			Ángı	ılo de plu	ıma prin	cipal 45.	[°]C			
42.0 44.0 45.0	35.0 23.7 17.6	35.0 31.7 28.9	5.9 5.5	5.5 4.7						



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

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]
		29.0	0 m Plum Cabeza 25.0	de plumí	oal, Punt ín (1916- osición m	1) 44.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
9.7 10.0 11.0 12.0 13.0	78.0 77.2 74.9 72.5 70.0	56.6 56.5 56.3 56.0 55.6	15.1 15.1 15.1 15.1 15.1	28.6 28.6 23.6 20.1 17.4						
14.0 16.0 18.0 20.0 22.0	67.5 62.4 57.0 51.3 45.0 37.8	55.2 54.2 53.0 51.5 49.6	14.6 13.5 10.9 8.8 7.4 6.3	15.3 12.3 10.1 8.5 7.3 6.2						
24.0 26.0	29.2	44.2	5.4	5.4						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]C			
14.4 16.0 18.0 20.0	73.0 69.0 63.9 58.6	55.7 55.1 54.2 53.1	15.1 15.1 13.9 11.7	19.8 16.4 13.0 10.7						
22.0 24.0 26.0 28.0	53.0 46.9 40.0 31.9	51.7 49.9 47.8 44.9	9.3 7.8 6.6 5.7	8.9 7.6 6.5 5.7						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
21.6 22.0 24.0 26.0 28.0 30.0	65.0 64.0 58.8 53.1 47.0 40.2	53.5 53.3 52.2 50.8 49.1 46.9	14.9 11.8 9.4 7.8 6.6	13.2 13.2 10.8 9.0 7.7 6.6						
32.0	32.1	44.1	5.8	5.8						
34.0	21.3	40.1	5.0 Ápgi	Jo do plu	ıma prin	cinal SE	101			
30.2	55.0	49.3	Angu	9.3	ania pilli	upai 05.1	۱] د			
32.0 34.0 36.0 38.0	49.6 43.1 35.6 26.2	47.9 45.9 43.4 40.0	8.4 7.1 6.1 5.3	8.1 7.0 6.1 5.4						
					uma prin	cipal 45.0) [°]			
44.4 46.0	35.0 27.7	36.8 34.4	5.4	6.0 5.4			_			
48.0	16.1	29.2	4.7							



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]
		29.0	0 m Plum Cabeza 25.0	de plumi	oal, Punt ín (2316- osición m	1) 47.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
9.7	78.0	56.6		30.1						
10.0 11.0 12.0 13.0	77.4 75.0 72.6 70.2	56.6 56.3 56.0 55.6	15.1 15.1 15.1 15.1	30.1 30.1 27.4 24.0						
14.0	67.7	55.2	15.1	21.2						
16.0 18.0 20.0 22.0	62.6 57.2 51.4 45.1	54.2 53.0 51.5 49.7	15.1 12.9 10.8 9.0	16.6 13.5 11.3 9.5						
24.0	38.0	49.7	7.5	8.0						
26.0	29.4	44.3	6.4	6.9						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
14.4	73.0	55.7		27.5						
16.0 18.0	69.1 64.1	55.2 54.3	15.1 15.1	22.7 17.6						
20.0	58.8	53.1	14.1	14.3						
22.0	53.1	51.7	12.5	11.8						
24.0 26.0	47.0 40.2	50.0 47.8	10.6 8.6	10.0 8.4						
28.0	32.1	45.0	7.3	7.2						
30.0	21.2	41.0	6.1	6.1						
			Ángı	ılo de plı	ıma prin	cipal 75.0	[°]			
21.7 22.0	65.0 64.2	53.5 53.4	15.1	17.8						
24.0	58.9	53.4 52.2	15.1	17.7 14.5						
26.0	53.3	50.8	12.7	11.8						
28.0	47.2	49.1	10.7	10.0						
30.0 32.0	40.3 32.3	46.9 44.2	8.8 7.4	8.5 7.4						
34.0	21.5	40.2	6.3	6.2						
			Ángu	ılo de plu	ıma prin	cipal 65.0	[<u>°</u>] C			
30.2	55.0	49.3		11.7						
32.0 34.0	49.7 43.2	47.9 46.0	10.9 9.0	10.2 8.7						
36.0	35.8	43.5	7.5	7.4						
38.0	26.4	40.1	6.5	6.5						
			Ángu	ılo de plu	ıma prin	cipal 45.0	[°]			
44.5	35.0	36.7		4.6						
46.0 48.0	27.9 16.4	34.4 29.3	5.0 4.2	4.1						
	10.7	20.0	7.2		1					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 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]
		29.0	0 m Plum Cabeza 28.0	na princip de plumí 0 [m] Po	n (1916-	1) 47.5 r	n Plumín	dfall I		
				ılo de plu	ıma prin	cipal 88.	0[°]			
10.3 11.0 12.0 13.0 14.0 16.0 18.0	78.0 76.5 74.4 72.3 70.1 65.6 61.0	59.5 59.4 59.1 58.8 58.4 57.6 56.5	15.1 15.1 15.1 15.1 15.1 15.1 15.0	30.1 30.1 30.1 27.4 24.9 20.3 17.1						
20.0 22.0 24.0	56.1 51.0 45.3	55.2 53.7 51.9	14.3 13.7 12.1	14.7 12.9 11.5						
26.0 28.0 30.0	39.1 31.8 22.3	49.6 46.8 42.8	10.5 9.4 8.4	10.3 9.3 8.5						
			Ángı	ılo de plu	ıma prin	cipal 83.	0[°]			
15.2 16.0	73.0 71.3	58.6 58.4	15.1	28.0 26.8						
18.0 20.0 22.0 24.0	66.9 62.3 57.6 52.5	57.5 56.6 55.4 53.9	15.1 15.1 14.6 14.1	21.6 17.9 15.3 13.4						
26.0 28.0 30.0 32.0	47.0 41.0 34.0 25.4	52.2 50.0 47.4 43.8	12.6 11.0 9.7 8.8	11.9 10.6 9.6 8.8						
			Ángu	ılo de plu	ıma prin	cipal 75.	0 [°]			
22.9 24.0 26.0	65.0 62.5 57.7	56.2 55.7 54.5	15.1 14.9	19.1 18.0 15.4						
28.0 30.0 32.0 34.0	52.6 47.1 41.1 34.2	53.0 51.3 49.2 46.5	13.9 12.7 11.0 9.8	13.4 12.0 10.7 9.7						
36.0	25.6	43.0	8.9 Ángi	lo de plu	ıma prin	cinal 65	1°10			
31.9 32.0 34.0 36.0 38.0 40.0	55.0 54.7 49.4 43.6 37.2 29.4	51.7 51.7 50.1 48.2 45.8 42.7	15.1 13.4 11.7 10.3 9.3	14.0 14.0 12.5 11.2 10.1 9.3			- 1			
			Ángı	ılo de plu	ıma prin	cipal 45.	0 [°]			
46.9 48.0 50.0 51.0	35.0 30.6 20.6 15.1	38.5 37.0 32.8 29.6	6.9 6.2 5.9	6.2 5.8 5.2						



N° de ident.: 9842523/95738/

200 %

Pieza de articulación de pluma principal:

2821-1

Radio de descarga:

360 °

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]
29.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (1916-1) 50.5 m Plumín 19.0 [m] Posición midfall (1916)										
Ángulo de pluma principal 88.0 [°]										
8.4 9.0 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0	78.0 76.2 73.1 69.9 66.6 63.2 59.7 52.3 43.9 33.9	50.7 50.6 50.3 49.9 49.5 49.0 48.4 47.0 45.1 42.6	15.1 15.1 15.1 15.1 15.1 15.1 14.9 12.6 9.9	30.1 30.1 29.7 27.3 23.7 20.2 17.7 13.9 11.4 9.4						
Ángulo de pluma principal 83.0 [°]										
12.6 13.0 14.0 16.0 18.0 20.0 22.0 24.0	73.0 71.7 68.5 61.7 54.5 46.4 37.0 24.4	50.0 49.9 49.5 48.5 47.2 45.5 43.1 39.7	15.1 15.1 15.1 15.1 13.4 10.6 8.7	30.1 30.0 26.0 19.2 14.9 12.1 9.9 8.4						
Ángulo de pluma principal 75.0 [°]										
19.1 20.0 22.0 24.0 26.0 28.0	65.0 61.9 54.7 46.6 37.2 24.8	48.0 47.6 46.3 44.6 42.3 38.9	15.1 15.0 13.6 10.7 8.9	20.8 19.3 14.9 12.1 10.0 8.5						
Ángulo de pluma principal 65.0 [°]										
26.7 28.0 30.0 32.0	55.0 50.0 41.3 30.4	44.4 43.4 41.4 38.5	14.6 11.9 9.7	14.5 13.1 10.8 9.2						
Ángulo de pluma principal 45.0 [°]										
39.5 40.0 42.0	35.0 32.1 15.9	33.3 32.8 28.4	8.2 7.1	6.2 6.0 5.0						



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]
		29.0	0 m Plum Cabeza 28.0	na princip de plumí 0 [m] Po	n (2316-	1) 50.5 r	n Plumín	dfall I		
				ılo de plu	ıma prin	cipal 88.	0 [°]			
10.4 11.0 12.0 13.0 14.0	78.0 76.6 74.5 72.4 70.2 65.7	59.6 59.4 59.1 58.8 58.5 57.6	15.1 15.1 15.1 15.1 15.1 15.1	30.1 30.1 30.1 29.6 29.1 24.0						
18.0 20.0 22.0 24.0 26.0	61.1 56.3 51.1 45.5 39.2	56.5 55.3 53.8 51.9 49.7	15.1 15.1 15.1 13.4 11.6	20.0 16.9 14.6 12.7						
28.0 30.0	31.9 22.5	46.8 42.9	10.2 8.9	10.0 8.9						
00.0	22.0	12.0		ılo de plu	ıma prin	cipal 83.	0[°]			
15.3 16.0	73.0 71.5	58.6 58.4	15.1 15.1	30.1 30.1						
18.0 20.0 22.0 24.0	67.0 62.5 57.7 52.6	57.6 56.6 55.4 53.9	15.1 15.1 15.1 15.1	25.7 21.0 17.7 15.2						
26.0 28.0 30.0 32.0	47.2 41.1 34.2 25.6	52.2 50.1 47.4 43.9	13.7 12.0 10.7 9.4	13.3 11.6 10.4 9.2						
			Ángu	ılo de plu	ıma prin	cipal 75.	0[°]			
22.9 24.0 26.0 28.0 30.0 32.0 34.0	65.0 62.6 57.8 52.7 47.3 41.3 34.4	56.2 55.7 54.5 53.1 51.3 49.2 46.6	15.1 15.1 15.1 14.2 12.3 10.8	22.5 21.2 17.8 15.2 13.4 11.8 10.5						
36.0	25.8	43.1	9.5	9.4						
			Ángı	ılo de plu	ıma prin	cipal 65.	0 [°]			
31.9 32.0 34.0 36.0 38.0 40.0	55.0 54.8 49.6 43.8 37.3 29.6	51.7 51.7 50.2 48.2 45.8 42.7	14.3 12.6 10.8 9.6	13.3 13.3 11.7 10.4 9.2 8.1						
			Ángı	ılo de plu	ıma prin	cipal 45.	0[°]	_		
46.9 48.0 50.0 51.0	35.0 30.7 20.8 15.5	38.5 37.0 32.9 29.7	4.3 3.6 3.3	3.9 3.5 2.9						



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 22.0	de plumi		1) 53.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.	0 [°]			
9.1 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0	78.0 75.4 72.7 70.0 67.1 64.2 58.2 51.7 44.5 36.2 25.5	53.7 53.4 53.1 52.8 52.3 51.9 50.7 49.2 47.4 45.0 41.6	15.1 15.1 15.1 15.1 15.0 14.9 13.0 10.2 8.3 6.9 5.8	30.1 29.5 26.5 22.3 19.3 16.8 13.3 10.7 8.8 7.3 6.2						
					ıma prin	cipal 83.	0[°]			
13.5 14.0 16.0 18.0 20.0 22.0 24.0 26.0	73.0 71.6 65.9 60.0 53.6 46.7 38.8 29.0	52.9 52.7 51.9 50.8 49.4 47.7 45.5 42.4	15.1 15.1 15.1 14.6 12.0 10.0 8.0 6.7	24.9 24.6 18.1 14.2 11.3 9.4 7.8 6.6						
20.0	25.0	72.7			ıma prin	cinal 75 i	\			
20.4 22.0 24.0 26.0 28.0 30.0	65.0 60.1 53.8 46.8 38.9 29.2	50.8 49.9 48.5 46.8 44.6 41.6	15.1 15.1 12.6 10.1 8.1 6.8	16.4 14.1 11.3 9.4 7.8 6.7	этга рин	ыраг <i>т</i> Э.	V []			
					uma prin	cipal 65	0 [°]			
28.4 30.0 32.0 34.0	55.0 49.8 42.3 33.5	46.8 45.6 43.7 41.0	11.0 8.9 7.3	11.4 10.2 8.5 7.2	та ріш	oipai oo.	~ []			
			Ángu	ılo de plu	ıma prin	cipal 45.	0[°]			
42.0 44.0 45.0	35.0 23.4 17.2	35.0 31.6 28.8	6.3 5.8	5.4 4.6						



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 central [t]: 0.0

Lastre o	entral [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]
		29.0	0 m Plum Cabeza 31.0	na princip de plumí 0 [m] Po	n (2316-	1) 53.5 r	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	D[°]			
11.0 12.0 13.0 14.0 16.0	78.0 76.1 74.1 72.2 68.2	62.5 62.2 62.0 61.6 60.9	15.1 15.1 15.1 15.1 15.1	30.1 30.1 30.1 27.5 23.1						
18.0 20.0 22.0 24.0 26.0	64.2 59.9 55.5 50.8 45.8	60.0 58.9 57.5 56.0 54.2	15.1 14.7 13.5 12.7 11.0	18.9 16.1 13.8 12.1 10.6						
28.0 30.0 32.0	40.2 33.9 26.2	52.0 49.3 45.7	9.4 8.2 7.3	9.3 8.3 7.4	ıma nrin	oin al 92 (0.1.01			
16.2	73.0	61.5	15.1	ılo de plu 28.7	лпа рпп 	cipai 65.]]			
18.0 20.0 22.0 24.0 26.0	69.4 65.4 61.2 56.8 52.2	60.8 60.0 58.9 57.7 56.2	15.1 15.1 15.1 14.0 13.1	24.5 20.0 16.9 14.4 12.5						
28.0 30.0 32.0 34.0	47.3 41.9 35.8 28.6	54.4 52.4 49.8 46.6	11.5 9.9 8.6 7.7	11.0 9.7 8.6 7.8						
04.0	05.0	50.0	Angı	ılo de plu	ıma prin	cipal 75.0	D[°]		1	
24.2 26.0 28.0 30.0 32.0 34.0 36.0 38.0	65.0 61.3 56.9 52.3 47.4 42.0 35.9 28.8	58.9 58.0 56.8 55.3 53.6 51.5 49.0 45.8	15.1 14.5 13.1 11.7 10.0 8.7 7.8	18.9 16.9 14.5 12.6 11.1 9.8 8.8 7.9						
				ılo de plu	ıma prin	cipal 65.0	[°]			
33.7 34.0 36.0 38.0 40.0 42.0 44.0	55.0 54.2 49.4 44.2 38.5 31.9 23.5	54.2 54.0 52.4 50.5 48.1 45.2 41.4	13.5 11.7 10.2 8.8 7.8 7.0	12.1 11.8 10.5 9.3 8.3 7.3 6.5						
			,	ılo de plu	ıma prin	cipal 45.0	0 [°]			
49.4	35.0	40.2	0.5	3.0						

50.0 53.0 39.5



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 0.0 Lastre central [t]:

	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]
			0 m Plum Cabeza 22.0	de plumí	n (2316-		n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0] (°)			
9.1	78.0	53.7		30.1		·				
10.0	75.6	53.5	15.1	30.1						
11.0	72.9	53.2	15.1	29.7						
12.0	70.1	52.8	15.1	28.4						
13.0	67.3	52.4	15.1	25.5						
14.0	64.4	51.9	15.1	22.0						
16.0	58.4	50.7	15.0	17.3						
18.0 20.0	51.9 44.7	49.3 47.4	14.8 12.6	14.0 11.6						
22.0	36.4	45.0	10.0	9.6						
24.0	25.7	41.6	8.2	8.0						
24.0	20.7	41.0			ıma nrin	cipal 83.0	1 0 1		ı	
13.5	73.0	52.9	I	30.1			J []			
14.0	71.7	52.9	15.1	30.1						
16.0	66.1	51.9	15.1	24.0						
18.0	60.1	50.8	15.1	18.6						
20.0	53.8	49.5	15.1	14.8						
22.0	46.9	47.7	13.5	12.3						
24.0	38.9	45.5	10.8	10.2						
26.0	29.2	42.5	8.9	8.6						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
20.4	65.0	50.8		21.6						
22.0	60.3	49.9	15.1	18.6						
24.0	54.0	48.6	14.9	14.9						
26.0	47.0	46.9	13.8	12.4						
28.0 30.0	39.1 29.4	44.6 41.6	11.0 9.1	10.3 8.8						
30.0	4J.4	41.0			ıma nrin	oinal 65 f) [°]		I	
20.5	EE 0	46.0	Angu		лна рпп	cipal 65.0	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			
28.5 30.0	55.0 49.9	46.8 45.7	14.3	12.3 10.8						
32.0	49.9	43.7	11.5	9.1						
34.0	33.7	41.1	9.4	7.6						
					ıma prin	cipal 45.0	1°10			
42.0	35.0	35.0	,gc	2.8						
44.0	23.7	31.7	2.9	2.0						
45.0	17.6	28.9	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

Valor de vuelco:

2 - Vía ancha 74.0

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

Alcance		Inserciór	1	1	2	3	4	5	6	7	8
Cabeza de plumín (1916-1) 56.5 m Plumín 25.0 [m] Posición midfall (1916) Angulo de pluma principal 88.0 [°] 9.7 78.0 56.6 15.1 30.1 3	ce	o ďe plumín	de rolda- nas								
9.7			29.	Cabeza	de plumí	n (1916-	1) 56.5 r	n Plumín			
10.0 77.2 56.5 15.1 30.1 15.1 22.7 15.0 70.0 55.6 15.1 22.8 15.0 17.5 16.0 62.4 54.2 14.7 14.0 18.0 57.0 53.0 12.5 11.6 20.0 51.3 51.5 10.2 9.8 22.0 45.0 49.6 8.6 8.4 24.0 37.8 47.3 7.2 7.2 7.2 26.0 29.2 44.2 62.2 62 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				Ángı	ılo de plu	ıma prin	cipal 88.0	0 [°]			
11.0 74.9 56.3 15.1 226.7 12.0 72.5 56.0 15.1 22.8 13.0 70.0 55.6 15.1 19.7 14.0 67.5 55.2 15.0 17.5 16.0 62.4 54.2 14.7 14.0 18.0 57.0 53.0 12.5 11.6 20.0 51.3 51.5 10.2 9.8 22.0 45.0 49.6 8.6 8.4 24.0 37.8 47.3 7.2 7.2 26.0 29.2 44.2 6.2 6.2 Angulo de pluma principal 83.0 [°] 14.4 73.0 55.7 15.1 12.0 16.0 69.0 55.1 15.1 18.6 18.0 63.9 54.2 14.8 14.8 20.0 58.6 53.1 13.2 12.2 22.0 53.0 51.7 10.8 10.3 24.0 46.9 49.9 9.1 8.8 26.0 40.0 47.8 7.6 7.5 28.0 31.9 44.9 6.6 6.6 22.0 64.0 53.3 15.1 14.8 24.0 58.8 52.2 13.2 12.3 24.0 58.8 52.2 13.2 12.3 24.0 58.8 52.2 13.2 12.3 26.0 40.0 47.8 10.8 10.3 28.0 47.0 49.1 9.1 8.9 30.0 40.2 46.9 7.7 7.6 32.0 32.1 44.1 6.6 6.6 6.6 34.0 21.3 40.1 5.8 5.8 Angulo de pluma principal 65.0 [°] 30.2 55.0 49.3	9.7	78.0	56.6	15.1	30.1	·					
12.0	10.0	77.2	56.5	15.1	30.1						
13.0 70.0 55.6 15.1 19.7 14.0 67.5 55.2 15.0 17.5 16.0 62.4 54.2 14.7 14.0 18.0 57.0 53.0 12.5 11.6 20.0 51.3 51.5 10.2 9.8 22.0 45.0 49.6 8.6 8.4 4 4.2 42.2 42.0 37.8 47.3 7.2 7.2 7.2 26.0 29.2 44.2 6.2 6.2 6.2 6.2 6.2 6.2 6.2 6.2 6.2 6				-							
14.0 67.5 55.2 15.0 17.5 16.0 62.4 54.2 14.7 14.0 18.0 57.0 53.0 12.5 11.6 52.0 51.3 51.5 10.2 9.8 22.0 45.0 49.6 8.6 8.4 24.0 37.8 29.2 44.2 6.2 6.2 6.2		1									
16.0 62.4 54.2 14.7 14.0 18.0 57.0 53.0 12.5 11.6 22.0 45.0 49.6 8.6 8.4 22.0 45.0 49.6 8.6 8.4 22.0 29.2 44.2 6.2 6.2 6.2 2 2 2 2 2 2 2 2 2 2 2 2 2											
18.0 57.0 53.0 12.5 11.6 22.0 45.0 49.6 8.6 8.4 24.0 37.8 47.3 7.2 7.2 26.0 29.2 44.2 6.2 6.2 6.2		1									
20.0 51.3 51.5 10.2 9.8 8.6 8.4											
22.0											
24.0 37.8 47.3 7.2 6.2 6.2 Angulo de pluma principal 83.0 [°] 14.4 73.0 55.7 15.1 22.0 16.0 69.0 55.1 15.1 18.6 18.0 63.9 54.2 14.8 14.8 20.0 58.6 53.1 13.2 12.2 22.0 53.0 51.7 10.8 10.3 24.0 46.9 49.9 9.1 8.8 26.0 40.0 47.8 7.6 7.5 28.0 31.9 44.9 6.6 6.6 Angulo de pluma principal 75.0 [°] 21.6 65.0 53.5 22 13.2 12.3 24.0 58.8 52.2 13.2 12.3 26.0 53.1 50.8 10.8 10.3 24.0 58.8 52.2 13.2 12.3 26.0 53.1 50.8 10.8 10.3 28.0 47.0 49.1 9.1 8.9 30.0 40.2 46.9 7.7 7.6 32.0 32.1 44.1 6.6 6.6 6.6 Angulo de pluma principal 65.0 [°] 30.2 55.0 49.3 34.0 15.8 58.2 8.1 36.0 35.6 43.4 7.0 7.0 38.0 26.2 40.0 6.2 6.2 Angulo de pluma principal 45.0 [°]		1									
Ángulo de pluma principal 83.0 [°] 14.4 73.0 55.7 15.1 22.0 16.0 69.0 55.1 15.1 18.6 18.0 63.9 54.2 14.8 14.8 20.0 58.6 53.1 13.2 12.2 22.0 53.0 51.7 10.8 10.3 24.0 46.9 49.9 9.1 8.8 26.0 40.0 47.8 7.6 7.5 28.0 31.9 44.9 6.6 6.6 22.0 64.0 53.3 15.1 14.8 24.0 58.8 52.2 13.2 12.3 24.0 58.8 52.2 13.2 12.3 26.0 53.1 50.8 10.8 10.3 28.0 47.0 49.1 9.1 8.9 30.0 40.2 46.9 7.7 7.6 32.0 32.1 34.0 45.9 8.2 8.1 34.0 21.3 40.1 5.8 5.8 8.1 36.0<	24.0										
14.4	26.0	29.2	44.2	6.2	6.2						
16.0 69.0 55.1 15.1 18.6 14.8 20.0 58.6 53.1 13.2 12.2 22.0 53.0 51.7 10.8 10.3 24.0 46.9 49.9 9.1 8.8 26.0 40.0 47.8 7.6 7.5 28.0 31.9 44.9 6.6 6.6 6.6 22.0 64.0 53.3 15.1 14.8 24.0 58.8 52.2 13.2 12.3 26.0 53.1 50.8 10.8 10.3 28.0 47.0 49.1 9.1 8.9 30.0 40.2 46.9 7.7 7.6 32.0 32.1 44.1 6.6 6.6 6.6 34.0 21.3 40.1 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8 5.8				Ángı	ılo de plu	ıma prin	cipal 83.0	0 [°]			
18.0 63.9 54.2 14.8 14.8 14.8 20.0 58.6 53.1 13.2 12.2 22.0 53.0 51.7 10.8 10.3 24.0 46.9 49.9 9.1 8.8 26.0 40.0 47.8 7.6 7.5 28.0 31.9 44.9 6.6 6.6 6.6	14.4	73.0	55.7	15.1	22.0						
20.0	16.0	69.0	55.1	15.1	18.6						
22.0 53.0 51.7 10.8 10.3 24.0 46.9 49.9 9.1 8.8 26.0 40.0 47.8 7.6 7.5 28.0 31.9 44.9 6.6 6.6 6.6	18.0	63.9	54.2	14.8							
24.0											
26.0		1									
28.0 31.9 44.9 6.6 6.6											
Ángulo de pluma principal 75.0 [°] 21.6 65.0 53.5 14.8 22.0 64.0 53.3 15.1 14.8 24.0 58.8 52.2 13.2 12.3 26.0 53.1 50.8 10.8 10.3 28.0 47.0 49.1 9.1 8.9 30.0 40.2 46.9 7.7 7.6 32.0 32.1 44.1 6.6 6.6 34.0 21.3 40.1 5.8 5.8 Ángulo de pluma principal 65.0 [°] 32.0 49.6 47.9 9.7 9.4 34.0 43.1 45.9 8.2 8.1 36.0 35.6 43.4 7.0 7.0 38.0 26.2 40.0 6.2 6.2 Ángulo de pluma principal 45.0 [°]		i i									
21.6 65.0 53.5 14.8 22.0 64.0 53.3 15.1 14.8 24.0 58.8 52.2 13.2 12.3 26.0 53.1 50.8 10.8 10.3 28.0 47.0 49.1 9.1 8.9 30.0 32.1 44.1 6.6 6.6 34.0 21.3 40.1 5.8 5.8 58	20.0	01.0		•		ıma nrin	cinal 75 (0 [0]		ı	
22.0 64.0 53.3 15.1 14.8 24.0 58.8 52.2 13.2 12.3 26.0 53.1 50.8 10.8 10.3 28.0 47.0 49.1 9.1 8.9 30.0 32.1 44.1 6.6 6.6 34.0 21.3 40.1 5.8 5.8	21.6	65.0	53.5	Aligo							
24.0				15.1							
26.0 53.1 50.8 10.8 10.3 8.9 30.0 40.2 46.9 7.7 7.6 32.0 32.1 44.1 6.6 6.6 34.0 21.3 40.1 5.8 5.8 5.8 5.0 5.0 49.3 32.0 49.6 47.9 9.7 9.4 34.0 43.1 45.9 8.2 8.1 36.0 35.6 43.4 7.0 7.0 38.0 26.2 40.0 6.2 6.2 \$\$Angulo de pluma principal 45.0 [°]\$\$\$Angulo de pluma principal 45.0 [°]\$\$\$Angulo de pluma principal 45.0 [°]\$\$\$\$Angulo de pluma principal 45.0 [°]\$\$\$\$Angulo de pluma principal 45.0 [°]\$\$\$\$\$Angulo de pluma principal 45.0 [°]\$\$\$\$\$Angulo de pluma principal 45.0 [°]\$\$\$\$\$\$Angulo de pluma principal 45.0 [°]\$\$\$\$\$\$\$Angulo de pluma principal 45.0 [°]\$\$\$\$\$\$\$\$\$Angulo de pluma principal 45.0 [°]\$\$\$\$\$\$\$\$\$\$Angulo de pluma principal 45.0 [°]\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$Angulo de pluma principal 45.0 [°]\$											
30.0				-							
32.0 32.1 44.1 6.6 6.6 5.8 5.8	28.0	47.0	49.1								
34.0 21.3 40.1 5.8 5.8		I .									
Ángulo de pluma principal 65.0 [°] 30.2 55.0 49.3 10.6 32.0 49.6 47.9 9.7 9.4 34.0 43.1 45.9 8.2 8.1 36.0 35.6 43.4 7.0 7.0 38.0 26.2 40.0 6.2 6.2 Ángulo de pluma principal 45.0 [°] 44.4 35.0 36.8 4.8											
30.2 55.0 49.3 10.6 32.0 49.6 47.9 9.7 9.4 34.0 43.1 45.9 8.2 8.1 36.0 35.6 43.4 7.0 7.0 38.0 26.2 40.0 6.2 6.2 Angulo de pluma principal 45.0 [°] 44.4 35.0 36.8 4.8	34.0	21.3	40.1			<u> </u>		0.00		l	
32.0				Angı		ıma prin	cipal 65.0	֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓			
34.0 43.1 45.9 8.2 8.1 7.0 7.0 7.0 38.0 26.2 40.0 6.2 6.2 Ángulo de pluma principal 45.0 [°]											
36.0 35.6 43.4 7.0 7.0 38.0 26.2 40.0 6.2 6.2											
38.0 26.2 40.0 6.2 6.2		1 -									
Ángulo de pluma principal 45.0 [°] 44.4 35.0 36.8 4.8				-							
44.4 35.0 36.8 4.8	55.5					ıma nrin	cipal 45	0 [°]			
	44 4	35.0	36.8	Ig							
				5.6							
48.0 16.1 29.2 4.8											



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 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]
		29.0	0 m Plum Cabeza 25.0	de plumí	pal, Punt ín (2316- osición m	1) 59.5 r	n Plumín	dfall		
					ıma prin					
9.7	78.0	56.6	, uigo	30.1		l loo.	, j			
10.0	77.4	56.6	15.1	30.1						
11.0	75.0	56.3	15.1	30.1						
12.0	72.6	56.0	15.1	28.5						
13.0	70.2	55.6	15.1	25.6						
14.0	67.7	55.2	15.1	22.9						
16.0	62.6	54.2	15.1	17.8						
18.0	57.2	53.0	13.9	14.5						
20.0	51.4	51.5	12.6	12.0						
22.0	45.1	49.7	10.7	10.1						
24.0 26.0	38.0 29.4	47.4 44.3	8.7 7.3	8.5 7.3						
20.0	23.4	44.5			ıma nrin	oinal 02 () [°]			
			Angu		ıma prin	cipai os.i	7[]		1	
14.4	73.0	55.7	45.4	28.8						
16.0 18.0	69.1 64.1	55.2 54.3	15.1 15.1	24.6 19.0						
20.0	58.8	53.1	14.1	15.4						
22.0	53.1	51.7	12.1	12.7						
24.0	47.0	50.0	10.3	10.7						
26.0	40.2	47.8	8.5	9.0						
28.0	32.1	45.0	7.2	7.7						
30.0	21.2	41.0	6.1	6.5						
			Ángι	ılo de plu	ıma prin	cipal 75.0	[°]C			
21.7	65.0	53.5		18.8						
22.0	64.2	53.4	15.1	18.8						
24.0	58.9	52.2	15.1	15.6						
26.0	53.3	50.8	13.4	12.8						
28.0 30.0	47.2 40.3	49.1 46.9	11.6	10.9 9.2						
30.0 32.0	40.3 32.3	46.9 44.2	9.5 7.9	9.2 7.9						
34.0	21.5	40.2	6.7	6.6						
		·	Ángi	ılo de pli	ıma prin	cipal 65 (1°10		•	
30.2	55.0	49.3	,gc	11.1						
32.0	49.7	47.9	12.0	9.5						
34.0	43.2	46.0	9.8	8.1						
36.0	35.8	43.5	8.1	6.8						
38.0	26.4	40.1	6.9	5.7						
			Ángı	ılo de plu	ıma prin	cipal 45.0	[°]			
44.5	35.0	36.7		2.0						
46.0	29.0	34.4	2.1							



Nº de ident.: 9842523/95738/ 360°

Radio de descarga:

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	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]
		29.	0 m Plum Cabeza 28.0	na princip de plumí 0 [m] Po	n (1916-	1) 59.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]0			
10.3 11.0 12.0 13.0 14.0	78.0 76.5 74.4 72.3 70.1	59.5 59.4 59.1 58.8 58.4	15.1 15.1 15.1 15.1 15.1	28.7 28.1 23.9 20.8 18.3						
16.0 18.0 20.0 22.0 24.0	65.6 61.0 56.1 51.0 45.3	57.6 56.5 55.2 53.7 51.9	14.3 13.4 10.7 8.6 7.3	14.7 12.2 10.1 8.5 7.3						
26.0 28.0 30.0	39.1 31.8 22.3	49.6 46.8 42.8	6.2 5.4 4.7	6.2 5.4 4.7						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
15.2 16.0	73.0 71.3	58.6 58.4	15.1	20.3 19.7						
18.0 20.0 22.0 24.0	66.9 62.3 57.6 52.5	57.5 56.6 55.4 53.9	14.8 12.3 10.1 8.3	15.7 12.7 10.6 8.9						
26.0 28.0 30.0	47.0 41.0 34.0	52.2 50.0 47.4	7.1 6.1 5.3	7.6 6.5 5.7						
32.0	25.4	43.8	4.7 Ángi	10 de plu	ıma nrin	cinal 75 (1°10			
22.9	65.0	56.2		13.5		.,,	- 1			
24.0 26.0 28.0 30.0 32.0 34.0	62.5 57.7 52.6 47.1 41.1 34.2	55.7 54.5 53.0 51.3 49.2 46.5	14.2 11.4 9.2 7.8 6.6 5.7	12.8 10.7 9.0 7.7 6.6 5.8						
36.0	25.6	43.0	5.0 Ángi	5.1 Ilo de plu	ıma nrin	cinal 65 (1°10			
31.9 32.0 34.0 36.0 38.0 40.0	55.0 54.7 49.4 43.6 37.2 29.4	51.7 51.7 50.1 48.2 45.8 42.7	9.6 8.4 7.1 6.1 5.4	9.3 9.3 8.2 7.1 6.2 5.4	and pilli		~ []			
			Ángı	ılo de plu	ıma prin	cipal 45.0	[°]			
46.9 48.0 50.0 51.0	35.0 30.6 20.6 15.1	38.5 37.0 32.8 29.6	4.9 4.2 3.8	4.1 3.7 3.1						



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]
		29.0	0 m Plum Cabeza 28.0	de plumí		1) 62.5 r	n Plumín			
					ıma prin					
10.4	78.0	59.6	15.1	30.1						
11.0 12.0 13.0	76.6 74.5 72.4	59.4 59.1 58.8	15.1 15.1 15.1	30.1 28.4 25.2						
14.0	70.2	58.5	15.1	21.9						
16.0 18.0 20.0 22.0	65.7 61.1 56.3 51.1	57.6 56.5 55.3 53.8	14.5 13.9 11.2 9.1	17.3 14.1 11.6 9.7						
24.0	45.5	51.9	7.7	8.2						
26.0 28.0 30.0	39.2 31.9 22.5	49.7 46.8 42.9	6.5 5.5 4.6	6.9 5.9 4.9						
			Ángu	ılo de plu	ıma prin	cipal 83.0	1°10			
15.3 16.0	73.0 71.5	58.6 58.4	15.1 15.1	24.5 23.9						
18.0 20.0	67.0 62.5	57.6 56.6	15.1 15.1	18.5 14.9						
22.0 24.0 26.0	57.7 52.6 47.2	55.4 53.9 52.2	13.0 10.7 9.0	12.3 10.3 8.7						
28.0 30.0	41.1 34.2	50.1 47.4	7.4 6.2	7.4 6.3						
32.0	25.6	43.9	5.3	5.3	<u> </u>					
22.9	65.0	56.2	Angı	ılo de plu 15.9	uma prind	cipai /5.0	ַן נין ט			
24.0	62.6	55.2 55.7	15.1	15.9						
26.0	57.8	54.5	13.7	12.5						
28.0 30.0 32.0	52.7 47.3 41.3	53.1 51.3 49.2	10.9 9.1 7.6	10.4 8.8 7.5						
34.0	34.4	46.6	6.4	6.4						
36.0	25.8	43.1	5.4	5.5	<u> </u>					
			Angı	· ·	uma prin	cipal 65.0	[°]			
31.9 32.0	55.0 54.8	51.7 51.7		9.9 9.9						
34.0	49.6	50.2	9.3	8.5						
36.0 38.0	43.8 37.3	48.2 45.8	7.7 6.5	7.2 6.1						
40.0 42.0	29.6 19.0	42.7 38.3	5.6 4.7	5.1 4.2						



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

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]
	•	29.0	0 m Plun Cabeza 31.0	de plumi		1) 62.5 r	n Plumír			
			Ángı	ılo de plı	ıma prin	cipal 88.	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 32.0	78.0 77.9 75.9 74.0 68.1 64.1 59.8 55.4 45.6 40.1 33.7 26.0 73.0 69.3 65.2 61.1	62.5 62.5 62.2 61.9 61.6 60.8 59.9 58.8 57.5 56.0 54.1 51.9 49.2 45.7	15.1 15.1 15.1 15.1 14.8 12.8 11.1 9.1 7.5 6.5 6.6 4.8 4.3	26.1 26.1 24.5 21.2 18.7 15.1 12.4 10.5 8.8 7.5 6.5 5.6 4.9	uma prin					
24.0 26.0 28.0 30.0 32.0	56.7 52.1 47.1 41.7 35.7	57.6 56.1 54.4 52.3 49.8	9.6 7.9 6.8 5.9 5.1	9.2 7.9 6.8 5.9 5.2						
34.0	28.5	46.5	4.5 Ángi	ulo de niu	uma prin	rinal 75 i	1 ° 1 0			
24.2 26.0 28.0 30.0 32.0 34.0 36.0	65.0 61.2 56.8 52.2 47.2 41.9	58.9 58.0 56.7 55.3 53.5 51.5	13.2 11.8 9.7 8.0 6.9 6.0 5.2	12.2 10.9 9.3 7.9 6.9 6.0 5.3		о.ри 70.	~ i J			
38.0	28.6	45.7	4.6 Ángi	ulo de plu	ıma prin	cinal 65 i	 			
33.6 34.0 36.0 38.0 40.0 42.0 44.0	55.0 54.1 49.3 44.1 38.4 31.7 23.4	54.2 54.0 52.4 50.4 48.1 45.2 41.3	8.4 7.4 6.4 5.5 4.9	8.4 8.4 7.3 6.4 5.6 5.0	лпа рпп	upar ob.				

49.3

50.0 53.0

35.0

32.7

Ángulo de pluma principal 45.0 [°]

3.6

3.4 2.6

40.2

39.5 33.3



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 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]
		29.0	0 m Plum Cabeza 31.0	de plumí		1) 65.5 ñ	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0	1°10			
11.0	78.0	62.5	15.1	30.1			- []			
12.0	76.1	62.2	15.1	30.1						
13.0	74.1	62.0	15.1	30.1						
14.0	72.2	61.6	15.1	27.5						
16.0	68.2	60.9	15.1	22.4						
18.0 20.0	64.2 59.9	60.0 58.9	15.1 14.7	18.3 15.5						
20.0	55.5	58.9 57.5	14.7	13.2						
24.0	50.8	56.0	11.9	11.5						
26.0	45.8	54.2	10.4	10.1						
28.0	40.2	52.0	8.9	8.8						
30.0	33.9	49.3	7.6	7.8						
32.0	26.2	45.7	6.0	6.1						
					ıma prin	cipal 83.0	[°]			
16.2	73.0 69.4	61.5 60.8	15.1	27.2 23.7						
18.0 20.0	65.4	60.0	15.1 15.1	19.4						
22.0	61.2	58.9	15.1	16.3						
24.0	56.8	57.7	13.6	13.9						
26.0	52.2	56.2	12.4	12.0						
28.0	47.3	54.4	11.0	10.6						
30.0	41.9	52.4	9.4	9.2						
32.0 34.0	35.8 28.6	49.8 46.6	8.1 7.0	8.2 7.2						
34.0	20.0	40.0			uma prin	cinal 75 (1 0 1			
24.2	65.0	58.9	Ang.	18.0		cipai 75.	J []			
26.0	61.3	58.0	15.1	16.0						
28.0	56.9	56.8	14.6	14.0						
30.0	52.3	55.3	12.6	12.1						
32.0	47.4	53.6	11.1	10.7						
34.0	42.0	51.5	9.5	9.3						
36.0	35.9	49.0	8.2	8.0						
38.0	28.8	45.8	7.3	6.9	l					
00.7	55.0	540	Angu		ıma prin	cipal 65.0	ן נ"ן נ	I	l	
33.7 34.0	55.0 54.2	54.2 54.0	11.0	8.7 8.5						
36.0	49.4	52.4	9.5	7.3						
38.0	44.2	50.5	8.2	6.2						
40.0	38.5	48.1	7.1	5.3						
42.0	31.9	45.2	6.0	4.4						
44.0	23.5	41.4	5.1	3.6						
45.0	18.0	38.8	4.6	3.2						



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 34.0	de plumi		1) 65.5 r	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0	[°]			
11.5 12.0	78.0 77.2	65.4 65.3	15.1	23.7 23.7						
13.0	77.2 75.5	65.1	15.1	21.5						
14.0	73.7	64.8	15.1	19.2						
16.0	70.2	64.1	15.1	15.3						
18.0 20.0	66.5 62.7	63.2 62.3	13.4 11.2	12.7 10.7						
22.0	58.8	61.1	9.4	9.1						
24.0	54.8	59.8	7.9	7.7						
26.0 28.0	50.5 45.9	58.2 56.4	6.7 5.8	6.7 5.8						
30.0	40.9	54.2	5.0	5.1						
32.0	35.3	51.6	4.4	4.4						
34.0 36.0	28.7 20.1	48.4 43.9	3.9 3.4	4.0 3.5						
					ıma prin	cipal 83.0	D[°]			
17.0	73.0	64.3	15.1	16.8						
18.0	71.2	64.0	15.1	16.3						
20.0 22.0	67.6 63.8	63.2 62.3	14.8 11.9	13.5 11.1						
24.0	60.0	61.2	9.9	9.5						
26.0	56.0	59.9	8.2	8.1						
28.0 30.0	51.7 47.2	58.4 56.6	7.0 6.1	7.0 6.1						
32.0	42.4	54.6	5.3	5.3						
34.0	36.9	52.1	4.6	4.7						
36.0 38.0	30.7 22.9	49.1 45.1	4.1 3.6	4.2 3.7						
			Ángı	ılo de plı	ıma prin	cipal 75.0	[°]0			
25.4	65.0	61.6	11.7	11.1						
26.0 28.0	63.9 60.1	61.4 60.3	11.7 9.8	11.1 9.5						
30.0	56.1	59.0	8.3	8.2						
32.0	51.8	57.5	7.1 6.2	7.1 6.2						
34.0 36.0	47.3 42.5	55.8 53.7	5.3	5.4						
38.0	37.1	51.3	4.7	4.7						
40.0 42.0	30.9 23.1	48.3 44.3	4.1 3.7	4.2 3.7						
.2.0					ıma prin	cipal 65.0	[°]			
35.3	55.0	56.6		7.6	<u> </u>					
36.0	53.6	56.2	7.5	7.6						
38.0 40.0	49.2 44.5	54.6 52.7	6.5 5.7	6.6 5.8						
42.0	39.3	50.4	5.0	5.1						
44.0	33.5	47.6	4.4	4.5						
46.0	26.5	44.1	3.9 Ángu	ulo de plu	ıma prin	cinal 45 (\		l	
51.8	35.0	41.9	Angu	3.0	μπα μπη 	upai 40.1	<u> </u>			
55.0	23.5	36.4	2.9	2.2						
56.0	19.8	33.8	2.6							



Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal:

2821-1

Valor de vuelco:

Lastre trasero [t]:

Lastre central [t]:

360°

74.0 0.0

Cabeza de pluma principal: 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]
		29.0	0 m Plum Cabeza 34.0	de plumi	oal, Punt ín (2316- osición m	1) 68.5 r	n Plumír			
			Ángı	ılo de plı	uma prin	cipal 88.	0 [°]			
11.6	78.0	65.4	15.1	30.1						
12.0 13.0 14.0 16.0	77.3 75.6 73.8 70.3	65.3 65.1 64.8 64.1	15.1 15.1 15.1 15.1	30.1 29.0 26.7 21.2						
18.0 20.0 22.0 24.0	66.6 62.9 59.0 54.9	63.3 62.3 61.1 59.8	15.1 15.1 13.6 11.3	17.5 14.7 12.6 10.8						
26.0 28.0 30.0 32.0 34.0	50.6 46.0 41.0 35.4 28.8	58.2 56.4 54.2 51.7 48.4	9.6 8.3 7.2 6.3 5.2	9.5 8.3 7.3 6.4 5.3						
36.0	20.3	44.0	4.1	4.2						
			Ángı	ılo de plu	uma prin	cipal 83.	0 [°]			
17.0 18.0 20.0 22.0	73.0 71.3 67.7 63.9	64.3 64.0 63.3 62.3	15.1 15.1 15.1	23.5 22.7 18.5 15.4						
24.0 26.0 28.0 30.0 32.0 34.0	56.1 51.8 47.3 42.5 37.1	59.9 58.4 56.7 54.6 52.2	14.4 12.0 10.2 8.8 7.6 6.6	13.3 11.4 9.9 8.7 7.6 6.7						
36.0	30.8	49.2	5.8	6.0						
38.0	23.1	45.2	5.1 Ángi	lo de nli	uma prin	cinal 75 (1°10			
25.5 26.0 28.0	65.0 64.0 60.2	61.6 61.4 60.3	15.1 14.0	15.4 15.4 13.3						
30.0 32.0 34.0 36.0 38.0	56.2 51.9 47.4 42.6 37.2	59.0 57.6 55.8 53.8 51.3	12.1 10.2 8.9 7.7 6.7	11.5 10.0 8.8 7.7 6.8						
40.0	31.0	48.3	6.0	6.1						
42.0	23.3	44.4	5.3 Ánai	5.4 ulo de plu	uma prin	cipal 65	1°10	<u> </u>	<u> </u>	<u>I</u>
35.4 36.0 38.0	55.0 53.7 49.3	56.6 56.3 54.6	9.5 8.2	7.8 7.4 6.4	p	- p =	- L J			
40.0 42.0 44.0 46.0	44.6 39.5 33.6 26.7	52.7 50.4 47.7 44.2	7.1 6.1 5.1 4.3	5.4 4.6 3.8 3.2						
48.0	17.1	39.3	3.5	2.5	I					



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]							
			0 m Plum	na princir	al Punt	o de car	na 3 - Mi	dfall		
		29.0	Cabeza		ín (1916-	1) 68.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.	0 [°]			
12.2	78.0	68.3	15.1	23.1						
13.0 14.0	76.7 75.1	68.2 67.9	15.1 15.1	23.1 20.3						
16.0	71.8	67.3	15.1	16.5						
18.0	68.5	66.5	15.0	13.9						
20.0 22.0	65.1 61.6	65.6 64.6	12.3 10.3	11.6 10.0						
24.0	58.0	63.4	8.8	8.6						
26.0	54.3	62.0	7.5	7.5						
28.0 30.0	50.3	60.4	6.5 5.7	6.6 5.8						
30.0	46.1 41.5	58.6 56.5	5.7	5.8						
34.0	36.5	54.0	4.4	4.5						
36.0	30.7	50.9 47.0	4.0	4.1						
38.0	23.7	47.0	3.5 Ángi	lo de plu	ıma nrin	rinal 83 i	1 ° 1			
17.9	73.0	67.2	15.1	16.4		lipai 00.				
18.0	72.8	67.2	15.1	16.4						
20.0	69.5	66.5	14.8	14.5						
22.0 24.0	66.1 62.7	65.6 64.6	13.2 10.8	12.3 10.4						
26.0	59.1	63.5	9.2	9.0						
28.0	55.4	62.2	7.8	7.8						
30.0 32.0	51.5 47.3	60.6 58.9	6.7 6.0	6.9 6.1						
34.0	42.9	56.8	5.2	5.4						
36.0	38.0	54.5	4.6	4.8						
38.0 40.0	32.5 25.9	51.6 48.0	4.2 3.7	4.3 3.8						
40.0	20.0	40.0		ılo de plu	ıma prin	cipal 75	01°1			
26.7	65.0	64.4	79	10.9						
28.0	62.7	63.7	11.0	10.5						
30.0 32.0	59.2 55.4	62.6 61.3	9.1 7.9	9.1 7.9						
34.0	51.5	59.8	6.9	7.0						
36.0	47.4	58.0	6.1	6.2						
38.0 40.0	43.0 38.1	56.0 53.6	5.3 4.7	5.4 4.8						
42.0	32.6	50.7	4.7	4.3						
44.0	26.1	47.1	3.8	3.9						
			Ángı	ılo de plu	ıma prin	cipal 65.	0[°]			
37.0 38.0	55.0 53.1	59.1 58.5	7.3	7.5 7.4						
40.0	53.1 49.1	56.8	6.4	6.5						
42.0	44.8	54.9	5.7	5.8						
44.0	40.1	52.7	5.0	5.1						
46.0 48.0	34.9 28.9	50.0 46.8	4.5 4.0	4.6 4.1						
50.0	21.3	42.5	3.6	3.7						
			Ángı	ılo de plı	ıma prin	cipal 45.	0 [°]			
54.2	35.0	43.6		2.5						
55.0	32.8	42.8	2.9	2.3						
58.0	23.4	37.0	2.2						L	



2821-1

2821-1

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

			1	i .	i			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]
		29.0		de plumi	ín (2316-	o de carç 1) 71.5 n nidfall (23	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0) [°]			
12.2	78.0	68.4		28.8						
13.0 14.0 16.0	76.8 75.2 71.9	68.2 67.9 67.3	15.1 15.1 15.1	28.5 25.0 19.9						
18.0	68.6	66.5	15.0	16.5						
20.0 22.0 24.0 26.0	65.2 61.7 58.1 54.4	65.7 64.6 63.4 62.1	13.5 12.3 10.5 8.8	13.8 11.8 10.1 8.7						
28.0	50.4	60.5	7.5	7.6						
30.0 32.0 34.0 36.0	46.2 41.6 36.6 30.8	58.6 56.5 54.0 51.0	6.5 5.7 4.9 4.1	6.6 5.7 5.0 4.2						
38.0	23.8	47.1	3.2	3.2	<u> </u>		2.5.0.3			
			Angı		ıma prin	cipal 83.0	ַנין נ	ı		ı
17.9 18.0 20.0	73.0 72.9 69.6	67.2 67.2 66.5	15.1 15.1	19.9 19.9 17.3						
22.0	66.2	65.6	14.4	14.5						
24.0 26.0	62.8 59.2	64.7 63.5	12.8 11.1	12.3 10.6						
28.0	55.5	62.2	9.3	9.1						
30.0 32.0	51.6 47.4	60.7 58.9	7.9 6.9	8.0 7.0						
34.0	43.0	56.9	6.0	6.1						
36.0	38.1	54.5	5.2	5.3						
38.0 40.0	32.6 26.0	51.6 48.0	4.5 3.9	4.6 4.0						
			Ángı		uma prin	cipal 75.0	1°1			
26.8	65.0	64.4	13.9	13.0						
28.0 30.0	62.8 59.3	63.8 62.6	13.4 11.1	12.5 10.7						
32.0	55.5	61.3	9.4	9.2						
34.0	51.6	59.8	8.0	8.0						
36.0 38.0	47.5 43.1	58.0 56.0	7.0 6.1	7.1 6.2						
40.0	38.2	53.6	5.3	5.4						
42.0 44.0	32.7 26.2	50.8 47.2	4.7 4.1	4.7 4.1						
. 1.0					ıma prin	cipal 65.0	1°1C			
37.1	55.0	59.1		6.8						
38.0	53.2	58.5	8.0	6.3						
40.0 42.0	49.2 44.9	56.9 55.0	6.9 5.8	5.4 4.5						
44.0	40.2	52.7	4.9	3.8						
46.0 48.0	35.0 29.0	50.1 46.9	4.1 3.3	3.1 2.5						
50.0 51.0	22.5 17.8	42.6 39.7	2.6 2.2	0						



N° de ident.: 9842523/95738/

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

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

Alcan- ce	Ángu					4	5	6	7	8
[m]	Angu- 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	na nrincir	al, Punt	o de car	na 3 - Mi	dfall		
		29.0	Cabeza	de plumi	ín (1916- osición m	1) 71.5 r	n Plumín	l		
			Ángı	ılo de plı	ıma prin	cipal 88.0	[°]			
12.8	78.0	71.3	15.1	24.2						
13.0 14.0	77.7 76.2	71.2 71.0	15.1 15.1	24.2 23.4						
16.0	73.2	70.4	15.1	19.1						
18.0	70.2	69.7	15.1	16.0						
20.0	67.1	68.9	13.9	13.7						
22.0 24.0	64.0 60.7	68.0 66.9	12.0 10.6	11.7 10.2						
26.0	57.3	65.7	9.2	9.0						
28.0	53.8	64.3	8.0	7.9						
30.0	50.1	62.7	7.0	7.1						
32.0 34.0	46.2 42.0	60.8 58.7	6.3 5.6	6.4 5.8						
36.0	37.5	56.3	5.0	5.2						
38.0	32.3	53.4	4.6	4.7						
40.0	26.3	49.8	4.2	4.3						
			Angu		ıma prin	cipal 83.0	D[°]			
18.7	73.0	70.1		17.5						
20.0 22.0	71.1 68.0	69.7 68.9	15.1 15.1	16.8 14.3						
24.0	64.9	68.0	12.9	12.2						
26.0	61.6	66.9	11.0	10.7						
28.0	58.3	65.8	9.6	9.4						
30.0 32.0	54.8 51.2	64.4 62.9	8.3 7.3	8.3 7.5						
34.0	47.4	61.1	6.6	6.7						
36.0	43.3	59.1	5.9	6.0						
38.0 40.0	38.8 33.9	56.8	5.3 4.8	5.4 4.9						
40.0	28.2	54.0 50.7	4.6 4.4	4.9						
44.0	21.0	46.3	3.9	4.1						
			Ángu	ılo de plu	ıma prin	cipal 75.0	[°]			
28.0	65.0	67.1	11.2	11.7						
30.0	61.7	66.1	10.3	10.8						
32.0 34.0	58.4 54.9	64.9 63.5	8.9 7.8	9.6 8.4						
36.0	51.3	62.0	7.0	7.5						
38.0	47.5	60.2	6.3	6.8						
40.0 42.0	43.4 38.0	58.2 55.9	5.6 5.1	6.1 5.5						
42.0 44.0	38.9 34.0	55.9	4.6	5.5						
46.0	28.3	49.8	4.3	4.6						
48.0	21.2	45.5	3.9	4.2						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
38.8	55.0	61.6		8.1						
40.0 42.0	52.8 49.0	60.7 59.1	7.8 6.9	8.0						
42.0 44.0	49.0 45.1	59.1 57.2	6.3	7.1 6.4						
46.0	40.8	55.0	5.6	5.8						
48.0	36.1	52.4	5.1	5.2						
50.0	30.7	49.3	4.7 Ángu	do do plu	ıma aris	cinal 45 f	1 0 1			
	25.0	45.4		iio de pil	ıma prin	upai 45.0	\			
56.9	35.0	45.4	2.4	I	I				I	



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]
		29.0	0 m Plum Cabeza 31.0	de plumí	oal, Punt n (1916- osición m	1) 74.5 r	n Plumín	dfall I		
			Ángı		ıma prin	cipal 88.0	[°]			
10.9 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0	78.0 77.9 75.9 74.0 72.1 68.1 64.1 59.8 55.4 50.7 45.6 40.1 33.7 26.0	62.5 62.5 62.2 61.9 61.6 60.8 59.9 58.8 57.5 56.0 54.1 51.9 49.2 45.7	15.1 15.1 15.1 14.9 14.2 10.8 8.5 6.9 5.6 4.7 4.0 3.3 2.9	21.6 21.6 20.6 17.8 15.7 12.6 10.0 8.3 6.7 5.6 4.7 4.0 3.4 2.9						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
16.1 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0	73.0 69.3 65.2 61.1 56.7 52.1 47.1 41.7 35.7 28.5	61.5 60.8 59.9 58.9 57.6 56.1 54.4 52.3 49.8 46.5	14.3 11.5 9.0 7.3 6.0 5.1 4.3 3.6 3.1	15.2 13.2 10.6 8.7 7.1 6.0 5.1 4.3 3.6 3.1						
			Ángu	ılo de plu	ıma prin	cipal 75.0	[°]			
24.2 26.0 28.0 30.0 32.0 34.0 36.0 38.0	65.0 61.2 56.8 52.2 47.2 41.9 35.8 28.6	58.9 58.0 56.7 55.3 53.5 51.5 48.9 45.7	10.0 9.0 7.4 6.1 5.2 4.4 3.7 3.2	9.6 8.6 7.2 6.0 5.2 4.4 3.7 3.2						
					ıma prin	cipal 65.0	1°10			
33.6 34.0 36.0 38.0 40.0 42.0 44.0	55.0 54.1 49.3 44.1 38.4 31.7 23.4	54.2 54.0 52.4 50.4 48.1 45.2 41.3	6.4 5.6 4.8 4.0 3.5 3.0	6.4 6.4 5.5 4.8 4.1 3.5 3.1	, ,	, -31				
11.0		71.0			ıma prin	cipal 45 (1°10			
49.5	35.0	40.2	2.4	do pic	a piili	pui +0.	- []			
50.0	33.4	39.5	2.2						<u> </u>	



N° de ident.: 9842523/95738/ Pieza d Radio de descarga: 360 ° Cabeza

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

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

Lasile	entrai 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]
		29.) m Plum Cabeza 40.0	na princip de plumí D [m] Po	'n (2316-	1) 74.5 r	n Plumín	dfall		
				ılo de plu						
12.8	78.0	71.3		28.7		·				
13.0	77.8	71.3	15.1	28.7						
14.0 16.0	76.3 73.3	71.0 70.5	15.1 15.1	27.6 22.3						
18.0	70.3	69.8	15.1	18.2						
20.0	67.2	69.0	14.4	15.5						
22.0	64.0	68.0	13.2	13.3						
24.0 26.0	60.8 57.4	66.9 65.7	12.2 10.4	11.6 10.1						
28.0	53.9	64.3	8.9	8.8						
30.0	50.2	62.7	7.7	7.9						
32.0	46.3	60.9	6.7	6.8						
34.0	42.1	58.8	5.7	5.9						
36.0 38.0	37.6 32.5	56.4 53.5	4.8 4.0	5.1 4.2						
40.0	26.4	49.9	2.9	3.1						
			Ángu	ılo de plu	ıma prin	cipal 83.0] °]			
18.8	73.0	70.1		20.0						
20.0	71.2	69.7	15.1	19.4						
22.0	68.1	68.9	15.1	16.3						
24.0 26.0	65.0 61.7	68.0 67.0	13.8 12.6	13.9 12.1						
28.0	58.4	65.8	10.9	10.6						
30.0	54.9	64.4	9.3	9.2						
32.0	51.3	62.9	8.1	8.2						
34.0 36.0	47.5 43.4	61.2 59.1	7.1 6.3	7.3 6.4						
38.0	38.9	56.8	5.5	5.7						
40.0	34.0	54.1	4.9	5.0						
42.0	28.3	50.7	4.1	4.2						
44.0	21.2	46.4	3.3	3.4						
			Angı	ılo de plu	ıma prin	cipal 75.0	0[°]			
28.0	65.0	67.1	10.0	13.2						
30.0 32.0	61.8 58.5	66.1 64.9	12.9 11.0	12.2 10.8						
34.0	55.0	63.6	9.4	9.4						
36.0	51.4	62.0	8.1	8.3						
38.0	47.6	60.3	7.2	7.4						
40.0 42.0	43.5 39.0	58.3 56.0	6.4 5.6	6.4 5.6						
44.0	34.1	53.2	5.0	4.8						
46.0	28.4	49.9	4.5	4.1						
48.0	21.3	45.6	3.9	3.5						
			Angı	ılo de plu	ıma prin	cipal 65.0	D[°]	ı	1	1
38.8	55.0	61.6	0.7	5.9						
40.0 42.0	52.9 49.1	60.8 59.1	6.7 5.7	5.3 4.5						
44.0	45.1	57.2	4.8	3.7						
46.0	40.9	55.0	4.0	3.1						
48.0	36.2	52.5	3.2	2.4						
50.0 51.0	31.5	49.4 47.6	2.5							
51.0	28.5	47.6	2.2						I	



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]:

	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]
		29.	0 m Plum Cabeza 34.0	na princip de plumí 0 [m] Po	n (1916-	1) 77.5 r	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
11.5 12.0 13.0 14.0 16.0 18.0 20.0 22.0	78.0 77.2 75.5 73.7 70.2 66.5 62.7 58.8	65.4 65.3 65.1 64.8 64.1 63.2 62.3 61.1	15.1 15.1 15.1 13.1 10.8 8.5 6.9	19.3 19.3 17.8 15.8 12.5 10.1 8.2 6.8						
24.0 26.0	54.8 50.5	59.8 58.2	5.7 4.7	5.6 4.7						
28.0 30.0 32.0 34.0	45.9 40.9 35.3 28.7	56.4 54.2 51.6 48.4	4.0 3.3 2.8 2.3	4.0 3.4 2.8 2.3						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]C			
17.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0	73.0 71.2 67.6 63.8 60.0 56.0 51.7 47.2	64.3 64.0 63.2 62.3 61.2 59.9 58.4 56.6	15.1 15.1 11.5 9.0 7.3 6.0 5.0 4.3	13.5 13.3 10.7 8.6 7.2 6.0 5.0 4.3						
32.0 34.0 36.0	42.4 36.9 30.7	54.6 52.1 49.1	3.6 3.0 2.6	3.6 3.1 2.6						
			Ángı	ılo de plı	ıma prin	cipal 75.0	D[°]			
25.4 26.0 28.0 30.0 32.0 34.0	65.0 63.9 60.1 56.1 51.8 47.3	61.6 61.4 60.3 59.0 57.5 55.8	8.6 7.3 6.1 5.1 4.4	8.4 8.4 7.2 6.1 5.1 4.4						
36.0 38.0 40.0 42.0	42.5 37.1 30.9 23.1	53.7 51.3 48.3 44.3	3.7 3.1 2.7 2.3	3.7 3.2 2.7 2.3						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
35.3 36.0 38.0 40.0 42.0	55.0 53.6 49.2 44.5 39.3	56.6 56.2 54.6 52.7 50.4	5.4 4.7 4.0 3.4	5.5 5.5 4.7 4.1 3.4						
44.0 46.0 48.0	33.5 26.5 16.9	47.6 44.1 39.2	2.9 2.5 2.1	3.0 2.6 2.2						



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 Plun Cabeza 43.0	de plumi		1) 77.5 r	n Plumín			
					ıma prin					
13.5	78.0	74.2	15.1	28.4	<u>'</u>					
14.0	77.3	74.1	15.1	28.4						
16.0	74.5	73.6	15.1	23.8						
18.0	71.7	73.0	15.1	19.8						
20.0	68.9	72.2	15.1	17.0						
22.0 24.0	66.0 63.0	71.3 70.4	13.8 12.8	14.6 12.7						
26.0	60.0	69.2	11.6	11.3						
28.0	56.8	68.0	10.1	9.9						
30.0	53.5	66.6	8.7	8.8						
32.0	50.1	64.9	7.7	7.9						
34.0	46.5	63.1	6.3	6.5						
36.0	42.6	61.1	5.1	5.2						
38.0 40.0	38.4 33.8	58.7 55.9	3.9 3.0	4.1 3.2						
40.0	33.0	55.5			ıma prin	cinal 83 (0 [°]			
19.7	73.0	73.0	15.1	20.0		l l			1	
20.0	72.5	72.9	15.1	20.0						
22.0	69.7	72.2	15.1	17.7						
24.0	66.8	71.3	14.8	15.3						
26.0	63.9	70.4	13.3	13.2						
28.0	60.8	69.3	12.2	11.8						
30.0 32.0	57.7 54.5	68.1 66.7	10.5	10.3 9.1						
34.0	51.1	65.1	9.1 8.0	8.2						
36.0	47.5	63.4	7.2	7.3						
38.0	43.7	61.4	6.4	6.5						
40.0	39.7	59.1	5.7	5.8						
42.0	35.2	56.5	5.1	5.2						
44.0	30.1	53.3	4.0	4.1						
46.0	24.0	49.4	2.9 Ápgu	3.0	ıma prin	oinal 75 (1 ° 1			
20.2	65.0	60.0	Angl		uma prin	upai / 3.1	∪[]			
29.3 30.0	65.0 63.9	69.8 69.5	13.9	12.8 12.2						
32.0	60.9	68.4	12.2	10.7						
34.0	57.8	67.2	10.7	9.4						
36.0	54.5	65.8	9.3	8.3						
38.0	51.2	64.3	8.2	7.3						
40.0	47.6	62.5	7.3	6.4						
42.0 44.0	43.8 39.7	60.5 58.3	6.5 5.8	5.5 4.7						
44.0	35.3	55.6	5.6	4.7						
48.0	30.2	52.5	4.5	3.4						
50.0	24.2	48.5	3.7	2.8						
					ıma prin	cipal 65.0	0 [°]			
40.5	55.0	64.0		4.9		-				
42.0	52.6	63.0	5.4	4.3						
44.0	49.1	61.3	4.5	3.6						
46.0	45.4	59.4	3.7	2.9						
48.0	41.4	57.3	2.9	2.3						
50.0	37.6	54.8	2.3	I	ı	I	ı	I	ı	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 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]
		29.	0 m Plum Cabeza 34.0	de plumí		1) 80.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	0[°]			
11.6 12.0 13.0 14.0 16.0	78.0 77.3 75.6 73.8 70.3	65.4 65.3 65.1 64.8 64.1	15.1 15.1 15.1 15.1 15.1	30.1 30.1 30.1 28.5 23.8						
18.0 20.0 22.0 24.0 26.0	66.6 62.9 59.0 54.9 50.6	63.3 62.3 61.1 59.8 58.2	15.1 15.1 13.6 9.3 5.9	19.8 16.4 13.1 9.1 6.0						
28.0	46.0	56.4	3.8	3.9						
			Ángu	ılo de plu	uma prin	cipal 83.0	0 [°]			
17.0 18.0 20.0 22.0 24.0 26.0	73.0 71.3 67.7 63.9 60.1 56.1	64.3 64.0 63.3 62.3 61.2 59.9	15.1 15.1 14.8 14.5 11.9	25.0 25.0 20.7 17.2 14.6 12.3						
28.0 30.0 32.0 34.0	51.8 47.3 42.5 37.1	58.4 56.7 54.6 52.2	9.9 7.6 5.0 2.8	10.4 8.0 5.2 2.8						
			Angı		ıma prin	cipal 75.0	0[°]	ı		
25.5 26.0 28.0 30.0	65.0 64.0 60.2 56.2	61.6 61.4 60.3 59.0	15.1 14.8 12.6	12.8 12.3 10.3 8.7						
32.0 34.0 36.0 38.0 40.0	51.9 47.4 42.6 37.2 31.0	57.6 55.8 53.8 51.3 48.3	10.6 8.9 7.4 6.0 4.7	7.4 6.1 5.0 4.0 3.1						
	00	.0.0			uma prin	cinal 65 (0 [0]			
35.4 36.0 38.0	55.0 53.7 49.3	56.6 56.3 54.6	6.0 4.7	4.7 4.3 3.3	ania pilli	o.pai 00.	V . J			
40.0 42.0	44.6 39.9	52.7 50.4	3.5 2.4	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

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 Plun Cabeza 37.0	de plumi		1) 80.5 r	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0	[°]			
12.2	78.0	68.3	15.1	19.9		·				
13.0 14.0	76.7 75.1	68.2 67.9	15.1 15.1	19.9 17.8						
16.0	71.8	67.3	14.2	14.3						
18.0	68.5	66.5	12.8	11.8						
20.0 22.0	65.1 61.6	65.6 64.6	10.2 8.3	9.7 8.2						
24.0	58.0	63.4	7.0	7.0						
26.0	54.3	62.0	5.9	5.9						
28.0	50.3	60.4	5.1	5.1						
30.0 32.0	46.1 41.5	58.6 56.5	4.4 3.8	4.5 3.9						
34.0	36.5	54.0	3.3	3.4						
36.0	30.7	50.9	2.7	2.7						
			Ángı	ılo de plı	ıma prin	cipal 83.0	[°]C			
17.9	73.0	67.2	15.1	14.0						
18.0	72.8	67.2	15.1	14.0						
20.0 22.0	69.5 66.1	66.5 65.6	13.4 10.8	12.3 10.2						
24.0	62.7	64.6	8.7	8.5						
26.0	59.1	63.5	7.3	7.3						
28.0 30.0	55.4 51.5	62.2 60.6	6.2 5.4	6.2 5.4						
32.0	47.3	58.9	4.7	4.8						
34.0	42.9	56.8	4.1	4.2						
36.0	38.0	54.5	3.5	3.6						
38.0 40.0	32.5 25.9	51.6 48.0	3.1 2.7	3.2 2.8						
					ıma prin	cipal 75.0	[°]			
26.7	65.0	64.4		8.9						
28.0	62.7	63.7	8.8	8.7						
30.0 32.0	59.2 55.4	62.6 61.3	7.4 6.3	7.4 6.4						
34.0	51.5	59.8	5.4	5.5						
36.0	47.4	58.0	4.8	4.9						
38.0	43.0	56.0	4.2	4.2						
40.0 42.0	38.1 32.6	53.6 50.7	3.6	3.7						
44.0	26.1	47.1	2.9	2.9						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
37.0	55.0	59.1		6.0						
38.0	53.1	58.5	5.8	6.0						
40.0 42.0	49.1 44.8	56.8 54.9	5.1 4.5	5.2 4.6						
44.0	40.1	52.7	3.9	4.0						
46.0	34.9	50.0	3.4	3.5						
48.0	28.9	46.8	3.1	3.2						
50.0 51.0	21.3 16.2	42.5 39.6	2.7	2.8 2.5						
		-		-			-	-		-



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

	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]
		29.0	0 m Plum Cabeza 37.0	de plumi	oal, Punt n (2316- osición m	1) 83.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	1°10			
12.2	78.0	68.4		28.8			- 1			
13.0 14.0 16.0 18.0	76.8 75.2 71.9 68.6	68.2 67.9 67.3 66.5	15.1 15.1 15.1 15.1	28.8 27.0 22.0 18.2						
20.0	65.2	65.7	14.0	15.1						
22.0 24.0 26.0 28.0	61.7 58.1 54.4 50.4	64.6 63.4 62.1 60.5	13.0 10.4 7.0 4.3	12.7 9.9 6.8 4.5						
30.0	46.2	58.6	2.9	3.1						
			Ánaı	ılo de plu	ıma prin	cipal 83.0	1°10			
17.9	73.0	67.2	I	20.8						
18.0	72.9	67.2	15.1	20.8						
20.0	69.6	66.5	15.1	19.2						
22.0	66.2	65.6	15.0	16.0 13.3						
24.0 26.0 28.0	62.8 59.2 55.5	64.7 63.5 62.2	13.4 12.0 9.9	11.4						
30.0	51.6	60.7	8.2	8.2						
32.0	47.4	58.9	6.2	6.2						
34.0	43.0	56.9	3.9	3.9						
			Ángı	ılo de plı	ıma prin	cipal 75.0	[°]			
26.8	65.0	64.4	14.6	11.5						
28.0 30.0	62.8 59.3	63.8 62.6	14.4 12.2	10.3 8.7						
32.0	55.5	61.3	10.3	7.4						
34.0	51.6	59.8	8.5	6.2						
36.0	47.5	58.0	7.3	5.1						
38.0	43.1	56.0	6.0	4.1						
40.0 42.0	38.2 32.7	53.6 50.8	4.7 3.6	3.2 2.4						
44.0	27.0	47.2	2.6	2.4						
7-7.0	21.0	71.4		ılo de nlı	ıma prin	cinal 65 (l ° l		ı	ı
37.1	55.0	59.1	Ailgt	3.7	лна рин		, j		1	
38.0	53.2	58.5	4.5	3.7						
40.0	49.2	56.9	3.4	2.4						
42.0	45.3	55.0	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

	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]
		29.0	0 m Plun Cabeza 40.0	de plumi	ín (1916-		n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0	[°]0			
12.8 13.0 14.0 16.0 18.0	78.0 77.7 76.2 73.2 70.2	71.3 71.2 71.0 70.4 69.7	15.1 15.1 15.1 13.6 11.3	17.1 17.1 16.8 13.7 11.0						
20.0 22.0 24.0 26.0	67.1 64.0 60.7 57.3	68.9 68.0 66.9 65.7	9.4 7.6 6.3 5.4	9.1 7.5 6.3 5.4						
28.0 30.0 32.0 34.0 36.0	53.8 50.1 46.2 42.0 37.5	64.3 62.7 60.8 58.7 56.3	4.5 3.9 3.4 2.9 2.4	4.6 4.0 3.4 2.9 2.5						
00.0	01.0	00.0			ıma prin	cipal 83.0	[°]			
18.7 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0	73.0 71.1 68.0 64.9 61.6 58.3 54.8 51.2 47.4 43.3	70.1 69.7 68.9 68.0 66.9 65.8 64.4 62.9 61.1 59.1	11.7 9.7 8.0 6.7 5.7 4.8 4.1 3.6 3.1	11.9 11.6 9.5 7.9 6.7 5.7 4.9 4.2 3.7 3.1						
38.0	38.8	56.8	2.6	2.7						
40.0	33.9	54.0	2.2 Ángi	lo de plu	ıma nrin	cipal 75.0	1°10		<u> </u>	
28.0 30.0 32.0 34.0 36.0 38.0	65.0 61.7 58.4 54.9 51.3 47.5	67.1 66.1 64.9 63.5 62.0 60.2	7.3 6.8 5.8 4.9 4.2 3.7	7.4 6.8 5.8 5.0 4.3 3.7	,	,				
40.0 42.0 44.0	43.4 38.9 34.0	58.2 55.9 53.2	3.2 2.7 2.3	3.2 2.8 2.4						
			Ángı		ıma prin	cipal 65.	[°]			
38.8 40.0 42.0 44.0 46.0	55.0 52.8 49.0 45.1 40.8	61.6 60.7 59.1 57.2 55.0	4.6 3.9 3.4 2.9	4.7 4.7 4.0 3.5 3.0						
48.0 50.0 52.0	36.1 30.7 24.3	52.4 49.3 45.0	2.5 2.2	2.6 2.3 2.0						



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]
		29.	0 m Plum Cabeza 40.0	na princip de plumí 0 [m] Po	n (2316-	1) 86.5 r	n Plumín	dfall 1		
			Ángı	ılo de plı	ıma prin	cipal 88.0	D[°]			
12.8 13.0 14.0 16.0 20.0 22.0 24.0 26.0 28.0 30.0	78.0 77.8 76.3 73.3 70.3 67.2 64.0 60.8 57.4 53.9 50.2 73.0 71.2 68.1 65.0	71.3 71.3 71.0 70.5 69.8 69.0 68.0 66.9 65.7 64.3 62.7	15.1 14.9 13.1	27.0 27.0 26.7 21.5 17.6 15.0 12.8 11.1 7.9 5.2 3.2 Jlo de plu 18.8 18.7 15.7 13.4	uma prind	cipal 83.0)[°]			
26.0 28.0 30.0 32.0 34.0 36.0	61.7 58.4 54.9 51.3 47.5 43.4	67.0 65.8 64.4 62.9 61.2 59.1	11.1 9.6 8.2 7.1 5.3 3.3	11.6 10.1 8.7 7.6 5.6 3.5						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
28.0 30.0 32.0 34.0 36.0 38.0	65.0 61.8 58.5 55.0 51.4 47.6	67.1 66.1 64.9 63.6 62.0	12.1 10.3 8.8 7.3 6.0	10.3 8.7 7.4 6.2 5.2 4.2						
40.0 42.0 44.0	43.5 39.0 34.6	58.3 56.0 53.2	4.7 3.7 2.7	3.3 2.5						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
38.8 40.0 42.0	55.0 52.9 49.4	61.6 60.8 59.1	3.3 2.3	2.9 2.4						



Nº de ident.: 9842523/95738/

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

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]								
	29.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (1916-1) 86.5 m Plumín 43.0 [m] Posición midfall (1916)										
Ángulo de pluma principal 88.0 [°]											
13.4	78.0	74.2	Ī	15.1	<u>'</u>						
14.0	77.2	74.1	15.1	15.1							
16.0	74.4	73.6	13.6	12.7							
18.0	71.7	72.9	10.8	10.3							
20.0	68.8	72.2	8.6	8.5							
22.0	65.9	71.3	7.0	7.0							
24.0	62.9	70.3	5.7	5.8							
26.0	59.9	69.2	4.8	4.9							
28.0	56.7	67.9	4.1	4.1							
30.0	53.4	66.5	3.4	3.5							
32.0	50.0	64.9	2.9	3.0							
34.0	46.4	63.1	2.5	2.5							
			Ángı	ılo de plu	uma prin	cipal 83.0	[°]				
19.6	73.0	72.9		10.2							
20.0	72.5	72.8	10.5	10.1							
22.0	69.6	72.1	9.1	8.8							
24.0	66.7	71.3	7.4	7.3							
26.0	63.8	70.3	6.1	6.1							
28.0	60.8	69.3	5.2	5.2							
30.0	57.6	68.0	4.3	4.4							
32.0	54.4	66.7	3.7	3.7							
34.0	51.0	65.1	3.1	3.2							
36.0	47.4	63.4	2.7	2.7							
38.0	43.6	61.4	2.2	2.3							
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]				
29.2	65.0	69.8		6.1							
30.0	63.9	69.5	6.0	6.1							
32.0	60.8	68.4	5.2	5.3							
34.0	57.7	67.2	4.5	4.5							
36.0	54.5	65.8	3.7	3.8							
38.0	51.1	64.2	3.2	3.3							
40.0	47.5	62.5	2.7	2.8							
42.0	43.7	60.5	2.3	2.4							
Ángulo de pluma principal 65.0 [°]											
40.5	55.0	64.0		3.7							
42.0	52.5	63.0	3.5	3.5							
44.0	49.0	61.3	2.9	3.0							
46.0	45.3	59.4	2.5	2.6							
48.0	41.4	57.3	2.1	2.2							
49.0	39.3	55.8		2.0							



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

2 - Vía ancha

Lastre trasero [t]: 74.0

Lastre central [t]: 0.0

	70.14.G. [4										
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]	
29.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (2316-1) 89.5 m Plumín 43.0 [m] Posición midfall (2316)											
Ángulo de pluma principal 88.0 [°]											
13.5 14.0 16.0 18.0 20.0 22.0 24.0 26.0	78.0 77.3 74.5 71.7 68.9 66.0 63.0 60.0	74.2 74.1 73.6 73.0 72.2 71.3 70.4 69.2	15.1 15.1 15.1 15.1 15.1 12.8 10.2 8.1	27.8 27.8 24.4 20.4 17.5 14.0 11.0 8.6							
28.0 30.0	56.8 53.5	68.0 66.6	5.6 3.5	5.9 3.6							
Ángulo de pluma principal 83.0 [°]											
19.7 20.0 22.0 24.0 26.0	73.0 72.5 69.7 66.8 63.9	73.0 72.9 72.2 71.3 70.4	15.1 15.1 15.1 15.1 13.5	19.8 19.8 17.9 15.2 12.9							
28.0 30.0 32.0 34.0 36.0 38.0	60.8 57.7 54.5 51.1 47.5 43.7	69.3 68.1 66.7 65.1 63.4 61.4	12.3 10.2 8.1 6.5 4.9	11.1 9.5 8.2 6.8 5.1 3.3							
					ıma prin	cipal 75.	1°10				
29.3 30.0 32.0 34.0 36.0 38.0 40.0 42.0 44.0	65.0 63.9 60.9 57.8 54.5 51.2 47.6 43.8 40.1	69.8 69.5 68.4 67.2 65.8 64.3 62.5 60.5 58.3	11.6 9.9 8.4 7.1 5.8 4.6 3.5 2.6	9.1 8.6 7.2 6.1 5.1 4.2 3.3 2.5							
Ángulo de pluma principal 65.0 [°]											
40.5											



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]
	29.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (1916-1) 89.5 m Plumín 46.0 [m] Posición midfall (1916)									
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
14.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0	78.0 75.5 72.9 70.3 67.6 64.8 62.0 59.2 56.2 53.1	77.1 76.7 76.1 75.4 74.6 73.7 72.7 71.5 70.2 68.8	13.9 10.9 8.5 7.0 5.7 4.8 4.1 3.4 2.9	14.1 12.8 10.4 8.4 7.0 5.8 4.9 4.2 3.5 3.0						
34.0	49.9	67.1	2.4	2.5						
			Ángu	ılo de plu	ıma prin	cipal 83.0] °]			
20.5	73.0	75.8	9.4	9.2						
22.0 24.0 26.0	71.0 68.4 65.6	75.3 74.6 73.7	9.0 7.2 6.0	8.8 7.2 6.1						
28.0 30.0 32.0 34.0 36.0 38.0	62.8 60.0 57.0 54.0 50.8 47.5	72.7 71.6 70.3 68.9 67.3	5.1 4.3 3.7 3.1 2.6	5.1 4.4 3.7 3.1 2.7 2.3						
55.5		00.0		ılo de plu	ıma prin	cinal 75 (1°10			
30.5 32.0 34.0 36.0	65.0 62.9 60.1 57.1	72.5 71.8 70.7 69.4	5.2 4.4 3.8	5.4 5.3 4.5 3.8	and pilli	o.pui 7 0.1	×			
38.0 40.0 42.0	54.1 50.9 47.6	68.0 66.5 64.7	3.2 2.7 2.3	3.2 2.8 2.4						
42.2 44.0	55.0 52.2	66.5 65.2	2.9	3.2 3.0	ıma prin	cipal 65.0	ַנ״ן יוי			
46.0 48.0	48.9 45.5	63.5 61.7	2.4 2.1	2.5 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

Valor de vuelco: 2 - \(\)
Lastre trasero [t]:

2 - Vía ancha 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]	
	29.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (2316-1) 92.5 m Plumín 46.0 [m] Posición midfall (2316)										
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]				
14.1 16.0 18.0 20.0 22.0	78.0 75.6 73.0 70.3 67.6	77.2 76.7 76.1 75.4 74.6	15.1 15.1 15.1 15.1 14.6	24.1 22.9 19.2 16.2 13.9	·	·					
24.0 26.0 28.0 30.0	64.9 62.1 59.2 56.3	73.7 72.7 71.5 70.2	11.3 8.8 6.6 4.5	11.2 9.1 7.0 4.7							
			Angı		ıma prin	cipal 83.0	[°]		ı		
20.5 22.0 24.0 26.0 28.0 30.0	73.0 71.1 68.4 65.7 62.9 60.1	75.8 75.4 74.6 73.7 72.7 71.6	15.1 14.7 13.4 11.4 9.9	17.0 17.0 14.6 12.8 11.1 9.6							
32.0 34.0 36.0 38.0 40.0	57.1 54.1 50.9 47.6 44.0	70.4 69.0 67.4 65.6 63.6	8.2 6.8 5.6 4.3 3.0	8.2 7.0 6.0 4.6 3.1							
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]				
30.6 32.0 34.0 36.0 38.0 40.0 42.0 44.0 45.0	65.0 63.0 60.1 57.2 54.1 51.0 47.6 44.4 42.6	72.5 71.8 70.7 69.5 68.1 66.5 64.8 62.8 61.7	10.8 9.7 8.2 6.9 5.7 4.6 3.6 2.6 2.1	8.2 7.2 6.1 5.0 4.2 3.4 2.6							