

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-	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-								
	[°]	nas								
		[m]								
			0 m Plun							
			Cabeza		n (2316- osición m					
				<u> </u>		•				
					ıma prin	cipal 88.0	[°]		1	1
13.3	78.0	83.3	15.1	26.1						
14.0 16.0	76.9 74.0	83.1 82.6	15.1 15.1	26.1 22.0						
18.0	70.9	81.9	15.1	18.2						
20.0	67.9	81.1	14.8	15.4						
22.0	64.7	80.2	12.0	12.6						
24.0	61.5	79.2	10.0	10.6						
26.0	58.1	78.0	7.4	7.8						
28.0	54.7	76.6	4.8	5.1						
30.0	51.0	75.1	2.8	2.9						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
20.3	73.0	82.0	15.1	18.4		· ·				
22.0	70.4	81.4	15.1	17.6	İ	İ			İ	İ
24.0	67.3	80.6	15.1	15.0						
26.0	64.1	79.7	13.1	12.8						
28.0	60.8	78.6	11.5	11.1						
30.0	57.5	77.4	9.7	9.6						
32.0	54.0	76.0	8.1	8.2						
34.0	50.3	74.4	6.9	7.2						
36.0 38.0	46.4 42.2	72.6 70.5	4.9 3.0	5.0 3.0						
36.0	42.2	70.5				-in-al 75 (2			
24.4	05.0	70.7	Angl		ıma prin	cipai 75.i □	J []		I	ı
31.1 32.0	65.0 63.6	78.7 78.3	12.8	12.2 12.2						
32.0 34.0	60.3	78.3 77.2	12.8	10.9						
36.0	56.9	75.9	9.7	9.6						
38.0	53.4	74.5	8.3	8.4						
40.0	49.7	72.9	7.2	7.4						
42.0	45.8	71.0	6.3	6.5						
44.0	41.5	68.9	5.5	5.6						
46.0	36.9	66.4	4.8	4.9						
48.0	31.7	63.4	3.9	3.9						
			Ángı	ılo de plu	ıma prin	cipal 6 <u></u> 5.0	[°]			
43.9	55.0	72.4	l	5.4						
44.0	54.8	72.4	6.9	5.3						
46.0	51.2	70.9	5.9	4.5						
48.0	47.3	69.1	4.9	3.7						
50.0	43.2	67.1	4.0	2.9						
54.0	34.3	62.0	2.3	l	l	l			l	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]
			0 m Plum Cabeza 43.0	de plumí		1) 86.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
13.8	78.0	86.2		14.6						
14.0 16.0	77.8 75.0	86.2 85.7	15.1 14.2	14.6 13.1						
18.0 20.0	72.2 69.4	85.1 84.3	11.3 8.8	10.6 8.7						
22.0	66.5	83.5	7.2	7.2						
24.0	63.6	82.5	5.9	6.0						
26.0	60.5	81.4	5.0	5.1						
28.0	57.4	80.2	4.2	4.3						
30.0	54.1	78.8	3.5	3.6						
32.0	50.7	77.3	3.0	3.1						
34.0	47.1	75.5	2.6	2.6						
36.0	43.3	73.5	2.2	2.2						
			Angı	ılo de plı	ıma prin	cipal 83.0	0 [°]			
21.1	73.0	84.9	9.3	9.9						
22.0	71.7	84.6	9.2	9.9						
24.0	68.9	83.8	7.6	8.2						
26.0 28.0	66.0 63.0	83.0 82.0	6.4 5.4	6.9 5.8						
30.0	59.9	80.9	4.6	5.0						
32.0	56.8	79.6	3.9	4.2						
34.0	53.5	78.2	3.3	3.6						
36.0	50.1	76.6	2.9	3.1						
38.0	46.4	74.7	2.5	2.6						
40.0	42.6	72.7	2.1	2.2						
			Ángu	ılo de plu	ıma prin	cipal 75.0	[°]			
32.3	65.0	81.4		6.0						
34.0	62.5	80.6	5.7	5.8						
36.0	59.4	79.4	4.8	4.9						
38.0	56.3	78.2	4.1	4.2						
40.0	53.0	76.7	3.5	3.6						
42.0 44.0	49.5 45.9	75.1 73.2	3.0 2.6	3.1 2.7						
44.0 46.0	45.9 42.0	73.2 71.1	2.0	2.7						
70.0	72.0	7 1.1			ıma prin	cinal 65 (1 0 1			
45.6	55.0	74.9	Angu	3.7	,,,,,a p,,,,,,, 	upai 00.1	, I			
45.6 46.0	54.3	74.9 74.7	3.6	3.7						
48.0	50.9	73.1	3.3	3.7						
50.0	47.3	71.3	2.8	2.8						
54.0	39.4	67.0	2.0	2.1						



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]: 94.0 Lastre central [t]: 52.6

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	0 m Plum Cabeza 43.0		n (2316-	1) 89.5 r	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0	D[°]			
13.9 14.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0	78.0 77.9 75.1 72.3 69.5 66.6 63.6 60.6 57.5	86.2 86.2 85.7 85.1 84.4 83.5 82.6 81.5 80.2	15.1 15.1 15.1 15.1 15.1 13.2 9.9 7.4 5.1	26.9 26.9 25.0 21.0 17.8 14.4 10.7 8.0 5.4						
30.0	54.2	78.9	3.1	3.3						
			Angı	ılo de plu	ıma prin	cipal 83.0	0[°]			
21.1 22.0 24.0 26.0 28.0	73.0 71.8 68.9 66.0 63.1	84.9 84.6 83.9 83.0 82.0	15.1 15.1 14.7 13.0	19.4 19.3 17.3 15.0 12.9						
30.0 32.0 34.0 36.0 38.0	60.0 56.9 53.6 50.1 46.5	80.9 79.6 78.2 76.6 74.8	11.8 9.3 7.2 5.6 4.0	11.3 9.1 7.2 5.7 4.1						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
32.4 34.0 36.0 38.0 40.0	65.0 62.6 59.5 56.4 53.1	81.4 80.6 79.5 78.2 76.7	13.6 11.8 10.3 8.8	13.2 12.2 10.8 9.5 8.4						
42.0 44.0 46.0 48.0 50.0	49.6 45.9 42.0 37.8 33.1	75.1 73.3 71.1 68.7 65.9	7.6 6.6 5.7 5.0 4.2	7.4 6.5 5.6 4.8 4.1						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
45.6 46.0 48.0 50.0 54.0	55.0 54.4 51.0 47.4 39.9	74.9 74.7 73.1 71.4 67.1	5.6 4.6 3.7 2.1	4.5 4.3 3.6 2.8	-		_			



Nº de ident.: 9842523/95738/

Radio de descarga:

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

360°

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	0 m Plum Cabeza 46.0	na princip de plumí 0 [m] Po	ín (1916-	1) 89.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	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 76.0 73.4 70.8 68.1 65.4 62.6 59.8 56.8 53.8	89.1 88.8 88.2 87.5 86.8 85.9 84.9 83.8 82.5 81.1	14.9 14.3 11.1 8.8 7.2 5.9 4.9 4.2 3.5 3.0	13.7 13.1 10.6 8.6 7.2 6.0 5.0 4.3 3.6 3.0						
34.0	50.6	79.5	2.5	2.6						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
22.0 24.0 26.0 28.0	73.0 70.3 67.6 64.9	87.7 87.0 86.2 85.3	9.0 8.3 6.7 5.7	9.0 8.3 6.9 5.8						
30.0 32.0 34.0 36.0 38.0	62.1 59.2 56.2 53.2 49.9	84.3 83.2 81.9 80.4 78.8	4.8 4.1 3.5 3.0 2.5	4.9 4.2 3.6 3.0 2.6						
40.0	46.6	77.0	2.1	2.2						
			Angı	ılo de plu	ıma prin	cipal 75.0	D[°]			
33.6 34.0 36.0 38.0	65.0 64.5 61.6 58.8	84.1 83.9 82.9 81.7	5.2 4.8 4.1	5.4 5.3 4.9 4.2						
40.0 42.0 44.0 46.0	55.8 52.7 49.4 46.0	80.4 78.9 77.3 75.5	3.5 2.9 2.5 2.1	3.6 3.0 2.6 2.2						
			Ángu	ılo de plu	ıma prin	cipal 65.0	[°]C			
47.3 48.0	55.0 53.9	77.3 76.9	3.0	3.1 3.1						
50.0 54.0	50.7 43.8	75.3 71.4	2.7	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 [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.	0 m Plum Cabeza 46.0	de plumí	n (2316-	o de carç 1) 92.5 r nidfall (23	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]C			
14.5 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0	78.0 76.1 73.5 70.9 68.2 65.5 62.7 59.8 56.9	89.2 88.8 88.2 87.6 86.8 85.9 84.9 83.8 82.5	15.1 15.1 14.6 14.0 10.9 8.1 6.1 4.1	23.3 23.3 19.4 16.5 14.4 11.2 8.6 6.5 4.3						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
22.0	73.0	87.7		16.7						
24.0 26.0 28.0 30.0 32.0	70.4 67.7 65.0 62.2 59.3	87.1 86.3 85.4 84.3 83.2	15.1 14.3 12.6 10.8 9.2	16.1 14.0 12.2 10.6 9.2						
34.0 36.0 38.0 40.0	56.3 53.2 50.0 46.6	81.9 80.5 78.8 77.0	7.5 6.0 4.9 3.6	7.6 6.2 5.2 3.8						
			Ángι	ılo de plu	ıma prin	cipal 75.0	[°]C			
33.7 34.0	65.0 64.5	84.1 84.0	11.3	11.1						
36.0 38.0 40.0 42.0	61.7 58.8 55.8 52.7	82.9 81.8 80.5 79.0	10.9 9.3 8.2 7.0	10.7 9.4 8.3 7.2						
44.0 46.0 48.0 50.0	49.5 46.1 42.5 38.6	77.3 75.5 73.4 71.0	6.1 5.4 4.6 4.0	6.3 5.5 4.8 4.1						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
47.3 48.0 50.0 54.0	55.0 54.0 50.8 44.2	77.3 76.9 75.4 71.6	4.6 3.7 2.1	3.8 3.6 2.9						



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 49.0	de plumí		1) 92.5 r	n Plumín			
			Ángu	ılo de plu	uma prin	cipal 88.0	0 [°]			
15.1 16.0 18.0 20.0 22.0	78.0 76.9 74.5 72.0 69.5	92.1 91.9 91.3 90.7 90.0	11.2 11.2 10.0 8.5 6.9	12.4 12.4 10.3 8.5 7.0						
24.0 26.0 28.0 30.0 32.0	67.0 64.4 61.8 59.1 56.3	89.2 88.2 87.2 86.0 84.8	5.8 4.8 4.1 3.5 2.9	5.9 4.9 4.1 3.5 3.0						
34.0	53.4	83.3	2.4	2.5	<u> </u>					
22.8	73.0	90.6	Angu	Ilo de plu 8.0	uma prind	cipal 83.0	0 [°]			
24.0 26.0 28.0	71.6 69.1 66.5	90.2 89.5 88.6	7.9 6.6 5.6	7.9 6.7 5.7						
30.0 32.0 34.0 36.0 38.0	63.9 61.3 58.6 55.8 52.9	87.7 86.6 85.4 84.1 82.7	4.7 4.0 3.4 2.8 2.4	4.8 4.1 3.5 2.9 2.5						
			Ánaı	ılo de plu	ıma prin	cipal 75.0	1°10			
34.9 36.0 38.0 40.0 42.0 44.0	65.0 63.5 60.9 58.1 55.3 52.4	86.8 86.3 85.2 84.0 82.7 81.2	4.6 4.0 3.4 2.9 2.4	4.7 4.7 4.1 3.5 2.9 2.4			- 1			
			Ángı	ılo de plu	ıma prin	cipal 65.0	0 [°]			
49.0 50.0 53.0	55.0 53.5 49.0	79.8 79.2 76.6	2.5	2.6 2.6 2.1			-			



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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]
		41.0	0 m Plum Cabeza 49.0	de plumí	oal, Punt ín (2316- osición m	1) 95.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
15.1 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0	78.0 77.0 74.5 72.1 69.6 67.1 64.5 61.9 59.2 56.4	92.1 91.9 91.4 90.7 90.0 89.2 88.3 87.2 86.1 84.8	15.1 15.1 14.8 14.1 12.2 8.9 6.4 4.5 3.0	21.9 21.9 19.1 16.4 14.1 11.7 8.9 6.7 4.9 3.2						
					ıma prin	cipal 83 (1°10			
22.9 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0	73.0 71.6 69.1 66.6 64.0 61.4 58.6 55.8 52.9 49.9	90.6 90.3 89.5 88.7 87.7 86.7 85.5 84.2 82.7 81.1	15.1 13.5 11.8 9.9 8.6 7.2 5.9 4.7 3.8 2.9	15.6 15.5 13.8 12.1 10.5 9.3 7.8 6.3 5.1 4.1						
42.0	46.7	79.3				-in al 75 () [° 1			
34.9 36.0 38.0 40.0 42.0 44.0 46.0 48.0 50.0	65.0 63.6 60.9 58.2 55.4 52.5 49.4 46.2 42.8	86.8 86.3 85.3 84.1 82.7 81.2 79.6 77.7 75.7	10.1 9.2 8.0 7.1 6.2 5.6 4.9 4.2	10.2 10.2 9.3 8.2 7.2 6.4 5.6 4.8 4.1	uma prin	ыраг 75.1	J []			
55.0	33.2	69.2	2.9	2.5						
			Ángı		ıma prin	cipal 65.0	[°]			
49.0 50.0 53.0	55.0 53.6 49.3	79.8 79.2 76.7	3.4 2.2	3.0 2.7						



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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]
			0 m Plum Cabeza 52.0	de plumí		1) 95.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.	0[°]			
15.7 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0	78.0 77.7 75.4 73.1 70.8 68.4 66.0 63.6 61.1 58.5	95.0 95.0 94.5 93.9 93.2 92.4 91.6 90.6 89.5 88.3	8.8 8.8 8.2 7.2 6.0 5.2 4.3 3.5 3.0 2.4	10.0 10.0 9.2 7.9 6.3 5.3 4.4 3.6 3.0 2.5						
32.0	36.3	00.3			ıma prin	cinal 83 i	1 ° 1 0			
23.7 24.0 26.0 28.0 30.0 32.0 34.0	73.0 72.7 70.3 68.0 65.6 63.1 60.6	93.5 93.4 92.7 91.9 91.0 90.0 88.9 87.7	6.3 5.9 4.9 4.2 3.5 2.9 2.4	6.6 6.6 6.1 5.1 4.3 3.6 3.0 2.5			~ i j			
36.0	58.0	81.1			ıma nrin	oinal 75	1 ° 1		l	l
36.1 38.0 40.0 42.0 44.0	65.0 62.7 60.2 57.6 54.9	89.5 88.6 87.5 86.3 84.9	3.4 2.8 2.4	3.7 3.6 2.9 2.5 2.0	uma prind	ират 75.	V []			



Nº de ident.: 9842523/95738/ 360°

Radio de descarga:

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 94.0 Lastre central [t]: 52.6

Alcance		Inserciór	1	1	2	3	4	5	6	7	8
Cabeza de plumín (2316-1) 98.5 m Plumín 52.0 [m] Posición midfall (2316) Angulo de pluma principal 88.0 [°] 15.8 78.0 95.0 15.1 19.9 18.0 77.7 95.0 15.1 19.9 18.0 77.7 95.0 15.1 19.9 18.0 75.5 94.5 15.1 18.6 20.0 73.2 93.9 15.1 15.9 22.0 70.8 93.2 13.5 13.6 22.0 70.8 93.2 13.5 13.6 22.0 63.6 90.6 6.8 6.9 30.0 61.1 89.6 4.8 5.1 32.0 88.6 88.4 3.5 3.7 20.0 63.6 90.6 6.8 6.9 30.0 61.1 89.6 4.8 5.1 32.0 88.6 88.4 3.5 3.7 20.0 88.6 88.4 3.5 3.7 20.0 88.6 88.4 3.5 3.7 20.0 88.6 88.4 3.5 3.7 20.0 88.6 88.4 3.5 3.7 20.0 88.6 88.4 3.5 3.7 20.0 88.6 88.4 3.5 3.7 20.0 88.6 88.4 3.5 3.7 20.0 88.6 88.4 3.5 3.7 20.0 88.6 88.4 3.5 3.7 20.0 88.0 91.9 11.2 11.6 9.0 91.9 11.2 11.6 9.0 91.9 91.2 11.6 91.2 91.3 91.2 91.2 91.2 91.2 91.2 91.2 91.2 91.2	ce	o de plumín	de rolda- nas								
15.8 78.0 95.0 15.1 19.9 18.0 17.7 95.0 15.1 19.9 18.0 77.5 94.5 15.1 19.9 18.0 75.5 94.5 15.1 19.9 18.0 75.5 94.5 15.1 15.9 18.0 22.0 70.8 93.2 13.5 13.6 13.6 24.0 68.5 92.5 12.3 12.0 28.0 66.1 91.6 9.4 9.2 28.0 63.6 90.6 6.8 6.9 30.0 61.1 89.6 4.8 5.1 32.0 58.6 88.4 3.5 3.7 Angulo de pluma principal 83.0 [°] 23.8 73.0 93.5 13.8 14.2 24.0 72.7 93.4 13.8 14.1 28.0 68.0 91.9 11.2 11.6 30.0 65.6 91.1 9.7 10.2 32.0 63.2 90.1 8.3 8.9 34.0 60.7 89.0 73.7 79.3 36.0 58.1 87.8 6.0 6.4 38.0 55.4 86.4 4.7 5.1 40.0 52.7 85.0 85.0 80.3 3.7 4.0 48.8 81.5 2.3 2.4 Angulo de pluma principal 75.0 [°] 36.2 65.0 89.5 88.7 88.8 9.0 9.0 9.0 83.0 62.8 88.7 88.8 9.0 9.0 9.0 83.5 2.3 2.4 44.0 46.8 81.5 2.3 2.4 Angulo de pluma principal 75.0 [°] 36.2 65.0 89.5 88.7 88.8 9.0 9.0 9.0 83.5 2.3 2.4 44.0 55.0 85.0 6.0 6.2 48.0 49.4 81.8 4.7 4.8 50.0 46.3 80.0 74.4 2.6 2.4 Angulo de pluma principal 65.0 [°]			41.	Cabeza	de plumi	ín (2316-	1) 98.5 r	n Plumín	dfall		
15.8 78.0 95.0 15.1 19.9 18.0 17.7 95.0 15.1 19.9 18.0 77.5 94.5 15.1 19.9 18.0 75.5 94.5 15.1 19.9 18.0 75.5 94.5 15.1 15.9 18.0 22.0 70.8 93.2 13.5 13.6 13.6 24.0 68.5 92.5 12.3 12.0 28.0 66.1 91.6 9.4 9.2 28.0 63.6 90.6 6.8 6.9 30.0 61.1 89.6 4.8 5.1 32.0 58.6 88.4 3.5 3.7 Angulo de pluma principal 83.0 [°] 23.8 73.0 93.5 13.8 14.2 24.0 72.7 93.4 13.8 14.1 28.0 68.0 91.9 11.2 11.6 30.0 65.6 91.1 9.7 10.2 32.0 63.2 90.1 8.3 8.9 34.0 60.7 89.0 73.7 79.3 36.0 58.1 87.8 6.0 6.4 38.0 55.4 86.4 4.7 5.1 40.0 52.7 85.0 85.0 80.3 3.7 4.0 48.8 81.5 2.3 2.4 Angulo de pluma principal 75.0 [°] 36.2 65.0 89.5 88.7 88.8 9.0 9.0 9.0 83.0 62.8 88.7 88.8 9.0 9.0 9.0 83.5 2.3 2.4 44.0 46.8 81.5 2.3 2.4 Angulo de pluma principal 75.0 [°] 36.2 65.0 89.5 88.7 88.8 9.0 9.0 9.0 83.5 2.3 2.4 44.0 55.0 85.0 6.0 6.2 48.0 49.4 81.8 4.7 4.8 50.0 46.3 80.0 74.4 2.6 2.4 Angulo de pluma principal 65.0 [°]				Ángı	ılo de plu	ıma prin	cipal 88.0	1°10			
Angulo de pluma principal 83.0 [°] 23.8 73.0 93.5 13.8 14.2 24.0 72.7 93.4 13.8 14.1 26.0 70.4 92.7 13.1 13.4 28.0 68.0 91.9 11.2 11.6 30.0 65.6 91.1 9.7 10.2 32.0 63.2 90.1 8.3 8.9 34.0 60.7 89.0 7.3 7.9 36.0 58.1 87.8 6.0 6.4 38.0 55.4 86.4 4.7 5.1 40.0 52.7 85.0 3.7 4.0 42.0 49.8 83.3 2.9 3.1 44.0 46.8 81.5 2.3 2.4 Angulo de pluma principal 75.0 [°] 36.2 65.0 89.5 38.0 62.8 88.7 40.0 60.3 87.6 7.7 7.9 42.0 57.7 86.3 6.8 7.1 44.0 55.0 85.0 85.0 6.0 6.2 46.0 52.2 83.5 5.3 5.5 48.0 49.4 81.8 4.7 4.8 50.0 46.3 80.0 4.1 4.0 55.0 38.0 74.4 2.6 2.4 Angulo de pluma principal 65.0 [°]	16.0 18.0 20.0 22.0 24.0 26.0 28.0	77.7 75.5 73.2 70.8 68.5 66.1 63.6	95.0 94.5 93.9 93.2 92.5 91.6 90.6	15.1 15.1 15.1 15.1 13.5 12.3 9.4 6.8	19.9 19.9 18.6 15.9 13.6 12.0 9.2 6.9						
23.8	32.0	58.6	88.4			<u> </u>					
24.0 72.7 93.4 13.8 14.1 26.0 70.4 92.7 13.1 13.4 13.4 28.0 68.0 91.9 11.2 11.6 30.0 65.6 91.1 9.7 10.2 32.0 63.2 90.1 8.3 8.9 34.0 60.7 89.0 7.3 7.9 36.0 58.1 87.8 6.0 6.4 38.0 55.4 86.4 4.7 5.1 40.0 52.7 85.0 3.7 4.0 42.0 49.8 83.3 2.9 3.1 44.0 46.8 81.5 2.3 2.4 40.0 60.3 87.6 7.7 7.9 42.0 60.3 87.6 7.7 7.9 42.0 60.3 87.6 7.7 7.9 42.0 57.7 86.3 6.8 7.1 44.0 55.0 85.0 6.0 6.2 46.0 52.2 83.5 5.3 5.5 48.0 49.4 81.8 4.7 4.8 50.0 46.3 80.0 4.1 4.0 55.0 38.0 74.4 2.6 2.4 4.8 55.0 38.0 74.4 2.6 2.4 4.0 55.0 38.0 74.4 2.6 2.4 57.0 \$\frac{Angulo de pluma principal 65.0 [°]}{Angulo de pluma principal 65.0 [°]}						ıma prin	cipal 83.0	D[°]			
34.0 60.7 89.0 7.3 7.9 36.0 58.1 87.8 6.0 6.4 38.0 55.4 86.4 4.7 5.1 40.0 52.7 85.0 3.7 4.0 42.0 49.8 81.5 2.3 2.4 Angulo de pluma principal 75.0 [°] 36.2 65.0 89.5 9.0 38.0 62.8 88.7 8.8 9.0 40.0 60.3 87.6 7.7 7.9 42.0 57.7 86.3 6.8 7.1 44.0 55.0 85.0 6.0 6.2 46.0 52.2 83.5 5.3 5.5 48.0 49.4 81.8 4.7 4.8 50.0 46.3 80.0 4.1 4.0 55.0 38.0 74.4 2.6 2.4 Ángulo de pluma principal 65.0 [°]	24.0 26.0 28.0	72.7 70.4 68.0	93.4 92.7 91.9	13.8 13.1 11.2	14.1 13.4 11.6						
44.0 46.8 81.5 2.3 2.4 Ángulo de pluma principal 75.0 [°] 36.2 65.0 89.5 9.0 38.0 62.8 88.7 8.8 9.0 40.0 60.3 87.6 7.7 7.9 42.0 57.7 86.3 6.8 7.1 44.0 55.0 85.0 6.0 6.2 46.0 52.2 83.5 5.3 5.5 48.0 49.4 81.8 4.7 4.8 50.0 46.3 80.0 4.1 4.0 55.0 38.0 74.4 2.6 2.4 Ángulo de pluma principal 65.0 [°] 50.8 55.0 82.3 2.2	34.0 36.0 38.0	60.7 58.1 55.4	89.0 87.8 86.4	7.3 6.0 4.7	7.9 6.4 5.1						
Ángulo de pluma principal 75.0 [°] 36.2 65.0 89.5 9.0 38.0 62.8 88.7 9.0 40.0 60.3 87.6 7.7 7.9 42.0 57.7 86.3 6.8 7.1 44.0 55.0 85.0 6.0 6.2 46.0 52.2 83.5 5.3 5.5 48.0 49.4 81.8 4.7 4.8 50.0 46.3 80.0 4.1 4.0 55.0 38.0 74.4 2.6 2.4 Ángulo de pluma principal 65.0 [°]											
36.2 65.0 89.5 9.0 9.0 40.0 60.3 87.6 7.7 7.9 42.0 57.7 86.3 6.8 7.1 44.0 55.0 85.0 6.0 6.2 46.0 52.2 83.5 5.3 5.5 48.0 49.4 81.8 4.7 4.8 50.0 46.3 80.0 4.1 4.0 55.0 38.0 74.4 2.6 2.4 Ángulo de pluma principal 65.0 [°]	44.0	40.0	01.5			ıma nrin	rinal 75 (1 ° 1	1	l	
38.0 62.8 88.7 8.8 9.0 40.0 60.3 87.6 7.7 7.9 42.0 57.7 86.3 6.8 7.1 44.0 55.0 85.0 6.0 6.2 46.0 52.2 83.5 5.3 5.5 48.0 49.4 81.8 4.7 4.8 50.0 46.3 80.0 4.1 4.0 55.0 38.0 74.4 2.6 2.4	36.2	65.0	89.5	Ange		IIII PIIII	J. Pai 7 J.	, i		1	
44.0 55.0 85.0 6.0 6.2 46.0 52.2 83.5 5.3 5.5 48.0 49.4 81.8 4.7 4.8 50.0 46.3 80.0 4.1 4.0 55.0 38.0 74.4 2.6 2.4 Ángulo de pluma principal 65.0 [°]	38.0 40.0	62.8 60.3	88.7 87.6	7.7	9.0 7.9						
Ángulo de pluma principal 65.0 [°] 50.8 55.0 82.3 2.2	44.0 46.0 48.0 50.0	55.0 52.2 49.4 46.3	85.0 83.5 81.8 80.0	6.0 5.3 4.7 4.1	6.2 5.5 4.8 4.0						
50.8 55.0 82.3 2.2	55.0	38.0	74.4			ıma nris	oinal 65 f) [° 1			
	50.0	EE 0	92.2	Angu		uma prin∈ □	upai 65.0	\		1	
33.0 32.1 00. <i>t</i>	50.8 53.0	55.0 52.1	82.3 80.7	2.1	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 Plum Cabeza c 55.0		า (2316-1	1) 101.5`	m Plumíı			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
16.4 18.0 20.0 22.0 24.0	78.0 76.3 74.1 71.9 69.7	98.0 97.6 97.0 96.4 95.7	15.1 15.1 14.8 13.4 11.2	17.5 17.5 14.9 12.9 11.2						
26.0 28.0 30.0 32.0 34.0	67.5 65.2 62.9 60.5 58.0	94.9 94.0 93.0 91.9 90.7	9.3 6.8 4.9 3.4 2.5	9.4 7.0 5.1 3.6 2.7						
			Ángı	ılo de plu	ıma prin	cipal 83.0	1°10			
24.6 26.0 28.0 30.0 32.0 34.0 36.0	73.0 71.5 69.3 67.0 64.7 62.4 60.0	96.3 95.9 95.2 94.3 93.4 92.4 91.3	11.8 10.5 9.0 7.7 6.7 5.8	12.3 12.3 11.0 9.6 8.3 7.2 6.3	·					
38.0 40.0 42.0	57.6 55.0 52.4	90.1 88.7 87.2	4.6 3.6 2.7	5.0 3.8 2.9						
12.0	02	07.2		ılo de plu	ıma prin	cipal 75 (1°10			
37.5 38.0 40.0 42.0 44.0	65.0 64.4 62.0 59.6 57.2	92.3 92.0 91.0 89.9 88.6	7.3 7.1 6.2 5.5	7.6 7.6 7.3 6.4 5.7]			
46.0 48.0 50.0 55.0 56.0	54.6 52.0 49.3 41.9 40.3	87.2 85.7 84.0 79.1 77.9	4.7 4.1 3.6 2.3 2.0	4.9 4.3 3.8 2.3 2.0						



Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal:

2821-1

Valor de vuelco:

360°

Cabeza de pluma principal:

2821-1

2 - Vía ancha Lastre trasero [t]: 94.0 Lastre central [t]: 52.6

	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 c 46.0	de plumír	า (2์316-		m Plumíı			
			Ángı	ılo de plu	ıma prin	cipal 88.	[°]			
14.5 16.0 18.0 20.0 22.0 24.0	78.0 76.1 73.5 70.9 68.2 65.5	89.2 88.8 88.2 87.6 86.8	15.1 15.1 12.9 10.3	22.3 22.3 18.8 14.5 10.8	·					
24.0	05.5	65.9			ıma nrin	cipal 83.) [°]			
22.0	73.0	87.7	Aligo	15.9			<u> </u>			
24.0 26.0 28.0	70.4 67.7 65.0	87.1 86.3 85.4	15.0 13.5 11.1	15.6 13.1 10.8						
30.0 32.0 34.0	62.2 59.3 56.3	84.3 83.2 81.9	8.4 6.4 3.9	8.6 6.8 4.1						
			Ánaı	ılo de plu	ıma prin	cipal 75.	1°10		•	
33.7 34.0	65.0 64.5	84.1 84.0	10.3	8.9 8.7		1				
36.0 38.0 40.0 42.0 44.0	61.7 58.8 55.8 52.7 49.5	82.9 81.8 80.5 79.0 77.3	10.0 8.5 7.3 6.2 5.1	7.4 6.2 5.2 4.3 3.5						
46.0 48.0 49.0	46.1 42.8 40.9	75.5 73.4 72.3	3.9 2.9 2.2	2.7						



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]: 94.0 Lastre central [t]: 52.6

	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 49.0	de plumíi		1) 107.5`	m Plumíı			
			Ángu	ılo de plu	uma prin	cipal 88.0	[°]C			
15.1 16.0 18.0 20.0 22.0 24.0 26.0 22.9 24.0 26.0 28.0	78.0 77.0 74.5 72.1 69.6 67.1 64.5 73.0 71.6 69.1 66.6	92.1 91.9 91.4 90.7 90.0 89.2 88.3 90.6 90.3 89.5 88.7	15.1 15.1 14.4 9.9 6.6 3.5 Ángu	18.7 18.7 17.0 14.1 10.1 7.0 3.7 Ilo de plu 13.2 11.9 10.2	uma prin	cipal 83.	D [°]			
30.0 32.0 34.0 36.0	64.0 61.4 58.6 55.8	87.7 86.7 85.5 84.2	7.8 6.3 4.9 3.1	8.3 6.8 5.2 3.3						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
34.9 36.0 38.0 40.0 42.0 44.0	65.0 63.6 60.9 58.2 55.4 52.5	86.8 86.3 85.3 84.1 82.7 81.2	8.0 7.5 6.4 5.5	7.9 7.2 6.0 5.0 4.1 3.4						
46.0 48.0 49.0	49.4 46.5 44.8	79.6 77.7 76.7	3.8 2.8 2.3	2.7						



N° de ident.: 9842523/95738/

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

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza o 52.0	de plumír	า (2316-1		m Plumíı			
			Ángu	ılo de plu	uma prin	cipal 88.0	[°]			
15.8 16.0 18.0 20.0 22.0 24.0	78.0 77.7 75.5 73.2 70.8 68.5	95.0 95.0 94.5 93.9 93.2	15.1 15.1 15.1 15.1 10.9	19.2 19.2 18.4 15.2 10.7						
26.0	66.1	91.6	4.1	4.4						
			Ángı	ılo de plu	ıma prin	cipal 83.0	1°10			
23.8 24.0 26.0	73.0 72.7 70.4	93.5 93.4 92.7	12.9 12.9 12.5	12.5 12.5 12.0	·	·				
28.0 30.0 32.0 34.0 36.0	68.0 65.6 63.2 60.7 58.1	91.9 91.1 90.1 89.0 87.8	10.2 8.5 6.6 5.3 3.9	10.1 8.5 6.9 5.6 4.1						
			Ángu	ılo de plu	uma prin	cipal 75.0] °]			
36.2 38.0 40.0 42.0 44.0	65.0 62.8 60.3 57.7 55.0	89.5 88.7 87.6 86.3 85.0	7.3 6.5 5.5 4.5	6.9 5.9 4.9 4.0 3.2 2.5	•					
46.0 48.0 49.0	52.2 49.6 48.1	83.5 81.8 80.9	3.6 2.7 2.2	2.5						



Nº de ident.: 9842523/95738/

Radio de descarga:

360°

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

Valor de vuelco: 2 - Vía ancha Lastre trasero [t]: 94.0

Lastre trasero [t]: 94.0

Lastre central [t]: 52.6

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0	0 m Plum Cabeza 13.0	de plumí	n (1916-	o de carç 1) 32.5 r nidfall (19	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
7.7 8.0 9.0 10.0 11.0	78.0 76.7 72.0 67.3 62.3	59.9 59.8 59.5 59.1 58.5	15.1 15.1 15.1 15.1 15.1	30.1 30.1 24.9 18.5 14.6						
12.0 13.0 14.0 16.0	57.0 51.4 45.2 29.7	57.9 57.1 56.2 53.5	13.0 11.2 9.5 7.0	12.0 10.1 8.7 6.7						
					ıma prin	cipal 83.0	[°]			
12.7 13.0 14.0 16.0 18.0 20.0	73.0 71.5 66.7 56.4 44.4 28.5	59.1 59.0 58.6 57.4 55.7 52.9	15.1 15.1 15.1 12.8 9.2 6.9	25.5 23.9 17.8 11.7 8.5 6.6						
			Ángı	ılo de plu	ıma prin	cipal 75.0	D[°]			
20.4 22.0 24.0 26.0	65.0 56.9 45.1 29.5	57.1 56.2 54.5 51.7	13.8 9.3 6.9	15.8 11.8 8.6 6.7						
L			Ángu		ıma prin	cipal 65.	[°]			
29.6 30.0 32.0	55.0 52.8 40.1	53.0 52.8 50.8	10.9 7.7	10.8 10.4 7.7						
			Ángu		ıma prin	cipal 45.0	[°]			
45.2 46.0 47.0	35.0 27.5 17.4	40.5 39.4 36.8	6.5 5.7	6.9 6.3						



N° de ident.: 9842523/95738/ Pieza

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

Valor de vuelco: Lastre trasero [t]: 2 - Vía ancha 94.0 52.6 Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	entral [t	-		52.6						
	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	n (1916-		n Plumín			
Ángulo de pluma principal 88.0 [°]										
8.3	78.0	62.8		30.1						
9.0 10.0 11.0 12.0	75.5 71.7 67.9 63.9	62.6 62.3 61.9 61.4	15.1 15.1 15.1 15.1	29.9 24.8 19.8 16.3						
13.0	59.8	60.8	14.1	13.9						
14.0 16.0 18.0	55.4 45.8 34.1	60.2 58.4 55.9	12.2 9.4 7.4	12.0 9.4 7.7						
			Ánaı	ılo de plı	ıma prin	cipal 83.0	1°10		•	
13.6	73.0	62.0	15.1	25.6						
14.0 16.0 18.0 20.0 22.0	71.3 63.4 54.9 45.2 33.3	61.9 61.0 59.7 57.9 55.4	15.1 15.1 12.4 9.7 7.6	24.1 15.8 11.7 9.3 7.6						
			Ánaı	ılo de plu	ıma prin	cipal 75.0	1°10			
21.7 22.0 24.0 26.0 28.0	65.0 63.8 55.3 45.7 33.9	59.8 59.7 58.4 56.7 54.2	15.1 13.0 9.8 7.6	16.3 16.1 11.8 9.3 7.6	•	•				
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
31.3 32.0 34.0 36.0	55.0 52.0 41.8 28.5	55.5 55.1 53.1 50.2	11.6 8.8 7.1	11.4 10.8 8.5 7.0	,	,	. ,			
			Ángı	ılo de plu	ıma prin	cipal 45.0	[°]			
47.6 48.0 50.0	35.0 32.6 15.4	42.2 41.9 37.1	7.3 6.0	7.4 7.3						



Nº de ident.: 9842523/95738/ Piez

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

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0	0 m Plum Cabeza 16.0	de plumí	n (2316-		n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
8.4 9.0 10.0 11.0 12.0 13.0 14.0 16.0	78.0 75.7 72.0 68.1 64.1 60.0 55.6 46.1	62.8 62.7 62.3 61.9 61.4 60.9 60.2 58.5	15.1 15.1 15.1 15.1 15.1 15.1 15.1 15.1	30.1 30.1 30.1 28.0 23.0 19.6 16.7 13.0						
18.0	34.3	56.0	11.2	10.5						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
13.6	73.0	62.0		30.1	· ·					
14.0 16.0 18.0 20.0 22.0	71.5 63.6 55.1 45.4 33.5	61.9 61.0 59.7 58.0 55.4	15.1 15.1 15.1 13.4 11.0	30.1 22.5 16.4 12.8 10.4						
			Ángı	ılo de plı	ıma prin	cipal 75.0	1°10			
21.8 22.0 24.0 26.0 28.0	65.0 64.0 55.5 46.0 34.2	59.8 59.7 58.5 56.8 54.3	15.1 14.6 12.6 9.9	22.9 22.9 16.4 12.8 10.4		. , ,	- 1			
			Ángı	ılo de plu	ıma prin	cipal 65.0	0 [°]			
31.4 32.0 34.0 36.0	55.0 52.2 42.0 28.8	55.5 55.1 53.1 50.2	15.1 11.9 9.5	14.8 14.2 11.1 9.2		,				
			Ángu	ılo de plu	ıma prin	cipal 45.0	[°]C			
47.7	35.0	42.2		6.7						
48.0 50.0	32.9 16.1	42.0 37.3	7.9 6.9	6.5						



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]: 94.0 Lastre central [t]: 52.6

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0	0 m Plum Cabeza 19.0	na princip de plumí D [m] Po	n (1916-	1) 38.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
9.0 10.0 11.0 12.0 13.0	78.0 74.7 71.6 68.3 65.0 61.6	65.7 65.5 65.1 64.7 64.3	15.1 15.1 15.1 15.1 15.1	30.1 28.8 24.0 20.3 17.3						
16.0 18.0 20.0 22.0	54.3 46.2 36.7 24.0	62.4 60.7 58.3 54.9	12.8 10.7 8.5 7.1	11.9 9.8 8.1 6.9	uma nrin	oinal 92	0.001			
14.4	73.0	64.9	Angu	ılo de plu 25.0	лпа рпп	lipai 65.	J []			
16.0 18.0 20.0 22.0 24.0 26.0	67.9 61.1 53.8 45.7 36.1 23.0	64.3 63.3 61.9 60.2 57.8 54.2	15.1 15.0 12.2 10.0 8.0 6.8	19.8 14.9 11.7 9.7 8.1 6.9						
			Ángı	ılo de plu	ıma prin	cipal 75.0	D[°]			
23.0 24.0 26.0 28.0 30.0 32.0	65.0 61.5 54.2 46.1 36.6 23.8	62.5 62.0 60.7 59.0 56.6 53.1	15.1 13.2 10.6 8.4 7.1	16.5 14.9 11.8 9.8 8.1 7.0			-			
02.0	20.0	00.1		ılo de plu	ıma prin	cipal 65.0	[°]C			
33.1 55.0 58.0 11.8 34.0 51.4 57.3 12.4 11.0 36.0 42.9 55.4 9.7 9.1 38.0 32.5 52.7 8.0 7.7										
			Ángı	ılo de plu	ıma prin	cipal 45.0	[°]			
50.1 52.0	35.0 22.2	43.9 40.7	7.1	7.8 6.9						



Nº de ident.: 9842523/95738/

Radio de descarga:

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

360° 2 - Vía ancha Valor de vuelco:

Lastre trasero [t]: 94.0 Lastre central [t]: 52.6

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0	0 m Plum Cabeza 19.0	na princip de plumí) [m] Po	oal, Punt ín (2316- osición m	o de carç 1) 41.5 r nidfall (23	ga 3 - Mi n Plumín 316)	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
9.0	78.0	65.7		30.1						
10.0	74.9	65.5	15.1	30.1						
11.0	71.7	65.2	15.1	29.9						
12.0	68.5	64.8	15.1	28.4						
13.0	65.2	64.3	15.1	23.9						
14.0	61.7	63.8	15.1	20.7						
16.0 18.0	54.5 46.4	62.4 60.7	15.1 13.6	16.0 12.9						
20.0	37.0	58.4	10.7	10.5						
22.0	24.3	54.9	8.7	8.7						
			Ángi	ılo de nlı	ıma prin	cinal 83 (1 ° 1			
14.5	73.0	64.9	15.1	30.1	 	l loc.	<u> </u>			
16.0	68.1	64.3	15.1	27.7						
18.0	61.3	63.3	15.1	20.4						
20.0	54.0	62.0	15.1	15.7						
22.0	45.9	60.2	13.2	12.8						
24.0	36.3	57.8	10.6	10.5						
26.0	23.3	54.3	8.7	8.7						
			Ángι	ılo de plu	uma prin	cipal 75.0	[°]C			
23.0	65.0	62.5		22.7						
24.0	61.7	62.1	15.1	20.5						
26.0	54.4	60.7	15.1	15.9						
28.0	46.3	59.0	14.0	13.0						
30.0	36.8	56.7	11.5	10.7						
32.0	24.1	53.2	9.4	8.9						
			Angı		ıma prin	cipal 65.0	D[°]			
33.1	55.0	57.9		15.0						
34.0	51.6	57.3	15.1	14.1						
36.0 38.0	43.1 32.8	55.4 52.8	12.0 9.7	11.5 9.6						
30.0	32.0	52.0			uma prin	oinal 45 f) [°]			
E0.4	25.0	42.0	Angu		ina pilli	upai 43.1	, []			
50.1 52.0	35.0 22.5	43.9 40.8	6.1	5.7 5.0						
IJ ∠ .U	22.5	40.0	0.1	ა.0	I				<u> </u>	

Source:a9841388



N° de ident.: 9842523/95738/

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

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 22.0	de plumí		1) 41.5 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	78.0 76.9 74.2 71.4 68.6 65.8 59.8 53.5 46.5 38.5 28.6	68.7 68.6 68.3 67.9 67.6 67.1 66.0 64.7 62.9 60.7 57.6	15.1 15.1 15.1 15.1 15.1 15.1 14.1 11.0 9.0 7.4 6.3	30.1 29.8 24.8 20.6 17.9 15.6 12.4 10.1 8.5 7.2 6.3	uma prin	cinal 83 (0.10			
15.3	73.0	67.7	Angu	21.6	лна рин І	cipai os.i	J []		1	
16.0 18.0 20.0 22.0 24.0 26.0 28.0	71.1 65.4 59.5 53.1 46.1 38.0 28.0	67.5 66.7 65.6 64.2 62.4 60.1 57.0	15.1 14.6 12.9 10.1 8.4 7.0 6.0	20.4 15.3 12.3 10.0 8.5 7.2 6.2						
20.0	20.0	07.0			ıma prin	cinal 75 () [°]			
24.2	65.0	65.2	Angl	14.5	ina pini	o.pa. 73.	~ []			
26.0 28.0 30.0 32.0 34.0	59.8 53.4 46.4 38.4 28.5	64.3 62.9 61.2 58.9 55.8	13.7 10.9 8.9 7.4 6.3	12.3 10.1 8.5 7.2 6.3						
			Ánai	ılo de plı	ıma prin	cipal 65 (1°10			
34.8 36.0 38.0 40.0 42.0	55.0 50.9 43.6 35.1 23.9	60.4 59.5 57.6 55.1 51.5	10.1 8.3 7.0 6.1	10.3 9.5 8.0 6.9 6.0						
			Ángı	ılo de plu	ıma prin	cipal 45.0] [°]			
52.6 55.0	35.0 20.5	45.6 41.2	5.8	6.7 5.8						



Nº de ident.: 9842523/95738/

Radio de descarga:

360°

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

2821-1 2821-1

Valor de vuelco:	2 - Vía ancha
Lastre trasero [t]:	94.0
Lastre central [t]:	52.6

	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 88.0	[°]			
9.6 10.0 11.0 12.0 13.0 14.0 16.0 20.0 22.0 24.0	78.0 77.0 74.3 71.6 68.8 65.9 60.0 53.6 46.7 28.9 73.0 71.2 65.6 59.6 59.6	68.7 68.6 68.3 68.0 67.6 67.1 66.1 64.7 63.0 60.7 57.6	15.1 15.1 15.1 15.1 15.1 14.9 14.2 12.5 10.0 8.3 Ángt 15.1 15.1 15.1 15.1 15.1 14.7	30.1 30.1 30.1 27.6 25.1 21.6 16.9 13.7 11.4 9.5 8.1 ulo de plu 30.1 28.7 21.2 16.6 13.5	uma prind	cipal 83.) [°]			
24.0 26.0	46.2 38.2	62.5 60.2	11.5 9.4	11.3 9.4						
28.0	28.2	57.0	7.9	8.1						
			Ángı		ıma prin	cipal 75.0	[°]			
24.3 26.0 28.0 30.0 32.0 34.0	59.9 53.6 46.6 38.6 28.7	65.2 64.4 63.0 61.2 59.0 55.9	15.1 13.7 11.8 9.6 8.1	19.7 16.8 13.6 11.4 9.6 8.2						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
34.8 36.0 38.0 40.0 42.0	55.0 51.1 43.8 35.3 24.2	60.4 59.6 57.7 55.2 51.6	13.6 10.9 8.9 7.6	13.1 12.1 10.2 8.6 7.4	-		. =			
			Ángı	ılo de plu	ıma prin	cipal 45.0	[°]			
52.6 55.0	35.0 20.7	45.6 41.3	5.2	5.1 4.3						



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

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0	0 m Plum Cabeza 25.0	de plumí	oal, Punt n (1916- osición m	1) 44.5 r	n Plumín	dfall		
			Ánaı	ılo de plu	ıma prin	cipal 88.0	1°10			
10.2 11.0 12.0 13.0	78.0 76.1 73.7 71.3	71.6 71.4 71.1 70.8	15.1 15.1 15.1 15.1	27.3 25.2 21.4 18.2	- 1					
14.0 16.0 18.0 20.0	68.8 63.8 58.5 52.8	70.4 69.5 68.3 66.9	15.0 12.8 10.7 8.7	16.1 12.8 10.6 8.8						
22.0 24.0 26.0	46.7 39.8 31.7	65.1 63.0 60.1	7.3 6.3 5.4	7.6 6.5 5.7						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
16.2 18.0 20.0 22.0 24.0	73.0 68.6 63.5 58.2 52.5	70.6 70.0 69.0 67.9 66.4	15.1 15.1 13.5 11.3 9.1	19.1 15.8 12.6 10.4 8.8						
26.0 28.0 30.0	46.3 39.4 31.1	64.6 62.4 59.5	7.6 6.5 5.6	7.5 6.5 5.7						
05.5	05.0	20.0	Angu		ıma prin	cipal 75.0	֓֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓		I	
25.5 26.0 28.0 30.0 32.0 34.0 36.0	65.0 63.7 58.4 52.8 46.6 39.7	68.0 67.8 66.6 65.2 63.4 61.2 58.4	14.4 11.4 9.1 7.7 6.5	12.9 12.8 10.6 8.8 7.6 6.5						
30.0	31.0	JU. 4			ıma prin	cinal 65 () [°]			
36.5 38.0 40.0 42.0 44.0	55.0 50.6 44.2 37.0 28.0	62.9 61.8 59.9 57.5 54.3	8.6 7.2 6.2 5.5	9.1 8.3 7.2 6.2 5.5	лпа рпп	ωμαι υ υ.	7 []			
			Ángı	ılo de plu	ıma prin	cipal 45.0	[°]C			
55.0 58.0	35.0 19.1	47.4 41.8	5.0	5.9 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]
			0 m Plum Cabeza 25.0	de plumí		1) 47.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
10.3 11.0 12.0 13.0 14.0	78.0 76.2 73.9 71.4 69.0 63.9	71.6 71.4 71.1 70.8 70.4 69.5	15.1 15.1 15.1 15.1 15.1	30.1 30.1 30.0 25.4 22.4 17.3						
18.0 20.0 22.0 24.0 26.0	58.6 53.0 46.9 40.0 31.8	68.4 66.9 65.2 63.0 60.2	13.8 11.8 10.0 8.3 7.0	14.2 11.8 10.0 8.4 7.2						
20.0	01.0	00.2			uma prin	cipal 83 (1°10			
16.2 18.0 20.0 22.0 24.0 26.0 28.0 30.0	73.0 68.7 63.6 58.3 52.6 46.5 39.5 31.3	70.6 70.0 69.1 67.9 66.5 64.7 62.5 59.6	15.1 15.1 13.9 12.3 10.4 8.6 7.2	26.6 21.8 17.1 14.0 11.6 9.8 8.4 7.2						
30.0	31.3	39.0			ıma prin	cinal 75 (1 ° 1		l	
25.6 26.0 28.0 30.0 32.0 34.0	65.0 63.9 58.6 52.9 46.8 39.9	68.0 67.8 66.6 65.2 63.5 61.3	15.1 14.8 12.0 10.0 8.3	17.3 17.3 14.2 11.7 10.0 8.5		ырат т о	- []			
36.0	31.8	58.5	7.1	7.4						
			Ángu	ılo de plu	ıma prin	cipal 65.0	D [°]			
36.6 55.0 62.9 11.5 38.0 50.8 61.8 10.6 10.5 40.0 44.4 59.9 8.8 9.0 42.0 37.1 57.5 7.4 7.7 44.0 28.2 54.3 6.4 6.7 Ángulo de pluma principal 45.0 [°]										
55.1 58.0	35.0 19.3	47.3 41.9	4.1	4.3 3.4						



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]
		44.0	0 m Plum Cabeza 28.0	de plumí	n (1916-		n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]0			
10.8 11.0 12.0 13.0 14.0	78.0 77.6 75.5 73.4 71.2	74.5 74.5 74.2 73.9 73.6	15.1 15.1 15.1 15.1	30.1 30.1 30.1 29.3 25.9						
16.0 18.0 20.0 22.0	66.8 62.2 57.4 52.3	72.8 71.8 70.6 69.1	15.1 15.1 14.4 13.7	21.1 17.6 15.2 13.3						
24.0 26.0 28.0 30.0	46.9 40.8 33.8 25.2	67.4 65.3 62.6 59.0	12.5 10.9 9.7 8.7	11.8 10.6 9.6 8.8						
L			Angu 15.1	ılo de plu 27.0	ıma prin	cipal 83.0	[°]		ı	
17.1 18.0 20.0 22.0 24.0	73.0 71.0 66.5 61.9 57.1	73.5 73.2 72.4 71.3 70.1	15.1 15.1 15.1 15.1 14.5	25.7 25.8 17.4 15.0						
26.0 28.0 30.0 32.0	52.0 46.5 40.4 33.4	68.7 66.9 64.7 62.0	13.9 12.4 10.9 9.7	13.2 11.8 10.5 9.6						
34.0	24.5	58.4	8.7 Ángi	lo de pli	ıma nrin	L cipal 75.0	\			
26.8 28.0	65.0 62.2	70.7 70.1	15.1	18.6 17.6	ли рин	51pai 7 5.	<u> </u>			
30.0 32.0 34.0 36.0 38.0	57.4 52.3 46.8 40.7 33.8	68.9 67.4 65.7 63.5 60.8	14.9 13.8 12.5 10.9 9.7	15.1 13.2 11.8 10.6 9.6						
40.0	25.1	57.3	8.8 Ápgu	8.8	ıma prin	cipal 65.0	1 0 1			
38.2 40.0 42.0 44.0	55.0 50.3 44.7 38.3	65.3 64.0 62.1 59.8	13.6 11.9 10.4	13.7 12.7 11.4 10.2	лна рип	ыраі 05.	7 []			
46.0 48.0	30.9 21.0	56.9 52.7	9.4 8.5	9.4 8.6						
			Ángı		ıma prin	cipal 45.0	[°]			
57.5 60.0	35.0 24.0	49.1 44.9	6.2	6.0 5.4						
61.0	17.9	42.3	5.9	5.1						



360°

Cargas pluma principal + plumín abatible + midfall

Nº de ident.: 9842523/95738/

Radio de descarga:

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

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 19.0	de plumi	ín (1916-		n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.	D[°]			
9.0 10.0 11.0 12.0 13.0	78.0 74.7 71.6 68.3 65.0	65.7 65.5 65.1 64.7 64.3	15.1 15.1 15.1 15.1 15.1	30.1 30.1 28.2 25.6 21.6						
14.0 16.0 18.0 20.0 22.0	61.6 54.3 46.2 36.7 24.0	63.7 62.4 60.7 58.3 54.9	15.1 15.0 13.5 10.6 8.7	18.8 14.7 12.0 9.8 8.3						
			Ángı	ılo de plı	ıma prin	cipal 83.	[°]			
14.4 16.0 18.0 20.0 22.0 24.0	73.0 67.9 61.1 53.8 45.7	64.9 64.3 63.3 61.9 60.2 57.8	15.1 15.1 15.1 13.2 10.5	30.0 24.8 18.6 14.5 11.9						
26.0	23.0	54.2	8.6	8.3						
			Ángı		ıma prin	cipal 75.	[°]			
23.0 24.0 26.0 28.0 30.0 32.0	65.0 61.5 54.2 46.1 36.6 23.8	62.5 62.0 60.7 59.0 56.6 53.1	15.1 14.9 13.5 10.7 8.9	20.2 18.7 14.7 12.0 10.0 8.5						
			Ángı	ılo de plı	ıma prin	cipal 65.	D[°]			
33.1 34.0 36.0 38.0	55.0 51.4 42.9 32.5	58.0 57.3 55.4 52.7	15.1 12.5 10.1	14.4 13.7 11.3 9.5		-	-			
			Ángı	ılo de plı	ıma prin	cipal 45.	0 [°]			
50.1	35.0	43.9	6.0	6.1						



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0) m Plum Cabeza 28.0	de plumí	oal, Punt ín (2316- osición m	1) 50.5 r	n Plumín	dfall I		
					ıma prin	cipal 88.0	[°]			
10.9 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0	78.0 77.7 75.6 73.5 71.3 66.9 62.4 57.6 52.5	74.6 74.5 74.3 74.0 73.6 72.8 71.8 70.6 69.2	15.1 15.1 15.1 15.1 15.1 15.1 15.1 15.0 14.8	30.1 30.1 30.1 30.0 28.9 25.1 20.7 17.5 15.1						
24.0 26.0 28.0 30.0	47.0 41.0 34.0 25.3	67.4 65.3 62.6 59.1	13.6 11.7 10.2 9.0	13.2 11.6 10.3 9.3						
00.0	20.0	00.1			ıma prin	cipal 83.0	[°]			
17.1 18.0 20.0 22.0 24.0 26.0 28.0	73.0 71.1 66.7 62.1 57.3 52.2 46.7	73.5 73.2 72.4 71.4 70.2 68.7 66.9	15.1 15.1 15.1 15.1 15.1 13.4	30.1 30.0 24.8 20.5 17.3 15.0 13.1						
30.0 32.0 34.0	40.6 33.5 24.7	64.8 62.1 58.4	11.6 10.2 9.0	11.6 10.4 9.3						
			Ángı	ılo de plu	ıma prin	cipal 75.0	0 [°]			
26.8 28.0 30.0 32.0 34.0 36.0 38.0	65.0 62.3 57.5 52.4 46.9 40.9 33.9 25.2	70.7 70.1 68.9 67.5 65.7 63.6 60.9	15.1 15.1 15.1 14.1 12.2 10.8 9.5	21.9 20.7 17.5 15.0 13.3 11.7 10.5						
40.0	25.2	57.3			uma prin	cipal 65 (1°10			
38.3 40.0 42.0 44.0 46.0 48.0	55.0 50.5 44.8 38.5 31.0 21.2	65.3 64.0 62.2 59.9 56.9 52.8	14.7 12.9 11.1 9.8 8.7	14.6 13.4 12.1 10.7 9.7 8.7	uma prin					
57.5 60.0 61.0	35.0 24.2 18.1	49.1 44.9 42.4	3.5 3.3	3.6 2.8 2.5	ana pilli	oipai +0.	~ i J			



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 plı	ıma prin	cipal 88.0	[°]			
9.6 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0	78.0 76.9 74.2 71.4 68.6 65.8 59.8 53.5 46.5	68.7 68.6 68.3 67.9 67.6 67.1 66.0 64.7 62.9	15.1 15.1 15.1 15.1 15.1 15.1 14.6 12.0 9.9	30.1 30.1 27.8 23.7 20.5 17.8 14.0 11.3 9.3						
22.0 24.0	38.5 28.6	60.7 57.6	8.0 6.6	7.7 6.6						
20	20.0	07.0			uma prin	cinal 83 (l ° l			
15.3 16.0 18.0 20.0 22.0 24.0 26.0 28.0	73.0 71.1 65.4 59.5 53.1 46.1 38.0 28.0	67.7 67.5 66.7 65.6 64.2 62.4 60.1 57.0	15.1 15.1 14.3 11.3 9.3 7.5 6.4	24.0 23.3 17.4 13.8 11.1 9.2 7.7 6.6						
			Ángı	ılo de plı	ıma prin	cipal 75 (1°10			
24.2 26.0 28.0 30.0 32.0 34.0	65.0 59.8 53.4 46.4 38.4 28.5	65.2 64.3 62.9 61.2 58.9 55.8	14.9 12.3 9.9 8.0 6.8	15.9 13.9 11.2 9.4 7.8 6.7						
				ılo de nlı	ıma prin	cipal 65 (1°10			
34.8 36.0 38.0 40.0 42.0	55.0 50.9 43.6 35.1 23.9	60.4 59.5 57.6 55.1 51.5	11.5 9.3 7.6 6.5	11.3 10.6 8.8 7.5 6.5			, j			
			Ángı	ılo de plu	ıma prin	cipal 45.0	D[°]			
52.6 55.0	35.0 20.5	45.6 41.2	5.8	5.3 4.5						



Nº de ident.: 9842523/95738/

Radio de descarga:

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

360°

94.0

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: Lastre central [t]: 52.6

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0	0 m Plum Cabeza 31.0	de plumí	oal, Punt n (2316- osición m	1) 53.5 ñ	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0] (°]			
11.5	78.0	77.5	15.1	30.1	·					
12.0 13.0 14.0 16.0	77.1 75.1 73.2 69.3	77.4 77.1 76.8 76.1	15.1 15.1 15.1 15.1	30.1 30.1 29.1 24.0						
18.0 20.0 22.0	65.2 61.1 56.7	75.2 74.2 72.9	15.1 15.0 13.5	19.6 16.6 14.3						
24.0 26.0 28.0	52.1 47.1 41.7	71.4 69.7 67.6	12.3 11.0 9.5	12.5 11.0 9.7						
30.0 32.0	35.6 28.4	65.0 61.8	8.3 7.4	8.6 7.8		-i1 00 (2 0 0 1			
40.0	70.0	70.4	Angu	27.7	ıma prin	cipai 83.0) []			
18.0 20.0	73.0 69.1	76.4 75.7	15.1	23.5						
22.0 24.0 26.0	65.0 60.8 56.4	74.8 73.7 72.4	15.1 15.0 13.8	19.4 16.5 14.1						
28.0 30.0 32.0	51.8 46.8 41.4	70.9 69.2 67.1	13.0 11.4 9.8	12.4 10.9 9.7						
34.0 36.0	35.2 27.9	64.5 61.2	8.5 7.7	8.6 7.8						
			Angı		ıma prin	cipal 75.0) [°]			
28.1 30.0 32.0	65.0 61.0 56.6	73.4 72.4 71.2	15.1 14.4	18.4 16.5 14.3						
34.0 36.0 38.0	52.0 47.1 41.7	69.7 67.9 65.9	12.6 11.1 9.6	12.5 11.1 9.8						
40.0	35.6	63.3	8.4	8.8 7.9						
42.0	28.3	60.0	7.6 Ángu		ıma prin	cinal 65 (1 0 1	1		
40.0	55.0	67.8	Angt	12.5	лна рип	υμαι 00.0	, []			
42.0 44.0 46.0	50.3 45.2 39.5	66.3 64.4 62.2	11.4 9.9 8.6	11.3 10.1 8.9						
48.0	33.1	59.4	7.7	8.1						
50.0	25.1	55.7	7.0 Ápgu	7.3	ıma pris	sinal 45 () [°]			
60.0	35.0	50.8	Angl	110 de pil	ıma prind	υραι 45.0	۱] د			
60.0 64.0	18.8	50.8 42.8	2.1	2.0						



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]: 94.0 52.6 Lastre central [t]:

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 22.0	de plumí		1) 56.5 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	78.0 77.0 74.3 71.6 68.8 65.9 60.0 53.6 46.7 38.7	68.7 68.6 68.3 68.0 67.6 67.1 66.1 64.7 63.0 60.7	15.1 15.1 15.1 15.1 15.1 15.1 14.9 13.5 10.8	30.1 30.1 30.1 28.7 27.2 23.4 18.3 14.7 12.2 10.2						
			Ángı	ılo de plı	ıma prin	cipal 83.0	1°10			
15.4 16.0 18.0 20.0 22.0 24.0 26.0 28.0	73.0 71.2 65.6 59.6 53.2 46.2 38.2 28.2	67.8 67.6 66.7 65.6 64.2 62.5 60.2 57.0	15.1 15.1 15.1 15.1 15.1 13.3 10.7 8.9	30.1 30.0 23.0 18.1 14.5 12.1 10.1 8.6						
			Ánaı	ılo de plu	ıma prin	cipal 75.0	1°10			
24.3 26.0 28.0 30.0 32.0 34.0	65.0 59.9 53.6 46.6 38.6 28.7	65.2 64.4 63.0 61.2 59.0 55.9	15.1 14.8 13.6 11.0 9.1	21.0 18.1 14.7 12.3 10.3 8.8						
			Ánaı	ılo de plı	ıma prin	cipal 65.0	1°10			
34.8 36.0 38.0 40.0 42.0	55.0 51.1 43.8 35.3 24.2	60.4 59.6 57.7 55.2 51.6	14.8 11.9 9.7 8.2	13.6 12.6 11.0 9.3 8.0						
			Ángı	ılo de plu	ıma prin	cipal 45.0	0 [°]			
52.6 55.0	35.0 22.6	45.6 41.3	2.4	2.4	·		-			



N° de ident.: 9842523/95738/

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

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0	0 m Plum Cabeza 25.0	de plumi		1) 56.5 r	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0	[°]			
10.2 11.0 12.0 13.0 14.0 16.0 20.0 22.0 24.0 26.0	78.0 76.1 73.7 71.3 68.8 63.8 58.5 52.8 46.7 39.8 31.7	71.6 71.4 71.1 70.8 70.4 69.5 68.3 66.9 65.1 63.0 60.1	15.1 15.1 15.1 15.1 15.1 15.1 14.0 12.2 10.0 8.5 7.2 6.3 Ångu	29.9 28.5 24.2 20.7 18.3 14.5 12.1 10.1 8.7 7.5 6.5 Jlo de plu 21.2 17.9	uma prin	cipal 83.)[°]			
22.0 24.0 26.0 28.0 30.0	58.2 52.5 46.3 39.4 31.1	67.9 66.4 64.6 62.4 59.5	12.7 10.5 8.9 7.5 6.5 Ángu	11.9 10.0 8.6 7.4 6.5	uma prin	cipal 75.) (°)			
25.5 26.0 28.0 30.0 32.0 34.0 36.0	65.0 63.7 58.4 52.8 46.6 39.7 31.6	68.0 67.8 66.6 65.2 63.4 61.2 58.4	15.1 12.8 10.5 8.9 7.6 6.6	14.4 14.4 12.1 10.1 8.7 7.5 6.6			2101			
36.5 38.0 40.0 42.0 44.0 55.0 58.0	55.0 50.6 44.2 37.0 28.0	62.9 61.8 59.9 57.5 54.3	9.5 8.0 6.9 6.1	10.3 9.6 8.3 7.1 6.3	uma prinduma					



Nº de ident.: 9842523/95738/

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

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.	0 m Plum Cabeza 25.0	de plumí	pal, Punt n (2316- osición m	1) 59.5 r	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
10.3 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0	78.0 76.2 73.9 71.4 69.0 63.9 58.6 53.0 46.9 40.0 31.8	71.6 71.4 71.1 70.8 70.4 69.5 68.4 66.9 65.2 63.0	15.1 15.1 15.1 15.1 15.1 15.1 14.2 12.4 10.7 8.8 7.4	30.1 30.1 30.1 26.9 24.1 18.7 15.3 12.6 10.7 9.0						
			Ángu	ılo de plu	ıma prin	cipal 83.0	[°]C			
16.2 18.0 20.0 22.0 24.0 26.0 28.0 30.0	73.0 68.7 63.6 58.3 52.6 46.5 39.5 31.3	70.6 70.0 69.1 67.9 66.5 64.7 62.5 59.6	15.1 15.1 14.4 13.1 11.3 9.2 7.7	27.8 23.6 18.5 15.1 12.5 10.6 9.0 7.7						
30.0	31.3	39.0			ıma nrin	oinal 75 () [°]			
25.6 26.0 28.0 30.0 32.0 34.0 36.0	65.0 63.9 58.6 52.9 46.8 39.9 31.8	68.0 67.8 66.6 65.2 63.5 61.3 58.5	15.1 15.1 12.9 11.0 9.1 7.7	18.4 18.3 15.3 12.7 10.8 9.2 7.9	uma prin	Сіраі 75.	J []			
			Ángu	ılo de plu	ıma prin	cipal 65.0	[°]C			
36.6 38.0 40.0 42.0 44.0	55.0 50.8 44.4 37.1 28.2	62.9 61.8 59.9 57.5 54.3	12.5 10.2 8.4 7.2	12.3 11.2 9.8 8.3 7.2			-			
			Ángu	ılo de plu	ıma prin	cipal 45.0	[°]C			
55.3	35.0	47.3	2.2							



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0	0 m Plum Cabeza 28.0	de plumí	oal, Punt ín (1916- osición m	1) 59.5 r	n Plumín	dfall I		
			Ángı		ıma prin	cipal 88.0	0 [°]			
10.8 11.0 12.0 13.0 14.0 16.0 18.0	78.0 77.6 75.5 73.4 71.2 66.8 62.2	74.5 74.5 74.2 73.9 73.6 72.8 71.8	15.1 15.1 15.1 15.1 14.3 12.7	27.5 27.5 25.2 22.0 19.1 15.3 12.6						
20.0 22.0 24.0	57.4 52.3 46.9	70.6 69.1 67.4	10.6 8.6 7.3	10.5 8.8 7.6						
26.0 28.0 30.0	40.8 33.8 25.2	65.3 62.6 59.0	6.3 5.4 4.7	6.5 5.7 5.0						
			Ángu	ılo de plu	ıma prin	cipal 83.0	0[°]			
17.1 18.0 20.0 22.0 24.0 26.0	73.0 71.0 66.5 61.9 57.1 52.0	73.5 73.2 72.4 71.3 70.1 68.7	15.1 15.1 14.8 13.3 11.0 9.0	19.6 18.8 15.1 12.5 10.4 8.8						
28.0 30.0 32.0 34.0	46.5 40.4 33.4 24.5	66.9 64.7 62.0 58.4	7.6 6.5 5.6 4.9	7.6 6.5 5.7 5.0						
26.8	65.0	70.7	Angı	13.2	uma prind	cipai 75.0	 			
28.0 30.0 32.0 34.0 36.0 38.0 40.0	62.2 57.4 52.3 46.8 40.7 33.8 25.1	70.1 68.9 67.4 65.7 63.5 60.8	13.0 10.6 8.7 7.4 6.4 5.6	12.6 10.5 8.9 7.7 6.6 5.8						
40.0	23.1	37.3			uma prin	cipal 65.0	1°10			
38.2 40.0 42.0 44.0 46.0 48.0	55.0 50.3 44.7 38.3 30.9 21.0	65.3 64.0 62.1 59.8 56.9 52.7	8.3 7.1 6.1 5.4 4.8	9.3 8.5 7.4 6.3 5.6 4.9						
	05.5	46 :	Ángu		ıma prin	cipal 45.0	0 [°]			
57.5 60.0 61.0	35.0 24.0 17.9	49.1 44.9 42.3	4.4 4.1	4.1 3.4 3.1						



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]: 94.0 52.6 Lastre central [t]:

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0	0 m Plum Cabeza 28.0	de plumí	oal, Punt ín (2316- osición m	1) 62.5 r	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
10.9	78.0	74.6	15.1	30.1	'					
11.0	77.7	74.5	15.1	30.1						
12.0	75.6	74.3	15.1	29.4						
13.0	73.5	74.0	15.1	26.7						
14.0	71.3	73.6	15.1	23.0						
16.0	66.9	72.8	15.0	18.2						
18.0	62.4	71.8	14.7	14.7						
20.0	57.6	70.6	12.5	12.2						
22.0	52.5	69.2	10.1	10.2						
24.0	47.0	67.4	8.4	8.7						
26.0	41.0	65.3	7.1	7.3						
28.0 30.0	34.0 25.3	62.6 59.1	6.0 5.1	6.3 5.3						
30.0	25.3	59.1								
			Angı		ıma prin	cipal 83.0) [°]			
17.1	73.0	73.5		23.7						
18.0	71.1	73.2	15.1	22.8						
20.0	66.7	72.4	15.1	17.9						
22.0	62.1	71.4	15.1	14.5						
24.0 26.0	57.3 52.2	70.2 68.7	12.8 10.6	12.1 10.2						
28.0	46.7	66.9	8.9	8.7						
30.0	40.6	64.8	7.4	7.3						
32.0	33.5	62.1	6.2	6.3						
34.0	24.7	58.4	5.3	5.4						
			Ánaı	ılo de plu	ıma prin	cipal 75.0	1°10			
26.8	65.0	70.7		15.5	<u>'</u>					
28.0	62.3	70.1	15.1	14.8						
30.0	57.5	68.9	13.4	12.2						
32.0	52.4	67.5	10.8	10.2						
34.0	46.9	65.7	9.0	8.8						
36.0	40.9	63.6	7.6	7.5						
38.0	33.9	60.9	6.4	6.5					-	
40.0	25.2	57.3	5.5	5.5					<u> </u>	
			Ángı		ıma prin	cipal 65.0	[°]			
38.3	55.0	65.3		10.2						
40.0	50.5	64.0	9.1	9.3						
42.0	44.8	62.2	7.7	8.0						
44.0	38.5	59.9	6.5	6.8						
46.0	31.0	56.9	5.6	5.9						
48.0	21.2	52.8	4.8	5.0						
49.0	16.0	49.7	4.4							



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]
		44.0	0 m Plum Cabeza 31.0	de plumí	ín (1916-		n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
11.4 12.0 13.0 14.0 16.0	78.0 76.9 75.0 73.1 69.2	77.5 77.3 77.1 76.8 76.1	15.1 15.1 15.1 15.1	25.0 25.0 22.1 19.6 15.7						
18.0 20.0 22.0 24.0	65.1 60.9 56.6 52.0	75.2 74.1 72.9 71.4	13.2 11.6 9.5 7.9	12.9 10.9 9.2 7.8						
26.0 28.0 30.0 32.0	47.0 41.6 35.5 28.2	69.6 67.5 65.0 61.7	6.7 5.8 5.1 4.5	6.8 5.9 5.1 4.5						
				ılo de plu	ıma prin	cipal 83.0	[°]			
17.9 18.0 20.0	73.0 72.9 68.9	76.4 76.4 75.6	15.1 15.1	17.8 17.8 15.3						
22.0 24.0 26.0	64.9 60.7 56.3	74.7 73.7 72.4	13.4 11.5 9.4	12.7 10.8 9.1						
28.0 30.0 32.0 34.0	51.7 46.7 41.3	70.9 69.1 67.0	7.9 6.8 5.8	7.8 6.8 5.9						
36.0	35.1 27.7	64.4 61.1	5.1 4.5	5.2 4.6						
			Ángı		ıma prin	cipal 75.0	[°]	I	I	1
28.0 30.0 32.0 34.0 36.0 38.0	65.0 60.9 56.5 51.9 46.9 41.5	73.4 72.4 71.1 69.7 67.9 65.8	11.5 9.6 8.0 6.9 5.9	12.0 10.8 9.2 7.9 6.9 6.0						
40.0	35.4	63.2	5.2	5.3						
42.0	28.1	60.0	4.6 Ángi	ılo de pli	ıma prin	l cipal 65.0	1°10			l
39.9	55.0	67.8	,90	8.4	IIII PIIII		, ,			
40.0 42.0 44.0	54.9 50.1 45.0	67.7 66.2 64.4	7.6 6.6	8.4 7.6 6.6						
46.0 48.0 50.0	39.4 32.9 25.0	62.1 59.3 55.7	5.7 5.0 4.5	5.8 5.1 4.5						
			Ángı		ıma prin	cipal 45.0	[°]			
59.9 60.0 64.0	35.0 34.8 17.0	50.8 50.7 42.7	3.5	3.7 3.7 2.5						



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]: 94.0 52.6 Lastre central [t]:

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0	0 m Plun Cabeza 31.0	de plumi	pal, Punt n (2316- osición m	1) 65.5 r	n Plumín	dfall		
					ıma prin					
11.5	78.0	77.5	15.1	30.1	лна рин Г	 	J []			
12.0	77.1	77.4	15.1	30.1						
13.0	75.1	77.1	15.1	29.9						
14.0	73.2	76.8	15.1	29.2						
16.0	69.3	76.1	15.1	23.2						
18.0	65.2	75.2	15.1	19.0						
20.0	61.1	74.2	15.1	16.1						
22.0	56.7	72.9	13.3	13.8						
24.0	52.1	71.4	11.8	11.9						
26.0	47.1	69.7	10.2	10.3						
28.0	41.7	67.6	8.5	8.8						
30.0	35.6	65.0	7.0	7.5						
32.0	28.4	61.8	5.6	6.0						
			Ángı		ıma prin	cipal 83.0	[°]	1	1	1
18.0	73.0	76.4		26.3						
20.0	69.1	75.7	15.1	22.8						
22.0	65.0	74.8	15.1	18.8						
24.0 26.0	60.8 56.4	73.7 72.4	15.1 13.3	16.0 13.7						
28.0	51.8	70.9	11.8	11.9						
30.0	46.8	69.2	10.4	10.5						
32.0	41.4	67.1	8.9	9.2						
34.0	35.2	64.5	7.7	8.1						
36.0	27.9	61.2	6.8	7.2						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
28.1	65.0	73.4		17.6						
30.0	61.0	72.4	14.9	16.0						
32.0	56.6	71.2	13.6	13.9						
34.0	52.0	69.7	11.6	12.0						
36.0	47.1	67.9	10.1	10.6						
38.0	41.7	65.9	8.8	9.3						
40.0 42.0	35.6 28.3	63.3 60.0	7.7 6.9	8.3 7.4						
42.0	20.3	00.0		•		-in-105	2		l	
40.0	55.0	67.0	Angı		uma prin	cıpai 65.0 ⊺	\ \[]		I	
40.0 42.0	55.0 50.3	67.8 66.3	11.1	10.0 8.9						
44.0	45.2	64.4	9.9	7.8						
46.0	39.5	62.2	8.6	6.9						
48.0	33.1	59.4	7.6	6.1						
50.0	25.1	55.7	6.8	5.3						
52.0	15.2	50.1	6.0							



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

Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 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]
			0 m Plum Cabeza 34.0	de plumi		1) 65.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	D[°]			
12.1	78.0	80.4	15.1	22.7						
13.0 14.0	76.4 74.6	80.2 79.9	15.1 15.1	22.4 19.6						
16.0	71.1	79.3	15.1	15.8						
18.0	67.5	78.5	14.2	13.2						
20.0 22.0	63.7 59.9	77.5 76.4	11.7 9.8	11.0 9.5						
24.0	55.9	75.1	8.2	8.1						
26.0 28.0	51.6 47.1	73.6 71.9	6.9 6.0	7.0 6.1						
30.0	42.2	69.8	5.2	5.3						
32.0	36.8	67.3	4.5	4.6						
34.0 36.0	30.5 22.7	64.3 60.3	4.0 3.6	4.1 3.6						
30.0	22.1	00.5			ıma prin	cinal 83 () [°]			
18.8	73.0	79.2	Ango	16.3			J []			
20.0	70.9	78.8	15.1	15.7						
22.0	67.3	78.0	14.3	13.1						
24.0 26.0	63.5 59.7	77.1 76.0	11.6 9.7	10.9 9.4						
28.0	55.6	74.7	8.1	8.0						
30.0 32.0	51.4 46.8	73.1 71.4	6.9 6.0	7.0 6.1						
34.0	41.9	69.3	5.3	5.3						
36.0	36.4	66.8	4.6	4.6						
38.0 40.0	30.1 22.1	63.7 59.6	4.1 3.6	4.1 3.7						
40.0	22.1	00.0			ıma prin	rinal 75 () [°]			
29.3	65.0	76.1	7 (119)	10.9	IIIa piiii		J]			
30.0	63.7	75.8	11.0	10.9						
32.0 34.0	59.8 55.8	74.7 73.4	9.3 7.9	9.4 8.1						
36.0	51.6	71.9	6.8	7.1						
38.0	47.1	70.1	6.0	6.2						
40.0 42.0	42.2 36.7	68.1 65.6	5.2 4.6	5.4 4.8						
44.0	30.5	62.5	4.1	4.3						
46.0	22.6	58.5	3.6	3.8						
			Angı		ıma prin	cipal 65.0	[°]			
41.7 42.0	55.0 54.3	70.2 70.1	7.4	7.5 7.5						
44.0	50.0	68.5	6.7	6.8						
46.0	45.3	66.6	5.9	6.0						
48.0 50.0	40.3 34.6	64.4 61.7	5.1 4.5	5.2 4.6						
23.0	20		,		ıma prin	cipal 45 (1°1C			
62.4	35.0	52.5	,g	2.9	 P.III.	- pao.				
65.0	26.0	48.3	3.2	2.3						
67.0	17.6	43.2	2.6							



N° de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

Inserción			1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
44.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (2316-1) 68.5 m Plumín 34.0 [m] Posición midfall (2316)										
Ángulo de pluma principal 88.0 [°]										
12.1 13.0 14.0 16.0 18.0 20.0	78.0 76.5 74.7 71.2 67.6 63.8	80.4 80.2 79.9 79.3 78.5 77.6	15.1 15.1 15.1 14.9	30.1 30.1 27.4 21.9 18.2						
22.0 24.0 26.0 28.0	60.0 56.0 51.7 47.2	76.5 75.2 73.7 71.9	13.4 11.3 9.6 8.3	13.1 11.3 9.8 8.6						
30.0 32.0 34.0 36.0	42.3 36.9 30.7 22.8	69.8 67.4 64.3 60.3	7.2 6.3 5.3 4.0	7.5 6.6 5.5 4.1						
Ángulo de pluma principal 83.0 [°]										
18.9 20.0 22.0 24.0 26.0 28.0	73.0 71.0 67.4 63.6 59.8 55.7	79.2 78.9 78.1 77.1 76.0 74.7	15.1 15.1 15.1 14.9 14.0 11.8	22.7 21.8 18.0 15.0 13.0 11.2						
30.0 32.0 34.0 36.0 38.0	51.5 46.9 42.0 36.6 30.2	73.2 71.4 69.3 66.8 63.7	10.0 8.7 7.6 6.6 5.8	9.8 8.7 7.6 6.7 6.0						
40.0	22.3	59.7	5.1 Ángi	Jo de plu	ıma nrin	cipal 75.0	1 ° 1			
29.4 30.0 32.0 34.0	65.0 63.8 59.9 55.9	76.1 75.9 74.7 73.5	15.1 13.3 11.4	15.1 15.1 13.0 11.3	and pill	o.par 7 0.1	~ []			
36.0 38.0 40.0 42.0 44.0	51.7 47.2 42.3 36.9 30.6	71.9 70.2 68.1 65.6 62.6	9.7 8.5 7.4 6.5 5.9	9.9 8.8 7.7 6.9 6.2						
46.0 22.7 58.6 5.2 5.4										
41.7 42.0 44.0 46.0 48.0 50.0	55.0 54.4 50.1 45.4 40.4 34.7	70.2 70.1 68.5 66.7 64.5 61.8	10.1 9.1 7.9 7.0 6.2	9.1 9.0 8.0 7.1 6.2 5.5	and pill	о.раг 00.t	~ []			
54.0	19.1	53.9	4.9	4.2						



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]: 94.0 Lastre central [t]: 52.6

ı	nserciór	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) Dl		al Dunt		- 2 M:	-14-11		
		44.0	0 m Plum Cabeza 37.0	de plumí	oai, Punt n (1916- osición m	1) 68.5 r	n Plumín	atali I		
					ıma prin					
12.7	78.0	83.3	15.1	22.1						
13.0 14.0	77.5 75.9	83.3 83.0	15.1 15.1	22.1 21.1						
16.0	72.7	82.4	15.1	17.0						
18.0	69.4	81.7	15.0	14.2						
20.0	66.0	80.9	12.9	12.0						
22.0 24.0	62.6 59.0	79.9 78.7	10.7 9.1	10.3 9.0						
26.0	55.3	77.4	7.8	7.8						
28.0	51.3	75.9	6.7	6.8						
30.0	47.2	74.1	5.9	6.0						
32.0 34.0	42.7 37.8	72.1 69.7	5.2	5.3 4.7						
34.0 36.0	32.3	66.8	4.6 4.1	4.7						
38.0	25.7	63.1	3.7	3.8						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
19.7	73.0	82.1	15.1	16.0						
20.0	72.5	82.0	15.1	15.9						
22.0	69.2	81.3	14.6	14.0						
24.0	65.8	80.4	12.8	12.0						
26.0 28.0	62.4 58.8	79.4 78.3	10.6 9.1	10.2 8.9						
30.0	55.0	76.9	7.8	7.7						
32.0	51.1	75.4	6.8	6.8						
34.0	46.9	73.6	6.0	6.1						
36.0 38.0	42.5 37.5	71.5 69.1	5.2 4.6	5.3 4.7						
40.0	32.0	66.2	4.0	4.7						
42.0	25.3	62.5	3.7	3.8						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
30.6	65.0	78.8	10.0	10.8						
32.0 34.0	62.5 58.9	78.2 77.0	10.8 9.1	9.0						
36.0	55.2	75.7	7.8	7.9						
38.0	51.3	74.1	6.8	6.9						
40.0	47.2	72.4	6.1	6.2						
42.0 44.0	42.7 37.8	70.3 67.9	5.3 4.7	5.4 4.8						
46.0	32.3	65.0	4.7	4.4						
48.0	25.6	61.4	3.8	3.9						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]0		_	
43.4	55.0	72.7		7.4						
44.0	53.8	72.3	7.3	7.4						
46.0 48.0	49.8 45.6	70.7 68.9	6.6 5.8	6.6 6.0						
50.0	41.0	66.7	5.1	5.2						
55.0	26.6	59.1	3.9	4.0						
			Ángu	ılo de plu	ıma prin	cipal 45.0	[°]C			
64.8	35.0	54.3		2.4						
65.0	34.6	54.3	3.2	2.3						
69.0	21.7	46.6	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 37.0	de plumi		·1) 71.5 r̀	n Plumín			
			Ángı	ılo de plı	uma prin	cipal 88.	0[°]			
12.7	78.0	83.4		27.6						
13.0 14.0	77.6 76.0	83.3 83.1	15.1 15.1	27.6 26.1						
16.0	76.0	82.5	15.1	20.7						
18.0	69.5	81.7	15.1	17.0						
20.0	66.1	80.9	13.6	14.3						
22.0	62.7	79.9	12.1	12.2						
24.0 26.0	59.1 55.4	78.7 77.4	10.5 8.9	10.5 9.1						
28.0	51.4	75.9	7.6	7.9						
30.0	47.3	74.1	6.6	6.9						
32.0	42.8	72.1	5.7	6.0						
34.0	38.0	69.7	4.9	5.2						
36.0 38.0	32.4 25.8	66.8 63.2	4.2 3.2	4.4 3.3						
30.0	25.0	03.2			uma prin	cinal 83	1°10			
19.7	73.0	82.1	, ange	19.3	 					
20.0	72.6	82.0	15.1	19.2						
22.0	69.3	81.3	15.1	16.7						
24.0	65.9	80.5	14.2	14.1						
26.0 28.0	62.5 58.9	79.5 78.3	12.5 10.8	12.1 10.4						
30.0	55.1	77.0	9.1	9.0						
32.0	51.2	75.4	7.8	7.9						
34.0	47.0	73.6	6.8	6.9						
36.0	42.6	71.6	5.9	6.1						
38.0 40.0	37.6 32.1	69.2 66.2	5.1 4.5	5.3 4.7						
42.0	25.4	62.6	3.9	4.0						
					uma prin	cipal 75.	0[°]	•		•
30.6	65.0	78.8		12.7						
32.0	62.6	78.2	13.0	12.2						
34.0 36.0	59.0 55.3	77.0 75.7	10.9 9.3	10.5 9.1						
38.0	51.4	74.2	7.9	8.0						
40.0	47.3	72.4	6.9	7.0						
42.0	42.8	70.4	6.0	6.2						
44.0	37.9	68.0	5.3	5.4						
46.0 48.0	32.4 25.8	65.1 61.5	4.7 4.1	4.8 4.2						
					uma prin	cipal 65.	0 [°]			
43.4	55.0	72.7		8.1						
44.0	53.9	72.4	8.0	7.8						
46.0	49.9	70.8	7.2	6.9						
48.0 50.0	45.7 41.1	68.9 66.7	6.3 5.5	6.1 5.4						
55.0	26.7	59.2	4.1	3.8						
57.0	18.2	54.4	3.5	3.1						



2821-1

2821-1

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 40.0	de plumi		1) 71.5 r	n Plumín			
			Ángı	ılo de plu	uma prin	cipal 88.0	[°]			
13.3	78.0	86.3	15.1	22.8 22.8						
14.0 16.0	77.0 74.0	86.1 85.6	15.1 15.1	19.4						
18.0	71.0	84.9	15.1	16.4						
20.0	67.9 64.8	84.1 83.2	14.5 12.1	14.1 12.1						
24.0	61.6	82.2	10.4	10.6						
26.0 28.0	58.2 54.7	81.0 79.6	9.1 7.9	9.3 8.2						
30.0	51.1	78.1	7.9	7.4						
32.0	47.3	76.3	6.3	6.6						
34.0 36.0	43.2 38.7	74.3 72.0	5.6 5.1	6.0 5.4						
38.0	33.8	69.2	4.6	4.9						
40.0 42.0	28.0 20.8	65.8	4.2 3.8	4.5 4.1						
42.0	20.6	61.4			uma prin	rinal 83 (1 ° 1		l	
20.6	73.0	85.0	15.1	16.9			J []			
22.0	70.8	84.5	15.1	16.2						
24.0 26.0	67.8 64.6	83.7 82.8	14.0 12.0	13.9 12.0						
28.0	61.4	81.7	10.4	10.6						
30.0	58.0	80.5	9.1	9.3						
32.0 34.0	54.5 50.9	79.2 77.6	7.9 7.1	8.2 7.4						
36.0	47.0	75.8	6.3	6.7						
38.0 40.0	42.9 38.4	73.8 71.4	5.7 5.1	6.0 5.4						
42.0	33.4	68.6	4.7	4.9						
44.0	27.6	65.2	4.3	4.5						
46.0	20.3	60.7	3.9 Á	4.1		-in al 75 (2			
31.8	65.0	81.6	Angl	11.5	ıma prin İ	upai /5.	√[]			
32.0	64.8	81.5	11.9	11.5						
34.0 36.0	61.5 58.2	80.5 79.3	11.0 9.5	10.7 9.5						
38.0	54.7	77.9	8.3	9.5 8.4						
40.0	51.1	76.4	7.3	7.5						
42.0 44.0	47.2 43.1	74.6 72.6	6.6 5.9	6.8 6.1						
46.0	38.7	70.2	5.3	5.5						
48.0 50.0	33.7 27.9	67.5 64.1	4.8 4.5	5.0 4.6						
30.0	21.5	U*f. I			ıma prin	cipal 65 (1°10		I.	I.
45.1	55.0	75.2	, uige	8.1						
46.0	53.4	74.6	7.8	8.0						
48.0 50.0	49.7 45.8	73.0 71.1	7.1 6.4	7.2 6.6						
55.0	34.4	65.1	5.0	5.1						
			Ángu	ılo de plı	ıma prin	cipal 45.0	[°]			
67.5	35.0	56.0	2.4							
68.0	33.7	55.2	2.2							



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

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

Valor de vuelco: 2 - Vía ancha Lastre trasero [t]: 94.0 Lastre central [t]: 52.6 Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.	0 m Plum Cabeza 31.0	de plumí	ín (1916-	o de carç 1) 74.5 r nidfall (19	n Plumín	dfall I		
			Ángı		ıma prin	cipal 88.0	[°]			
11.4 12.0 13.0 14.0 16.0	78.0 76.9 75.0 73.1 69.2	77.5 77.3 77.1 76.8 76.1 75.2	15.1 15.1 15.1 14.3 11.4	20.6 20.6 18.6 16.5 13.1						
20.0 22.0 24.0 26.0 28.0	60.9 56.6 52.0 47.0 41.6	74.1 72.9 71.4 69.6 67.5	9.0 7.2 5.9 4.9	8.7 7.1 5.9 5.0 4.2						
30.0 32.0	35.5 28.2	65.0 61.7	3.5 2.9	3.6 3.0						
02.0	20.2	0			uma prin	cipal 83.0	D[°]			
17.9 18.0	73.0 72.9	76.4 76.4	15.1	14.8 14.8						
20.0 22.0 24.0	68.9 64.9 60.7	75.6 74.7 73.7	14.1 11.1 8.7	12.8 10.3 8.5						
26.0 28.0 30.0 32.0	56.3 51.7 46.7 41.3	72.4 70.9 69.1 67.0	7.1 5.9 5.0 4.2	7.0 5.9 5.0 4.3						
34.0 36.0	35.1 27.7	64.4 61.1	3.6 3.1	3.6 3.1						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]0			
28.0 30.0 32.0 34.0	65.0 60.9 56.5 51.9	73.4 72.4 71.1 69.7	8.5 7.0 5.9	9.5 8.6 7.2 6.0						
36.0 38.0 40.0 42.0	46.9 41.5 35.4 28.1	67.9 65.8 63.2 60.0	5.0 4.3 3.6 3.2	5.2 4.4 3.8 3.3						
.2.0	20				ıma prin	cipal 65.0	[°]			
39.9 40.0 42.0	55.0 54.9 50.1	67.8 67.7 66.2	5.8	6.4 6.4 5.8						
44.0 46.0 48.0 50.0	45.0 39.4 32.9 25.0	64.4 62.1 59.3 55.7	4.9 4.2 3.6 3.2	5.0 4.2 3.7 3.2						
					ıma prin	cipal 45.0	[°]			
60.1 61.0	35.0	50.8 49.4	2.4							
01.0	32.0	49.4	۷.۷		l	I			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 -	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]
		44.0	0 m Plun Cabeza 40.0	de plumi		1) 74.5 r	n Plumír			
					ıma prin					
13.4	78.0	86.3	15.1	27.4						
14.0	77.1	86.2	15.1	27.4						
16.0 18.0	74.1 71.1	85.6 84.9	15.1 15.1	22.8 18.8						
20.0	68.0	84.2	14.8	16.1						
22.0	64.9	83.3	13.4	13.7						
24.0	61.6	82.2	12.4	12.0						
26.0	58.3	81.0	10.8	10.5						
28.0	54.8	79.7	9.3	9.2						
30.0	51.2	78.1	8.0	8.1						
32.0 34.0	47.4 43.3	76.4 74.4	6.9	7.0 5.8						
36.0	38.8	72.0	5.7 4.6	4.7						
38.0	33.9	69.3	3.7	3.8						
40.0	28.1	65.9	2.7	2.8						
			Ángı	ılo de plı	ıma prin	cipal 83.0	0[°]			
20.6	73.0	85.0		19.4						
22.0	70.9	84.5	15.1	18.6						
24.0	67.8	83.7	15.1	15.8						
26.0	64.7	82.8	13.7	13.6						
28.0 30.0	61.5 58.1	81.8 80.6	12.4 10.7	11.9 10.4						
32.0	54.6	79.2	9.2	9.1						
34.0	51.0	77.7	8.0	8.1						
36.0	47.1	75.9	7.1	7.2						
38.0	43.0	73.8	6.2	6.4						
40.0	38.5	71.5	5.5	5.6						
42.0 44.0	33.5 27.8	68.7 65.3	4.8 4.0	4.9 4.1						
46.0	20.4	60.8	3.1	3.1						
					uma prin	cipal 75.0	D[°]			
31.9	65.0	81.6		12.9						
32.0	64.8	81.6	13.0	12.9						
34.0	61.6	80.5	12.1	12.0						
36.0	58.3	79.3	10.4	10.5						
38.0 40.0	54.8 51.2	78.0 76.4	9.0 7.8	9.2 8.2						
42.0	47.3	74.7	7.0	7.3						
44.0	43.2	72.6	6.2	6.5						
46.0	38.8	70.3	5.5	5.8						
48.0	33.8	67.5	5.0	5.2						
50.0	28.1	64.2	4.4	4.7						
			Ángı	· ·	ıma prin	cipal 65.0	[°]			
45.2	55.0	75.1	0.0	7.2						
46.0 48.0	53.5 49.8	74.6 73.0	8.2 7.4	6.9 6.1						
50.0	49.6 45.9	73.0	6.6	5.3						
55.0	34.5	65.1	4.7	3.7						
60.0	17.5	54.8	3.1	2.2						



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]: 94.0 52.6 Lastre central [t]:

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0		de plumi	ín (1916-	1) 77.5 r	n Plumín		!	
					osición m uma prin					
12.1	78.0	80.4	15.1	18.5			J []			
13.0	76.0	80.4	15.1	18.5						
14.0	74.6	79.9	15.1	16.3						
16.0	71.1	79.3	13.7	13.0						
18.0	67.5	78.5	11.5	10.6						
20.0	63.7	77.5	9.0	8.6						
22.0	59.9	76.4	7.2	7.1						
24.0	55.9	75.1	5.9	5.9						
26.0	51.6	73.6	4.9	4.9						
28.0	47.1	71.9	4.2	4.2						
30.0	42.2	69.8	3.5	3.6						
32.0 34.0	36.8 30.5	67.3	2.9	3.0						
34.0	30.5	64.3	2.4	2.4					l	
			Angı	ılo de plı	ıma prin	cipal 83.0	0 [°]			
18.8	73.0	79.2		13.2						
20.0	70.9	78.8	13.4	12.8						
22.0	67.3	78.0	10.4	10.4						
24.0	63.5	77.1	8.2	8.3						
26.0	59.7	76.0	6.8	7.0						
28.0	55.6	74.7	5.6	5.8						
30.0 32.0	51.4 46.8	73.1 71.4	4.8 4.1	5.0 4.3						
34.0	41.9	69.3	3.5	3.6						
36.0	36.4	66.8	2.9	3.1						
38.0	30.1	63.7	2.5	2.6						
			Ángı		ıma prin	cipal 75.0	1°10			
29.3	65.0	76.1	Ŭ	8.3	<u> </u>	·				
30.0	63.7	75.8	8.4	8.3						
32.0	59.8	74.7	7.2	7.1						
34.0	55.8	73.4	6.0	6.0						
36.0	51.6	71.9	5.1	5.1						
38.0	47.1	70.1	4.3	4.4						
40.0	42.2	68.1	3.7	3.7						
42.0	36.7	65.6	3.1	3.2						
44.0	30.5	62.5	2.7	2.8						
46.0	22.6	58.5	2.3	2.4	l .				L	l
			Angı		ıma prin	cipal 65.0	D[°]			
41.7	55.0	70.2		5.4						
42.0	54.3	70.1	5.4	5.4						
44.0	50.0	68.5	4.9	4.9						
46.0	45.3	66.6	4.2	4.2						
48.0	40.3	64.4	3.6	3.6						
50.0	34.6	61.7	3.0	3.1						
54.0	18.9	53.8	2.3	2.3	<u> </u>				I.	



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

Valor de vuelco: 2 - Vía ancha

Lastre trasero [t]: Lastre central [t]: 2 - Vía ancha 94.0

94.0 52.6

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0	0 m Plum Cabeza 43.0	de plumí	n (2316-	o de caro 1) 77.5 r nidfall (23	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
14.0 16.0 18.0 20.0	78.0 75.2 72.5 69.6	89.2 88.7 88.1 87.4	15.1 15.1 15.1 15.1	27.2 24.5 20.4 17.3						
22.0 24.0 26.0 28.0	66.8 63.8 60.8 57.6	86.6 85.6 84.5 83.3	14.0 12.6 11.6 9.9	15.0 13.1 11.6 10.1						
30.0 32.0 34.0 36.0	54.4 51.0 47.4 43.6	81.9 80.4 78.6 76.6	8.5 7.3 6.1 4.9	8.8 7.8 6.5 5.2						
38.0 40.0	39.5 35.0	74.3 71.7	3.8 2.8	3.9 2.9						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]C			
21.5	73.0	87.8	45.4	19.3						
22.0 24.0 26.0	72.3 69.5 66.6	87.7 87.0 86.1	15.1 15.1 14.7	19.3 17.1 14.9						
28.0 30.0	63.6 60.6	85.2 84.1	13.1 11.9	13.0 11.6						
32.0 34.0	57.4 54.2	82.9 81.5	10.3 9.0	10.2 9.1						
36.0 38.0 40.0	50.8 47.2 43.4	79.9 78.1 76.1	7.9 7.1 6.3	8.2 7.3 6.5						
42.0 44.0 46.0	39.3 34.8 29.6	73.8 71.1 67.9	5.6 5.0 4.0	5.8 5.2 4.1						
48.0	23.5	63.9	2.9 Ángi	lo de pli	ıma nrin	L cipal 75.0	1°1(
33.2	65.0	84.3	Ange	13.0	arna prim	o.pu: 70.	· []			
34.0 36.0 38.0 40.0	63.8 60.7 57.6 54.4	83.9 82.8 81.6 80.2	13.0 11.6 10.2 8.9	12.9 11.6 10.4 9.2						
42.0 44.0 46.0 48.0	51.0 47.4 43.6 39.5	78.7 76.9 74.9 72.6	7.9 7.1 6.4 5.7	8.3 7.5 6.7 6.0						
50.0 55.0	35.0 20.1	69.9 60.3	5.2 3.9	5.5 4.1						
					uma prin	cipal 65.0) [°]			
46.9	55.0	77.6		6.3						
48.0 50.0 55.0	53.1 49.7 40.1	76.9 75.2 70.1	7.1 6.2 4.4	5.9 5.1 3.6						
60.0	27.8	62.6	2.9	2.2						
63.0	18.0	55.3	2.0							



2821-1 2821-1

N° de ident.: 9842523/95738/

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

Pieza de articulación de pluma principal: 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]
		44.0	0 m Plum Cabeza 34.0	de plumí		1) 80.5 r	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0	D[°]			
12.1 13.0 14.0 16.0 18.0 20.0 22.0 24.0 26.0	78.0 76.5 74.7 71.2 67.6 63.8 60.0 56.0 51.7	80.4 80.2 79.9 79.3 78.5 77.6 76.5 75.2 73.7	15.1 15.1 15.1 15.1 14.4 13.8 9.2 5.5	30.1 30.1 29.3 24.6 20.7 16.8 13.8 9.2 5.6						
28.0	47.2	71.9	3.4	3.5	ıma prin		2.5.0.1			
18.9 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0	73.0 71.0 67.4 63.6 59.8 55.7 51.5 46.9 42.0	79.2 78.9 78.1 77.1 76.0 74.7 73.2 71.4 69.3	15.1 15.1 15.1 14.7 14.2 11.7 9.7 7.4 4.8	24.3 24.2 20.2 16.8 14.3 12.0 10.2 7.7 4.9						
			Ángı	ılo de plu	uma prin	cipal 75.0	[°]C			
29.4 30.0 32.0 34.0 36.0 38.0 40.0 42.0 44.0 46.0	65.0 63.8 59.9 55.9 51.7 47.2 42.3 36.9 30.6 22.7	76.1 75.9 74.7 73.5 71.9 70.2 68.1 65.6 62.6 58.6	15.1 14.8 13.4 11.2 9.6 8.1 6.9 5.4 3.2	16.3 15.6 13.6 11.9 10.5 9.2 8.0 6.9 5.3 3.1						
70.0	22.1	00.0			ıma prin	cinal 65 (1 ° 1			
41.7 42.0 44.0 46.0 48.0 50.0	55.0 54.4 50.1 45.4 40.4 34.7	70.2 70.1 68.5 66.7 64.5 61.8	7.8 6.6 5.5 4.5 3.6	6.1 5.9 5.0 4.1 3.3 2.5	ина рпп	ираг 65.) []			
53.0	24.9	56.4	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]
		44.0	0 m Plum Cabeza 37.0	de plumi	oal, Punt ín (1916- osición m	1) 80.5 r	n Plumín	dfall I		
				<u>_</u>	ıma prin	cipal 88.0	[°]			
12.7 13.0 14.0 16.0 18.0	78.0 77.5 75.9 72.7 69.4	83.3 83.0 82.4 81.7	15.1 15.1 15.1 14.8 12.9	19.1 19.1 18.4 15.0 12.2						
20.0 22.0 24.0 26.0 28.0	66.0 62.6 59.0 55.3 51.3	80.9 79.9 78.7 77.4 75.9	10.7 8.6 7.2 6.1 5.3	10.1 8.4 7.2 6.2 5.3						
30.0 32.0 34.0 36.0	47.2 42.7 37.8 32.3	74.1 72.1 69.7 66.8	4.6 4.0 3.5 2.9	4.7 4.1 3.6 3.0						
				ılo de plu	ıma prin	cipal 83.0	[°]			
19.7 20.0 22.0 24.0 26.0	73.0 72.5 69.2 65.8 62.4	82.1 82.0 81.3 80.4 79.4	14.3 14.3 12.7 10.4 8.5	13.6 13.6 11.9 9.9 8.3						
28.0 30.0 32.0 34.0 36.0 38.0	58.8 55.0 51.1 46.9 42.5 37.5	78.3 76.9 75.4 73.6 71.5 69.1	7.2 6.1 5.3 4.7 4.1 3.5	7.2 6.2 5.4 4.7 4.1 3.6						
40.0	32.0	66.2	3.1	3.2						
42.0	25.3	62.5	2.7 Ángi	lo de nli	ıma prin	rinal 75 (1 ° 1			
30.6	65.0	78.8		8.8	piiii	J. Par 7 0.1	- []			
32.0 34.0 36.0	62.5 58.9 55.2	78.2 77.0 75.7	8.6 7.3 6.3	8.5 7.3 6.3						
38.0 40.0 42.0 44.0	55.2 51.3 47.2 42.7 37.8	74.1 72.4 70.3 67.9	5.4 4.8 4.2 3.7	5.5 4.9 4.3 3.7						
46.0 48.0	32.3 25.6	65.0 61.4	3.3 2.9	3.4 3.0						
.5.0		· · · · ·			ıma prin	cipal 65.0	[°]			
43.4 44.0 46.0	55.0 53.8 49.8	72.7 72.3 70.7	5.8 5.2	5.9 5.9 5.3			-			
48.0 50.0 55.0 57.0	45.6 41.0 26.6 18.1	68.9 66.7 59.1 54.3	4.6 4.0 3.1 2.7	4.7 4.1 3.1 2.8						



N° de ident.: 9842523/95738/

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

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0	0 m Plum Cabeza 37.0	de plumi	oal, Punt ín (2316- osición m	1) 83.5 r	n Plumín	dfall I		
			Ángı	ılo de plı	ıma prin	cipal 88.0	[°]			
12.7 13.0 14.0	78.0 77.6 76.0	83.4 83.3 83.1	15.1 15.1	27.7 27.7 27.7						
16.0 18.0 20.0	72.8 69.5 66.1	82.5 81.7 80.9	15.1 15.1 14.1	22.7 18.7 15.7						
22.0 24.0 26.0	62.7 59.1 55.4	79.9 78.7 77.4	12.2 10.2 6.8 4.1	12.9 10.4 6.9 4.2						
28.0 30.0	51.4 47.3	75.9 74.1	2.5	2.7						
			Ángı	ılo de plı	ıma prin	cipal 83.0	1°10			
19.7 20.0 22.0 24.0	73.0 72.6 69.3 65.9	82.1 82.0 81.3 80.5	15.1 15.1 14.8	20.2 20.1 18.6 15.6						
26.0 28.0 30.0 32.0 34.0	62.5 58.9 55.1 51.2 47.0	79.5 78.3 77.0 75.4 73.6	12.9 11.3 9.3 7.7 5.8	13.1 11.3 9.4 8.0 6.0						
36.0	42.6	71.6	3.7	3.7						
			Ángı	ılo de plı	ıma prin	cipal 75.0	D[°]			
30.6 32.0 34.0 36.0	65.0 62.6 59.0 55.3	78.8 78.2 77.0 75.7	14.3 12.1 10.2	13.5 13.4 11.5 9.9						
38.0 40.0 42.0 44.0	51.4 47.3 42.8 37.9	74.2 72.4 70.4 68.0	8.5 7.3 6.2 5.2	8.5 7.4 6.2 5.3						
46.0	32.4	65.1	4.3	4.3						
48.0	25.8	61.5	2.8 Ángi	ulo de niu	ıma prin	cinal 65 (۱ ° ۱ ۲			
43.4 44.0 46.0 48.0	55.0 53.9 49.9 45.7	72.7 72.4 70.8 68.9	6.4 5.3 4.3	5.2 4.9 4.0 3.2	лна рип	ыраг 65.1	7 []			
50.0 53.0	41.1 33.7	66.7 62.7	3.4 2.2	2.5						



Nº de ident.: 9842523/95738/

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

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
				de plumí	pal, Punt ín (1916- osición m	1) 83.5 r	n Plumín			
			Ángu	ılo de plu	ıma prin	cipal 88.0	0 [°]			
13.3	78.0	86.3		16.1	·	i i				
14.0	77.0	86.1	15.1	16.1						
16.0	74.0	85.6	13.5	13.9						
18.0	71.0	84.9	11.1	11.4						
20.0	67.9 64.8	84.1	9.3 7.6	9.5 7.8						
22.0 24.0	61.6	83.2 82.2	6.3	6.6						
26.0	58.2	81.0	5.4	5.6						
28.0	54.7	79.6	4.6	4.8						
30.0	51.1	78.1	3.9	4.1						
32.0	47.3	76.3	3.4	3.6						
34.0	43.2	74.3	2.9	3.1						
36.0	38.7	72.0	2.5	2.6						
			Ángı	ılo de plu	uma prin	cipal 83.0	0[°]			
20.6	73.0	85.0	11.2	11.5						
22.0	70.8	84.5	10.9	11.2						
24.0	67.8	83.7	9.2	9.2						
26.0 28.0	64.6 61.4	82.8 81.7	7.7 6.5	7.7 6.6						
30.0	58.0	80.5	5.5	5.6						
32.0	54.5	79.2	4.7	4.8						
34.0	50.9	77.6	4.1	4.2						
36.0	47.0	75.8	3.5	3.6						
38.0	42.9	73.8	3.0	3.1						
40.0	38.4	71.4	2.6 2.3	2.7						
42.0	33.4	68.6		2.3		-i175 /	2.0.1			
31.8	65.0	81.6	Angu	7.3	uma prind	upai /5.0	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			
32.0	64.8	81.5	7.2	7.2						
34.0	61.5	80.5	6.7	6.7						
36.0	58.2	79.3	5.7	5.8						
38.0	54.7	77.9	4.9	4.9						
40.0	51.1	76.4	4.2	4.3						
42.0	47.2	74.6	3.7	3.7						
44.0 46.0	43.1 38.7	72.6 70.2	3.2 2.7	3.2 2.8						
48.0	33.7	67.5	2.4	2.4						
					ıma prin	cipal 65 (1°10			
45.1	55.0	75.2	9	4.7		. ,,				
46.0	53.4	74.6	4.5	4.7						
48.0	49.7	73.0	4.0	4.1						
50.0	45.8	71.1	3.5	3.6						
55.0	34.4	65.1	2.5	2.5						
58.0	25.5	59.8	2.1	2.1						



2821-1

2821-1

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

	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]
			0 m Plum Cabeza 40.0	de plumí		1) 86.5 r	n Plumír			
			Ángı	ılo de plu	ıma prin	cipal 88.	0[°]			
13.4 14.0 16.0 18.0 20.0	78.0 77.1 74.1 71.1 68.0	86.3 86.2 85.6 84.9 84.2	15.1 15.1 15.1 15.1 15.0	25.9 25.9 22.0 18.2 15.5						
22.0 24.0 26.0 28.0 30.0	64.9 61.6 58.3 54.8 51.2	83.3 82.2 81.0 79.7 78.1	11.8 9.5 7.0 4.6 2.7	12.4 10.2 7.5 4.9 2.8						
			Ángı	ılo de plu	ıma prin	cipal 83.	0[°]			
20.6 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0	73.0 70.9 67.8 64.7 61.5 58.1 54.6 51.0 47.1	85.0 84.5 83.7 82.8 81.8 80.6 79.2 77.7 75.9	15.1 15.1 13.5 11.6 9.8 8.0 6.7 4.9	18.3 18.1 15.3 13.1 11.3 9.7 8.2 7.0 5.1						
38.0	43.0	73.8	3.1	3.2						
31.9 32.0 34.0 36.0 38.0	65.0 64.8 61.6 58.3 54.8	81.6 81.6 80.5 79.3 78.0	12.7 12.1 10.2 8.8	12.2 12.2 11.6 10.0 8.8	uma prin	cipal 75.	0[°]			
40.0 42.0 44.0 46.0 48.0 50.0	51.2 47.3 43.2 38.8 33.8 28.1	76.4 74.7 72.6 70.3 67.5 64.2	7.6 6.6 5.8 5.0 4.4 3.1	7.7 6.8 5.9 5.1 4.4 3.1						
55.0	20.1	U-7.∠	,		ıma prin	cinal 65	1°10		l.	
45.2 46.0 48.0 50.0	55.0 53.5 49.8 45.9 39.8	75.1 74.6 73.0 71.1 67.8	5.2 4.2 3.3 2.1	4.4 4.0 3.2 2.5	and pilli		~!]			



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

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

Lastre trasero [t]:

Lastre central [t]:

2 - Vía ancha 94.0 52.6 Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

Inserción			1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
44.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (1916-1) 86.5 m Plumín 43.0 [m] Posición midfall (1916)										
			Ángı	ılo de plu	ıma prin	cipal 88.0	0 [°]			
13.9	78.0	89.2	Ī	14.5						
14.0	77.9	89.2	15.1	14.5						
16.0	75.2	88.7	14.4	13.1						
18.0	72.4	88.1	11.4	10.7						
20.0	69.6	87.4	8.9	8.7						
22.0	66.7	86.5	7.3	7.3						
24.0 26.0	63.7 60.7	85.6	6.0 5.0	6.0 5.1						
28.0	57.6	84.5 83.3	5.0 4.2	4.3						
30.0	54.3	81.9	3.6	3.6						
32.0	50.9	80.3	3.0	3.1						
34.0	47.3	78.6	2.6	2.6						
36.0	43.5	76.6	2.2	2.2						
Ángulo de pluma principal 83.0 [°]										
21.4	73.0	87.8	ı	9.8	<u> </u>	·				
22.0	72.2	87.7	9.6	9.8						
24.0	69.4	86.9	8.3	8.5						
26.0	66.5	86.1	6.9	7.1						
28.0	63.5	85.1	5.7	5.9						
30.0	60.5	84.1	4.9	5.1						
32.0	57.4	82.8	4.2	4.3						
34.0	54.1	81.4	3.5	3.7						
36.0	50.7	79.9	3.0	3.2						
38.0 40.0	47.1 43.3	78.1 76.1	2.6 2.2	2.7 2.3						
40.0	1 40.0	70.1				-:	0.00			
			Angu		ıma prin	cipai 75.0	<u>ו "ן</u>			
33.1	65.0	84.3	5.0	6.0						
34.0	63.7	83.9	5.8	6.0						
36.0 38.0	60.6 57.5	82.8 81.6	5.1 4.4	5.2 4.5						
40.0	54.3	80.2	3.7	3.8						
42.0	50.9	78.6	3.1	3.3						
44.0	47.3	76.9	2.7	2.8						
46.0	43.5	74.8	2.3	2.4						
					ıma prin	cipal 65.0	1°10			
46.8	55.0	77.6		3.6		,				
48.0	53.0	76.8	3.5	3.6						
50.0	49.6	75.2	3.0	3.1						
55.0	40.0	70.1	2.0	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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.0	0 m Plum Cabeza 43.0	de plumi	oal, Punt ín (2316- osición m	1) 89.5 r	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0	[°]			
14.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0	78.0 75.2 72.5 69.6 66.8 63.8 60.8 57.6	89.2 88.7 88.1 87.4 86.6 85.6 84.5 83.3	15.1 15.1 15.1 15.1 13.4 9.8 7.1 4.9	26.6 25.2 21.0 17.8 14.5 10.5 7.6 5.2						
30.0	54.4	81.9	3.0	3.1						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
21.5	73.0	87.8		19.2						
22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0	72.3 69.5 66.6 63.6 60.6 57.4 54.2 50.8	87.7 87.0 86.1 85.2 84.1 82.9 81.5 79.9	15.1 15.1 15.0 13.2 11.9 9.6 7.3 5.6	19.2 17.7 15.4 13.2 11.6 9.3 7.4 5.8						
38.0	47.2	78.1	4.1	4.3						
40.0	43.4	76.1	2.7	2.8		-i175:	2.5.2			
	05.0	0.1.0	Angı		ıma prin	cipal /5.0	ו "ו		1	
33.2 34.0 36.0 38.0 40.0	65.0 63.8 60.7 57.6 54.4	84.3 83.9 82.8 81.6 80.2	13.0 12.1 10.4 9.0	12.4 11.7 10.3 9.1 8.0						
42.0 44.0 46.0 48.0 50.0	51.0 47.4 43.6 39.5 35.0	78.7 76.9 74.9 72.6 69.9	7.7 6.8 5.9 5.1 4.5	7.1 6.1 5.3 4.5 3.8						
			Ángı	ılo de plu	ıma prin	cipal 65.0	0[°]			
46.9 48.0 50.0 52.0	55.0 53.1 49.7 46.3	77.6 76.9 75.2 73.4	4.0 3.1 2.3	3.5 3.1 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

Valor de vuelco: 2 - Vía ancha Lastre trasero [t]: 94.0 Lastre central [t]: 52.6

	Inserción		1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
44.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (1916-1) 89.5 m Plumín 46.0 [m] Posición midfall (1916)										
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
14.6 16.0 18.0 20.0 22.0 24.0 26.0	78.0 76.2 73.6 70.9 68.3 65.6 62.8	92.1 91.8 91.2 90.6 89.8 88.9 87.9	14.4 14.1 11.1 8.8 7.2 5.9 4.9	13.6 13.2 10.7 8.6 7.3 6.0 5.0						
28.0 30.0 32.0 34.0	59.9 57.0 53.9 50.7	86.8 85.6 84.1 82.6	4.2 3.5 3.0 2.5	4.3 3.6 3.1 2.6						
36.0	47.4	80.8	2.5	2.0						
			Ángı	ılo de plu	uma prin	cipal 83.0	1°10			
22.3 24.0 26.0	73.0 70.8 68.1	90.7 90.1 89.4	8.4 6.9	8.8 8.4 7.0						
28.0 30.0 32.0 34.0 36.0	65.4 62.6 59.7 56.8 53.7	88.5 87.5 86.4 85.1 83.7	5.8 4.9 4.3 3.6 3.0	5.9 5.0 4.3 3.7 3.1						
38.0 40.0	50.5 47.2	82.1 80.3	2.6 2.2	2.7 2.3						
					uma prin	cipal 75.0	1°10	•		
34.4 36.0 38.0	65.0 62.7 59.9	87.0 86.2 85.1	5.1 4.3	5.3 5.2 4.4		. ,	- , ,			
40.0 42.0 44.0 46.0	56.9 53.9 50.7 47.4	83.8 82.4 80.9 79.1	3.7 3.1 2.7 2.3	3.8 3.2 2.8 2.4						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
48.5 50.0 55.0	55.0 52.7 44.3	80.1 79.1 74.4	3.0	3.1 3.1 2.1						

Source:a9841388



2821-1

2821-1

Nº de ident.: 9842523/95738/

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

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

Valor de vuelco: 2 - Vía ancha

Lastre trasero [t]: 94.0
Lastre central [t]: 52.6

	Inserción			2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
44.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (2316-1) 92.5 m Plumín 46.0 [m] Posición midfall (2316)										
			Ángu	ılo de plu	uma prin	cipal 88.0	[°]			
14.6 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0	78.0 76.2 73.6 71.0 68.4 65.6 62.8 60.0 57.0	92.2 91.8 91.3 90.6 89.8 89.0 88.0 86.8 85.6	15.1 15.1 14.7 14.2 11.0 7.9 5.7 3.8	23.1 23.1 19.4 16.5 14.4 11.0 8.1 6.0 4.0						
			Ángu	ılo de plu	uma prin	cipal 83.0	[°]			
22.4	73.0	90.7	15.1	16.5						
24.0 26.0 28.0 30.0	70.9 68.2 65.5 62.7	90.2 89.4 88.5 87.5	15.1 14.1 12.4 10.6	16.5 14.2 12.4 10.8						
32.0 34.0 36.0 38.0 40.0 42.0	59.8 56.9 53.8 50.6 47.3 43.7	86.4 85.1 83.7 82.1 80.4 78.4	9.2 7.4 5.9 4.8 3.6 2.5	9.5 7.7 6.3 5.1 3.8 2.6						
42.0	43.7	70.4			ıma prin	oinal 75 () [°]			
34.4 36.0	65.0 62.8	87.0 86.3	11.1	11.0 10.3	uma prin	cipai 75.) [·]			
38.0 40.0 42.0	60.0 57.0 54.0	85.1 83.9 82.5	9.9 8.6 7.4	9.1 8.0 7.0						
44.0 46.0 48.0 50.0 55.0	50.8 47.4 43.9 40.1 28.9	80.9 79.1 77.1 74.9 67.5	6.4 5.6 4.9 4.2 2.5	6.2 5.4 4.6 3.8 2.3						
			Ángı	ılo de plu	ıma prin	cipal 65.0	0[°]			
48.6 50.0 52.0	55.0 52.8 49.8	80.1 79.1 77.5	3.1 2.3	2.8 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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
44.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (1916-1) 92.5 m Plumín 49.0 [m] Posición midfall (1916)										
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
15.2 16.0 18.0 20.0 22.0 24.0	78.0 77.0 74.6 72.2 69.7 67.2	95.1 94.9 94.4 93.7 93.0 92.2	11.0 11.0 9.9 8.5 6.9 5.8	12.1 12.1 10.3 8.5 7.0 5.9						
26.0 28.0 30.0 32.0 34.0	64.6 61.9 59.2 56.5 53.6	91.3 90.3 89.1 87.8 86.4	4.8 4.1 3.5 2.9 2.4	4.9 4.2 3.5 3.0 2.5						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
23.2 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0	73.0 72.0 69.5 67.0 64.4 61.8 59.1 56.3 53.4	93.6 93.3 92.6 91.8 90.9 89.8 88.7 87.4 85.9	7.8 6.8 5.8 4.8 4.1 3.5 2.9 2.4	7.9 7.9 6.8 5.8 4.9 4.2 3.6 3.0 2.5						
			Ángu	ılo de plu	ıma prin	cipal 75.0	1°10			
35.7 36.0 38.0 40.0 42.0 44.0 46.0	65.0 64.5 61.9 59.2 56.4 53.5 50.5	89.7 89.6 88.6 87.4 86.1 84.7 83.1	4.5 4.5 4.2 3.6 3.1 2.6 2.2	4.6 4.6 4.3 3.7 3.1 2.6 2.2	·					
70.0	. 00.0	00.1			ıma prin	cipal 65.0	[°]C			
50.3 54.0	55.0 49.4	82.5 79.5	J	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

	Inserción		1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
44.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (2316-1) 95.5 m Plumín 49.0 [m] Posición midfall (2316)										
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
15.2 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0	78.0 77.1 74.7 72.2 69.7 67.2 64.6 62.0 59.3	95.1 94.9 94.4 93.8 93.1 92.2 91.3 90.3 89.1	15.1 15.1 14.8 13.8 12.0 8.7 6.1 4.3	21.7 21.7 19.2 16.4 14.2 11.8 8.8 6.5 4.7						
32.0	56.5	87.9	2.9	3.1						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
23.3 24.0 26.0 28.0 30.0	73.0 72.1 69.6 67.1 64.5	93.6 93.4 92.6 91.8 90.9	15.1 15.1 14.5 12.4 10.6	15.4 15.4 14.2 12.4 10.7						
32.0 34.0 36.0 38.0 40.0	61.9 59.1 56.4 53.5 50.5	89.8 88.7 87.4 86.0 84.4	9.1 7.7 6.1 4.8 3.8	9.4 8.0 6.4 5.1 4.0						
42.0	47.3	82.6	2.9 Ápgi	Jo do plu	ıma prin	cinal 75 () [°]			
35.7 36.0 38.0 40.0 42.0 44.0 46.0 48.0 50.0	65.0 64.6 62.0 59.3 56.5 53.6 50.6 47.5 44.2	89.7 89.6 88.6 87.4 86.2 84.7 83.1 81.4 79.4	10.1 9.7 8.4 7.4 6.5 5.8 5.2 4.5	10.1 10.1 8.8 7.8 6.8 6.0 5.2 4.5 3.7	лпа рпп	ыраг 75.	J []			
55.0	34.8	73.2	3.0	2.2		-in al 05 :			l	
50.3	55.0	82.5	Angu	ilo de plu	ıma prind	cipai 65.0	֖֓֞֝֞֓֓֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓			
51.0	54.2	82.1	2.4							



N° de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 52.0	de plumí	n (1916-		n Plumín			
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]			
15.8	78.0	98.0		9.7						
16.0	77.8	98.0	8.6	9.7						
18.0	75.5	97.5	8.1	9.2						
20.0	73.2	96.9	7.2	7.9						
22.0	70.9	96.2	6.0	6.3						
24.0	68.5	95.5	5.2	5.3						
26.0	66.1	94.6	4.3	4.4						
28.0	63.7	93.7	3.5	3.6						
30.0	61.2	92.6	2.9	3.1						
32.0	58.6	91.4	2.4	2.5						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]C			
24.1	73.0	96.4	6.2	6.5						
26.0	70.8	95.8	6.0	6.2						
28.0	68.4	95.0	5.1	5.2						
30.0	66.0	94.2	4.3	4.4						
32.0	63.6	93.2	3.5	3.6						
34.0	61.0	92.1	3.0	3.1						
36.0	58.5	90.9	2.5	2.6						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
36.9	65.0	92.4		3.6						
38.0	63.7	91.9	3.5	3.6						
40.0	61.2	90.9	3.0	3.2						
42.0	58.6	89.7	2.5	2.6						
44.0	56.0	88.4	2.1	2.2						



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]:	94.0
Lastre central [t]:	52.6

I	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
44.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (2316-1) 98.5 m Plumín 52.0 [m] Posición midfall (2316)										
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]			
15.9	78.0	98.0	15.1	19.7						
16.0	77.9	98.0	15.1	19.7						
18.0	75.6	97.5	15.1	18.6						
20.0	73.3	96.9	15.1	15.9						
22.0	71.0	96.3	13.3	13.6						
24.0	68.6	95.5	11.7	11.9						
26.0	66.2	94.6	9.0	9.1						
28.0	63.8	93.7	6.5	6.7						
30.0	61.3	92.6	4.5	4.8						
32.0	58.7	91.4	3.3	3.5						
			Ángu	ılo de plu	ıma prin	cipal 83.0	[°]C			
24.1	73.0	96.4		14.0						
26.0	70.8	95.8	14.0	13.7						
28.0	68.5	95.1	11.8	11.9						
30.0	66.1	94.2	10.2	10.4						
32.0	63.6	93.2	8.7	9.0						
34.0	61.1	92.2	7.6	8.0						
36.0	58.5	91.0	6.3	6.6						
38.0	55.9	89.7	4.9	5.2						
40.0	53.2	88.2	3.8	4.0						
42.0	50.3	86.6	2.9	3.0 2.4						
44.0	47.4	84.8	2.2 Ángu		ıma nri:-	oinal 75 () [°]	<u> </u>		
07.0	05.0	00.4	Angl		ıma prine	cipal 75.0	ر ا ^ر			
37.0 38.0	65.0 63.7	92.4 92.0	0.4	9.0						
38.0 40.0	63.7 61.2	92.0 90.9	8.4 7.9	8.7 7.6						
40.0 42.0	58.7	90.9 89.7	7.9 6.9	7.6 6.6						
44.0	56.0	88.4	6.1	5.8						
46.0	53.3	87.0	5.4	5.0 5.0						
48.0	50.5	85.4	5.4 4.7	4.4						
50.0	47.5	83.6	4.7	3.7						
55.0	39.4	78.3	2.8	2.1						
57.0	36.1	75.6	2.1							
									1	1



Nº de ident.: 9842523/95738/ 360°

Radio de descarga:

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

2821-1 2821-1

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

94.0 Lastre central [t]: 52.6

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
44.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (2316-1) 101.5 m Plumín 55.0 [m] Posición midfall (2316)										
			Ángu	ılo de plı	ıma prin	cipal 88.0	D[°]			
16.5 18.0 20.0 22.0 24.0	78.0 76.4 74.2 72.0 69.8	101.0 100.6 100.1 99.4 98.7	15.1 15.1 14.5 12.8 10.6	17.4 17.4 14.9 12.8 10.9	·					
26.0 28.0 30.0 32.0 34.0	67.6 65.3 63.0 60.6 58.2	97.9 97.0 96.0 94.9 93.7	8.7 6.4 4.6 3.1 2.4	9.1 6.7 4.8 3.4 2.5						
			Ángu	ılo de plı	ıma prin	cipal 83.0	D[°]			
25.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 42.0	73.0 71.9 69.7 67.5 65.2 62.8 60.5 58.0 55.5 52.9	99.3 99.0 98.3 97.5 96.6 95.6 94.5 93.3 91.9 90.5	11.7 10.7 9.1 7.8 6.8 6.0 4.8 3.7 2.7	12.2 12.2 11.2 9.7 8.4 7.3 6.5 5.1 3.9 2.9						
			Ángu	ılo de plu	ıma prin	cipal 75.0	[°]C			
38.2 40.0 42.0 44.0 46.0 48.0 50.0 55.0 56.0	65.0 63.0 60.6 58.1 55.6 53.0 50.4 43.4 41.8	95.2 94.3 93.2 92.0 90.7 89.2 87.6 82.8 81.7	7.2 6.5 5.7 5.0 4.3 3.8 2.5 2.2	7.6 7.3 6.4 5.5 4.8 4.1 3.5			-			



Nº de ident.: 9842523/95738/

Radio de descarga:

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

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
44.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (2316-1) 104.5 m Plumín 46.0 [m] Posición midfall (2316)										
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]C			
14.6 16.0 18.0 20.0 22.0 24.0 22.4 24.0 26.0 28.0 30.0 32.0	78.0 76.2 73.6 71.0 68.4 65.6 73.0 70.9 68.2 65.5 62.7 59.8	92.2 91.8 91.3 90.6 89.8 89.0 90.7 90.2 89.4 88.5 87.5 86.4	15.1 15.1 12.8 9.6 5.5 Ángu 15.1 14.9 13.7 11.5 8.5 6.4	22.0 22.0 18.8 14.4 10.3 5.8 Illo de plu 15.7 15.6 13.3 11.1 8.6 6.8	uma prin	cipal 83.	D[°]			
34.0	56.9	85.1	4.1 Ángi	4.3	ıma nrin	 cipal 75.0	1 ° 1			
34.4 36.0 38.0 40.0	65.0 62.8 60.0 57.0	87.0 86.3 85.1 83.9	9.6 8.1 6.8	7.9 6.9 5.8 4.8	лпа рпп	oipai 73.	, I			
42.0 44.0 46.0	54.0 50.8 47.4	82.5 80.9 79.1	5.6 4.6 3.5	3.9 3.2 2.4						



Nº de ident.: 9842523/95738/ 360°

Radio de descarga:

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

Valor de vuelco: 2 - Vía ancha

valor ac vacioo.	_	Via ariona
Lastre trasero [t]:		94.0
Lastre central [t]:		52.6

	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 49.0		า (2316-1	1) 107.5`	m Plumíı			
			Ángı	ılo de plu	ıma prin	cipal 88.0	l°10			
15.2 16.0 18.0 20.0 22.0 24.0 26.0 23.3 24.0 26.0 28.0 30.0 32.0 34.0	78.0 77.1 74.7 72.2 69.7 67.2 64.6 73.0 72.1 69.6 67.1 64.5 61.9 59.1	95.1 94.9 94.4 93.8 93.1 92.2 91.3 93.6 93.4 92.6 91.8 90.9 89.8 88.7	15.1 15.1 14.7 9.6 6.3 3.4 Ángu 13.3 13.2 12.3 10.1 8.1 6.3 4.9	18.5 18.5 17.0 14.3 9.8 6.7 3.6 ulo de plu 13.1 12.2 10.3 8.4 6.7	uma prind	cipal 83.0	D[°]			
36.0	56.4	87.4	3.2	3.4						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
35.7 36.0 38.0 40.0 42.0 44.0 46.0 48.0	65.0 64.6 62.0 59.3 56.5 53.6 50.6 47.7	89.7 89.6 88.6 87.4 86.2 84.7 83.1 81.4	7.9 7.7 6.4 5.2 4.2 3.3 2.3	6.9 6.7 5.6 4.6 3.7 3.0 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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		44.(0 m Plum Cabeza c 52.0	le plumír	า (2316-1	o de caro 1) 110.5 nidfall (23	m Plumíi	dfall n		
			Ángu	ılo de plu	ıma prin	cipal 88.	[°]			
15.9 16.0 18.0 20.0 24.0 26.0 24.1 26.0 28.0 30.0 32.0 34.0 36.0	78.0 77.9 75.6 73.3 71.0 68.6 66.2 73.0 70.8 68.5 66.1 63.6 61.1 58.5	98.0 98.0 97.5 96.3 95.5 94.6 96.4 95.8 95.1 94.2 93.2 92.2 91.0	12.4 10.4 8.7 6.6 5.1 3.8	12.3 12.1 10.2 8.7 6.8 5.4 4.1	uma prin	cipal 83.) [°]			
38.0	55.9	89.7	2.5 Ángi	ılo de nlı	ıma prin	cipal 75.	1°10			
37.0 38.0 40.0 42.0 44.0 46.0 48.0	65.0 63.7 61.2 58.7 56.0 53.3 50.7	92.4 92.0 90.9 89.7 88.4 87.0 85.4	7.2 6.1 4.9 3.9 3.0 2.2	6.0 5.4 4.4 3.6 2.8 2.1			.]			



Nº de ident.: 9842523/95738/

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

2 - Vía ancha Valor de vuelco:

Lastre trasero [t]: 94.0 Lastre central [t]: 52.6

	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 13.0	de plumí		1) 32.5 r	n Plumín			
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]			
7.8 8.0 9.0 10.0 11.0 12.0 13.0 14.0 16.0	78.0 77.1 72.5 67.8 62.8 57.6 52.0 45.9 30.7	62.9 62.8 62.5 62.1 61.6 61.0 60.2 59.3 56.6	15.1 15.1 15.1 15.1 15.1 13.2 11.3 9.6 7.0 Ángu	30.1 30.1 25.7 19.0 14.9 12.2 10.3 8.8 6.8 ulo de plu 25.2 19.6 12.5	uma princ	cipal 83.0	D [°]			
18.0	46.8	59.0 56.5	9.8	9.0						
20.0	32.0	50.5	7.1 Ángi		ıma prin	cipal 75 (1°10			
21.2	65.0	60.0	,gc	15.7	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	5.pa 5	, <u>, , , , , , , , , , , , , , , , , , </u>			
22.0 24.0 26.0	61.0 50.0 36.3	59.6 58.1 55.9	14.9 10.6 7.6	13.6 9.6 7.3						
			Ángu	ılo de plu	ıma prin	cipal 65.0	[°]			
30.9 32.0 34.0	55.0 48.5 34.3	55.8 54.9 52.5	10.0	10.8 9.2 7.0						
L			Angu		ıma prin	cipal 45.0	[°]			
47.3 48.0 49.0	35.0 28.7 15.1	42.6 41.7 39.3	6.6 5.8	6.9 6.4 5.7						

Source:a9841388



N° de ident.: 9842523/95738/

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

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 16.0	de plumí		1) 35.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
8.4 9.0 10.0 11.0 12.0	78.0 75.9 72.1 68.3 64.3	65.8 65.7 65.3 64.9 64.5	15.1 15.1 15.1 14.9	30.1 29.9 25.3 20.2 16.5						
13.0 14.0 16.0 18.0	60.2 55.9 46.4 34.8	63.9 63.2 61.5 59.1	14.0 11.8 9.0 7.2	14.1 12.1 9.5 7.7						
			Ángu		ıma prin	cipal 83.0	[°]			
13.9 14.0 16.0 18.0 20.0 22.0	73.0 72.7 64.9 56.5 47.1 35.7	65.0 65.0 64.1 62.9 61.3 58.9	15.1 15.1 12.9 10.1 7.8	25.4 25.4 16.8 12.3 9.6 7.8						
			Ángı	ılo de plu	ıma prin	cipal 75.0	0 [°]			
22.5 24.0 26.0 28.0	65.0 58.7 49.6 38.9	62.7 61.9 60.4 58.2	14.7 10.8 8.3	16.2 13.3 10.2 8.1	-					
			Ángı		ıma prin	cipal 65.0	[°]			
32.6 34.0 36.0	55.0 48.4 37.4	58.2 57.1 54.9	10.3 8.0	9.8 7.9						
			Ángı		ıma prin	cipal 45.0	[°]		ı	
49.8 50.0 52.0	35.0 33.4 17.2	44.3 44.3 39.7	7.3 6.1	7.4 7.4						



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]
		47.0	0 m Plum Cabeza 16.0	de plumi	oal, Punt ín (2316- osición m	1) 38.5 r	n Plumín	dfall I		
			Ángı	ılo de plı	ıma prin	cipal 88.0	D[°]			
8.5 9.0 10.0 11.0 12.0	78.0 76.1 72.4 68.5 64.5	65.8 65.7 65.4 65.0 64.5	15.1 15.1 15.1 15.1 15.1	30.1 30.1 30.1 28.6 23.4						
13.0 14.0 16.0 18.0	60.4 56.1 46.6 35.1	63.9 63.3 61.6 59.2	15.1 15.1 14.0 11.3	19.9 17.0 13.1 10.6						
					ıma prin	cipal 83.0	[°]		ı	
14.0 16.0 18.0 20.0 22.0	73.0 65.1 56.7 47.3 36.0	65.0 64.2 63.0 61.3 59.0	15.1 15.1 15.1 14.0 11.3	30.1 24.0 17.2 13.3 10.7						
			Ángı	ılo de plı	ıma prin	cipal 75.0	D[°]			
22.5 24.0 26.0 28.0 30.0	65.0 58.9 49.9 39.2 24.5	62.7 61.9 60.4 58.3 54.9	15.1 13.9 10.8 8.9	22.8 18.4 14.0 11.1 9.3	-					
			Ángı	ılo de plı	ıma prin	cipal 65.0	D[°]			
32.7 34.0 36.0	55.0 48.7 37.7	58.2 57.2 54.9	13.9 10.8	14.8 12.8 10.2						
			Ángı	ılo de plı	ıma prin	cipal 45.0	D[°]			
49.8 50.0 52.0	35.0 33.7 17.8	44.3 44.3 39.9	6.4 5.6	5.4 5.3						



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]: 94.0 Lastre central [t]: 52.6

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 19.0	de plumí	n (1916-		n Plumín			
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]			
9.1	78.0	68.7	15.1	30.1						
10.0	75.1	68.5	15.1	28.9						
11.0	71.9	68.2	15.1	24.4						
12.0	68.6	67.8	15.1	20.6						
13.0	65.3	67.3	15.1	17.5						
14.0	61.9	66.8	15.1	15.3						
16.0	54.7	65.5	12.9	12.0						
18.0 20.0	46.7 37.3	63.8 61.5	10.8 8.6	9.9 8.2						
20.0	24.8	58.1	7.2	7.0						
22.0	24.0	30.1								
			Angu	ilo de plu	ıma prin	cipal 83.0)[°]			
14.8	73.0	67.9	15.1	24.8						
16.0	69.1	67.4	15.1	20.8						
18.0	62.4	66.5	15.1	15.5						
20.0 22.0	55.2 47.3	65.2	13.1 11.0	12.2 10.0						
24.0	38.0	63.5 61.3	8.7	8.3						
26.0	25.9	58.0	7.3	7.1						
20.0	20.0	30.0				-i1 7 <i>C</i> /	2 6 0 1			
			Angu		ıma prini	cipal 75.0	ן ן י		1	
23.7	65.0	65.4		16.4						
24.0	64.2	65.3	15.1	16.4						
26.0	57.1	64.1	14.5	12.9						
28.0 30.0	49.4 40.5	62.6 60.5	11.7 9.2	10.6 8.7						
30.0	40.5 29.5	57.6	9.2 7.6	8.7 7.4						
52.0	20.0	57.0			ıma nrin	oinal 65 f) [°]	1		
		20.7	Angu		лна рин	cipal 65.0	ווי			
34.3	55.0	60.7	44.0	11.8						
36.0	48.4	59.4	11.2	10.2						
38.0 40.0	39.4 27.8	57.2 54.1	9.0 7.5	8.5 7.3						
40.0	21.0	J 4 . I					2 6 9 3	1		
			Angu		uma prini	cipal 45.0	ו []			
52.2	35.0	46.0	0.0	7.1						
55.0	15.6	40.1	6.6							



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

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

Valor de vuelco: 2 - Vía ancha Lastre trasero [t]: 94.0 Lastre central [t]: 52.6 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]
		47.	0 m Plum Cabeza 19.0	de plumí	n (2316-	o de caro 1) 41.5 r nidfall (23	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
9.1	78.0	68.7		30.1						
10.0	75.2	68.5	15.1	30.1						
11.0	72.1	68.2	15.1	29.9						
12.0	68.8	67.8	15.1	28.8						
13.0	65.5	67.3	15.1	24.2						
14.0	62.1	66.8	15.1	20.9						
16.0	54.9	65.5	14.4	16.2						
18.0	46.9	63.8	12.9	13.1						
20.0	37.5	61.5	10.2	10.6						
22.0	25.1	58.2	8.4	8.9						
			Angı	ılo de plı	ıma prin	cipal 83.0	0[°]			
14.8	73.0	67.9		30.1						
16.0	69.3	67.5	15.1	28.4						
18.0	62.6	66.5	15.1	21.3						
20.0	55.4	65.2	14.6	16.4						
22.0	47.5	63.5	13.1	13.3						
24.0	38.2	61.3	10.4	10.8						
26.0	26.2	58.1	8.6	9.1						
			Angı	ılo de plı	ıma prin	cipal 75.0	0[°]			
23.8	65.0	65.4		22.5						
24.0	64.3	65.4	15.1	22.5						
26.0	57.3	64.2	15.1	17.5						
28.0	49.6	62.6	15.1	14.0						
30.0	40.8	60.6	12.3	11.4						
32.0	29.7	57.6	10.2	9.6						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
34.4	55.0	60.7		14.9						
36.0	48.6	59.4	14.3	12.9						
38.0	39.6	57.3	11.7	10.6						
40.0	28.1	54.2	9.5	9.0						
			Ángu	ılo de plu	ıma prin	cipal 45.0	[°]			
52.3	35.0	46.0		4.5						
55.0	16.1	40.2	4.4							



Nº de ident.: 9842523/95738/

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

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 22.0	de plumi		1) 41.5 r	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0	D[°]			
9.7 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0 24.0 15.7 16.0 18.0	78.0 77.1 74.4 71.7 68.9 66.1 60.1 53.8 46.9 39.0 29.2	71.7 71.6 71.3 71.0 70.6 70.2 69.1 67.7 66.0 63.8 60.8	15.1 15.1 14.6	21.5 21.4 16.0	uma prind	cipal 83.	0[°]			
20.0 22.0 24.0 26.0 28.0	60.6 54.3 47.4 39.6 30.0	68.8 67.4 65.7 63.6 60.6	9.9 8.2 6.9 6.0	12.8 10.4 8.7 7.4 6.4						
			Ángı	ılo de plı	ıma prin	cipal 75.0	[°]			
25.0 26.0 28.0 30.0 32.0 34.0	65.0 62.1 55.9 49.2 41.7 32.7	68.1 67.7 66.4 64.8 62.8 60.1	14.8 11.9 9.6 7.9 6.7	14.4 13.4 10.9 9.1 7.7 6.6						
			Ángı	ılo de plu	uma prin	cipal 65.0	[°]C			
36.0 38.0 40.0 42.0	55.0 48.4 40.7 31.5	63.1 61.6 59.5 56.7	9.3 7.7 6.6	10.2 8.9 7.5 6.6						
			Angı		ıma prin	cipal 45.0	D[°]			
54.7 55.0 57.0	35.0 33.5 21.4	47.8 47.6 43.7	6.7 5.9	6.3 6.2 5.6						



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 plumí		1) 44.5 r	n Plumín			
			Ángu	ılo de plu	uma prin	cipal 88.0	[°]			
9.7 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0 24.0 15.7 16.0 18.0 20.0 22.0 24.0	78.0 77.3 74.6 71.9 69.1 66.2 60.3 54.0 47.1 39.2 29.5 73.0 72.2 66.6 60.7 54.7	71.7 71.6 71.3 71.0 70.6 70.2 69.1 67.8 66.1 63.8 60.8	15.1 15.1 15.1 15.1 15.0 14.2 12.6 10.1 8.3 Ángu	30.1 30.1 30.1 27.8 25.5 21.9 17.1 13.8 11.5 9.6 8.2 21.0 de plu 29.9 29.8 22.3 17.3 13.9 11.6	uma prind	cipal 83.0	D[°]			
26.0 28.0	39.8 30.2	63.6 60.7	9.2 7.8	9.7 8.3						
26.0	30.2	00.7			uma prin	rinal 75 (1 ° 1			
25.1	65.0	68.1	Aligo	19.6			J []			
26.0 28.0 30.0 32.0 34.0	62.3 56.1 49.4 41.9 32.9	67.7 66.4 64.9 62.8 60.1	15.1 14.6 13.5 10.9 9.0	18.4 14.7 12.2 10.2 8.8						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
36.1 38.0 40.0 42.0	55.0 48.5 40.9 31.7	63.1 61.7 59.6 56.8	12.4 10.1 8.4	13.1 11.3 9.5 8.2			- -			
			Ángı	ılo de plu	ıma prin	cipal 45.0	[°]			
54.7 55.0 57.0	35.0 33.7 21.7	47.7 47.6 43.8	4.6 4.0	4.0 3.9 3.2						



N° de ident.: 9842523/95738/ Pi

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

Valor de vuelco: Lastre trasero [t]: 2 - Vía ancha 94.0 52.6 Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	entral [t	-		52.6						
	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]
		47.0	0 m Plum Cabeza 25.0	de plumí	oal, Punt n (1916- osición m	1) 44.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.	0 [°]			
10.3 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0	78.0 76.4 74.0 71.6 69.1 64.1 58.8 53.1 47.0 40.2 32.1 21.4	74.6 74.4 74.1 73.8 73.4 72.5 71.4 70.0 68.2 66.1 63.3 59.3	15.1 15.1 15.1 15.1 15.1 12.3 10.2 8.3 7.1 6.1 5.3 4.6 Ángu		uma prin	cipal 83.	0 [°]			
16.5 18.0	73.0 69.5	73.6 73.1	15.1	19.0 16.4						
20.0 22.0 24.0 26.0 28.0 30.0 32.0	64.4 59.2 53.6 47.5 40.7 32.8 22.3	72.2 71.1 69.7 68.0 65.9 63.1 59.2	13.7 11.7 9.3 7.8 6.7 5.8	13.1 10.8 9.0 7.7 6.6 5.8 5.1						
			Ángı	ılo de plu	ıma prin	cipal 75.	0 [°]			
26.3 28.0 30.0 32.0 34.0 36.0 38.0	65.0 60.5 55.0 49.1 42.5 35.0 25.4	70.9 70.0 68.7 67.1 65.1 62.5 59.0	12.4 9.9 8.2 6.9 6.0 5.3	12.8 11.2 9.4 8.0 6.9 6.0 5.3						
					ıma prin	cipal 65.	0[°]			
37.8 38.0 40.0 42.0 44.0 46.0	55.0 54.3 48.3 41.7 33.9 24.0	65.6 65.5 63.8 61.8 59.1 55.5	9.4 8.0 6.8 5.9 5.2	9.1 9.1 7.8 6.8 5.9 5.2	·					
L			Angu	no de pil	ıma prin	upai 45.	ν[]			

57.1

35.0

49.5

5.7

Source:a9841388



N° de ident.: 9842523/95738/

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

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 25.0	de plumí		1) 47.5 r	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0	D[°]			
10.4 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0	78.0 76.5 74.1 71.7 69.2 64.2 58.9 53.3 47.2	74.6 74.5 74.2 73.8 73.5 72.6 71.4 70.0 68.3	15.1 15.1 15.1 15.1 15.1 15.1 14.1 12.3 10.6	30.1 30.1 30.1 25.8 22.6 17.5 14.3 11.8						
24.0 26.0	40.4 32.3	66.1 63.4	8.7 7.3	8.5 7.3						
28.0 28.0	32.3 21.6	59.4	6.2	6.2						
			Ángu	ılo de plu	ıma prin	cipal 83.0	[°]			
16.6 18.0 20.0	73.0 69.6 64.6	73.6 73.1 72.2	15.1 15.1	26.4 22.8 17.8						
22.0 24.0 26.0 28.0 30.0 32.0	59.3 53.7 47.6 40.9 33.0 22.5	71.1 69.7 68.0 65.9 63.2 59.3	14.3 12.6 10.8 8.9 7.5 6.4	14.5 11.9 10.1 8.6 7.4 6.3						
32.0	22.0	55.5			ıma prin	cinal 75 () [°]		ı	
26.3 28.0 30.0 32.0 34.0 36.0 38.0	65.0 60.7 55.2 49.2 42.7 35.1 25.6	70.9 70.0 68.7 67.1 65.1 62.6 59.1	14.5 12.2 10.2 8.5 7.3 6.3	17.3 15.1 12.5 10.6 9.0 7.8 6.7		приг то.	5 []			
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
37.8 38.0 40.0 42.0 44.0 46.0	55.0 54.5 48.5 41.8 34.1 24.2	65.6 65.5 63.9 61.8 59.2 55.6	10.9 9.3 7.9 6.8 5.9	11.5 11.5 9.9 8.4 7.3 6.3						
					uma prin	cipal 45.0	1°10			
57.2 60.0	35.0 20.2	49.5 44.3	3.0	3.1 2.2	P	- p === .5.				



Nº de ident.: 9842523/95738/

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

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 28.0	de plumí		1) 47.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.	0[°]			
10.9	78.0	77.5		30.1						
11.0 12.0	77.8 75.7	77.5 77.3	15.1 15.1	30.1 30.1						
13.0	73.6	77.0	15.1	29.7						
14.0	71.4	76.6	15.1	26.1						
16.0	67.0	75.8	15.1	21.2						
18.0	62.5	74.9	15.1	17.7						
20.0 22.0	57.7 52.6	73.7 72.2	14.5 13.7	15.3 13.3						
24.0	47.2	70.5	12.6	11.9						
26.0	41.1	68.4	11.0	10.6						
28.0	34.2	65.7	9.7	9.6						
30.0	25.7	62.2	8.8	8.8						
			Ángı	ılo de plu	ıma prin	cipal 83.	0 [°]			
17.4	73.0	76.5		26.8						
18.0	71.8	76.3	15.1	26.7						
20.0	67.4	75.5	15.1	21.5						
22.0 24.0	62.8 58.0	74.5 73.3	15.1 14.6	17.9 15.4						
26.0	53.0	71.9	14.0	13.5						
28.0	47.6	70.2	12.7	12.0						
30.0	41.6	68.1	11.1	10.7						
32.0	34.8	65.5	9.8	9.7						
34.0	26.4	62.1	8.9 Ápgi	lo do plu	ıma prin	cipal 75 i	1 ° 1 0			
27.6	65.0	73.6	15.1	18.5			 			
28.0	64.0	73.4	15.1	18.4						
30.0	59.3	72.3	15.1	15.9						
32.0	54.3	70.9	14.2	13.9						
34.0 36.0	49.0 43.2	69.3 67.3	13.2 11.5	12.4 11.0						
38.0	36.6	64.9	10.1	10.0						
40.0	28.7	61.7	9.2	9.2						
			Ángu	ılo de plu	uma prin	cipal 65.	[°]0			
39.5	55.0	68.0		13.7						
40.0	53.7	67.7	14.6	13.7						
42.0	48.3	66.1	12.8	12.1						
44.0	42.4	64.1	11.3	10.9						
46.0 48.0	35.8 27.6	61.5 58.2	10.0 9.1	9.9 9.1						
.5.0		<u>.</u>			ıma prin	cipal 45	0 [°]			
59.6	35.0	51.2	, «190	5.0	piiii	J.pui 40.	- L J			
60.0	33.5	50.9	5.6	4.9						
63.0	18.8	44.7	4.9	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]: 94.0 52.6 Lastre central [t]:

Inserción			1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
47.0 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 [°]										
9.1 10.0 11.0 12.0 13.0 14.0 16.0	78.0 75.1 71.9 68.6 65.3 61.9 54.7	68.7 68.5 68.2 67.8 67.3 66.8 65.5	15.1 15.1 15.1 15.1 15.1 15.1 14.9	30.1 30.1 28.5 26.0 21.9 19.0 14.9						
18.0 20.0 22.0	46.7 37.3 24.8	63.8 61.5 58.1	13.7 10.7 8.7	12.1 10.0 8.4						
					ıma prin	cipal 83.	0[°]			
14.8 16.0 18.0 20.0 22.0 24.0 26.0	73.0 69.1 62.4 55.2 47.3 38.0 25.9	67.9 67.4 66.5 65.2 63.5 61.3 58.0	15.1 15.1 15.1 15.1 13.9 10.9 9.0	29.8 26.1 19.3 15.1 12.3 10.1 8.6						
					ıma prin	cipal 75.	1°10			
23.7 24.0 26.0 28.0 30.0 32.0	65.0 64.2 57.1 49.4 40.5 29.5	65.4 65.3 64.1 62.6 60.5 57.6	15.1 15.1 14.6 11.7 9.6	20.1 20.1 16.1 13.0 10.7 9.1						
Ángulo de pluma principal 65.0 [°]										
34.3 36.0 38.0 40.0	55.0 48.4 39.4 27.8	60.7 59.4 57.2 54.1	14.1 11.5 9.5	14.4 12.7 10.5 9.0						
Ángulo de pluma principal 45.0 [°]										
52.2	35.0	46.0	F 0	5.0						



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]: 94.0 52.6 Lastre central [t]:

Inserción			1	2	3	4	5	6	7	8	
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	
47.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (2316-1) 50.5 m Plumín 28.0 [m] Posición midfall (2316)											
Ángulo de pluma principal 88.0 [°]											
11.0	78.0	77.5	15.1	30.1							
12.0	75.9	77.3	15.1	30.1							
13.0	73.7	77.0	15.1	30.1							
14.0 16.0	71.6 67.2	76.7 75.9	15.1 15.1	28.9 25.3							
18.0	62.6	74.9	15.1	20.8							
20.0	57.8	73.7	14.7	17.6							
22.0	52.8	72.3	14.2	15.2							
24.0	47.3	70.5	13.1	13.3							
26.0	41.3	68.4	11.3	11.7							
28.0 30.0	34.4 25.9	65.8 62.3	9.9 8.8	10.4 9.3							
Angulo de pluma principal 83.0 [°]											
17.5	73.0	76.5	15.1	30.1			7[]		l		
18.0	71.9	76.3	15.1	30.1							
20.0	67.5	75.5	15.1	25.8							
22.0	62.9	74.6	15.1	21.0							
24.0	58.2	73.4	14.8	17.8							
26.0	53.1	72.0	14.4 13.2	15.3							
28.0 30.0	47.7 41.7	70.3 68.2	11.4	13.5 11.8							
32.0	34.9	65.6	10.0	10.6							
34.0	26.6	62.2	9.0	9.5							
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]				
27.6	65.0	73.6		21.8							
28.0	64.1	73.4	15.1	21.8							
30.0 32.0	59.4 54.4	72.3 71.0	15.1 15.1	18.5 15.8			1				
34.0	49.1	69.3	14.9	14.0							
36.0	43.3	67.4	12.9	12.3							
38.0	36.8	64.9	11.3	10.9							
40.0	28.9	61.8	10.0	9.9							
			Angı		ıma prin	cipal 65.0)[°]		1		
39.5	55.0	68.0	44.0	13.2							
40.0 42.0	53.8 48.5	67.8 66.1	14.9 13.7	12.9 11.7							
44.0	42.6	64.1	12.2	10.7							
46.0	35.9	61.6	10.6	9.7							
48.0	27.8	58.3	9.4	8.8							
Ángulo de pluma principal 45.0 [°]											
59.6	35.0	51.2		2.3							
60.0	33.6	50.9	2.9	2.2							
62.0	26.0	47.3	2.3		<u> </u>				<u> </u>		



N° de ident.: 9842523/95738/ Pieza

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

Valor de vuelco: Lastre trasero [t]:

Lastre central [t]:

2 - Vía ancha 94.0 52.6 Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 22.0		n (1916-	1) 53.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
9.7 10.0 11.0 12.0 13.0 14.0 16.0 20.0 22.0 24.0 15.7 16.0 18.0 20.0 22.0	78.0 77.1 74.4 71.7 68.9 66.1 60.1 53.8 46.9 29.2 73.0 72.1 66.5 60.6 54.3 47.4	71.7 71.6 71.3 71.0 70.6 70.2 69.1 67.7 66.0 63.8 60.8	15.1 15.1 15.1 15.1 15.1 15.1 14.8 12.1 10.1 8.1 6.7 Ángu 15.1 15.0 14.2 11.1 9.1	30.1 30.1 28.0 24.0 20.7 18.0 14.2 11.4 9.5 7.8 6.6 ulo de plu 23.9 23.8 18.2 14.4 11.5 9.6	uma prind	cipal 83.t) [°]			
26.0 28.0	39.6 30.0	63.6 60.6	7.5 6.4	8.0 6.8						
			Ángı	ılo de plu	ıma prin	cipal 75.0	D[°]			
25.0 26.0 28.0 30.0 32.0 34.0	65.0 62.1 55.9 49.2 41.7 32.7	68.1 67.7 66.4 64.8 62.8 60.1	15.1 13.5 10.8 8.7 7.2	15.8 15.2 12.2 10.1 8.4 7.2						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
36.0 38.0 40.0 42.0	55.0 48.4 40.7 31.5	63.1 61.6 59.5 56.7	10.5 8.6 7.2	11.3 9.9 8.3 7.1	•	•				
			Ángı	ılo de plu	ıma prin	cipal 45.0	[°]			1
54.7 55.0 57.0	35.0 33.5 21.4	47.8 47.6 43.7	5.3 4.7	4.3 4.2 3.6						



Nº de ident.: 9842523/95738/ 360°

Radio de descarga:

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 94.0 52.6 Lastre central [t]:

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 31.0	de plumí		1) 53.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
11.6	78.0	80.5		30.1						
12.0	77.3	80.4	15.1	30.1						
13.0	75.3	80.1	15.1	30.1						
14.0	73.4	79.8	15.1	29.5						
16.0 18.0	69.5 65.5	79.1 78.3	15.1 15.1	24.1 19.8						
20.0	61.3	76.3 77.2	15.1	16.8						
22.0	56.9	76.0	13.3	14.4						
24.0	52.3	74.5	11.9	12.5						
26.0	47.4	72.8	10.6	11.1						
28.0	42.0	70.7	9.2	9.8						
30.0	36.0	68.2	8.1	8.7						
32.0	28.8	65.0	7.3	7.8						
			Ángι	ılo de plu	ıma prin	cipal 83.0	[°]C			
18.4	73.0	79.3	15.1	27.5						
20.0	69.8	78.8	15.1	24.4						
22.0	65.8	77.9	15.1	20.0						
24.0	61.6	76.9	15.1	17.0						
26.0	57.2	75.7	14.0	14.5 12.7						
28.0 30.0	52.7 47.8	74.2 72.5	13.0 11.6	11.2						
32.0	42.4	70.4	10.1	9.9						
34.0	36.4	68.0	8.7	8.8						
36.0	29.4	64.8	7.8	7.9						
38.0	20.0	60.4	6.9	7.1						
			Ángu	ılo de plu	ıma prin	cipal 75.0	1°10			
28.9	65.0	76.3		18.3						
30.0	62.7	75.8	15.1	17.6						
32.0	58.4	74.6	15.1	15.2						
34.0	53.8	73.2	13.5	13.1						
36.0	49.0	71.6	12.2	11.6						
38.0	43.8	69.6	10.5	10.2						
40.0 42.0	38.0 31.3	67.2 64.3	9.2 8.2	9.1 8.3						
42.0 44.0	22.8	60.3	7.3	7.4						
	22.0	00.0			ıma prin	cinal 65 (1 0 1			
41.3	55.0	70.5	Ange	12.0	ina pini	J.pu. 00.	- L J		l	
42.0	53.3	70.5	11.9	11.5						
44.0	48.4	68.4	10.3	10.5						
46.0	43.2	66.4	9.1	9.6						
48.0	37.3	63.9	8.0	8.6						
50.0	30.4	60.9	7.2	7.8						
53.0	15.2	53.8	6.2	6.6						



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		47.	0 m Plum Cabeza 22.0	de plumi	n (2316-		n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.	[°]			
9.7	78.0	71.7		30.1		·				
10.0	77.3	71.6	15.1	30.1						
11.0	74.6	71.3	15.1	30.1						
12.0	71.9	71.0	15.1	28.8						
13.0	69.1	70.6	15.1	27.3						
14.0	66.2	70.2	15.1	23.7						
16.0	60.3	69.1	15.1	18.5						
18.0	54.0	67.8	14.9	14.9						
20.0	47.1	66.1	13.7	12.4						
22.0	39.2	63.8	10.9	10.3						
24.0	29.5	60.8	8.9	8.7						
			Ángu	ılo de plu	uma prin	cipal 83.	[°]C			
15.7	73.0	70.7		30.1						
16.0	72.2	70.7	15.1	30.1						
18.0	66.6	69.9	15.1	24.3						
20.0	60.7	68.8	15.1	18.8						
22.0	54.4	67.5	15.1	15.1						
24.0	47.6	65.8	13.9	12.5						
26.0	39.8	63.6	11.1	10.4						
28.0	30.2	60.7	9.2	8.9						
			Ángı	ılo de plu	ıma prin	cipal 75.	[°]C			
25.1	65.0	68.1		20.8						
26.0	62.3	67.7	15.1	20.0						
28.0	56.1	66.4	15.0	15.9						
30.0	49.4	64.9	14.6	13.2						
32.0	41.9	62.8	11.9	11.0						
34.0	32.9	60.1	9.8	9.4						
			Áηgι	ılo de plu	ıma prin	cipal 65.	[°]			
36.1	55.0	63.1		12.1						
38.0	48.5	61.7	13.5	10.7						
40.0	40.9	59.6	11.0	9.3						
42.0	31.7	56.8	9.1	8.1						
44.0	18.4	52.5	7.6	7.0						



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]
		47.0		de plumí	oal, Punt ín (1916- osición m	1) 56.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	1°1			
10.3	78.0	74.6	15.1	29.6	<u> </u>					
11.0	76.4	74.4	15.1	28.8						
12.0	74.0	74.1	15.1	24.4						
13.0	71.6	73.8	15.1	20.9						
14.0	69.1	73.4	15.1	18.4						
16.0	64.1 58.8	72.5 71.4	13.5 11.8	14.6 12.2						
18.0 20.0	58.8	70.0	9.6	10.2						
22.0	47.0	68.2	8.2	8.8						
24.0	40.2	66.1	7.0	7.5						
26.0	32.1	63.3	6.1	6.6						
28.0	21.4	59.3	5.3	5.7						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
16.5	73.0	73.6		21.1						
18.0	69.5	73.1	15.1	18.6						
20.0	64.4	72.2	14.5	14.8						
22.0	59.2	71.1	13.1	12.3						
24.0	53.6	69.7	10.7	10.3						
26.0	47.5	68.0	9.1	8.9						
28.0 30.0	40.7 32.8	65.9 63.1	7.7 6.6	7.6 6.7						
32.0	22.3	59.2	5.8	5.8						
32.0	22.0	33.2			ıma prin	cinal 75 (1 0 1			
26.3	65.0	70.9	Ango	14.3	лна рин Г		7[]			
28.0	60.5	70.9	13.7	12.8						
30.0	55.0	68.7	11.3	10.8						
32.0	49.1	67.1	9.5	9.2						
34.0	42.5	65.1	8.0	7.9						
36.0	35.0	62.5	6.9	6.9						
38.0	25.4	59.0	6.1	6.1						
			Angı		ıma prin	cipal 65.0	[°]			
37.8	55.0	65.6		10.3						
38.0	54.3	65.5	10.6	10.3						
40.0 42.0	48.3 41.7	63.8 61.8	9.2 7.9	9.0 7.8						
42.0 44.0	33.9	61.8 59.1	7.9 6.8	6.8						
46.0	24.0	55.5	6.0	6.1						
13.0					ıma prin	cinal 45 (1°10			
57.1	35.0	49.5	,gc	3.8	a piiii	J. Pai 40.	·			
60.0	20.0	44.2	3.9	2.9						
55.0			0.0	0			1			



N° de ident.: 9842523/95738/

Radio de descarga:

360 ° Ca

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 25.0	de plumí		1) 59.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
10.4 11.0 12.0 13.0 14.0	78.0 76.5 74.1 71.7 69.2	74.6 74.5 74.2 73.8 73.5	15.1 15.1 15.1 15.1 15.1	30.1 30.1 30.1 27.2 24.2						
16.0 18.0 20.0 22.0 24.0 26.0	64.2 58.9 53.3 47.2 40.4 32.3	72.6 71.4 70.0 68.3 66.1	15.1 14.2 12.0 10.3 8.6 7.2	18.9 15.4 12.7 10.8 9.1 7.8						
28.0	32.3 21.6	59.4 59.4	6.2	6.6						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
16.6 18.0 20.0	73.0 69.6 64.6	73.6 73.1 72.2	15.1 15.1	27.7 24.7 19.2						
22.0 24.0 26.0 28.0 30.0	59.3 53.7 47.6 40.9 33.0	71.1 69.7 68.0 65.9 63.2	14.7 13.2 11.6 9.5 7.9	15.6 12.9 11.0 9.3 8.0						
32.0	22.5	59.3	6.7	6.8						
			Angı		ıma prin	cipal 75.0	0[°]			
26.3 28.0 30.0 32.0 34.0 36.0	65.0 60.7 55.2 49.2 42.7 35.1	70.9 70.0 68.7 67.1 65.1 62.6	15.1 14.1 12.3 10.2 8.4	18.2 16.3 13.6 11.5 9.7 8.4						
38.0	25.6	59.1	7.2	7.2						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]0			
37.8 38.0	55.0 54.5	65.6 65.5	13.1	10.9 10.8						
40.0 42.0 44.0 46.0 47.0	48.5 41.8 34.1 24.2 17.1	63.9 61.8 59.2 55.6 52.9	11.4 9.5 7.9 6.8 6.2	9.5 8.3 7.2 6.3 5.9						



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]: 94.0 52.6 Lastre central [t]:

Alcance Anguarde Altura O de Toldania Carg		Inserciór	1	1	2	3	4	5	6	7	8
Cabeza de plumín (1916-1) 59.5 m Plumín 28.0 [m] Posición midfall (1916) 10.9	ce	o de plumín	de rolda- nas								
10.9 78.0 77.5 15.1 27.3 11.0 77.5 15.1 27.3 12.0 75.7 77.3 15.1 25.5 13.0 73.6 77.0 15.1 22.1 14.0 71.4 76.6 15.1 19.3 16.0 67.0 75.8 14.2 15.4 18.0 62.5 74.9 12.1 12.7 10.6 12.0 12			47.0	Cabeza	de plumi	ín (1916-	1) 59.5 r	n Plumín			
10.9 78.0 77.5 15.1 27.3 11.0 77.5 15.1 27.3 12.0 75.7 77.3 15.1 25.5 13.0 73.6 77.0 15.1 22.1 14.0 71.4 76.6 15.1 19.3 16.0 67.0 75.8 14.2 15.4 18.0 62.5 74.9 12.1 12.7 10.6 12.0 12				Ángu	ılo de plu	ıma prin	cipal 88.0	1°10			
12.0	10.9	78.0	77.5			·	i i				
13.0	11.0	77.8	77.5	15.1	27.3						
14.0 71.4 76.6 15.1 19.3 14.2 15.4 18.0 67.0 75.8 14.2 15.4 18.0 62.5 74.9 12.1 12.7 20.0 52.6 72.2 8.3 8.9 24.0 47.2 70.5 7.1 7.7 26.0 47.2 70.5 7.1 7.7 26.0 41.1 68.4 6.1 6.6 28.0 34.2 65.7 5.3 5.7 30.0 25.7 62.2 4.7 5.0 25.0 62.2 4.7 5.0 25.0 62.2 4.7 5.0 25.0 67.4 75.5 15.1 19.4 20.0 67.4 75.5 15.1 19.4 20.0 67.4 75.5 15.1 19.3 20.0 67.4 75.5 15.1 19.3 20.0 67.4 75.5 15.1 19.3 20.0 67.4 75.5 15.1 15.7 22.0 62.8 74.5 13.4 12.8 24.0 58.0 73.3 11.3 10.7 26.0 53.0 71.9 9.2 9.0 28.0 47.6 70.2 7.8 7.8 7.8 34.0 26.4 62.1 5.0 5.1 5.1 20.0 34.8 65.5 5.7 5.8 34.0 26.4 62.1 5.0 5.1 5.1 3.1 3.1 3.0 2.0 34.8 65.5 5.7 5.8 34.0 26.4 62.1 5.0 5.1 5.1 3.1 3.1 3.0 2.0 34.8 65.5 5.7 5.8 34.0 26.4 62.1 5.0 5.1 5.1 3.1 3.1 3.0 2.0 34.8 65.5 5.7 5.8 34.0 26.4 62.1 5.0 5.1 5.1 3.1 3.1 3.0 3.0 59.3 72.3 10.7 11.2 3.2 3.0 34.0 49.0 69.3 76.6 82.3 60.4 32.2 67.3 6.5 7.0 38.0 36.6 64.9 5.7 6.1 40.0 28.7 61.7 5.0 5.4 40.0 28.7 61.7 5.0 5.4 40.0 28.7 61.7 5.0 5.4 40.0 28.7 61.7 5.0 5.4 40.0 28.7 61.7 5.0 5.4 40.0 28.7 61.7 5.0 5.4 40.0 42.4 64.1 6.9 7.0 46.0 35.8 61.5 6.0 6.1 44.0 42.4 64.1 6.9 7.0 46.0 35.8 61.5 6.0 6.1 44.0 42.4 64.1 6.9 7.0 46.0 35.8 61.5 6.0 6.1 44.0 42.4 64.1 6.9 7.0 46.0 35.8 61.5 6.0 6.1 44.0 42.4 64.1 6.9 7.0 46.0 35.8 61.5 6.0 6.1 44.0 42.4 64.1 6.9 7.0 46.0 35.8 61.5 6.0 6.1 44.0 42.4 64.1 6.9 7.0 46.0 35.8 61.5 60.0 61.1 61.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 5	12.0	75.7	77.3	15.1	25.5						
16.0 67.0 75.8 14.2 15.4 12.7 12.7 12.7 12.7 12.7 12.0 12.0 57.7 73.7 10.1 10.6 12.0 52.0 52.6 72.2 8.3 8.9 24.0 47.2 70.5 7.1 7.7 7.7 12.0 12.0 52.6 72.2 8.3 8.9 7.7 7.7 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	13.0		77.0	15.1	22.1						
18.0 62.5 74.9 12.1 12.7 20.0 57.7 73.7 10.1 10.6 22.0 52.6 72.2 8.3 8.9 24.0 47.2 70.5 7.1 7.7 26.0 41.1 68.4 6.1 6.6 6.8 28.0 34.2 65.7 5.3 5.7 30.0 25.7 62.2 4.7 5.0 25.0 73.0 25.7 62.2 4.7 5.0 25.0 73.0 25.7 62.2 4.7 5.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0											
20.0 57.7 73.7 10.1 10.6 8.9 24.0 47.2 70.5 7.1 7.7 7.7 26.0 41.1 68.4 6.1 6.6 28.0 34.2 65.7 5.3 5.7 5.0 25.7 62.2 4.7 5.0 25.7 62.2 4.7 5.0 25.0 25.7 62.2 4.7 5.0 25.0 25.7 62.2 4.7 5.0 25.0 25.7 62.2 4.7 5.0 25.0 25.7 62.2 4.7 5.0 25.0		1									
22.0 52.6 72.2 8.3 8.9 7.7.7 24.0 47.2 70.5 7.1 7.7 7.7 26.0 41.1 68.4 6.1 6.6 6.8 28.0 34.2 65.7 5.3 5.7 30.0 25.7 62.2 4.7 5.0 **Angulo de pluma principal 83.0 [°]** 17.4 73.0 76.5 15.1 19.3 76.3 15.1 19.3 76.3 15.1 19.3 76.3 15.1 19.3 76.5 13.4 12.8 12.4 12.8 12.4 12.8 12.4 12.8 12.4 12.8 12.4 12.8 12.4 12.8 12.4 12.8 12.8 12.4 12.8 12.8 12.8 12.8 12.8 12.8 12.8 12.8		i i									
24.0											
26.0		1									
28.0 34.2 65.7 62.2 4.7 5.0 5.0 **Mingulo de pluma principal 83.0 [°]** 17.4 73.0 76.5											
30.0 25.7 62.2 4.7 5.0		1		-							
Angulo de pluma principal 83.0 [°] 17.4											
18.0 71.8 76.3 15.1 19.3 20.0 67.4 75.5 15.1 15.7 22.0 62.8 74.5 13.4 12.8 24.0 58.0 73.3 11.3 10.7 26.0 53.0 71.9 9.2 9.0 28.0 47.6 70.2 7.8 7.8 30.0 41.6 68.1 6.7 6.7 32.0 34.8 65.5 5.7 5.8 34.0 26.4 62.1 5.0 5.1				Ángı	ılo de plı	ıma prin	cipal 83.0	[°]			
20.0 67.4 75.5 15.1 15.7 22.0 62.8 74.5 13.4 12.8 24.0 58.0 73.3 11.3 10.7 26.0 53.0 71.9 9.2 9.0 28.0 47.6 70.2 7.8 7.8 7.8 30.0 41.6 68.1 6.7 6.7 32.0 34.8 65.5 5.7 5.8 34.0 26.4 62.1 5.0 5.1	17.4	73.0	76.5		19.4						
22.0 62.8 74.5 13.4 12.8 24.0 58.0 73.3 11.3 10.7 26.0 53.0 71.9 9.2 9.0 28.0 47.6 70.2 7.8 7.8 30.0 41.6 68.1 6.7 6.7 32.0 34.8 65.5 5.7 5.8 34.0 26.4 62.1 5.0 5.1	18.0	71.8	76.3	15.1	19.3						
24.0 58.0 73.3 11.3 10.7 26.0 53.0 71.9 9.2 9.0 28.0 47.6 70.2 7.8 7.8 7.8 30.0 41.6 68.1 6.7 6.7 32.0 34.8 65.5 5.7 5.8 34.0 26.4 62.1 5.0 5.1	20.0	67.4	75.5	15.1	15.7						
26.0	22.0	62.8									
28.0		i i									
30.0 41.6 68.1 6.7 6.7 5.8 32.0 34.8 65.5 5.7 5.8 34.0 26.4 62.1 5.0 5.1 **Magulo de pluma principal 75.0 [°]** 27.6 65.0 73.6 12.8 13.2 28.0 64.0 73.4 12.7 13.1 23.0 54.3 70.9 8.9 9.5 34.0 49.0 69.3 7.6 8.2 36.0 43.2 67.3 6.5 7.0 38.0 36.6 64.9 5.7 6.1 40.0 28.7 61.7 5.0 5.4 **Angulo de pluma principal 65.0 [°]** **Angulo de pluma principal 65.0 [°]** **Angulo de pluma principal 65.0 [°]** **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 [°]** **Angulo de pluma principal 45.0 [°]** **Angulo de pluma principal 45.0 [°]**		i i									
32.0 34.8 65.5 5.7 5.8 34.0 26.4 62.1 5.0 5.1											
34.0 26.4 62.1 5.0 5.1 Ángulo de pluma principal 75.0 [°] 27.6 65.0 73.6 12.8 13.2 28.0 64.0 73.4 12.7 13.1 30.0 59.3 72.3 10.7 11.2 32.0 54.3 70.9 8.9 9.5 34.0 49.0 69.3 7.6 8.2 36.0 43.2 67.3 6.5 7.0 38.0 36.6 64.9 5.7 6.1 40.0 28.7 61.7 5.0 5.4 Ángulo de pluma principal 65.0 [°] 39.5 55.0 68.0 9.3 40.0 53.7 67.7 9.4 9.3 42.0 48.3 66.1 8.1 8.0 44.0 42.4 64.1 6.9 7.0 46.0 35.8 61.5 6.0 6.1 48.0 27.6 58.2 5.3 5.4 Ángulo de pluma principal 45.0 [°] 59.6 59.6 35.0 51.2 3.1 60.0 33.5 50.9 3.8 3.0		i i									
Ángulo de pluma principal 75.0 [°] 27.6 65.0 73.6 12.8 13.2 28.0 64.0 73.4 12.7 13.1 30.0 59.3 72.3 10.7 11.2 32.0 54.3 70.9 8.9 9.5 34.0 49.0 69.3 7.6 8.2 36.0 43.2 67.3 6.5 7.0 38.0 36.6 64.9 5.7 6.1 40.0 28.7 61.7 5.0 5.4 Angulo de pluma principal 65.0 [°] 39.5 55.0 68.0 9.3 40.0 53.7 67.7 9.4 9.3 42.0 48.3 66.1 8.1 8.0 44.0 42.4 64.1 6.9 7.0 46.0 35.8 61.5 6.0 6.1 48.0 27.6 58.2 5.3 5.4 Ángulo de pluma principal 45.0 [°]				-							
27.6 65.0 73.6 12.8 13.2						ıma prin	cipal 75.0	1°10			
30.0 59.3 72.3 10.7 11.2 32.0 54.3 70.9 8.9 9.5 34.0 49.0 69.3 7.6 8.2 67.3 36.0 36.6 64.9 5.7 6.1 40.0 28.7 61.7 5.0 5.4	27.6	65.0	73.6	12.8	13.2						
32.0 54.3 70.9 8.9 9.5 34.0 49.0 69.3 7.6 8.2 36.0 43.2 67.3 6.5 7.0 38.0 36.6 64.9 5.7 6.1 40.0 28.7 61.7 5.0 5.4											
34.0 49.0 69.3 7.6 8.2 36.0 43.2 67.3 6.5 7.0 38.0 36.6 64.9 5.7 6.1 40.0 28.7 61.7 5.0 5.4											
36.0											
38.0 36.6 64.9 5.7 6.1 40.0 28.7 61.7 5.0 5.4 Angulo de pluma principal 65.0 [°] 39.5 55.0 68.0 9.3 40.0 53.7 67.7 9.4 9.3 42.0 48.3 66.1 8.1 8.0 44.0 42.4 64.1 6.9 7.0 446.0 35.8 61.5 6.0 6.1 48.0 27.6 58.2 5.3 5.4 Angulo de pluma principal 45.0 [°] \$\text{Angulo de pluma principal 45.0 [°]}\$											
40.0 28.7 61.7 5.0 5.4 Ángulo de pluma principal 65.0 [°] 39.5 55.0 68.0 9.3 40.0 53.7 67.7 9.4 9.3 42.0 48.3 66.1 8.1 8.0 44.0 42.4 64.1 6.9 7.0 46.0 35.8 61.5 6.0 6.1 48.0 27.6 58.2 5.3 5.4 Ángulo de pluma principal 45.0 [°] Ángulo de pluma principal 45.0 [°]		I .									
Ángulo de pluma principal 65.0 [°] 39.5 55.0 68.0 9.3 40.0 53.7 67.7 9.4 9.3 42.0 48.3 66.1 8.1 8.0 44.0 42.4 64.1 6.9 7.0 46.0 35.8 61.5 6.0 6.1 48.0 27.6 58.2 5.3 5.4 Ángulo de pluma principal 45.0 [°] 59.6 35.0 51.2 3.1 60.0 33.5 50.9 3.8 3.0											
39.5 55.0 68.0 9.3 40.0 53.7 67.7 9.4 9.3 42.0 48.3 66.1 8.1 8.0 44.0 42.4 64.1 6.9 7.0 46.0 35.8 61.5 58.2 5.3 5.4 5.9 5.9 5.8 5.9 5.9 5.9 3.8 3.0 59.6 35.0 51.2 60.0 33.5 50.9 3.8 3.0 3.0 50.0 5	40.0	20.7	01.7			ıma prin	cinal 65 (1°1		l	
40.0 53.7 67.7 9.4 9.3 42.0 48.3 66.1 8.1 8.0 44.0 42.4 64.1 6.9 7.0 46.0 35.8 61.5 6.0 6.1 48.0 27.6 58.2 5.3 5.4 Angulo de pluma principal 45.0 [°] 59.6 35.0 51.2 3.1 3.1 60.0 33.5 50.9 3.8 3.0	20.5	55.0	60.0	- Angu		a piiiii 	J.pu. 00.1	~ L J		l	
42.0 48.3 66.1 8.1 8.0 44.0 42.4 64.1 6.9 7.0 46.0 35.8 61.5 6.0 6.1 48.0 27.6 58.2 5.3 5.4 Angulo de pluma principal 45.0 [°] 59.6 35.0 51.2 3.1 3.1 60.0 33.5 50.9 3.8 3.0				9.4							
44.0 42.4 64.1 6.9 7.0 46.0 35.8 61.5 6.0 6.1 48.0 27.6 58.2 5.3 5.4 Ángulo de pluma principal 45.0 [°] 59.6 35.0 51.2 3.1 60.0 33.5 50.9 3.8 3.0				-							
46.0 35.8 61.5 6.0 6.1 48.0 27.6 58.2 5.3 5.4 Angulo de pluma principal 45.0 [°] 59.6 35.0 51.2 3.1 3.1 60.0 33.5 50.9 3.8 3.0											
Ángulo de pluma principal 45.0 [°] 59.6 35.0 51.2 3.1 60.0 33.5 50.9 3.8 3.0	46.0	35.8	61.5	6.0	6.1						
59.6 35.0 51.2 60.0 33.5 50.9 3.8 3.0	48.0	27.6	58.2			<u> </u>	<u> </u>			I	
60.0 33.5 50.9 3.8 3.0	F0.0	25.0	E4.0	Angu		uma prind	cipal 45.0	D[°]		I	
		i i		3 2							
	63.0	18.8	44.7	3.6	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

	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]
		47.0	0 m Plum Cabeza 28.0	de plumí	oal, Punt n (2316- osición m	1) 62.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.	0 [°]			
11.0 12.0 13.0 14.0 16.0	78.0 75.9 73.7 71.6 67.2	77.5 77.3 77.0 76.7 75.9	15.1 15.1 15.1 15.1 14.8	30.1 29.9 26.9 23.3 18.3						
18.0 20.0 22.0 24.0 26.0	62.6 57.8 52.8 47.3 41.3	74.9 73.7 72.3 70.5 68.4	13.9 11.9 9.7 8.2 6.9	14.8 12.3 10.3 8.8 7.4						
28.0 30.0	34.4 25.9	65.8 62.3	5.9 5.0	6.3 5.4						
			Ángı	ılo de plu	ıma prin	cipal 83.	0 [°]			
17.5 18.0 20.0	73.0 71.9 67.5	76.5 76.3 75.5	15.1 15.1 15.1	23.5 23.5 18.6						
22.0 24.0 26.0 28.0 30.0	62.9 58.2 53.1 47.7 41.7	74.6 73.4 72.0 70.3 68.2	15.1 13.3 10.9 9.1 7.6	15.0 12.5 10.5 8.9 7.6						
32.0 34.0	34.9 26.6	65.6 62.2	6.4 5.5	6.5 5.5						
					ıma prin	cipal 75.	0 [°]			
27.6 28.0 30.0	65.0 64.1 59.4	73.6 73.4 72.3	15.1 14.0	15.4 15.4 13.0						
32.0 34.0 36.0 38.0 40.0	54.4 49.1 43.3 36.8 28.9	71.0 69.3 67.4 64.9 61.8	11.7 9.7 8.1 6.8 5.9	10.9 9.4 8.0 6.8 5.9						
			Ángı	ılo de plu	ıma prin	cipal 65.	0 [°]			
39.5 40.0 42.0 44.0 46.0 48.0	55.0 53.8 48.5 42.6 35.9 27.8	68.0 67.8 66.1 64.1 61.6 58.3	9.4 8.2 7.0 5.9	9.9 9.6 8.4 7.4 6.4						
48.0 50.0	27.8 16.1	58.3	5.2 4.4	5.5 4.7						



Nº de ident.: 9842523/95738/

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

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		47.0	Cabeza	na princip de plumí 0 [m] Po	ín (1916-	1) 62.5 r	n Plumín	dfall I		
				ılo de plu	ıma prin	cipal 88.0	[°]			
11.6 12.0 13.0 14.0 16.0	78.0 77.1 75.2 73.3 69.4 65.3	80.5 80.4 80.1 79.8 79.1 78.2	15.1 15.1 15.1 15.1 15.1 13.3	24.8 24.8 22.3 19.7 15.7						
20.0 22.0 24.0 26.0 28.0 30.0	61.2 56.8 52.2 47.3 41.9 35.8	77.2 75.9 74.5 72.7 70.6 68.1	11.6 9.6 7.9 6.8 5.9 5.1	11.0 9.3 7.9 6.8 5.9 5.2						
32.0	28.7	64.9	4.5	4.6						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
18.3 20.0 22.0 24.0 26.0 28.0	73.0 69.7 65.6 61.5 57.1 52.5	79.3 78.7 77.9 76.8 75.6 74.2	15.1 13.9 11.8 9.7 8.1	17.7 15.9 13.1 11.1 9.3 8.0						
30.0 32.0 34.0 36.0	47.6 42.3 36.3 29.2	72.5 70.4 67.9 64.8	7.0 6.0 5.2 4.6	7.0 6.1 5.3 4.7						
28.8	65.0	76.3	Angı	ılo de plu	ıma prini İ	cipai 75.0	ا ا		l	
30.0 32.0 34.0 36.0 38.0 40.0	62.5 58.2 53.7 48.9 43.7 37.9 31.2	75.7 74.6 73.2 71.5 69.6 67.2 64.2	12.4 10.2 8.5 7.3 6.3 5.5	11.6 9.8 8.4 7.3 6.3 5.5 4.9						
44.0	22.6	60.3	4.3 Ángi	ulo de plu	ıma nrin	cinal 65 (
41.2 42.0 44.0 46.0 48.0 50.0	55.0 53.2 48.3 43.0 37.1 30.3	70.5 70.0 68.3 66.3 63.9 60.8	8.3 7.2 6.2 5.4 4.8	8.4 8.3 7.2 6.3 5.5 4.9	лпа рпп	ыраг оэ.	<i>J</i> []			
			Ángı	ılo de plu	ıma prin	cipal 45.0	[°]			
62.1 65.0 66.0	35.0 24.4 19.2	52.9 47.9 45.2	2.7 2.4	2.6						



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]: 94.0 Lastre central [t]: 52.6

	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 31.0		n (2316-	1) 65.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	0 [°]			
11.6	78.0	80.5	Ī	30.1		·				
12.0	77.3	80.4	15.1	30.1						
13.0	75.3	80.1	15.1	29.9						
14.0	73.4	79.8	15.1	29.4						
16.0	69.5	79.1	15.1	23.3						
18.0	65.5	78.3	15.1	19.2						
20.0	61.3	77.2	15.1	16.2						
22.0 24.0	56.9 52.3	76.0 74.5	13.2 11.5	13.9 12.0						
26.0	47.4	72.8	9.9	10.4						
28.0	42.0	70.7	8.3	8.7						
30.0	36.0	68.2	6.9	7.3						
32.0	28.8	65.0	5.6	5.9						
			Ángı	ılo de plı	ıma prin	cipal 83.0	D[°]			
18.4	73.0	79.3	15.1	26.1						
20.0	69.8	78.8	15.1	23.7						
22.0	65.8	77.9	15.1	19.4						
24.0	61.6	76.9	15.1	16.4						
26.0	57.2	75.7	13.4	14.0						
28.0	52.7	74.2	11.6	12.2						
30.0	47.8	72.5	10.2	10.7						
32.0 34.0	42.4 36.4	70.4 68.0	8.9 7.7	9.4 8.3						
36.0	29.4	64.8	6.8	7.3						
38.0	20.0	60.4	5.9	6.4						
				ılo de plu	ıma prin	cipal 75.0	1°10			
28.9	65.0	76.3	Г	17.5	<u> </u>	·				
30.0	62.7	75.8	15.1	17.1						
32.0	58.4	74.6	14.2	14.6						
34.0	53.8	73.2	12.2	12.6						
36.0	49.0	71.6	10.7	11.1						
38.0	43.8	69.6	9.3	9.8						
40.0	38.0	67.2	8.1	8.7						
42.0	31.3	64.3	7.2	7.8						
44.0	22.8	60.3	6.4	6.9	l			l	l	
			Angı	ılo de plu	ıma prin	cipal 65.0	0[°]	1		
41.3 42.0	55.0	70.5	10.2	8.8 8.4						
	53.3	70.0	10.3	_						
44.0 46.0	48.4 43.2	68.4 66.4	9.2 8.2	7.4 6.5						
48.0	37.3	63.9	7.2	5.7						
50.0	30.4	60.9	6.4	4.9						
53.0	15.2	53.8	5.2	3.9						

Source:a9841388



N° de ident.: 9842523/95738/ Pieza d

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

Valor de vuelco: 2 - Vía ancha Lastre trasero [t]: 94.0 Lastre central [t]: 52.6 Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

Ce [m] o de plumín roldanas [m] de plumín roldanas [m] [t] [t] <th></th> <th>Inserciór</th> <th>1</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> <th>8</th>		Inserciór	1	1	2	3	4	5	6	7	8
Cabeza de plumín (1916-1) 65.5 m Plumín 34.0 [m] Posición midfall (1916) Angulo de pluma principal 88.0 [°] 12.2 78.0 83.4 15.1 22.5	ce	o de plumín	de rolda- nas								Carga [t]
Ángulo de pluma principal 88.0 [°] 12.2 78.0 83.4 15.1 22.5 13.0 76.6 83.2 15.1 22.5 14.0 74.8 82.9 15.1 19.8 16.0 71.3 82.3 15.1 15.9 18.0 67.7 81.5 14.4 13.3 20.0 63.9 80.6 11.8 11.1 22.0 66.1 78.2 8.3 8.1 26.0 51.8 76.7 7.0 7.0 28.0 47.4 75.0 6.1 6.1 30.0 42.5 72.9 5.3 5.4 32.0 37.1 70.5 4.6 4.7 34.0 30.9 67.5 4.1 4.2 36.0 23.2 63.5 3.6 3.7 **Angulo de pluma principal 83.0 [°] **The strip of the strip of the strip of the strip of the strip of the strip of the strip of the strip of the strip of the strip of the strip of the strip of the strip of the strip of the strip of the strip of the strip of the strip of the strip of the strip o				Cabeza	de plumi	ín (1916-	·1) 65.5 r̀	n Plumír			
12.2											
13.0 76.6 83.2 15.1 22.5 14.0 74.8 82.9 15.1 19.8 16.0 71.3 82.3 15.1 19.8 18.0 67.7 81.5 14.4 13.3 20.0 63.9 80.6 11.8 11.1 22.0 60.1 79.5 9.9 9.6 24.0 56.1 78.2 8.3 8.1 26.0 51.8 76.7 7.0 7.0 28.0 47.4 75.0 6.1 6.1 30.0 42.5 72.9 5.3 5.4 32.0 37.1 70.5 4.6 4.7 34.0 30.9 67.5 4.1 4.2 36.0 23.2 63.5 3.6 3.7 \$\$\$\$Aigulo de pluma principal 83.0 [°]\$\$\$\$\$19.2 73.0 82.2 15.1 16.2 20.0 71.5 81.9 15.1 16.1 22.0 67.9 81.2 14.4 13.4 24.0 64.2 80.2 12.0 11.2 26.0 60.4 79.2 10.0 9.6 28.0 56.4 77.9 8.4 8.2 30.0 52.2 76.4 71.0 7.1 33.0 42.8 72.7 5.4 5.5 33.0 31.4 67.3 4.2 4.3 33.0 31.4 67.3 4.2 4.3 33.0 31.4 67.3 4.2 4.3 33.0 31.4 67.3 4.2 4.3 33.0 31.4 67.3 4.2 4.3 33.0 31.4 67.3 4.2 4.3 33.0 31.4 67.3 4.2 4.3 33.0 31.4 67.3 4.2 4.3 33.0 31.4 67.3 4.2 4.3 33.0 31.4 67.3 4.2 4.3 33.0 31.4 67.3 4.2 4.3 33.0 31.4 67.3 4.2 4.3 33.0 31.4 67.3 4.2 4.3 33.0 31.4 67.3 4.2 4.3 \$	12.2	78.0	83.4			ıma prin	cıpaı 88.0	ا ا			
16.0 71.3 82.3 15.1 15.9 18.0 67.7 81.5 14.4 13.3 20.0 63.9 80.6 11.8 11.1 22.0 60.1 79.5 9.9 9.6 24.0 56.1 78.2 8.3 8.1 26.0 51.8 76.7 7.0 7.0 7.0 28.0 47.4 75.0 6.1 6.1 30.0 42.5 72.9 5.3 5.4 32.0 37.1 70.5 4.6 4.7 34.0 30.9 67.5 4.1 4.2 36.0 23.2 63.5 3.6 3.7 3.6 3.7 3.0 82.2 15.1 16.2 20.0 71.5 81.9 15.1 16.1 22.0 67.9 81.2 14.4 13.4 24.0 64.2 80.2 12.0 11.2 26.0 60.4 79.2 10.0 9.6 28.0 56.4 77.9 8.4 8.2 30.0 52.2 76.4 7.1 7.1 32.0 47.7 74.7 6.2 6.3 33.0 42.8 72.7 5.4 5.5 36.0 37.5 70.2 4.7 4.8 38.0 31.4 67.3 4.2 4.3 38.0 31.4 67.3 4.2 4.3 38.0 31.4 67.3 4.2 4.3		l	I .								
18.0 67.7 81.5 14.4 13.3 20.0 63.9 80.6 11.8 11.1 22.0 60.1 79.5 9.9 9.6 24.0 56.1 78.2 8.3 8.1 26.0 51.8 76.7 7.0 7.0 28.0 47.4 75.0 6.1 6.1 30.0 42.5 72.9 5.3 5.4 32.0 37.1 70.5 4.6 4.7 34.0 30.9 67.5 4.1 4.2 36.0 23.2 63.5 3.6 3.7 Angulo de pluma principal 83.0 [°] 19.2 73.0 82.2 15.1 16.2 20.0 71.5 81.9 15.1 16.1 22.0 67.9 81.2 14.4 13.4 24.0 64.2 80.2 12.0 11.2 26.0 60.4 79.2 10.0 9.6 28.0 56.4 77.9 8.4 8.2 30.0 52.2 76.4 7.1 7.1 32.0 47.7 74.7 6.2 6.3 34.0 42.8 72.7 5.4 5.5 36.0 37.5 70.2 4.7 4.8 38.0 31.4 67.3 4.2 4.3					i						
20.0 63.9 80.6 11.8 11.1 22.0 60.1 79.5 9.9 9.6 24.0 56.1 78.2 8.3 8.1 26.0 51.8 76.7 7.0 7.0 7.0 28.0 47.4 75.0 6.1 6.1 30.0 42.5 72.9 5.3 5.4 32.0 37.1 70.5 4.6 4.7 34.0 30.9 67.5 4.1 4.2 36.0 23.2 63.5 3.6 3.7 36.0 22.2 15.1 16.2 20.0 71.5 81.9 15.1 16.1 22.0 67.9 81.2 14.4 13.4 24.0 64.2 80.2 12.0 11.2 26.0 60.4 79.2 10.0 9.6 28.0 56.4 77.9 8.4 8.2 30.0 52.2 76.4 7.1 7.1 32.0 42.8 72.7 5.4 5.5 36.0 37.4 67.3 4.2 4.3 38.0 31.4 67.3 4.2 4.3 31.4 67.3 4.2 4.3		I									
24.0 56.1 78.2 8.3 8.1 70.0 28.0 47.4 75.0 6.1 6.1 30.0 42.5 72.9 5.3 5.4 32.0 37.1 70.5 4.6 4.7 34.0 30.9 67.5 4.1 4.2 36.0 23.2 63.5 3.6 3.7 \$\$\$\$ Angulo de pluma principal 83.0 [°]\$\$\$\$\$ 19.2 73.0 82.2 15.1 16.2 20.0 71.5 81.9 15.1 16.1 22.0 67.9 81.2 14.4 13.4 24.0 64.2 80.2 12.0 11.2 26.0 60.4 79.2 10.0 9.6 28.0 56.4 77.9 8.4 8.2 30.0 52.2 76.4 7.1 7.1 32.0 47.7 74.7 6.2 6.3 34.0 42.8 72.7 5.4 5.5 36.0 37.5 70.2 4.7 4.8 38.0 31.4 67.3 4.2 4.3 \$											
26.0 51.8 76.7 7.0 7.0 7.0 28.0 47.4 75.0 6.1 6.1 30.0 42.5 72.9 5.3 5.4 32.0 37.1 70.5 4.6 4.7 34.0 30.9 67.5 4.1 4.2 36.0 23.2 63.5 3.6 3.7 Angulo de pluma principal 83.0 [°] 19.2 73.0 82.2 15.1 16.2 20.0 71.5 81.9 15.1 16.1 22.0 67.9 81.2 14.4 13.4 24.0 64.2 80.2 12.0 11.2 26.0 60.4 79.2 10.0 9.6 28.0 56.4 77.9 8.4 8.2 30.0 52.2 76.4 7.1 7.1 32.0 47.7 74.7 6.2 6.3 34.0 42.8 72.7 5.4 5.5 36.0 37.5 70.2 4.7 4.8 38.0 31.4 67.3 4.2 4.3		i	i		i						
28.0											
30.0		i									
34.0 30.9 67.5 4.1 4.2 36.0 23.2 63.5 3.6 3.7 Angulo de pluma principal 83.0 [°] 19.2 73.0 82.2 15.1 16.2 20.0 71.5 81.9 15.1 16.1 22.0 67.9 81.2 14.4 13.4 24.0 64.2 80.2 12.0 11.2 26.0 60.4 79.2 10.0 9.6 28.0 56.4 77.9 8.4 8.2 30.0 52.2 76.4 7.1 7.1 32.0 47.7 74.7 6.2 6.3 34.0 42.8 72.7 5.4 5.5 36.0 37.5 70.2 4.7 4.8 38.0 31.4 67.3 4.2 4.3											
36.0 23.2 63.5 3.6 3.7 Ángulo de pluma principal 83.0 [°] 19.2 73.0 82.2 15.1 16.2 20.0 71.5 81.9 15.1 16.1 22.0 67.9 81.2 14.4 13.4 24.0 64.2 80.2 12.0 11.2 26.0 60.4 79.2 10.0 9.6 28.0 56.4 77.9 8.4 8.2 30.0 52.2 76.4 7.1 7.1 32.0 47.7 74.7 6.2 6.3 34.0 42.8 72.7 5.4 5.5 36.0 37.5 70.2 4.7 4.8 38.0 31.4 67.3 4.2 4.3		i	i	i	i						
Ángulo de pluma principal 83.0 [°] 19.2 73.0 82.2 15.1 16.2 20.0 71.5 81.9 15.1 16.1 22.0 67.9 81.2 14.4 13.4 24.0 64.2 80.2 12.0 11.2 26.0 60.4 79.2 10.0 9.6 28.0 56.4 77.9 8.4 8.2 30.0 52.2 76.4 7.1 7.1 32.0 47.7 74.7 6.2 6.3 34.0 42.8 72.7 5.4 5.5 36.0 37.5 70.2 4.7 4.8 38.0 31.4 67.3 4.2 4.3		i									
19.2 73.0 82.2 15.1 16.2 20.0 71.5 81.9 15.1 16.1 22.0 67.9 81.2 14.4 13.4 24.0 64.2 80.2 12.0 11.2 26.0 60.4 79.2 10.0 9.6 28.0 56.4 77.9 8.4 8.2 30.0 52.2 76.4 7.1 7.1 32.0 47.7 74.7 6.2 6.3 34.0 42.8 72.7 5.4 5.5 38.0 31.4 67.3 4.2 4.3	00.0	20.2	00.0			ıma prin	cipal 83.0	1°10			
22.0 67.9 81.2 14.4 13.4 24.0 64.2 80.2 12.0 11.2 26.0 60.4 79.2 10.0 9.6 28.0 56.4 77.9 8.4 8.2 30.0 52.2 76.4 7.1 7.1 32.0 47.7 74.7 6.2 6.3 34.0 42.8 72.7 5.4 5.5 36.0 37.5 70.2 4.7 4.8 38.0 31.4 67.3 4.2 4.3	19.2	73.0	82.2		 						
24.0 64.2 80.2 12.0 11.2 26.0 60.4 79.2 10.0 9.6 28.0 56.4 77.9 8.4 8.2 30.0 52.2 76.4 7.1 7.1 32.0 47.7 74.7 6.2 6.3 34.0 42.8 72.7 5.4 5.5 36.0 37.5 70.2 4.7 4.8 38.0 31.4 67.3 4.2 4.3		i	i		i						
26.0 60.4 79.2 10.0 9.6 28.0 56.4 77.9 8.4 8.2 30.0 52.2 76.4 7.1 7.1 32.0 47.7 74.7 6.2 6.3 34.0 42.8 72.7 5.4 5.5 36.0 37.5 70.2 4.7 4.8 38.0 31.4 67.3 4.2 4.3		l									
28.0 56.4 77.9 8.4 8.2 30.0 52.2 76.4 7.1 7.1 32.0 47.7 74.7 6.2 6.3 34.0 42.8 72.7 5.4 5.5 36.0 37.5 70.2 4.7 4.8 38.0 31.4 67.3 4.2 4.3		i			i						
32.0 47.7 74.7 6.2 6.3 34.0 42.8 72.7 5.4 5.5 36.0 37.5 70.2 4.7 4.8 38.0 31.4 67.3 4.2 4.3		i	i		i						
34.0 42.8 72.7 5.4 5.5 36.0 37.5 70.2 4.7 4.8 38.0 31.4 67.3 4.2 4.3		i	i		i						
36.0 37.5 70.2 4.7 4.8 38.0 31.4 67.3 4.2 4.3		1									
		i	i i		i						
40.0 23.8 63.4 3.7 3.8 Angula de pluma principal 75.0 [°]	40.0	23.8	63.4			ıma nrin	oinal 75 () [° 1			
Ángulo de pluma principal 75.0 [°]	30.1	65.0	79.0	Angu		лпа рпп 	Cipai 75.) <u> </u>			
32.0 61.4 78.1 10.5 10.1		i	i	10.5	i						
34.0 57.4 76.8 8.8 8.7		l									
36.0 53.3 75.4 7.5 7.4 38.0 48.9 73.8 6.5 6.6											
40.0 44.1 71.8 5.6 5.7		l									
42.0 38.9 69.5 4.9 5.0		i	i	i							
44.0 33.0 66.7 4.4 4.5 46.0 25.9 63.1 3.9 4.0		ı									
Ángulo de pluma principal 65.0 [°]	. 5.0					ıma prin	cipal 65 (1°10			
42.9 55.0 73.0 7.5	42.9	55.0	73.0	I			J.pa. 00.	- L J			
44.0 52.7 72.2 7.4 7.4	44.0	52.7	72.2		7.4						
46.0 48.3 70.6 6.3 6.4 48.0 43.5 68.6 5.6 5.7											
50.0 38.3 66.2 4.9 5.0											
55.0 20.3 57.2 3.6 3.7											
Ángulo de pluma principal 45.0 [°]				Ángı	ılo de plu	ıma prin	cipal 45.0	[°]			
64.7 35.0 54.7 2.6											
65.0 34.1 54.2 2.5 67.0 27.3 50.7 2.0											



2821-1 2821-1

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

Valor de vuelco:	2 - Vía ancha
Lastre trasero [t]:	94.0
Lastre central [t]:	52.6

	Inserciór	l	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 34.0	de plumí	n (2316-		n Plumín			
			Ángı	ılo de plu	uma prin	cipal 88.0) [°]			
12.2	78.0	83.4		30.1						
13.0	76.7	83.2	15.1	30.1						
14.0	74.9	83.0	15.1	27.7						
16.0	71.4	82.3	15.1	22.1						
18.0	67.8	81.5	14.8	18.3						
20.0	64.0	80.6	13.9	15.3						
22.0	60.2	79.5	12.9	13.2						
24.0 26.0	56.2 52.0	78.2 76.7	10.9 9.3	11.4 9.9						
28.0	47.5	75.0	8.1	8.7						
30.0	42.6	73.0	7.0	7.5						
32.0	37.2	70.5	6.0	6.5						
34.0	31.0	67.5	5.1	5.4						
36.0	23.3	63.6	3.9	4.1						
			Ánaı	ılo de plu	uma prin	cipal 83.0	l°1			
19.2	73.0	82.2		22.6						
20.0	71.6	82.0	15.1	22.5						
22.0	68.0	81.2	15.1	18.4						
24.0	64.3	80.3	14.9	15.4						
26.0	60.5	79.2	14.4	13.4						
28.0	56.5	77.9	12.1	11.5						
30.0	52.3	76.5	10.3	10.0						
32.0 34.0	47.8 43.0	74.7 72.7	8.9 7.8	8.9 7.8						
36.0	37.6	70.3	6.7	6.9						
38.0	31.5	67.3	5.9	6.1						
40.0	23.9	63.5	5.2	5.3						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
30.1	65.0	79.0		15.0						
32.0	61.5	78.1	13.7	13.9						
34.0	57.5	76.9	11.6	12.0						
36.0	53.4	75.5	9.9	10.4						
38.0 40.0	49.0 44.2	73.8 71.9	8.6 7.6	9.2 8.1						
40.0	39.0	69.6	6.7	7.2						
44.0	33.1	66.8	6.0	6.4						
46.0	26.1	63.2	5.3	5.7						
			Ángı	ılo de plu	ıma prin	cipal 65.0) [°]			
43.0	55.0	72.9		8.0						
44.0	52.8	72.3	9.2	7.5						
46.0	48.4	70.6	8.2	6.6						
48.0	43.6	68.6	7.2	5.8						
50.0	38.4	66.3	6.4	5.0						
55.0 56.0	20.5 16.2	57.3 54.2	4.5 4.1	3.4						
50.0	10.4	57.2	7.1							



N° de ident.: 9842523/95738/ Pie

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

Valor de vuelco: 2 - Vía ancha Lastre trasero [t]: 94.0 Lastre central [t]: 52.6 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]
		47.	0 m Plum Cabeza 37.0	de plumi		1) 68.5 n	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0) [°]			
12.8 13.0 14.0 16.0 18.0	78.0 77.7 76.1 72.9 69.6	86.3 86.0 85.5 84.8	15.1 15.1 15.1 15.1 14.9	21.9 21.9 21.2 17.1 14.3						
20.0 22.0 24.0 26.0	66.2 62.8 59.2 55.5	83.9 82.9 81.8 80.5	13.0 10.8 9.2 7.9	12.1 10.4 9.0 7.8						
28.0 30.0 32.0 34.0 36.0	51.6 47.4 43.0 38.1 32.6	78.9 77.2 75.2 72.8 69.9	6.8 6.0 5.3 4.6 4.1	6.9 6.1 5.4 4.7 4.2						
38.0	26.1	66.3	3.7	3.8						
20.1	73.0	05.4	Angu 15.1	ılo de plu 15.9	ıma prin	cipal 83.0) [°]		I	l
22.0 24.0 26.0 28.0	69.8 66.5 63.0 59.4	85.1 84.4 83.6 82.6 81.5	14.9 13.2 10.9 9.3	14.5 12.3 10.5 9.1						
30.0 32.0 34.0 36.0	55.7 51.8 47.7 43.3	80.2 78.7 76.9 74.9	8.0 6.9 6.1 5.4	7.9 7.0 6.2 5.5						
38.0 40.0 42.0	38.5 33.0 26.6	72.6 69.7 66.2	4.7 4.2 3.8	4.8 4.4 3.9						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]C			
31.4 32.0 34.0	65.0 63.9 60.4	81.7 81.5 80.4	11.1 11.1 9.7	10.7 10.7 9.5						
36.0 38.0 40.0 42.0	56.7 52.8 48.8 44.5	79.1 77.7 76.0 74.1	8.3 7.2 6.4 5.6	8.3 7.3 6.5 5.7						
44.0 46.0 48.0 50.0	39.8 34.5 28.4 20.6	71.8 69.1 65.8 61.4	5.0 4.4 4.0 3.6	5.1 4.5 4.1 3.7						
			Ángı	ılo de plı	ıma prin	cipal 65.0) [°]			
44.7 46.0	55.0 52.4	75.4 74.5	7.2	7.4 7.2						
48.0 50.0 55.0 59.0	48.3 43.9 30.8 15.3	72.8 70.8 64.2 54.5	6.3 5.6 4.2 3.4	6.4 5.7 4.3						



Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal:

2821-1

360°

Cabeza de pluma principal:

2821-1

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 94.0 52.6 Lastre central [t]:

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plun Cabeza 37.0	de plumí		1) 71.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
12.9	78.0	86.4	15.1	27.3						
13.0 14.0	77.8 76.2	86.3 86.1	15.1 15.1	27.3 26.2						
16.0	72.9	85.5	15.1	20.2						
18.0	69.7	84.8	15.1	17.1						
20.0	66.3	83.9	13.9	14.4						
22.0 24.0	62.8 59.3	83.0 81.8	12.5 11.1	12.2 10.6						
26.0	55.6	80.5	9.3	9.1						
28.0	51.7	79.0	7.9	8.0						
30.0	47.5	77.2	6.8	7.0						
32.0	43.1	75.2	5.9	6.1						
34.0 36.0	38.2 32.7	72.8 70.0	5.0 4.3	5.3 4.5						
38.0	26.2	66.4	3.2	3.3						
			Ángi	ılo de plı	ıma prin	cinal 83 (1°10			
20.1	73.0	85.1	I	19.1						
22.0	69.9	84.4	15.1	17.3						
24.0	66.5	83.6	14.6	14.6						
26.0 28.0	63.1 59.5	82.6	12.8	12.4						
30.0	55.8	81.5 80.2	11.2 9.4	10.7 9.2						
32.0	51.9	78.7	8.0	8.1						
34.0	47.8	77.0	7.0	7.1						
36.0	43.4	75.0	6.1	6.2						
38.0 40.0	38.6 33.2	72.6 69.8	5.3 4.6	5.4 4.8						
42.0	26.7	66.3	4.0	4.0						
			Ángı	ılo de plu	ıma prin	cipal 75.0	D[°]			
31.4	65.0	81.7		12.6						
32.0	64.0	81.5	13.4	12.6						
34.0 36.0	60.5 56.8	80.4 79.1	11.6 9.9	9.7						
38.0	52.9	79.1 77.7	9.9 8.4	8.4						
40.0	48.9	76.0	7.3	7.4						
42.0	44.6	74.1	6.4	6.5						
44.0	39.9	71.9	5.6	5.7						
46.0 48.0	34.6 28.5	69.2 65.9	4.9 4.3	5.0 4.5						
50.0	20.7	61.5	3.8	3.9						
					ıma prin	cipal 65.0	[°]			
44.7	55.0	75.4		7.0						
46.0	52.5	74.5	7.8	6.4						
48.0	48.4	72.8	6.8	5.6						
50.0 55.0	44.0 31.0	70.9 64.2	6.0 4.2	4.9 3.3						
59.0	15.5	54.6	3.0							



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]
							0 14:	16 11		
		47.0	0 m Plum Cabeza 40.0	de plumí	oal, Punt In (1916- osición m	1) 71.5 r	n Plumín	dfall		
					ıma prin	•				
13.4	78.0	89.3		22.4						
14.0	77.1	89.1	15.1	22.4						
16.0	74.2	88.6	15.1	19.5						
18.0 20.0	71.2 68.1	88.0 87.2	14.7 14.0	16.4 14.2						
22.0	65.0	86.3	11.7	12.2						
24.0	61.7	85.2	10.1	10.6						
26.0	58.4	84.1	8.8	9.4						
28.0	54.9	82.7	7.7	8.3						
30.0	51.3	81.2	6.8	7.4						
32.0 34.0	47.5 43.4	79.4 77.4	6.2 5.5	6.7 6.0						
36.0	39.0	75.1	5.0	5.4						
38.0	34.0	72.4	4.5	4.9						
40.0	28.3	69.0	4.2	4.5						
42.0	21.2	64.7	3.8	4.1						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
20.9	73.0	87.9		16.8						
22.0	71.4	87.6	15.1	16.7						
24.0 26.0	68.3 65.2	86.8 85.9	14.4 12.7	14.2 12.3						
28.0	62.0	84.9	11.0	10.8						
30.0	58.6	83.7	9.6	9.5						
32.0	55.2	82.4	8.3	8.4						
34.0	51.6	80.9	7.4	7.5						
36.0 38.0	47.8 43.7	79.2 77.2	6.6 5.9	6.8 6.1						
40.0	39.3	74.9	5.3	5.5						
42.0	34.4	72.2	4.8	5.0						
44.0	28.8	68.9	4.4	4.6						
46.0	21.8	64.6	4.0	4.2						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
32.6	65.0	84.5	47.	11.5						
34.0	62.8	83.8	11.7	11.2						
36.0 38.0	59.5 56.1	82.7 81.4	10.0 8.8	9.8 8.8						
40.0	52.5	79.9	7.7	7.8						
42.0	48.8	78.2	6.9	7.1						
44.0	44.8	76.3	6.2	6.3						
46.0	40.4	74.1	5.6	5.7						
48.0 50.0	35.7 30.3	71.5 68.4	5.0 4.6	5.2 4.8						
33.0		55.⊣			ıma prin	cinal 65 () [°]			
46.4	55.0	77.9	Angl	8.0	Jilia Pilli	o.pai 00.0	- L J			
48.0	52.1	76.7	7.6	7.8						
50.0	48.3	75.0	6.8	7.0						
55.0	37.6	69.6	5.3	5.4						
60.0	22.9	60.9	4.2	4.4						
61.0	18.6	58.3	4.0	4.2						



Nº de ident.: 9842523/95738/ 360°

Radio de descarga:

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

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 94.0 52.6 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]
		47.0	0 m Plun Cabeza 31.0	na princip de plumi 0 [m] Po	ín (1916-	1) 74.5 r	n Plumír		•	
				ılo de plı						
11.6	78.0	80.5	15.1	20.5		J. Par 55.				
12.0	77.1	80.4	15.1	20.5						
13.0	75.2	80.1	15.1	18.8						
14.0	73.3	79.8	15.1	16.6						
16.0	69.4	79.1	14.2	13.2						
18.0	65.3	78.2	11.6	10.6						
20.0 22.0	61.2 56.8	77.2 75.9	9.0 7.3	8.7 7.2						
24.0	52.2	75.9 74.5	7.3 5.9	5.9						
26.0	47.3	72.7	5.0	5.0						
28.0	41.9	70.6	4.2	4.2						
30.0	35.8	68.1	3.6	3.6						
32.0	28.7	64.9	2.9	3.0						
			Ángı	ılo de plu	ıma prin	cipal 83.0	0 [°]			
18.3	73.0	79.3		14.7						
20.0	69.7	78.7	14.7	13.4						
22.0	65.6	77.9	11.6	10.7						
24.0	61.5	76.8	9.0	8.7						
26.0 28.0	57.1 52.5	75.6 74.2	7.4 6.1	7.2 6.1						
30.0	47.6	72.5	5.2	5.2						
32.0	42.3	70.4	4.4	4.4						
34.0	36.3	67.9	3.7	3.7						
36.0	29.2	64.8	3.2	3.2						
			Ángı	ılo de plu	uma prin	cipal 75.0	0 [°]			
28.8	65.0	76.3		9.5						
30.0	62.5	75.7	9.7	9.2						
32.0	58.2	74.6	7.8	7.6						
34.0	53.7	73.2	6.5	6.4						
36.0 38.0	48.9 43.7	71.5 69.6	5.5 4.7	5.5 4.7						
40.0	37.9	67.2	4.7	4.7						
42.0	31.2	64.2	3.4	3.5						
44.0	22.6	60.3	3.0	3.0						
			Ángı	ılo de plı	uma prin	cipal 65.0	0 [°]			
41.2	55.0	70.5		6.4			_ ·			
42.0	53.2	70.0	6.3	6.3						
44.0	48.3	68.3	5.4	5.4						
46.0	43.0	66.3	4.7	4.7						
48.0 50.0	37.1 30.3	63.9 60.8	4.0 3.5	4.0 3.5						
50.0	15.0	53.7	3.5 2.8	2.8						
33.0	13.0	33.1	2.0	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]: 94.0 Lastre central [t]: 52.6

Lasiic		1.		32.0						
	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]
		47.0	0 m Plum Cabeza 40 (de plumí	n (2316-	o de carç 1) 74.5 r nidfall (23	n Plumín	dfall		
						cipal 88.0				
13.5	78.0	89.3	15.1	27.1						
14.0	77.2	89.2	15.1	27.1						
16.0	74.3	88.6	15.1	23.0						
18.0 20.0	71.3 68.2	88.0 87.2	15.1 14.9	19.0 16.2						
22.0	65.0	86.3	13.5	13.8						
24.0	61.8	85.3	12.4	12.0						
26.0	58.5	84.1	10.9	10.5						
28.0	55.0	82.8	9.3	9.2						
30.0	51.4	81.2	8.1	8.2						
32.0 34.0	47.6 43.5	79.5 77.5	6.9 5.7	7.0 5.7						
36.0	39.1	75.1	4.5	4.6						
38.0	34.1	72.4	3.6	3.7						
40.0	28.5	69.1	2.7	2.7						
			Ángı	ılo de plu	ıma prin	cipal 83.0	1°10			
21.0	73.0	87.9	I	19.2						
22.0	71.5	87.6	15.1	19.2						
24.0	68.4	86.9	15.1	16.2						
26.0	65.3	86.0	14.0	13.9						
28.0	62.1	85.0	12.5	12.1						
30.0 32.0	58.7 55.3	83.8 82.5	11.0 9.4	10.7 9.3						
34.0	51.7	80.9	8.2	8.3						
36.0	47.9	79.2	7.2	7.4						
38.0	43.8	77.2	6.4	6.5						
40.0	39.4	74.9	5.6	5.8						
42.0	34.5	72.2	5.0	5.1						
44.0 46.0	28.9 21.9	68.9 64.7	4.1 3.2	4.2 3.2						
40.0	21.5	04.7			ıma prin	oinal 75 () [°]			
20.7	05.0	04.5	Angu		лна рип	cipal 75.0	J[]			
32.7 34.0	65.0 62.9	84.5 83.8	12.3	12.8 12.6						
34.0 36.0	59.6	82.7	12.3	11.0						
38.0	56.2	81.4	9.2	9.7						
40.0	52.6	79.9	8.0	8.6						
42.0	48.8	78.3	7.1	7.7						
44.0	44.9	76.4	6.3	6.8						
46.0 48.0	40.5 35.8	74.1 71.6	5.6 5.1	6.1 5.4						
50.0	30.4	68.4	4.6	4.9						
					ıma prin	cipal 65.0	1°10			
46.4	55.0	77.9	Ig	6.2						
48.0	52.2	76.8	6.7	5.5						
50.0	48.4	75.1	5.9	4.8						
55.0	37.7	69.6	4.1	3.3						
60.0	23.9	61.0	2.6							
61.0	19.9	58.4	2.3							



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]: 94.0 Lastre central [t]: 52.6

	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 plumí		1) 77.5 r	n Plumín			
			Ángu	ılo de plı	ıma prin	cipal 88.0	0 [°]			
12.2	78.0	83.4	15.1	18.3						
13.0	76.6	83.2	15.1	18.3						
14.0 16.0	74.8 71.3	82.9 82.3	15.1 13.8	16.4 13.1						
18.0	67.7	81.5	11.6	10.7						
20.0	63.9	80.6	9.0	8.7						
22.0	60.1	79.5	7.3	7.2						
24.0	56.1	78.2	6.0	6.0						
26.0	51.8	76.7	5.0	5.0						
28.0	47.4	75.0	4.2	4.2						
30.0 32.0	42.5	72.9	3.5	3.6						
34.0	37.1 30.9	70.5 67.5	3.0 2.4	3.0 2.5						
0 1.10	00.0	01.0	,		ıma prin	cipal 83.0	0[°]			
19.2	73.0	82.2	12.7	13.1	· ·	·				
20.0	71.5	81.9	12.6	13.0						
22.0	67.9	81.2	10.2	10.7						
24.0	64.2	80.2	8.1	8.6						
26.0 28.0	60.4 56.4	79.2	6.7	7.2 6.0						
30.0	52.2	77.9 76.4	5.6 4.8	5.1						
32.0	47.7	74.7	4.1	4.4						
34.0	42.8	72.7	3.5	3.7						
36.0	37.5	70.2	3.0	3.2						
38.0	31.4	67.3	2.5	2.7						
40.0	23.8	63.4	2.1	2.3						
			Angı		ıma prin	cipal 75.0	0 [°]			
30.1	65.0	79.0		8.3						
32.0 34.0	61.4 57.4	78.1 76.8	7.7 6.5	7.7 6.5						
34.0 36.0	57.4	76.8 75.4	5.4	5.4						
38.0	48.9	73.8	4.6	4.7						
40.0	44.1	71.8	3.9	4.0						
42.0	38.9	69.5	3.3	3.4						
44.0	33.0	66.7	2.8	2.9						
46.0	25.9	63.1	2.5	2.5	<u> </u>					l
40.0	EE 0	70.0	Angu		ıma prin	cipal 65.0	ט[֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֓֓֓֓	1	I	
42.9	55.0	73.0	E 4	5.5						
44.0 46.0	52.7 48.3	72.2 70.6	5.4 4.6	5.4 4.6						
48.0	43.5	68.6	3.9	4.0						
50.0	38.3	66.2	3.4	3.4						
55.0	20.3	57.2	2.3	2.4						
56.0	16.0	54.1	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]
				<u> </u>						
		47.0		de plumí	oal, Punt n (2316- osición m	1) 77.5 r̀	n Plumín			
					ıma prin	cipal 88.0	D [°]			
14.1	78.0	92.2	15.1	26.9						
16.0 18.0	75.4 72.6	91.8 91.2	15.1 15.1	24.6 20.6						
20.0	69.8	90.4	15.1	17.4						
22.0	66.9	89.6	14.0	15.1						
24.0	64.0	88.7	12.4	13.1						
26.0	60.9	87.6	11.2	11.7						
28.0 30.0	57.8 54.6	86.4 85.0	9.6 8.2	10.1 8.8						
32.0	51.2	83.5	7.1	7.7						
34.0	47.6	81.7	6.0	6.4						
36.0	43.8	79.7	4.8	5.1						
38.0	39.8	77.4	3.6	3.9						
40.0	35.3	74.8	2.7 Δησι	ılo de nlı	ıma prin	rinal 83 (1 ° 1			
21.9	73.0	90.8	15.1	19.2	лна рин Г		J []			
22.0	72.8	90.8	15.1	19.2						
24.0	70.0	90.1	15.1	17.6						
26.0	67.1	89.3	15.0	15.3						
28.0	64.2	88.3	13.3	13.3						
30.0 32.0	61.1 58.0	87.3 86.1	12.1 10.6	11.8 10.4						
34.0	54.8	84.7	9.2	9.2						
36.0	51.4	83.2	8.1	8.3						
38.0	47.9	81.4	7.2	7.4						
40.0	44.1	79.5	6.4	6.6						
42.0 44.0	40.1 35.6	77.2 74.6	5.7 5.0	5.9 5.2						
46.0	30.6	71.5	4.1	4.2						
48.0	24.7	67.6	3.1	3.1						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
33.9	65.0	87.2		12.9						
34.0	64.9	87.2	13.4	12.9						
36.0 38.0	61.9 58.8	86.2 85.0	12.7 11.0	12.2 10.8						
40.0	55.6	83.7	9.6	9.6						
42.0	52.3	82.2	8.4	8.6						
44.0	48.8	80.5	7.6	7.8						
46.0	45.1	78.6	6.8	7.0						
48.0 50.0	41.1 36.8	76.4 73.9	6.1 5.5	6.3 5.7						
55.0	23.0	65.1	4.2	4.3				<u> </u>		
					ıma prin	cipal 65.0	0 [°]			
48.1	55.0	80.3		5.3						
50.0	51.9	79.0	5.5	4.6						
55.0 60.0	42.7 31.9	74.3 67.6	3.8 2.3	3.1						
61.0	29.2	65.8	2.0							



2821-1 2821-1

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

Valor de vuelco: 2 - Vía ancha Lastre trasero [t]: 94.0 Lastre central [t]: 52.6

Ce		Inserciór	1	1	2	3	4	5	6	7	8
Cabeza de plumín (2316-1) 80.5 m Plumín 34.0 [m] Posición midfall (2316)	се	o de plumín	de rolda- nas		Carga [t]						Carga [t]
12.2			47.0	Cabeza	de plumi	ín (2316-	1) 80.5 r	n Plumín			
13.0				Ángı	ılo de plı	ıma prin	cipal 88.0	0 [°]			
Ángulo de pluma principal 83.0 [°] 19.2 73.0 82.2 24.2 20.0 71.6 82.0 15.1 24.1 22.0 68.0 81.2 15.1 20.8 24.0 64.3 80.3 14.8 17.3 26.0 60.5 79.2 14.3 14.7 28.0 56.5 77.9 12.0 12.3 30.0 52.3 76.5 10.0 10.4 32.0 47.8 74.7 7.9 8.2 34.0 43.0 72.7 5.2 5.3 Ángulo de pluma principal 75.0 [°] 30.1 65.0 79.0 15.0 [°] 30.1 65.0 79.0 11.6 32.0 61.5 78.1 15.1 13.2 34.0 57.5 76.9 14.0 11.6 36.0 53.4 75.5 12.0 10.1 38.0 49.0 73.8 10.1 8.8 40.0 44.2 71.9 8.6 7.7 42.0 39.0 69.6 7.3 6.6 44.0 33.1 66.8 6.2 5.6 46.0 26.1 63.2 4.2 4.1 Ángulo de pluma principal 65.0 [°] 43.0 55.0 72.9 6.0 5.0 44.0 48.4 70.6 4.9 3.7 48.0 43.6 68.6 3.9 2.9	13.0 14.0 16.0 18.0 20.0 22.0 24.0 26.0	76.7 74.9 71.4 67.8 64.0 60.2 56.2 52.0	83.2 83.0 82.3 81.5 80.6 79.5 78.2 76.7	15.1 15.1 15.1 14.1 13.4 9.0 5.4	30.1 29.7 24.8 20.9 16.6 13.6 9.1 5.6						
19.2				Ángı		ıma prin	cipal 83.0	1°10			
28.0	20.0 22.0	71.6 68.0	82.0 81.2	15.1	24.1 20.8	'	•				
Ángulo de pluma principal 75.0 [°] 30.1 65.0 79.0 15.0 32.0 61.5 78.1 15.1 13.2 34.0 57.5 76.9 14.0 11.6 36.0 53.4 75.5 12.0 10.1 38.0 49.0 73.8 10.1 8.8 40.0 44.2 71.9 8.6 7.7 42.0 39.0 69.6 7.3 6.6 44.0 33.1 66.8 6.2 5.6 46.0 26.1 63.2 4.2 4.1 Ángulo de pluma principal 65.0 [°] 43.0 55.0 72.9 5.0 44.0 52.8 72.3 6.0 4.5 46.0 48.4 70.6 4.9 3.7 48.0 43.6 68.6 3.9 2.9	28.0 30.0 32.0	56.5 52.3 47.8	77.9 76.5 74.7	12.0 10.0 7.9	12.3 10.4 8.2						
30.1 65.0 79.0 15.0 32.0 61.5 78.1 15.1 13.2 34.0 57.5 76.9 14.0 11.6 36.0 53.4 75.5 12.0 10.1 38.0 49.0 73.8 10.1 8.8 40.0 44.2 71.9 8.6 7.7 42.0 39.0 69.6 7.3 6.6 44.0 33.1 66.8 6.2 5.6 46.0 26.1 63.2 4.2 4.1 Angulo de pluma principal 65.0 [°] 43.0 55.0 72.9 5.0 44.0 45.6 68.6 3.9 2.9	34.0	1 40.0	12.1			ıma nrin	cinal 75 (1 ° 1 0		ı	
42.0 39.0 69.6 7.3 6.6 44.0 33.1 66.8 6.2 5.6 42 4.1 Ángulo de pluma principal 65.0 [°] 43.0 55.0 72.9 5.0 44.0 52.8 72.3 6.0 4.5 4.2 4.1 4.0 52.8 72.3 6.0 4.5 4.2 4.1	32.0 34.0 36.0 38.0	61.5 57.5 53.4 49.0	78.1 76.9 75.5 73.8	15.1 14.0 12.0 10.1	15.0 13.2 11.6 10.1 8.8		ырит 7 о.ч				
43.0 55.0 72.9 5.0 44.0 52.8 72.3 6.0 4.5 46.0 48.4 70.6 4.9 3.7 48.0 43.6 68.6 3.9 2.9	42.0 44.0	39.0 33.1	69.6 66.8	7.3 6.2	6.6 5.6						
44.0 52.8 72.3 6.0 4.5 46.0 48.4 70.6 4.9 3.7 48.0 43.6 68.6 3.9 2.9				Ángı	ılo de plu	ıma prin	cipal 65.0	0 [°]			
50.0 38.4 66.3 3.0 2.2	44.0 46.0 48.0 50.0	52.8 48.4 43.6 38.4	72.3 70.6 68.6 66.3	4.9 3.9 3.0	4.5 3.7						

Source:a9841388



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:

valor de vuelco.	Z - Via aliciia
Lastre trasero [t]:	94.0
Lastre central [t]:	52.6

	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]
			Cabeza	de plumi	oal, Punt ín (1916- osición m	1) 80.5 n	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0) [°]			
12.8 13.0 14.0 16.0 18.0 20.0 22.0 24.0 26.0	78.0 77.7 76.1 72.9 69.6 66.2 62.8 59.2 55.5	86.3 86.3 86.0 85.5 84.8 83.9 82.9 81.8 80.5	15.1 15.1 15.1 14.9 13.0 10.8 8.7 7.3 6.2	19.0 19.0 18.5 15.1 12.3 10.2 8.5 7.3 6.2						
28.0 30.0 32.0 34.0 36.0	51.6 47.4 43.0 38.1 32.6	78.9 77.2 75.2 72.8 69.9	5.3 4.6 4.0 3.5 3.0	5.4 4.7 4.1 3.6 3.0						
ļ					ıma prin	cipal 83.0	[°]			
20.1 22.0 24.0 26.0 28.0 30.0	73.0 69.8 66.5 63.0 59.4 55.7	85.1 84.4 83.6 82.6 81.5 80.2 78.7	14.1 13.2 10.8 8.7 7.4 6.3 5.4	13.5 12.3 10.2 8.6 7.4 6.3 5.5						
34.0 36.0 38.0 40.0 42.0	47.7 43.3 38.5 33.0 26.6	76.9 74.9 72.6 69.7 66.2	4.8 4.2 3.6 3.2 2.7	4.9 4.2 3.7 3.3 2.8						
					ıma prin	cipal 75.0) [°]		ı	
31.4 32.0 34.0 36.0	65.0 63.9 60.4 56.7	81.7 81.5 80.4 79.1	8.8 8.8 7.7 6.7	8.8 8.7 7.7 6.7						
38.0 40.0 42.0 44.0 46.0 48.0	52.8 48.8 44.5 39.8 34.5 28.4	77.7 76.0 74.1 71.8 69.1 65.8	5.7 5.1 4.4 3.9 3.4 3.1	5.8 5.1 4.5 3.9 3.5 3.1						
50.0	20.6	61.4	2.7 Ángi	l 2.8 Ilo de pli	ıma prin	cipal 65 (1°10		l	
44.7 46.0 48.0 50.0 55.0 59.0	55.0 52.4 48.3 43.9 30.8 15.3	75.4 74.5 72.8 70.8 64.2 54.5	5.7 5.0 4.4 3.3 2.6	5.9 5.8 5.1 4.5 3.4	, and print					



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]
		47.0		de plumi	oal, Punt ín (2316- osición m	1) 83.5 r	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	1°10			
12.9 13.0 14.0 16.0 18.0 20.0	78.0 77.8 76.2 72.9 69.7	86.4 86.3 86.1 85.5 84.8	15.1 15.1 15.1 15.1 15.1	27.5 27.5 27.5 22.8 18.8						
22.0 24.0 26.0 28.0 30.0	62.8 59.3 55.6 51.7 47.5	83.0 81.8 80.5 79.0	12.0 10.0 6.7 4.0 2.5	12.8 10.2 6.8 4.1 2.6						
30.0	47.5	11.2			ıma prin	cinal 83 (1°1		I	
20.1 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0	73.0 69.9 66.5 63.1 59.5 55.8 51.9 47.8 43.4	85.1 84.4 83.6 82.6 81.5 80.2 78.7 77.0 75.0	15.1 15.1 12.9 11.2 9.2 7.7 6.1 3.9	20.1 19.1 16.1 13.5 11.6 9.7 8.2 6.4 4.1	ana pini	spar oo.				
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
31.4 32.0 34.0 36.0 38.0 40.0 44.0 46.0 48.0	65.0 64.0 60.5 56.8 52.9 48.9 44.6 39.9 34.6 28.5	81.7 81.5 80.4 79.1 77.7 76.0 74.1 71.9 69.2 65.9		4.1	ıma princ	cipal 65.	D [°]			
46.0 48.0 50.0 51.0	52.5 48.4 44.0 42.1	74.5 72.8 70.9 69.8	4.7 3.7 2.8 2.4	3.6 2.8 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]
		47.0		de plumi	pal, Punt ín (1916- osición m	1) 83.5 r	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0	1°10			
13.4	78.0	89.3	I	15.9						
14.0	77.1	89.1	15.1	15.9						
16.0	74.2	88.6	13.7	14.0						
18.0	71.2	88.0	11.0	11.5						
20.0 22.0	68.1 65.0	87.2 86.3	8.9	9.6 7.9						
24.0	61.7	85.2	7.3 6.1	6.6						
26.0	58.4	84.1	5.2	5.7						
28.0	54.9	82.7	4.5	4.8						
30.0	51.3	81.2	3.8	4.2						
32.0	47.5	79.4	3.3	3.6						
34.0 36.0	43.4 39.0	77.4 75.1	2.9 2.5	3.1 2.7						
30.0	39.0	75.1			ıma prin	cinal 83 () [°]		l.	
00.0	70.0	07.0	Angu		ına pını	lipai 65.	J []		I	
20.9 22.0	73.0 71.4	87.9 87.6	10.9	11.5 11.4						
24.0	68.3	86.8	9.4	9.4						
26.0	65.2	85.9	7.9	7.9						
28.0	62.0	84.9	6.7	6.7						
30.0	58.6	83.7	5.7	5.8						
32.0 34.0	55.2 51.6	82.4 80.9	4.8 4.1	4.9 4.3						
36.0	47.8	79.2	3.6	3.7						
38.0	43.7	77.2	3.1	3.2						
40.0	39.3	74.9	2.7	2.8						
42.0	34.4	72.2	2.3	2.4						
			Ángı	ılo de plı	ıma prin	cipal 75.0	[°]			
32.6	65.0	84.5		7.2						
34.0	62.8	83.8	7.1	7.1						
36.0 38.0	59.5 56.1	82.7 81.4	6.0 5.2	6.1 5.3						
40.0	52.5	79.9	4.4	4.5						
42.0	48.8	78.2	3.9	4.0						
44.0	44.8	76.3	3.4	3.4						
46.0	40.4	74.1	2.9	2.9						
48.0 50.0	35.7 30.3	71.5 68.4	2.5 2.2	2.5 2.2						
30.0	30.3	00.4			ıma pris	cinal SE) [° 1			
46.4	55.0	77.9	Angl	110 de pil	uma prind	upai 05.0	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			
46.4 48.0	52.1	77.9 76.7	4.4	4.7						
50.0	48.3	75.0	3.8	3.9						
55.0	37.6	69.6	2.7	2.8						
60.0	22.9	60.4		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 [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]		
	47.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (2316-1) 86.5 m Plumín 40.0 [m] Posición midfall (2316)											
			Ángu	ılo de plu	uma prin	cipal 88.0	[°]					
13.5 14.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0	78.0 77.2 74.3 71.3 68.2 65.0 61.8 58.5 55.0	89.3 89.2 88.6 88.0 87.2 86.3 85.3 84.1 82.8	15.1 15.1 15.1 15.1 15.1 11.8 9.1 6.7 4.4	25.6 25.6 22.1 18.3 15.6 12.3 9.9 7.3 4.7								
			Ángı	ılo de plu	ıma prin	cipal 83.0	1°10					
21.0	73.0	87.9		18.2	, , , , , , , , , , , , , , , , , , ,		, ,					
22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0	71.5 68.4 65.3 62.1 58.7 55.3 51.7 47.9	87.6 86.9 86.0 85.0 83.8 82.5 80.9 79.2	15.1 15.1 13.9 11.8 10.0 8.1 6.5 4.9	18.1 15.7 13.4 11.5 9.9 8.2 6.9 5.2								
38.0	43.8	77.2	3.2	3.3								
			Angı		ıma prin	cipal 75.0	["]		ı			
32.7 34.0 36.0 38.0 40.0 42.0	65.0 62.9 59.6 56.2 52.6 48.8	84.5 83.8 82.7 81.4 79.9 78.3	12.6 10.8 9.3 8.0 7.0	12.1 11.5 10.1 8.8 7.8 6.8								
44.0 46.0 48.0 50.0	44.9 40.5 35.8 30.4	76.4 74.1 71.6 68.4	6.1 5.3 4.6 3.6	5.8 5.0 4.2 3.5								
Ángulo de pluma principal 65.0 [°]												
46.4 48.0 50.0 51.0	55.0 52.2 48.4 46.7	77.9 76.8 75.1 74.1	3.6 2.7 2.3	3.4 2.8 2.1								



Nº de ident.: 9842523/95738/

Radio de descarga:

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

2821-1 2821-1

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

94.0 52.6 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]		
	47.0 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 [°]											
14.0	78.0	92.2	44.5	14.4								
16.0 18.0	75.3 72.5	91.7 91.1	14.5 11.5	13.3 10.8								
20.0	69.7	90.4	8.9	8.8								
22.0	66.8	89.6	7.3	7.3								
24.0	63.9	88.6	6.0	6.0								
26.0	60.8	87.6	5.0	5.1								
28.0	57.7	86.3	4.3	4.3								
30.0	54.5	85.0	3.6	3.7								
32.0	51.1	83.4	3.0	3.1 2.7								
34.0 36.0	47.5 43.7	81.7 79.7	2.6 2.2	2.7								
			Ángu	ılo de plu	ıma prin	cipal 83.0	1°10		•			
21.8	73.0	90.8	Ī	9.7		·						
22.0	72.7	90.8	9.9	9.7								
24.0	69.9	90.1	9.0	8.8								
26.0	67.0	89.2	7.3	7.3								
28.0	64.1	88.3	6.1	6.1								
30.0	61.1	87.2	5.2	5.3								
32.0 34.0	57.9 54.7	86.0 84.7	4.4 3.7	4.5 3.8								
36.0	51.3	83.1	3.2	3.3								
38.0	47.8	81.4	2.7	2.8								
40.0	44.0	79.4	2.3	2.4								
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]					
33.9	65.0	87.2		6.0								
34.0	64.8	87.2	5.8	6.0								
36.0	61.8	86.1	5.5	5.6								
38.0	58.7	85.0	4.6	4.7								
40.0	55.5	83.6	3.9	4.1								
42.0	52.2	82.1	3.3	3.5								
44.0 46.0	48.7 45.0	80.5 78.6	2.9	3.0 2.6								
70.0		70.0			ıma prin	cipal 65 (1°1	l	I.			
48.1	55.0	80.3	/ tingt	3.6	a piiiii	J.pu. 00.	- L J					
50.0	51.8	79.0	3.3	3.4								
55.0	42.6	74.3	2.3	2.3								
56.0	40.5	73.1	2.1	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

	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]	
47.0 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 [°]										
14.1 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0	78.0 75.4 72.6 69.8 66.9 64.0 60.9 57.8 54.6	92.2 91.8 91.2 90.4 89.6 88.7 87.6 86.4 85.0	15.1 15.1 15.1 15.1 13.6 9.7 6.9 4.7 2.8	26.4 25.2 21.2 17.9 14.6 10.4 7.4 5.0 3.0							
			Ángι	ılo de plu	ıma prin	cipal 83.0	[°]C				
21.9	73.0	90.8	15.1	19.1							
22.0 24.0 26.0 28.0 30.0	72.8 70.0 67.1 64.2 61.1	90.8 90.1 89.3 88.3 87.3	15.1 15.1 15.0 13.5 12.0	19.1 18.1 15.6 13.4 11.7							
32.0 34.0 36.0 38.0 40.0	58.0 54.8 51.4 47.9 44.1	86.1 84.7 83.2 81.4 79.5	9.9 7.6 5.7 4.2 2.9	9.7 7.6 5.9 4.4 3.0							
			Ángi	ılo de plu	ıma prin	cipal 75 (1°10				
33.9 34.0 36.0 38.0 40.0 42.0 44.0 46.0	65.0 64.9 61.9 58.8 55.6 52.3 48.8 45.1	87.2 87.2 86.2 85.0 83.7 82.2 80.5 78.6	12.5 12.3 10.6 9.2 7.9 7.0 6.1	11.3 11.3 9.9 8.7 7.6 6.7 5.8 4.9			- ,]				
48.0 50.0	41.1 36.8	76.4 73.9	5.3 4.6	4.2 3.4							
- 00.0	. 00.0	70.0		ılo de plu	ıma prin	cipal 65.0	[°]C				
48.1 50.0 51.0	55.0 52.1 50.4	80.3 79.0 78.2	2.5 2.1	2.5	- 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]: 94.0 52.6 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]		
	47.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (1916-1) 89.5 m Plumín 46.0 [m] Posición midfall (1916)											
	Ángulo de pluma principal 88.0 [°]											
14.7 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0	78.0 76.3 73.7 71.1 68.4 65.7 62.9 60.1 57.1 54.1 50.9 47.6	95.1 94.8 94.3 93.6 92.8 92.0 91.0 89.9 88.6 87.2 85.7 83.9			ıma prin	cipal 83.	0[°]					
22.7 24.0	73.0 71.3	93.7 93.3	8.8 8.7	8.7 8.7								
26.0	68.6	92.5	7.1	7.2								
28.0 30.0 32.0 34.0 36.0 38.0	65.9 63.1 60.3 57.3 54.3 51.1	91.6 90.7 89.6 88.3 86.9 85.4	6.0 5.1 4.4 3.7 3.1 2.7	6.1 5.2 4.5 3.8 3.2 2.7								
40.0	47.8	83.6	2.3	2.3	<u> </u>							
25.0	65.0	00.0	<u> </u>		uma prind	cipal 75.0	ָנֻין ט ו		I			
35.2 36.0 38.0 40.0	65.0 63.8 61.0 58.1	89.9 89.5 88.5 87.2	5.2 5.2 4.6 3.9	5.3 5.3 4.7 4.0								
42.0 44.0 46.0	55.1 52.0 48.7	85.9 84.4 82.7	3.3 2.8 2.4	3.4 2.9 2.5								
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]					
49.8	55.0	82.8	2.0	3.1								
50.0 55.0 56.0	54.7 46.6 44.8	82.7 78.6 77.6	3.0 2.2 2.0	3.1 2.3 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]: 94.0 52.6 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]		
	47.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (2316-1) 92.5 m Plumín 46.0 [m] Posición midfall (2316)											
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]C					
14.7 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0	78.0 76.4 73.8 71.2 68.5 65.8 63.0 60.1 57.2	95.2 94.9 94.3 93.6 92.9 92.0 91.0 89.9 88.7	15.1 15.1 14.8 14.4 11.1 7.8 5.4 3.6	22.9 22.9 19.4 16.6 14.5 11.0 7.8 5.6 3.7								
			Ánaı	ılo de plu	ıma prin	cipal 83.0	1°10					
22.7 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 42.0	73.0 71.3 68.7 66.0 63.2 60.3 57.4 54.4 51.2 47.9	93.7 93.3 92.5 91.7 90.7 89.6 88.3 87.0 85.4 83.7 81.7	71.90 15.1 14.2 12.4 10.5 9.1 7.4 5.9 4.7 3.7 2.6	16.4 16.4 14.6 12.7 10.9 9.7 7.9 6.3 5.1 3.9 2.8	and pill	spar co.						
			Ánaı	ılo de plu	ıma prin	cipal 75.0	1°10					
35.2 36.0 38.0 40.0 42.0 44.0 46.0 48.0 50.0 55.0	65.0 63.9 61.1 58.2 55.2 52.0 48.8 45.3 41.6 31.4	89.9 89.6 88.5 87.3 85.9 84.4 82.7 80.8 78.7 71.8	11.1 10.4 9.0 7.8 6.8 5.9 5.2 4.4 2.7	10.4 9.8 8.6 7.6 6.6 5.8 5.0 4.2 3.5								
			Ángı	ılo de plu	ıma prin	cipal 65.0	0 [°]					
50.0 51.0	55.0 53.4	82.8 82.0	2.4 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

	Inserción			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]	
47.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (1916-1) 92.5 m Plumín 49.0 [m] Posición midfall (1916)											
Ángulo de pluma principal 88.0 [°]											
15.3 16.0 18.0 20.0 22.0	78.0 77.2 74.7 72.3 69.8	98.1 97.9 97.4 96.8 96.1	10.7 10.7 9.8 8.4 6.9	11.9 11.9 10.4 8.6 7.0							
24.0 26.0 28.0 30.0 32.0	67.3 64.7 62.1 59.4 56.6	95.3 94.3 93.3 92.2 90.9	5.9 4.9 4.1 3.5 2.9	5.9 5.0 4.2 3.6 3.0							
34.0	53.7	89.5	2.4	2.5							
					ıma prin	cipal 83.0	0[°]	1	1		
23.6 24.0 26.0 28.0	73.0 72.5 70.0 67.5	96.5 96.4 95.7 94.9	7.7 7.7 7.0 5.9	7.8 7.8 7.0 6.0							
30.0 32.0 34.0 36.0 38.0	64.9 62.3 59.6 56.8 53.9	94.0 93.0 91.9 90.6 89.2	5.0 4.2 3.6 3.0 2.5	5.0 4.3 3.7 3.1 2.6							
40.0	51.0	87.6	2.1	2.2							
			Ángı		ıma prin	cipal 75.0	[°]				
36.4 38.0 40.0 42.0 44.0 46.0	65.0 62.9 60.3 57.5 54.7 51.7	92.6 91.9 90.8 89.5 88.2 86.6	4.5 3.8 3.3 2.7 2.3	4.6 4.5 3.9 3.4 2.8 2.4							
					uma prin	cipal 65.0	[°]				
51.5 55.0	55.0 49.8	85.2 82.5	J	2.6 2.1	,						