

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]: 54.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 22.0	de plumí		1) 41.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
9.3 10.0 11.0 12.0 13.0	78.0 76.0 73.3 70.5 67.7 64.8	59.7 59.5 59.2 58.8 58.4 58.0	15.1 15.1 15.1 15.1 15.1 15.1	30.1 28.9 23.8 19.9 17.3						
16.0 18.0 20.0 22.0 24.0	58.9 52.4 45.3 37.1 26.8	56.8 55.4 53.6 51.2 48.0	13.5 10.6 8.7 7.2 6.1	12.1 9.9 8.3 7.1 6.1						
24.0	20.0	40.0			ıma prin	oinal 92 () [°]			
14.2	73.0	58.8	Angu	22.1	лна рин Г	 	7 J			
16.0 18.0 20.0 22.0 24.0	68.0 62.2 56.0 49.3 41.8	58.2 57.2 55.9 54.3 52.3	15.1 15.1 12.1 9.8 8.0	17.5 13.6 11.0 9.2 7.7						
26.0	32.9	49.6	6.7	6.6						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
21.9 22.0 24.0 26.0 28.0 30.0 32.0	65.0 64.7 58.7 52.3 45.2 37.0 26.6	56.6 56.6 55.4 54.0 52.2 49.8 46.5	15.1 13.6 10.6 8.7 7.2 6.2	14.7 14.7 12.1 9.9 8.3 7.1 6.1						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
31.0 32.0 34.0 36.0 38.0	55.0 51.6 44.4 36.0 25.2	52.3 51.5 49.7 47.2 43.8	9.2 7.6 6.5 5.7	10.4 9.7 8.2 7.0 6.1	•					
			Ángu	ılo de plu	ıma prin	cipal 45.0	D [°]			
46.2 48.0 49.0	35.0 26.4 19.4	39.3 36.4 33.8	2.4 2.1	2.4						

Source:a9841388



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]: 54.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		35.0	0 m Plum Cabeza 22.0	de plumi	oal, Punt ín (2316- osición m	1) 44.5 r	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.	[°]			
9.3 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0	78.0 76.2 73.5 70.7 67.9 65.0 59.0 52.6 45.5 37.3 27.0	59.7 59.5 59.2 58.9 58.5 58.0 56.9 55.5 53.6 51.3 48.0	15.1 15.1 15.1 15.1 15.1 14.8 14.1 12.1 9.6 8.0	30.1 30.1 29.5 27.1 24.2 20.8 16.4 13.3 11.0 9.2 7.8						
			Ángı	ılo de plu	ıma prin	cipal 83.	[°]			
14.3 16.0 18.0 20.0 22.0 24.0 26.0	73.0 68.2 62.4 56.2 49.5 42.0 33.1	58.8 58.2 57.2 56.0 54.4 52.3 49.7	15.1 15.1 15.1 13.5 12.0 9.7 8.1	30.1 24.6 18.6 14.8 12.3 10.2 8.6						
			Ánaı		ıma prin	cipal 75.	1°10		•	
22.0 24.0 26.0 28.0 30.0 32.0	65.0 58.9 52.5 45.4 37.2 26.8	56.6 55.5 54.0 52.2 49.9 46.6	15.1 12.8 10.7 8.8 7.5	18.3 15.7 13.3 11.1 9.3 8.0						
					ıma prin	cipal 65.	l°1	•		
31.0 32.0 34.0 36.0 38.0 39.0	55.0 51.8 44.6 36.2 25.5 17.7	52.2 51.6 49.7 47.3 43.9 41.4	9.3 8.0 6.9 5.9 5.5	8.3 7.6 6.5 5.5 4.7 4.2			.]			



N° de ident.: 9842523/95738/ Pieza

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

Valor de vuelco: Lastre trasero [t]:

Lastre central [t]:

2 - Vía ancha 54.0 0.0 Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 25.0	de plumí	n (1916-		n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0] (°)			
9.9 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0	78.0 77.7 75.4 73.0 70.5 68.1 63.0 57.6 51.9	62.6 62.6 62.3 62.0 61.7 61.3 60.3 59.1	15.1 15.1 15.1 15.1 15.1 14.8 13.5 11.2 8.9	28.1 28.1 24.2 20.6 17.7 15.7 12.5 10.3 8.7						
22.0 24.0 26.0	45.7 38.6 30.2	55.8 53.6 50.6	7.5 6.4 5.5	7.4 6.4 5.6						
20.0	00.2	00.0			ıma prin	cipal 83.0	1°10			
15.1 16.0 18.0 20.0 22.0 24.0 26.0 28.0	73.0 70.8 65.8 60.6 55.1 49.2 42.6 35.1	61.7 61.4 60.5 59.5 58.2 56.6 54.6 52.0	15.1 15.1 14.4 12.7 10.1 8.3 7.0 6.0	19.6 18.0 14.0 11.5 9.5 8.1 6.9 6.0						
30.0	25.6	48.5	5.2	5.3						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
23.2 24.0 26.0 28.0 30.0 32.0 34.0	65.0 62.9 57.5 51.8 45.6 38.5 30.0	59.3 58.9 57.7 56.2 54.4 52.1 49.1	14.1 11.1 8.9 7.5 6.4 5.6	13.1 12.5 10.3 8.6 7.4 6.4 5.6						
					ıma prin	cipal 65.0				
32.7 34.0 36.0 38.0 40.0	55.0 51.2 44.9 37.7 29.0	54.7 53.8 51.9 49.6 46.5	8.8 7.4 6.3 5.5	9.2 8.5 7.3 6.3 5.6		cipal 45.				
48.8 49.0	35.0 34.3	41.0 40.8	2.1 2.1		iei Jeini					

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]
			Cabeza	de plumi	oal, Punt ín (2316- osición m	1) 47.5 r	n Plumín			
			Ángı	ılo de plı	uma prin	cipal 88.0	[°]			
9.9 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0	78.0 77.9 75.5 73.1 70.7 68.2 63.1 57.8 52.1	62.6 62.6 62.4 62.1 61.7 61.3 60.3 59.2 57.7	15.1 15.1 15.1 15.1 15.1 15.1 15.1 13.1 11.0	30.1 30.1 30.1 28.3 24.5 21.7 16.9 13.8 11.5						
22.0 24.0	45.8 38.8	55.9 53.6	9.2 7.7	9.7 8.2						
26.0	30.4	50.7	6.5	7.0						
			Ángı	ılo de plı	uma prin	cipal 83.0	[°]			
15.1 16.0 18.0 20.0 22.0 24.0 26.0 28.0	73.0 70.9 65.9 60.7 55.3 49.3 42.8 35.2	61.7 61.4 60.6 59.5 58.2 56.6 54.6 52.1	15.1 15.1 14.7 12.1 10.2 8.5 7.2	27.2 25.2 19.2 15.4 12.6 10.7 9.0 7.7						
30.0	25.7	48.6	6.2	6.6						
23.2 24.0 26.0 28.0 30.0	65.0 63.0 57.7 52.0 45.7	59.3 58.9 57.7 56.3	15.1 13.6 11.0 9.2	16.6 15.7 13.6 11.4 9.7	uma prind	cipal 75.	0[°]			
32.0	38.7	52.2	7.8	8.3						
34.0	30.2	49.2	6.7	7.2						
			Ángı		uma prin	cipal 65.0	[°]			
32.7 34.0	55.0 51.3	54.7 53.8	7.7	7.1 6.4						
36.0 38.0 40.0 42.0	45.0 37.9 29.2 16.5	52.0 49.6 46.6 41.8	6.7 5.7 4.9 4.1	5.5 4.6 3.9 3.2						



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	ı	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 28.0	de plumi		1) 47.5 r	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0	0[°]			
10.5 11.0 12.0 13.0	78.0 77.0 74.8 72.7	65.5 65.4 65.2 64.8	15.1 15.1 15.1 15.1	30.1 30.1 30.1 28.1						
14.0 16.0 18.0 20.0 22.0	70.5 66.1 61.5 56.7 51.5	64.5 63.7 62.6 61.4 59.9	15.1 15.1 15.1 14.4 13.8	25.2 20.7 17.4 14.9 13.1						
24.0 26.0 28.0 30.0	46.0 39.8 32.6 23.5	58.1 55.9 53.1 49.3	12.3 10.7 9.5 8.6	11.6 10.4 9.5 8.6						
					ıma prin	cipal 83.0	[°]			
16.0 18.0 20.0	73.0 68.6 64.0	64.6 63.8 62.9	15.1 15.1 15.1	27.6 23.0 18.9						
22.0 24.0 26.0 28.0	59.3 54.4 49.1 43.3	61.8 60.4 58.8 56.8	14.5 13.3 12.1 10.6	16.2 14.0 12.4 11.1						
30.0 32.0	36.7 28.9	54.4 51.2	9.4 8.6	10.0 9.1						
			Ángı	ılo de plı	ıma prin	cipal 75.0	[°]			
24.4 26.0 28.0	65.0 61.4 56.6	62.0 61.2 60.0	15.1 14.6	17.9 16.3 14.6						
30.0 32.0 34.0 36.0 38.0	51.4 45.9 39.7 32.5 23.3	58.5 56.7 54.4 51.6 47.8	13.7 12.2 10.7 9.5 8.6	13.1 11.7 10.4 9.5 8.5						
30.0	23.3	47.0	- ,		uma prin	cipal 65 (1°10			
34.4 36.0 38.0 40.0 42.0	55.0 50.9 45.3 39.0 31.7	57.2 56.0 54.2 51.9 49.0	9.4 8.5 7.7 6.9	8.8 8.1 7.2 6.5 5.8			- []			
44.0 45.0	22.2 15.3	45.1 42.2	6.2 5.9	5.1 4.8						



N° de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

Valor de vuelco: 2 - Vía ancha Lastre trasero [t]: 54.0 Lastre central [t]: 0.0

		•								
	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plun Cabeza 19.0	de plumi	ín (1916-		n Plumír			
			Ángı	ılo de plu	ıma prin	cipal 88.	[°]			
8.6 9.0 10.0 11.0 12.0 13.0 14.0 16.0 20.0	78.0 76.9 73.7 70.5 67.3 63.9 60.4 53.1 44.8 35.0 73.0 70.9 64.3 57.2 49.5	56.7 56.7 56.4 56.0 55.6 55.1 54.5 53.2 51.4 48.9 55.9 55.7 54.8 53.7 52.1	15.1 15.1 15.1 15.1 15.1 15.0 13.0 10.2 Ángu	30.1 30.1 30.1 27.5 24.4 20.8 18.2 14.3 11.6 9.6 ulo de plu 30.1 29.3 21.1 16.2 13.0	uma prin	cipal 83.	D[°]			
22.0	40.7	50.0	11.6	10.6						
24.0	29.6	47.1	9.4 Ápgu	9.0	ıma prin	cipal 75) [°]	l	l	
20.6 22.0 24.0 26.0 28.0	65.0 60.3 52.9 44.7 34.8	53.8 53.1 51.7 49.9 47.4	15.1 14.9 12.9 10.3	18.8 16.7 14.1 11.6 9.7	лпа рпп	cipal 75.	7 []			
					ıma prin	cipal 65.	1°10			
29.3 30.0	55.0 52.1	49.8 49.3	11.2	9.1 8.5						

32.0

34.0

43.8

33.7 19.0 47.4

44.9 40.8 9.7

8.4 7.2 6.0 5.0



Nº de ident.: 9842523/95738/ 360°

Radio de descarga:

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 54.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 28.0	de plumí	n (2316-		n Plumín			
						cipal 88.0				
10.6	78.0	65.6	15.1	30.1			, j			
11.0 12.0 13.0 14.0	77.1 75.0 72.8 70.7	65.5 65.2 64.9 64.5	15.1 15.1 15.1 15.1	30.1 30.1 29.7 29.0						
16.0 18.0 20.0 22.0	66.2 61.6 56.8 51.7	63.7 62.7 61.4 59.9	15.1 15.1 15.1 15.1	24.5 20.3 17.2 14.8						
24.0 26.0 28.0 30.0	46.1 39.9 32.8 23.7	58.1 55.9 53.1 49.4	13.6 11.8 10.4 9.1	13.0 11.4 10.1 9.1						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
16.0 18.0	73.0 68.7	64.6 63.8	15.1	30.1 26.3						
20.0 22.0 24.0 26.0	64.2 59.5 54.5 49.2	62.9 61.8 60.5 58.8	15.1 15.1 15.1 14.5	22.3 18.8 16.0 14.0						
28.0 30.0 32.0	49.2 43.4 36.9 29.0	56.9 54.4 51.3	12.7 11.2 9.9	12.2 10.8 9.7						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
24.5 26.0 28.0	65.0 61.5 56.7	62.0 61.2 60.0	15.1 14.4	15.2 13.7 12.0						
30.0 32.0 34.0 36.0	51.6 46.0 39.8 32.6	58.5 56.7 54.5 51.7	12.8 11.3 10.1 8.9	10.5 9.2 8.1 7.1						
38.0	23.5	47.9	7.9	6.2						
34.5	55.0	57.2		6.2	uma prin	cipal 65.0	0 [°]			
36.0 38.0 40.0 42.0	51.0 45.4 39.1 31.8	56.1 54.2 52.0 49.1	6.5 5.6 4.8 4.0	5.5 4.6 3.9 3.2						
44.0 45.0	22.3 15.5	45.1 45.1 42.3	3.3 2.9	2.6 2.3						



Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal:

2821-1

360°

Cabeza de pluma principal:

2821-1

Alcance		Inserciór	1	1	2	3	4	5	6	7	8
Cabeza de plumín (1916-1) 53.5 m Plumín 22.0 [m] Posición midfall (1916) Angulo de pluma principal 88.0 [°] 9.3	ce	o de plumín	de rolda- nas					Carga [t]			
9.3			35.0	Cabeza	de plumí	n (1916-	1) 53.5 r	n Plumín	dfall I		
10.0				Ángu	ılo de plu	ıma prin	cipal 88.0	[°]C			
11.0 73.3 59.2 15.1 27.3 12.0 70.5 58.8 15.1 22.8 13.0 67.7 58.4 15.1 19.8 14.0 64.8 58.0 15.1 17.2 16.0 58.9 56.8 14.1 13.6 18.0 52.4 55.4 11.7 10.9 20.0 45.3 53.6 9.6 9.1 22.0 37.1 51.2 7.7 7.5 24.0 26.8 48.0 6.5 6.4	9.3	78.0	59.7	15.1	30.1						
12.0	10.0	76.0	59.5	15.1	30.1						
13.0											
14.0											
16.0											
18.0				-							
20.0											
22.0 37.1 51.2 7.7 7.5 24.0 26.8 48.0 6.5 6.4 Angulo de pluma principal 83.0 [°] 14.2 73.0 58.8 24.6 16.0 68.0 58.2 15.1 20.0 18.0 62.2 57.2 15.1 15.4 20.0 56.0 55.9 12.9 12.2 20.0 22.0 49.3 54.3 10.9 10.1 24.0 41.8 52.3 8.7 8.3 26.0 32.9 49.6 7.2 7.1 Angulo de pluma principal 75.0 [°] 21.9 65.0 56.6 15.1 16.2 24.0 58.7 55.4 15.0 13.4 26.0 52.3 54.0 11.9 10.9 28.0 45.2 52.2 9.6 9.1 30.0 37.0 49.8 7.8 7.6 32.0 26.6 46.5 6.6 6.5 Angulo de pluma principal 65.0 [°] 31.0 55.0 52.3 8.7 8.4 7.8 7.6 32.0 26.6 46.5 6.6 6.5 32.0 51.6 51.5 9.6 7.4 34.0 44.4 49.7 8.4 6.3 36.0 36.0 47.2 7.2 5.3 38.0 25.2 43.8 6.2 4.5											
24.0 26.8 48.0 6.5 6.4 Angulo de pluma principal 83.0 [°] 14.2 73.0 58.8 24.6 16.0 68.0 58.2 15.1 20.0 18.0 62.2 57.2 15.1 15.4 20.0 18.0 62.2 57.2 15.1 15.4 20.0 18.0 62.2 57.2 15.1 15.4 20.0 18.0 18.0 62.2 57.2 15.1 15.4 20.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 1											
Ángulo de pluma principal 83.0 [°] 14.2 73.0 58.8 24.6 16.0 68.0 58.2 15.1 20.0 18.0 62.2 57.2 15.1 15.4 20.0 56.0 55.9 12.9 12.2 22.0 49.3 54.3 10.9 10.1 24.0 41.8 52.3 8.7 8.3 26.0 32.9 49.6 7.2 7.1 Angulo de pluma principal 75.0 [°] 21.9 65.0 56.6 15.1 16.2 22.0 64.7 56.6 15.1 16.2 22.0 64.7 56.6 15.1 16.2 24.0 58.7 55.4 15.0 13.4 26.0 52.3 54.0 11.9 10.9 28.0 45.2 52.2 9.6 9.1 30.0 37.0 49.8 7.8 7.6 32.0 26.6 46.5 6.6 6.5 Angulo de pluma principal 65.0 [°] 31.0 55.0 52.3 32.0 51.6 51.5 9.6 7.4 34.0 44.4 49.7 8.4 6.3 36.0 36.0 47.2 7.2 5.3 38.0 25.2 43.8 6.2 4.5											
14.2				Ángı	ılo de plı	ıma prin	cipal 83.0	1°10			
16.0 68.0 58.2 15.1 20.0 18.0 62.2 57.2 15.1 15.4 20.0 56.0 55.9 12.9 12.2 22.0 49.3 54.3 10.9 10.1 24.0 41.8 52.3 8.7 8.3 26.0 32.9 49.6 7.2 7.1	14.2	73.0	58.8	,g.				, ,			
18.0 62.2 57.2 15.1 15.4 20.0 56.0 55.9 12.9 12.2 22.0 49.3 54.3 10.9 10.1 24.0 41.8 52.3 8.7 8.3 26.0 32.9 49.6 7.2 7.1	•			15.1							
22.0				-							
24.0 41.8 52.3 8.7 8.3 7.1 Angulo de pluma principal 75.0 [°] 21.9 65.0 56.6 15.1 16.2 22.0 64.7 56.6 15.1 16.2 24.0 58.7 55.4 15.0 13.4 16.3 16.3 16.3 16.3 16.3 16.3 16.3 16.3	20.0	56.0	55.9	12.9	12.2						
26.0 32.9 49.6 7.2 7.1 Angulo de pluma principal 75.0 [°] 21.9 65.0 56.6 16.3 16.3 22.0 64.7 56.6 15.1 16.2 24.0 58.7 55.4 15.0 13.4 19.9 10.9 10.9 10.9 10.9 10.9 10.9 10.9											
Ángulo de pluma principal 75.0 [°] 21.9	•										
21.9 65.0 56.6 15.1 16.3 22.0 64.7 56.6 15.1 16.2 24.0 58.7 55.4 15.0 13.4 26.0 52.3 54.0 11.9 10.9 28.0 45.2 52.2 9.6 9.1 30.0 37.0 49.8 7.8 7.6 32.0 26.6 46.5 6.6 6.5	26.0	32.9	49.6	7.2	7.1						
22.0 64.7 56.6 15.1 16.2 24.0 58.7 55.4 15.0 13.4 26.0 52.3 54.0 11.9 10.9 28.0 45.2 52.2 9.6 9.1 30.0 37.0 49.8 7.8 7.6 32.0 26.6 46.5 6.6 6.5 Angulo de pluma principal 65.0 [°] 31.0 55.0 52.3 8.1 32.0 51.6 51.5 9.6 7.4 34.0 44.4 49.7 8.4 6.3 36.0 36.0 47.2 7.2 5.3 38.0 25.2 43.8 6.2 4.5				Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
24.0 58.7 55.4 15.0 13.4 26.0 52.3 54.0 11.9 10.9 28.0 45.2 52.2 9.6 9.1 30.0 37.0 49.8 7.8 7.6 32.0 26.6 46.5 6.6 6.5 Ángulo de pluma principal 65.0 [°] 31.0 55.0 52.3 8.1 32.0 51.6 51.5 9.6 7.4 34.0 44.4 49.7 8.4 6.3 36.0 36.0 47.2 7.2 5.3 38.0 25.2 43.8 6.2 4.5		65.0	56.6								
26.0 52.3 54.0 11.9 10.9 28.0 45.2 52.2 9.6 9.1 30.0 37.0 49.8 7.8 7.6 32.0 26.6 46.5 6.6 6.5 Angulo de pluma principal 65.0 [°] 31.0 55.0 52.3 8.1 32.0 51.6 51.5 9.6 7.4 34.0 44.4 49.7 8.4 6.3 36.0 36.0 47.2 7.2 5.3 38.0 25.2 43.8 6.2 4.5											
28.0											
30.0 37.0 49.8 7.8 7.6 6.5											
32.0 26.6 46.5 6.6 6.5 Ángulo de pluma principal 65.0 [°] 31.0 55.0 52.3 8.1 32.0 51.6 51.5 9.6 7.4 34.0 44.4 49.7 8.4 6.3 36.0 36.0 47.2 7.2 5.3 38.0 25.2 43.8 6.2 4.5											
Ángulo de pluma principal 65.0 [°] 31.0 55.0 52.3 8.1 32.0 51.6 51.5 9.6 7.4 34.0 44.4 49.7 8.4 6.3 36.0 36.0 47.2 7.2 5.3 38.0 25.2 43.8 6.2 4.5					-						
31.0 55.0 52.3 8.1 32.0 51.6 51.5 9.6 7.4 34.0 44.4 49.7 8.4 6.3 36.0 36.0 47.2 7.2 5.3 38.0 25.2 43.8 6.2 4.5	32.0	20.0	40.0					2.501			
32.0 51.6 51.5 9.6 7.4 34.0 44.4 49.7 8.4 6.3 36.0 36.0 47.2 7.2 5.3 38.0 25.2 43.8 6.2 4.5				Angı		ıma prin	cipai 65.0	ו ["]			
34.0 44.4 49.7 8.4 6.3 36.0 36.0 47.2 7.2 5.3 38.0 25.2 43.8 6.2 4.5				0.0							
36.0 36.0 47.2 7.2 5.3 38.0 25.2 43.8 6.2 4.5											
38.0 25.2 43.8 6.2 4.5											
	39.0	17.5	41.3	5.7	4.1						



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]: 54.0 Lastre central [t]: 0.0

48.0

2.4

Lastre	central [t]:		0.0						
	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		35.0	0 m Plum Cabeza 31.0	de plumí	oal, Punt ín (2316- osición m	·1) 53.5 r	n Plumín	dfall 1		
			Ángı	ılo de plu	ıma prin	cipal 88.	[°]			
11.2 12.0 13.0 14.0 16.0 20.0 22.0 24.0 26.0	78.0 76.5 74.5 72.6 68.7 64.6 60.4 56.0 51.3 46.3	68.5 68.3 68.0 67.7 67.0 66.1 65.0 63.7 62.2 60.4	15.1 15.1 15.1 15.1 15.1 15.1 14.8 13.7 12.8 11.2	30.1 30.1 30.1 28.0 23.6 19.2 16.3 14.0 12.3 10.8						
30.0	34.6	55.6	8.3	8.4						
32.0	27.1	52.2	7.5 Ángi	Jo de plu	uma prin	cinal 83 i) [°]			
16.9	73.0	67.4	Aligo	28.4			<u> </u>			
18.0 20.0 22.0 24.0 26.0 28.0 30.0	70.8 66.8 62.7 58.4 53.9 49.1 43.9	67.1 66.3 65.3 64.1 62.7 61.1 59.1	15.1 15.1 15.1 14.3 13.4 12.2 10.5	26.3 21.4 17.8 15.2 13.1 11.6						
32.0 34.0	38.1 31.4	56.8 53.8	9.1 8.0	9.0 8.1						
36.0	22.9	49.9	7.1	7.3						
			Ángı	ılo de plu	ıma prin	cipal 75.	[°]			
25.8	65.0	64.7		13.8						
26.0 28.0 30.0 32.0 34.0	64.5 60.3 55.9 51.2 46.2	64.6 63.6 62.3 60.7 58.9	15.1 14.0 12.4 11.0 9.7	13.5 11.8 10.4 9.1 8.0						
36.0 38.0	40.7 34.5	56.8 54.1	8.6 7.6	7.0 6.1						
40.0	26.9	50.7	6.7	5.4						
			Angı		ıma prin	cipal 65.	[°]	1	1	
36.2 38.0 40.0	55.0 50.7 45.7	59.6 58.3 56.5	5.3 4.4	5.2 4.4 3.7						
42.0 44.0	40.1 33.8	54.2 51.5	3.7 3.0	3.1 2.5						

46.0

27.0



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

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

60 ° 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 22.0	de plumí		1) 56.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
9.3 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0	78.0 76.2 73.5 70.7 67.9 65.0 59.0 52.6 45.5 37.3 27.0 73.0 68.2 62.4 56.2	59.7 59.5 59.2 58.9 58.5 58.0 56.9 55.5 53.6 51.3 48.0	15.1 15.1 15.1 15.1 15.1 15.1 14.9 13.0 10.4 8.5 Ángu 15.1 15.1 15.1	30.1 30.1 30.0 28.5 26.2 22.6 17.7 14.3 11.9 9.8 8.3 210 de plu 30.1 25.0 20.1 16.0	uma princ	cipal 83.)[°]			
22.0 24.0	49.5 42.0	54.4 52.3	14.6 11.8	13.2 10.9						
26.0	33.1	49.7	9.6	9.2						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]C			
22.0 24.0 26.0 28.0 30.0 32.0	65.0 58.9 52.5 45.4 37.2 26.8	56.6 55.5 54.0 52.2 49.9 46.6	15.1 13.3 11.2 9.4 7.8	14.2 11.6 9.6 7.9 6.4 5.2						
32.0	20.0	40.0			ıma prin	cinal 65 (1 ° 1		l	
31.0 32.0 34.0 36.0 38.0	55.0 51.8 44.6 36.2 26.9	52.2 51.6 49.7 47.3 43.9	5.9 4.6 3.4 2.3	5.0 4.4 3.3 2.4	лпа рпп	ыраг 03.1	J []			



Nº de ident.: 9842523/95738/

360°

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

Radio de descarga: 2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 54.0

Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		35.0	0 m Plum Cabeza 25.0	de plumí	oal, Punt ín (1916- osición m	1) 56.5 r	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
9.9 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0	78.0 77.7 75.4 73.0 70.5 68.1 63.0 57.6 51.9	62.6 62.6 62.3 62.0 61.7 61.3 60.3 59.1 57.7	15.1 15.1 15.1 15.1 15.1 15.1 14.6 12.6 10.4	30.1 30.1 27.4 23.4 20.1 17.8 14.2 11.8 9.9						
22.0	45.7	55.8	8.7	8.5						
24.0 26.0	38.6 30.2	53.6 50.6	7.4 6.4	7.3 6.4						
			Ángı	ılo de plı	ıma prin	cipal 83.0	1°10			
15.1 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0	73.0 70.8 65.8 60.6 55.1 49.2 42.6 35.1 25.6	61.7 61.4 60.5 59.5 58.2 56.6 54.6 52.0 48.5	15.1 15.1 14.9 14.2 11.5 9.7 8.1 6.9	21.8 20.6 16.0 13.1 10.9 9.3 8.0 6.9						
00.0	20.0	10.0			ıma prin	cinal 75 (l o l C			
23.2 24.0 26.0 28.0 30.0 32.0 34.0	65.0 62.9 57.5 51.8 45.6 38.5 30.0	59.3 58.9 57.7 56.2 54.4 52.1 49.1	15.1 12.6 10.3 8.8 7.4 6.5	14.7 14.2 11.8 9.9 8.5 7.3 6.4	and pill	о.риг 7 0.1	~ []			
0 7.0	, 55.0				ıma prin	cinal 65 (1 0 1		'	
32.7 34.0 36.0 38.0 40.0	55.0 51.2 44.9 37.7 29.0	54.7 53.8 51.9 49.6 46.5	8.4 7.3 6.3 5.4	7.2 6.5 5.6 4.7 4.0		ωραι υ σ.ι	V []			
42.0	16.3	41.7	4.6	3.3						

Source:a9841388



N° de ident.:9842523/95738/Pieza de articulación de pluma principal:2821-1Radio de descarga:360 °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]
		35.0	0 m Plum Cabeza 25.0	de plumí	oal, Punt n (2316- osición m	1) 59.5 r	n Plumín	dfall I		
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]			
9.9 10.0 11.0 12.0 13.0	78.0 77.9 75.5 73.1 70.7 68.2	62.6 62.6 62.4 62.1 61.7	15.1 15.1 15.1 15.1	30.1 30.1 30.1 29.4 26.0						
16.0 18.0 20.0 22.0 24.0	63.1 57.8 52.1 45.8 38.8	60.3 59.2 57.7 55.9	15.1 15.1 14.1 12.8 11.0	18.2 14.9 12.3 10.4 8.7						
26.0	30.4	50.7	7.5	7.5						
			Ánaı	ılo de plu	ıma prin	cipal 83.0	1°10			
15.1 16.0 18.0	73.0 70.9 65.9	61.7 61.4 60.6	15.1 15.1	28.0 25.6 20.8	- 1					
20.0 22.0 24.0 26.0 28.0 30.0	60.7 55.3 49.3 42.8 35.2 25.7	59.5 58.2 56.6 54.6 52.1 48.6	15.0 12.8 11.1 9.2 7.7 6.6	16.7 13.6 11.5 9.7 8.2 7.0						
00.0	20.7	40.0			ıma prin	rinal 75 () [°]		ı	
23.2 24.0 26.0 28.0 30.0	65.0 63.0 57.7 52.0 45.7	59.3 58.9 57.7 56.3 54.5	15.1 13.2 11.1 9.4	12.7 11.8 9.8 8.1 6.7	ина рин	ыраі <i>1</i> О.	× []			
32.0	38.7	52.2	7.8	5.5 4.4						
34.0	30.2	49.2	6.4 Ángu		ıma prin	cinal 65 t) [°]		l	ı
32.7 34.0	55.0 51.3	54.7 53.8	Angu 4.5	4.0 3.4	лна рпп	Jipai 05.	J []			
36.0 38.0	45.0 38.6	52.0 49.6	3.3 2.3	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

Valor de vuelco: 2 - Vía ancha Lastre trasero [t]: 54.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		35.0	Cabeza	de plumí	oal, Punt ín (1916- osición m	1) 59.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
10.5 11.0 12.0 13.0 14.0	78.0 77.0 74.8 72.7 70.5	65.5 65.4 65.2 64.8 64.5	15.1 15.1 15.1 15.1 15.1	28.3 28.3 24.4 21.3 18.6						
16.0 18.0 20.0 22.0	66.1 61.5 56.7 51.5 46.0	63.7 62.6 61.4 59.9 58.1	13.1 14.4 13.5 10.9 8.8 7.5	15.0 12.4 10.3 8.6 7.4						
24.0 26.0 28.0 30.0	39.8 32.6 23.5	55.9 53.1 49.3	6.3 5.5 4.8	6.3 5.5 4.8	ıma nrin	oinal 92	0.1.01			
16.0	73.0	64.6	15.1	20.0	uma prind	cipai 65.	J []		1	
18.0 20.0 22.0	68.6 64.0 59.3	63.8 62.9 61.8	15.1 13.0 10.9	16.7 13.6 11.3						
24.0 26.0 28.0 30.0	54.4 49.1 43.3 36.7	60.4 58.8 56.8 54.4	8.9 7.5 6.5 5.6	9.4 8.1 7.0 6.0						
32.0	28.9	51.2	4.9	5.3		-in al 75 (2			
24.4 26.0	65.0 61.4	62.0 61.2	11.9	13.4 12.2	uma prind	lipai 75.				
28.0 30.0 32.0 34.0 36.0 38.0	56.6 51.4 45.9 39.7 32.5 23.3	60.0 58.5 56.7 54.4 51.6 47.8	9.7 8.1 7.0 6.0 5.3 4.6	10.3 8.7 7.5 6.4 5.7 5.0						
			Ángı	ılo de plu	uma prin	cipal 65.0	[°]			
34.4 36.0 38.0 40.0 42.0 44.0	55.0 50.9 45.3 39.0 31.7	57.2 56.0 54.2 51.9 49.0	7.1 6.2 5.3 4.5	6.4 5.6 4.8 4.1 3.4 2.8	-		-			
45.0	15.3	42.2	3.4	2.5						

Source:a9841388



Nº de ident.: 9842523/95738/

Radio de descarga:

360°

Pieza de articulación de pluma principal:

Valor de vuelco: Lastre trasero [t]:

Lastre central [t]:

2 - Vía ancha

54.0 0.0

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		ín (2316-	1) 62.5 r	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0	[°]			
10.6 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0	78.0 77.1 75.0 72.8 70.7 66.2 61.6 56.8 51.7 46.1 39.9	65.6 65.5 65.2 64.9 64.5 63.7 62.7 61.4 59.9 58.1	15.1 15.1 15.1 15.1 15.1 14.6 14.0 11.5 9.4 7.9 6.6	30.1 30.1 28.7 25.8 22.4 17.7 14.4 11.8 9.9 8.4						
28.0 30.0	32.8 23.7	53.1 49.4	5.7 4.8	6.1 5.1						
30.0	23.1	49.4			ıma nrin	oinal 02 () [°]			
16.0	73.0	64.6	Angu	ulo de plu 24.2	uma prini I	cipai 83.i) []		l	
16.0 18.0	68.7	63.8	15.1	20.0						
20.0 22.0 24.0 26.0 28.0	64.2 59.5 54.5 49.2 43.4 36.9	62.9 61.8 60.5 58.8 56.9	15.1 14.0 11.5 9.6 8.0	16.0 13.2 10.9 9.3 7.9 6.7						
32.0	29.0	51.3	5.7	5.7	<u> </u>					
015	05.0	00.0	Angı	ılo de plu	ıma prin	cipai /5.0	֓֓֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓		I	<u> </u>
24.5 26.0 28.0	65.0 61.5 56.7	62.0 61.2 60.0	13.0 11.1	11.5 10.0 8.4						
30.0 32.0 34.0 36.0 38.0	51.6 46.0 39.8 32.6 23.5	58.5 56.7 54.5 51.7 47.9	9.4 7.8 6.5 5.3 4.2	6.9 5.7 4.7 3.7 2.9						
			Ángı	ılo de plı	ıma prin	cipal 65.0	0 [°]			
34.5 36.0 38.0	55.0 51.0 45.9	57.2 56.1 54.2	3.3 2.3	3.2 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]: 54.0

Lastre trasero [t]: 54.0 Lastre central [t]: 0.0

	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]
		35.0	0 m Plum Cabeza 31.0	de plumi	oal, Punt ín (1916- osición m	1) 62.5 r	n Plumín	dfall		
			Ánaı	ılo de plu	ıma prin	cipal 88.0	1°10			
11.1	78.0	68.5	I	25.7						
12.0	76.3	68.3	15.1	24.9						
13.0	74.4	68.0	15.1	21.5						
14.0	72.5	67.7	15.1	19.1						
16.0	68.5	66.9	15.0	15.4						
18.0	64.5	66.0	13.0	12.6						
20.0 22.0	60.3 55.9	64.9 63.7	11.4 9.3	10.6 8.9						
22.0 24.0	55.9 51.2	62.1	9.3 7.7	7.6						
26.0	46.2	60.3	6.6	6.6						
28.0	40.7	58.2	5.7	5.7						
30.0	34.4	55.5	4.9	5.0						
32.0	26.9	52.1	4.4	4.4						
			Ángı	ılo de plı	uma prin	cipal 83.0	[°]C			
16.8	73.0	67.4	Ī	18.1	·					
18.0	70.7	67.0	15.1	17.2						
20.0	66.7	66.2	14.6	14.0						
22.0	62.6	65.2	12.3	11.6						
24.0	58.3	64.1	10.3	9.8						
26.0	53.8	62.7	8.5	8.3						
28.0 30.0	49.0 43.8	61.0 59.1	7.2 6.3	7.2 6.3						
32.0	38.0	56.7	5.4	5.5						
34.0	31.3	53.8	4.8	4.8						
36.0	22.8	49.8	4.2	4.2						
			Ánai	ılo de pli	ıma prin	cipal 75 (1°10			
25.7	65.0	64.7	9	12.2		. ,,				
26.0	64.4	64.6	13.1	12.1						
28.0	60.2	63.5	11.2	10.5						
30.0	55.8	62.2	9.3	8.9						
32.0	51.1	60.7	7.8	7.7						
34.0	46.1	58.9	6.7	6.7						
36.0	40.6	56.7	5.8	5.8						
38.0 40.0	34.3 26.8	54.1 50.6	5.1 4.5	5.1 4.6						
70.0	20.0	55.0			ıma aria	cinal SE) [° 1		1	
	55.0	50.0	Angu		ıma prin	upai 05.1	ין ו		1	
36.1 38.0	55.0 50.6	59.6 58.3	6.2	5.7 4.9						
40.0	45.5	56.4	5.4	4.9						
42.0	40.0	54.2	4.6	3.6						
44.0	33.6	51.5	3.9	3.0						
46.0	25.9	47.9	3.2	2.5						
48.0	16.3	42.6	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

	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) 65.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
11.2 12.0 13.0 14.0 16.0	78.0 76.5 74.5 72.6 68.7	68.5 68.3 68.0 67.7 67.0	15.1 15.1 15.1 15.1 15.1	30.1 30.1 30.1 28.3 22.8	·					
18.0 20.0 22.0 24.0 26.0	64.6 60.4 56.0 51.3 46.3	66.1 65.0 63.7 62.2 60.4	15.1 15.1 14.8 12.8 11.2 9.8	18.6 15.8 13.5 11.7 10.3						
28.0 30.0 32.0	40.8 34.6 27.1	58.2 55.6 52.2	8.5 7.4 5.9	9.0 7.9 6.3						
	l		Angu		ıma prin	cipal 83.0	֓֞֞֞֓֓֞֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓			
16.9 18.0 20.0	73.0 70.8 66.8	67.4 67.1 66.3	15.1 15.1	24.0 21.6 18.1						
22.0 24.0 26.0 28.0	62.7 58.4 53.9 49.1	65.3 64.1 62.7 61.1	15.1 14.2 12.8 11.6	15.3 13.0 11.1 9.5						
30.0 32.0 34.0 36.0	43.9 38.1 31.4 22.9	59.1 56.8 53.8 49.9	9.9 8.5 7.5 6.5	8.1 6.9 5.8 4.9						
			Ángı	ılo de plı	ıma prin	cipal 75.0	1°10			
25.8 26.0	65.0 64.5	64.7 64.6	12.7	10.2 10.0			- []			
28.0 30.0 32.0 34.0	60.3 55.9 51.2 46.2	63.6 62.3 60.7 58.9	10.8 9.1 7.7 6.4	8.4 7.0 5.8 4.7						
36.0 38.0 40.0	40.7 34.5 26.9	56.8 54.1 50.7	5.2 4.1 3.2	3.8 3.0 2.2						
36.2 38.0	55.0 51.1	59.6 58.3	Ángı _{2.1}	ılo de plu 2.3	ıma prin	cipal 65.0	[°]			



N° de ident.:9842523/95738/Pieza de articulación de pluma principal:2821-1Radio de descarga:360 °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]
			O m Dlum	o pripoi	al Dunt	. do oor	70.2 Mi	dfall		
		33.0	0 m Plum Cabeza 34.0	de plumí	ín (1916- osición m	1) 65.5 r	n Plumín	uiaii I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]C			
11.8	78.0	71.4	15.1	23.4						
12.0 13.0	77.6 75.8	71.4 71.1	15.1 15.1	23.4 22.1						
14.0	74.1	70.8	15.1	19.3						
16.0	70.5	70.2	15.1	15.5						
18.0	66.9	69.3	13.7	12.9						
20.0	63.1	68.4	11.4	10.8						
22.0	59.3	67.2	9.6	9.3						
24.0	55.2	65.9	8.0	7.9						
26.0 28.0	50.9 46.4	64.4 62.6	6.8 5.9	6.8						
30.0	41.4	60.4	5.1	5.2						
32.0	35.9	57.9	4.4	4.5						
34.0	29.4	54.7	3.9	4.0						
36.0	21.2	50.5	3.5	3.5						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
17.7	73.0	70.3		16.6						
18.0	72.5	70.2	15.1	16.6						
20.0	68.9	69.5	13.9	14.3						
22.0 24.0	65.2 61.4	68.6 67.6	11.5 9.5	11.9 10.1						
26.0	57.5	66.3	8.0	8.6						
28.0	53.3	64.9	6.9	7.4						
30.0	48.9	63.3	6.0	6.5						
32.0	44.2	61.3	5.2	5.6						
34.0	39.0	59.0	4.6	4.9						
36.0 38.0	33.1 26.0	56.2 52.7	4.1 3.6	4.4 3.9						
30.0	20.0	32.1			ıma prin	cinal 75 (1 ° 1			
27.0	65.0	67.4	Ange	11.1			<u> </u>			
28.0	63.1	67.0	11.5	10.9						
30.0	59.2	65.8	9.4	9.2						
32.0	55.1	64.5	8.0	7.9						
34.0	50.9	62.9	6.9	6.9						
36.0 38.0	46.3 41.3	61.1 59.0	6.0 5.2	6.1 5.3						
40.0	35.8	59.0 56.4	4.5	4.6						
42.0	29.3	53.3	4.1	4.2						
44.0	21.0	49.0	3.6	3.7	<u> </u>					
			Ángu	ılo de plu	ıma prin	cipal 65.0	[°]			
37.9	55.0	62.1		4.9						
38.0	54.7	62.1	6.0	4.9						
40.0	50.4	60.5	5.2	4.2						
42.0	45.8	58.7	4.4	3.5						
44.0 46.0	40.8 35.2	56.5 53.9	3.7 3.1	2.9 2.4						
48.0	29.3	50.6	2.5	2						
49.0	25.5	48.6	2.3							



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

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

Radio de descarga: 360 °
Valor de vuelco: 2 - Vía ancha
Lastre trasero [t]: 54.0
Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 34.0	de plumí		1) 68.5 r	n Plumín			
			Ángu	ılo de plu	ıma prin	cipal 88.0	0 [°]			
11.8	78.0	71.4		30.1						
12.0 13.0 14.0	77.7 75.9 74.2	71.4 71.1 70.9	15.1 15.1 15.1	30.1 29.7 26.9						
16.0	70.6	70.2	15.1	21.5						
18.0 20.0 22.0 24.0	67.0 63.3 59.4 55.3	69.4 68.4 67.3 65.9	14.6 13.9 12.5 10.6	17.8 14.9 12.9 11.0						
26.0	51.0	64.4	9.0	9.7						
28.0 30.0 32.0 34.0	46.5 41.5 36.0 29.6	62.6 60.5 57.9 54.8	7.9 6.9 6.1 5.1	8.5 7.4 6.5 5.5						
36.0	21.3	50.6	4.0	4.3		-:	0.001			
					ıma prin	cipai 83.	<u>ן נין</u>			
17.8 18.0 20.0 22.0 24.0	73.0 72.6 69.0 65.3 61.5	70.3 70.2 69.5 68.6 67.6	15.1 15.1 15.1 15.1 15.0	22.3 21.9 18.4 15.6 13.3						
26.0	57.6	66.4	12.8	11.4						
28.0 30.0 32.0 34.0	53.4 49.0 44.3 39.1	65.0 63.3 61.4 59.1	10.7 9.3 8.1 7.0	9.7 8.3 7.1 6.0						
36.0	33.2	56.3	6.2	5.1						
38.0	26.2	52.7	5.4	4.3						
			Ángı	•	ıma prin	cipal 75.0	0[°]			
27.0 28.0 30.0	65.0 63.2 59.3	67.4 67.0 65.9	10.7 9.1	9.2 8.4 7.1						
32.0	55.2	64.5	7.7	5.9						
34.0 36.0	51.0 46.4	63.0 61.2	6.4 5.2	4.9 3.9						
38.0	41.4	59.0	4.2	3.1						
40.0 42.0	35.9 30.2	56.5 53.3	3.3 2.4	2.4						
72.0	1 00.2	55.5		ılo de nlı	ıma prin	rinal 65 (1°10			
38.0	55.0	62.1	2.1	io de pit	arna prim	5.pai 00.t	<u> </u>			
50.0	1 55.0	UZ. I	4.1				·			



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]: 54.0 0.0 Lastre central [t]:

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
<u> </u>			0 Dl		L D		- 0 Mi	-16 - II		
		35.0	0 m Plum Cabeza	de plumí	oal, Punt ín (1916- osición m	1) 68.5 r	n Plumín	dfall I		
					uma prin					
12.4	78.0	74.3	15.1	22.7			J []			
13.0	77.0	74.2	15.1	22.7						
14.0	75.4	73.9	15.1	20.7						
16.0 18.0	72.2 68.9	73.3 72.6	15.1 15.1	16.7 14.1						
20.0	65.5	71.7	12.5	11.8						
22.0	62.0	70.7	10.5	10.1						
24.0	58.4	69.5	8.9	8.8						
26.0	54.7	68.2	7.6	7.6						
28.0 30.0	50.7 46.5	66.6 64.8	6.6 5.8	6.7 5.9						
32.0	42.0	62.7	5.6	5.9						
34.0	37.0	60.2	4.5	4.6						
36.0	31.4	57.3	4.0	4.1						
38.0	24.5	53.5	3.6	3.7						
			Ángı	ılo de plu	uma prin	cipal 83.0	[°]C			
18.6	73.0	73.2	15.1	16.3						
20.0	70.7	72.7	15.1	15.5						
22.0 24.0	67.4 63.9	71.9 71.0	14.2 11.6	13.1 11.0						
26.0	60.4	69.9	9.8	9.5						
28.0	56.7	68.6	8.3	8.2						
30.0	52.9	67.2	7.2	7.2						
32.0	48.9	65.5	6.3	6.4						
34.0 36.0	44.5 39.8	63.6 61.3	5.6 4.9	5.7 5.0						
38.0	34.6	58.7	4.3	4.5						
40.0	28.5	55.4	3.9	4.0						
42.0	20.7	51.0	3.5	3.6						
					ıma prin	cipal 75.0	[°]0			
28.3	65.0	70.1	11.3	10.9						
30.0 32.0	61.9 58.3	69.3 68.1	10.6 8.9	10.2 8.9						
34.0	56.3 54.6	66.7	7.7	7.7						
36.0	50.6	65.2	6.7	6.8						
38.0	46.4	63.4	5.9	6.0						
40.0	41.9	61.3	5.2	5.3						
42.0 44.0	36.9 31.3	58.8 55.8	4.6 4.2	4.7 4.2						
46.0	24.4	52.0	3.7	3.7						
					ıma prin	cipal 65.0	D[°]			
39.6	55.0	64.5		4.3						
40.0	54.2	64.3	5.1	4.2						
42.0	50.2	62.7	4.4	3.5						
44.0 46.0	46.0 41.4	60.9 58.8	3.7 3.1	3.0 2.4						
48.0	36.9	56.2	2.5	2.4						
49.0	34.1	54.8	2.2							



2821-1

2821-1

 N° de ident.: 9842523/95738/ Pieza de articulación de pluma principal: Radio de descarga: 360 $^{\circ}$ Cabeza de pluma principal:

	Inserciór	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]
		35.0	0 m Plun Cabeza 37.0	de plumi	oal, Punt ín (2316- osición m	·1) 71.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.	0[°]			
12.4	78.0	74.4	l	28.5		·				
13.0	77.1	74.2	15.1	28.5						
14.0	75.5	74.0	15.1	25.5						
16.0	72.3	73.4	15.1	20.3						
18.0	69.0	72.6	15.1	16.8						
20.0	65.6	71.8	13.6	14.0						
22.0	62.1	70.7	12.4	12.0						
24.0	58.5	69.6	10.7	10.3						
26.0	54.8	68.2	9.0	8.9						
28.0	50.8	66.6	7.7	7.7						
30.0	46.6	64.8	6.7	6.8						
32.0	42.1	62.8	5.8	5.9						
34.0	37.1	60.3	5.0	5.1						
36.0 38.0	31.5 24.6	57.3 53.5	4.2 3.2	4.3 3.3						
36.0	24.0	55.5		•	ıma nrin	oinal 02	0 [0]			
			Angu		ıma prin	cipai os.	υ[]		1	
18.6	73.0	73.2		19.7						
20.0	70.8	72.7	15.1	18.4						
22.0	67.5	71.9	15.1	15.5						
24.0 26.0	64.0 60.5	71.0 69.9	13.3	13.0						
28.0	56.8	68.6	11.9 9.9	11.3 9.7						
28.0 30.0	53.0	67.2	9.9 8.4	8.4						
32.0	49.0	65.5	7.3	7.2						
34.0	44.6	63.6	6.3	6.1						
36.0	39.9	61.4	5.5	5.1						
38.0	34.7	58.7	4.8	4.3						
40.0	28.6	55.4	4.2	3.5						
42.0	20.9	51.1	3.6	2.8						
			Ángı	ılo de plu	ıma prin	cipal 75.	0 [°]			
28.3	65.0	70.2	ΙŬ	8.0		i i				
30.0	62.0	69.3	8.8	6.9						
32.0	58.4	68.1	7.4	5.8						
34.0	54.7	66.8	6.1	4.8						
36.0	50.7	65.2	5.0	3.9						
38.0	46.5	63.4	4.0	3.1						
40.0	42.0	61.3	3.1	2.3						
				1	1	1	1		1	1



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

2821-1 Cabeza de pluma principal: 2821-1

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 54.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
	LJ	[m]								
		35.0	0 m Plum	na princip	oal, Punt	o de car	ga 3 - Mi	dfall	•	
			Cabeza 40.0		ín (1916- osición m			l		
			Ángı	ılo de plu	ıma prin	cipal 88.	0[°]			
13.0	78.0 76.5	77.3 77.0	15.1 15.1	23.7 23.4						
14.0 16.0	73.6	76.5	15.1	19.4						
18.0	70.5	75.8	15.1	16.1						
20.0	67.4	75.0	14.2	13.9						
22.0	64.3	74.1	12.2	11.9						
24.0	61.0	73.0	10.7	10.4						
26.0 28.0	57.7 54.2	71.8 70.4	9.3 8.1	9.2 8.1						
30.0	50.5	68.8	7.1	7.3						
32.0	46.6	67.0	6.4	6.5						
34.0	42.5	65.0	5.7	5.9						
36.0	38.0	62.6	5.1	5.3						
38.0	32.9	59.7	4.6	4.8						
40.0	27.0	56.2	4.2	4.4						
42.0	19.4	51.6	3.8 Ángi	lo de nli	ıma prin	rinal 83 i	1 ° 1			
10.5	72.0	76.0			лна рин І					
19.5 20.0	73.0 72.2	76.0 75.9	15.1 15.1	17.3 17.2						
22.0	69.2	75.5 75.1	15.0	15.0						
24.0	66.0	74.3	13.8	12.9						
26.0	62.8	73.3	11.6	11.2						
28.0	59.5	72.2	10.1	9.9						
30.0	56.1	70.9	8.7	8.7						
32.0	52.6	69.4	7.7	7.8						
34.0 36.0	48.8 44.8	67.7 65.8	6.9 6.1	7.0 6.3						
38.0	40.5	63.6	5.5	5.6						
40.0	35.8	61.0	5.0	5.1						
42.0	30.4	57.9	4.5	4.7						
44.0	23.9	54.0	4.1	4.3						
			Ángı	ılo de plu	ıma prin	cipal 75.	0 [°]			
29.5	65.0	72.9		10.6						
30.0	64.2	72.7	12.1	10.2						
32.0	61.0	71.6	10.7	9.0						
34.0 36.0	57.6 54.1	70.4 69.0	9.4 8.2	8.0 7.0						
38.0	50.5	67.4	7.2	6.2						
40.0	46.6	65.6	6.5	5.5						
42.0	42.4	63.5	5.8	4.8						
44.0	37.9	61.1	5.2	4.2						
46.0	32.8	58.3	4.7	3.6						
48.0 50.0	26.9 19.3	54.8 50.1	4.1 3.5	3.1 2.7						
50.0	10.0	JU. I			ıma prin	cinal 65	0 [0]	1		
41.3	55.0	67.0	Ange	3.6	Jina pini	J. Par 00.	~ []			
42.0	53.8	66.6	4.1	3.4						
44.0	50.1	65.0	3.5	2.8						
46.0	46.2	63.1	2.9	2.3						
48.0	42.3	61.0	2.3							
49.0	40.1	59.9	2.1							



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]: 54.0 Lastre central [t]: 0.0

Lastre o	entral [t]:		0.0						
	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 31.0	de plumí		1) 74.5 r	n Plumír			
			Ángı	ılo de plu	ıma prin	cipal 88.	0 [°]			
11.1	78.0	68.5		21.2		·				
12.0	76.3	68.3	15.1	21.0						
13.0	74.4	68.0	15.1	18.2						
14.0	72.5	67.7	15.0	16.1						
16.0	68.5	66.9	14.4	12.9						
18.0	64.5	66.0	11.1	10.2						
20.0	60.3	64.9	8.7	8.4						
22.0	55.9	63.7	7.0	6.9						
24.0	51.2	62.1	5.8	5.7						
26.0	46.2	60.3	4.8	4.8						
28.0	40.7	58.2	4.1	4.1						
30.0 32.0	34.4 26.9	55.5 52.1	3.4 2.9	3.5 3.0						
32.0	20.5	JZ.1			uma prin	cipal 83.	l°10		l	l
16.8	73.0	67.4		15.1						
18.0	70.7	67.0	15.1	14.5						
20.0	66.7	66.2	12.7	11.5						
22.0	62.6	65.2	9.7	9.3	İ	İ	İ	İ	İ	
24.0	58.3	64.1	7.9	7.7						
26.0	53.8	62.7	6.4	6.4						
28.0	49.0	61.0	5.4	5.4						
30.0	43.8	59.1	4.6	4.6						
32.0	38.0	56.7	3.8	3.9						
34.0	31.3	53.8	3.3	3.4						
36.0	22.8	49.8	2.8	2.9	<u> </u>					
			Angı		ıma prin	cipal /5.	ַט [ਁ <u>]</u>			
25.7	65.0	64.7		9.6						
26.0	64.4	64.6	10.0	9.6						
28.0	60.2	63.5	8.6	8.3						
30.0 32.0	55.8 51.1	62.2 60.7	7.1 5.9	7.0 5.9						
34.0	46.1	58.9	5.9	5.9						
36.0	40.1	56.7	4.2	4.3						
38.0	34.3	54.1	3.6	3.6						
40.0	26.8	50.6	3.1	2.9						
					uma prin	cipal 65.	0 [°]			
36.1	55.0	59.6		3.5		Ė	_ <u>. </u>			
20.1	50.6	50.0	2.7	2.7	l	l	l	l	l	l

38.0

40.0

50.6

58.3

56.4

2.8

2.7

2.0



Nº de ident.: 9842523/95738/ 360°

Radio de descarga:

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 54.0 Lastre central [t]: 0.0

	Inserción	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		35.0	0 m Plum Cabeza 40.0	de plumí	oal, Punt ín (2316- osición m	1) 74.5 r	n Plumín	dfall 1		
			Ánaı	ılo de plu	ıma prin	cipal 88.	1°10			
13.1	78.0	77.3	15.1	28.3			, <u>, , , , , , , , , , , , , , , , , , </u>			
14.0 16.0 18.0 20.0	76.6 73.6 70.6 67.5	77.1 76.5 75.8 75.0	15.1 15.1 15.1 14.6	28.0 22.6 18.5 15.8						
22.0	64.4	74.1	13.3	13.5						
24.0 26.0 28.0 30.0	61.1 57.8 54.3 50.6	73.1 71.8 70.5 68.9	12.3 10.6 9.1 7.9	11.8 10.3 9.0 8.0						
32.0	46.7	67.1	6.7	6.9						
34.0 36.0 38.0	42.6 38.1 33.0	65.0 62.6 59.8	5.7 4.8 3.9	5.9 5.0 4.1						
40.0	27.1	56.3	2.9 Ápgi	Jo do plu	uma prin	cipal 93 i) [°]			
19.5	73.0	76.0	Angu	19.1		 	J []		1	
20.0 22.0 24.0 26.0	72.3 69.2 66.1 62.9	75.9 75.2 74.3 73.3	15.1 15.1 14.4 13.0	18.4 15.5 13.2 11.3						
28.0	59.6	72.2	11.6	9.7						
30.0 32.0 34.0	56.2 52.7 48.9	70.9 69.4 67.8	9.9 8.5 7.5	8.4 7.2 6.1						
36.0 38.0	44.9 40.6	65.9 63.7	6.6 5.8	5.2 4.3						
40.0 42.0 44.0	35.9 30.5 24.0	61.1 58.0 54.1	4.8 3.9 3.1	3.6 2.9 2.3						
					ıma prin	cipal 75.	1°10			
29.6	65.0	72.9	,gc	7.0						
30.0 32.0 34.0 36.0 38.0	64.3 61.1 57.7 54.2 50.5	72.7 71.6 70.4 69.0 67.5	8.5 7.2 6.0 4.9 3.9	6.7 5.6 4.7 3.8 3.0						
40.0 42.0	46.7 42.9	65.7 63.6	3.0 2.2	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]
		35.0	0 m Plum Cabeza 34.0	de plumi	pal, Punt n (1916- osición m	1) 77.5 r	n Plumín	dfall		
			Ángı	ılo de plı	uma prin	cipal 88 () [°]			
11.8	78.0	71.4	15.1	19.0		l l				
12.0 13.0	77.6 75.8	71.4 71.1	15.1 15.1	19.0 18.2						
14.0 16.0	74.1 70.5	70.8 70.2	15.1 13.4	16.0 12.7						
18.0	66.9	69.3	11.2	10.3						
20.0	63.1	68.4	8.7	8.4						
22.0	59.3	67.2	7.1	7.0						
24.0	55.2	65.9	5.8	5.8						
26.0	50.9	64.4	4.8	4.8						
28.0	46.4	62.6	4.0	4.1						
30.0	41.4	60.4	3.4	3.5						
32.0 34.0	35.9 29.4	57.9 54.7	2.8 2.3	2.9 2.4						
34.0	29.4	34.7			ıma prin	rinal 83 (1 ° 1			
17.7	73.0	70.3	Ango	13.4			J []			
18.0	72.5	70.2	15.0	13.4						
20.0	68.9	69.5	12.5	11.4						
22.0	65.2	68.6	9.8	9.2						
24.0	61.4	67.6	7.8	7.7						
26.0	57.5	66.3	6.4	6.4						
28.0 30.0	53.3 48.9	64.9 63.3	5.3 4.5	5.4 4.6						
32.0	44.2	61.3	3.8	3.9						
34.0	39.0	59.0	3.2	3.3						
36.0	33.1	56.2	2.8	2.8						
38.0	26.0	52.7	2.4	2.4						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
27.0	65.0	67.4		8.4						
28.0	63.1	67.0	8.5	8.4						
30.0 32.0	59.2 55.1	65.8 64.5	7.0 5.9	6.9 5.9						
34.0	50.9	62.9	4.9	5.9						
36.0	46.3	61.1	4.2	4.3						
38.0	41.3	59.0	3.6	3.6						
40.0	35.8	56.4	3.0	3.0						
42.0	29.3	53.3	2.6	2.4						
44.0	22.1	49.0	2.2	.11		-11-05	2.5.2			
			Angı		ıma prin	cipai 65.0	ַנֻ זַן <u>י</u>			
37.9	55.0	62.1		2.8						
38.0	54.7	62.1	3.6	2.7						
40.0 41.0	50.4 48.5	60.5 59.6	2.8 2.3	2.0						
71.0	1 -10.0	00.0	2.0		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

6 7	7 8
	Carga Carga



2821-1 2821-1

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

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]
		35.0	0 m Plum Cabeza 34.0	de plumí	n (2316-	o de carç 1) 80.5 r nidfall (23	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	0 [°]			
11.8 12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0	78.0 77.7 75.9 74.2 70.6 67.0 63.3 59.4 55.3	71.4 71.4 71.1 70.9 70.2 69.4 68.4 67.3 65.9	15.1 15.1 15.1 15.1 15.1 15.1 14.2 9.5	30.1 30.1 30.0 26.8 21.4 17.3 14.2 11.7 9.4						
26.0	51.0	64.4	5.9	6.1						
28.0	46.5	62.6	3.8 Ángi	ulo de niu	ıma nrini	cipal 83.0	1 ° 1			
17.8 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0	73.0 72.6 69.0 65.3 61.5 57.6 53.4 49.0 44.3	70.3 70.2 69.5 68.6 67.6 66.4 65.0 63.3 61.4	15.1 15.1 15.1 15.1 13.7 11.3 9.2 7.3 5.7	17.8 17.3 13.9 11.3 9.2 7.5 6.1 4.9 3.8	, , , , , , , , , , , , , , , , , , ,	spar co.				
34.0	39.1	59.1	3.8	2.8						
	05.0	07.4	Angı		ıma prin	cipal 75.0	0 [°]			
27.0 28.0 30.0 32.0 34.0 35.0	65.0 63.2 59.3 55.2 51.3 49.1	67.4 67.0 65.9 64.5 63.0 62.1	7.0 5.4 4.0 2.7 2.1	5.7 5.0 3.8 2.8						



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]	
		35.0	0 m Plum Cabeza 37.0	de plumí	oal, Punt n (1916- osición m	1) 80.5 r	n Plumín	dfall I			
Ángulo de pluma principal 88.0 [°]											
12.4	78.0	74.3	15.1	19.6							
13.0	77.0	74.2	15.1	19.6							
14.0	75.4	73.9	15.1	18.1							
16.0	72.2	73.3	14.4	14.6							
18.0 20.0	68.9	72.6 71.7	12.9 10.4	12.0 9.9							
22.0	65.5 62.0	70.7	8.4	8.3							
24.0	58.4	69.5	7.1	7.1							
26.0	54.7	68.2	6.0	6.1							
28.0	50.7	66.6	5.1	5.2							
30.0	46.5	64.8	4.5	4.6							
32.0	42.0	62.7	3.9	4.0							
34.0	37.0	60.2	3.4	3.5							
36.0	31.4	57.3	2.8	2.8							
			Ángı	ılo de plu	ıma prin	cipal 83.0	0 [°]				
18.6	73.0	73.2	15.0	13.9							
20.0	70.7	72.7	14.5	13.2							
22.0	67.4	71.9	11.6	10.9							
24.0 26.0	63.9 60.4	71.0 69.9	9.3 7.8	9.0 7.7							
28.0	56.7	68.6	6.6	6.6							
30.0	52.9	67.2	5.7	5.7							
32.0	48.9	65.5	5.0	5.0							
34.0	44.5	63.6	4.3	4.4							
36.0	39.8	61.3	3.7	3.8							
38.0	34.6	58.7	3.2	3.4							
40.0 42.0	28.5 20.7	55.4 51.0	2.9 2.5	3.0 2.5							
.2.0		00			ıma prin	cipal 75.0	0 [°]				
28.3	65.0	70.1	9.0	8.9							
30.0	61.9	69.3	8.5	7.8							
32.0	58.3	68.1	7.2	6.6							
34.0	54.6	66.7	6.1	5.6							
36.0	50.6	65.2	5.3	4.7							
38.0	46.4	63.4	4.7	3.9							
40.0 42.0	41.9	61.3	4.1	3.2							
44.0	36.9 31.8	58.8 55.8	3.6 2.8	2.6							
44.0	1 01.0	55.0		ılo de pli	ıma prin	cinal 65 (1°10				
39.6	55.0	64.5	/ tingt	2.2	piiii	J.pa. 00.	~ []				
40.0	54.2	64.3	2.8	2.2							
41.0	52.5	63.6	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]
		35.0	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 plu	ıma prin	cipal 88.0	l°10			
12.4 13.0 14.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0	78.0 77.1 75.5 72.3 69.0 65.6 62.1 58.5 54.8 50.8	74.4 74.2 74.0 73.4 72.6 71.8 70.7 69.6 68.2 66.6	15.1 15.1 15.1 15.1 13.8 12.2 9.9 6.8 4.2	28.5 28.5 27.0 21.7 17.5 14.4 11.9 9.9 7.0 4.4						
30.0	46.6	64.8	2.8	3.0						
10.0	70.0	70.0	Ángı		uma prin	cipal 83.0	[°]		ı	
18.6 20.0 22.0 24.0 26.0 28.0 30.0 32.0	73.0 70.8 67.5 64.0 60.5 56.8 53.0 49.0	73.2 72.7 71.9 71.0 69.9 68.6 67.2 65.5	15.1 15.1 13.3 11.0 9.0 7.3 5.7	16.1 13.9 11.3 9.2 7.5 6.1 4.9 3.9						
34.0	44.6	63.6	4.3	2.9						
			Ángı		ıma prin	cipal 75.0	[°]			
28.3 30.0 32.0 34.0	65.0 62.0 58.4 54.9	70.2 69.3 68.1 66.8	5.0 3.7 2.6	4.6 3.6 2.6						



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]: 54.0 Lastre central [t]: 0.0

Lastre d	entral [t]:		0.0						
	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		35.0	0 m Plum Cabeza 40.0	de plumí	ín (1916-	o de carç 1) 83.5 r nidfall (19	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
13.0 14.0 16.0 18.0 20.0	78.0 76.5 73.6 70.5 67.4 64.3	77.3 77.0 76.5 75.8 75.0	15.1 15.1 13.5 11.4 9.6 7.8	16.8 16.8 13.8 11.2 9.3						
24.0 26.0 28.0 30.0 32.0	61.0 57.7 54.2 50.5 46.6	73.0 71.8 70.4 68.8 67.0	6.5 5.5 4.6 4.0 3.4	6.5 5.5 4.7 4.0 3.5						
34.0 36.0	42.5 38.0	65.0 62.6	2.9 2.5 Ángi	3.0 2.6	ıma nrin	cipal 83.0	1 ° 1			
19.5	73.0	76.0	11.7	11.8			J []			
20.0 22.0 24.0 26.0	72.2 69.2 66.0 62.8	75.9 75.1 74.3 73.3	11.7 10.3 8.6 7.1	11.8 10.1 8.4 7.1						
28.0 30.0 32.0	59.5 56.1 52.6	72.2 70.9 69.4	6.0 5.1 4.4	6.1 5.2 4.5						
34.0 36.0 38.0 40.0	48.8 44.8 40.5 35.8	67.7 65.8 63.6 61.0	3.8 3.3 2.8 2.4	3.9 3.3 2.9 2.5						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
29.5 30.0 32.0 34.0 36.0	65.0 64.2 61.0 57.6 54.1	72.9 72.7 71.6 70.4 69.0	7.3 6.5 5.6 4.7	7.4 7.3 6.6 5.6 4.7						
38.0 40.0 42.0 44.0	50.5 46.6 42.4 38.3	67.4 65.6 63.5 61.1	4.1 3.5 3.1 2.6	3.9 3.2 2.6						

Ángulo de pluma principal 65.0 [°]

41.4

55.0

67.0



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]: Lastre central [t]:

34.0

36.0

29.6

30.0 32.0

52.7

48.9

65.0

64.3 61.1 57.9 69.4

67.8

65.9

72.9

72.7 71.6 70.4

5.7

4.3

3.4

3.9

3.0

3.7

3.5 2.5

Ángulo de pluma principal 75.0 [°]

54.0

	Lastre c	Lastre central [t]: 0.0										
		Inserciór	1	1	2	3	4	5	6	7	8	
	Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	
35.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (2316-1) 86.5 m Plumín 40.0 [m] Posición midfall (2316)												
Ángulo de pluma principal 88.0 [°]												
	13.1	78.0	77.3	15.1	26.6							
	14.0	76.6	77.1	15.1	26.6							
	16.0	73.6	76.5	15.1	21.7							
	18.0	70.6	75.8	15.1	17.7							
	20.0	67.5	75.0	14.5	14.5							
	22.0	64.4	74.1	12.3	12.0							
	24.0 26.0	61.1 57.8	73.1 71.8	10.6 7.7	10.0 8.2							
	28.0	54.3	71.6	7.7 5.1	5.3							
	30.0	50.6	68.9	3.0	3.1							
					ılo de plu	ıma prin	cipal 83.0	0 [°]				
	19.5	73.0	76.0		14.6			T -				
	20.0	72.3	75.9	15.1	13.9							
	22.0	69.2	75.2	15.1	11.3							
	24.0	66.1	74.3	12.9	9.2							
	26.0	62.9	73.3	10.7	7.5							
	28.0	59.6	72.2	8.8	6.1							
	30.0	56.2	70.9	7.1	4.9							
	~~ ~					1	1	ı	1	1	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]: 54.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 43.0	de plumí		1) 86.5 r	n Plumín			
Ángulo de pluma principal 88.0 [°]										
13.6	78.0	80.2		14.9	<u>'</u>	·				
14.0	77.5	80.1	15.1	14.9						
16.0	74.7	79.6	13.9	12.8						
18.0	71.9	79.0	11.1	10.4						
20.0	69.1	78.3	8.7	8.6						
22.0	66.2	77.4	7.1	7.1						
24.0 26.0	63.2 60.2	76.4 75.3	5.8 4.9	5.9 5.0						
28.0	57.0	74.1	4.9	4.2						
30.0	53.8	72.7	3.5	3.6						
32.0	50.4	71.1	3.0	3.1						
34.0	46.8	69.3	2.5	2.6						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
20.3	73.0	78.9		10.0						
22.0	70.7	78.3	9.8	9.5						
24.0	67.8	77.6	7.8	7.8						
26.0	64.9	76.7	6.5	6.5						
28.0	61.9	75.6	5.4	5.5						
30.0 32.0	58.8 55.6	74.5 73.1	4.6 3.9	4.7 4.0						
34.0	52.3	71.7	3.3	3.4						
36.0	48.8	70.0	2.8	2.9						
38.0	45.1	68.1	2.4	2.5						
			Ángı	ılo de plu	uma prin	cipal 75.0	1°10			
30.8	65.0	75.6		6.1	<u> </u>	·				
32.0	63.2	75.0	5.6	6.0						
34.0	60.1	73.9	4.7	5.1						
36.0	57.0	72.7	4.1	4.4						
38.0	53.7	71.2	3.4	3.7						
40.0	50.3	69.7	3.0	3.2						
42.0	46.7 42.8	67.9 65.8	2.5 2.2	2.7 2.1						
44.0	42.ŏ	ზ5.8	2.2	2.1						



Nº de ident.:9842523/95738/Pieza de articulación de pluma principal:2821-1Radio de descarga:360 °Cabeza de pluma principal:2821-1

Valor de vuelco: 2 - Vía ancha Lastre trasero [t]: 54.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		35.0	0 m Plum Cabeza 46.0	na princip de plumí 0 [m] Po	n (1916-	1) 89.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
14.3 16.0 18.0 20.0 22.0	78.0 75.8 73.2 70.5 67.9	83.1 82.7 82.1 81.5 80.7	15.1 14.1 11.1 8.7 7.1	13.9 13.0 10.5 8.5 7.1	-					
24.0 26.0 28.0 30.0 32.0	65.1 62.3 59.5 56.5 53.4	79.8 78.8 77.6 76.4 74.9	5.8 4.9 4.1 3.5 2.9	5.9 5.0 4.2 3.6 3.0						
34.0	50.2	73.3	2.5	2.6						
<u> </u>			Ángu	ılo de plu	ıma prin	cipal 83.0	[°]			
21.2 22.0 24.0 26.0 28.0 30.0 32.0	73.0 72.0 69.3 66.6 63.9 61.0 58.1	81.8 81.5 80.8 80.0 79.0 77.9 76.7	8.4 7.1 6.0 5.0 4.3 3.7	9.1 9.1 7.7 6.5 5.4 4.7 4.0						
34.0 36.0	55.1 52.0	75.4 73.9	3.1 2.7	3.4 2.9						
38.0	48.7	72.2	2.3	2.4						
				ılo de plu	ıma prin	cipal 75.0	D[°]			
32.1 34.0 36.0 38.0 40.0	65.0 62.3 59.4 56.4 53.4	78.3 77.4 76.2 74.9	5.3 5.0 4.2 3.6 3.0	5.4 5.1 4.3 3.7 3.1						
42.0 44.0	50.2 46.8	71.9 70.1	2.6 2.2	2.6 2.0						

Source:a9841388



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]: 54.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8	
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	
		35.0	0 m Plum Cabeza 49.0	de plumí	ín (1916-	o de carç 1) 92.5 r nidfall (19	n Plumír	dfall I			
Ángulo de pluma principal 88.0 [°]											
14.9 16.0 18.0 20.0 22.0	78.0 76.6 74.2 71.8 69.3	86.1 85.8 85.3 84.6 83.9	11.7 11.7 10.2 8.5 6.9	12.7 12.7 10.2 8.4 7.0							
24.0 26.0 28.0 30.0 32.0	66.7 64.2 61.5 58.8 56.0	83.1 82.1 81.1 79.9 78.6	5.7 4.8 4.0 3.4 2.9	5.8 4.9 4.1 3.5 2.9							
34.0	53.1	77.2	2.9	2.9							
			Ángu	ılo de plu	uma prin	cipal 83.0] °]				
22.1 24.0 26.0 28.0 30.0 32.0 34.0 36.0	73.0 70.7 68.1 65.6 63.0 60.3 57.6 54.7	84.6 84.0 83.2 82.4 81.4 80.3 79.0 77.7	7.0 5.8 5.0 4.2 3.6 3.1 2.6	8.2 7.6 6.3 5.4 4.5 3.9 3.3 2.8							
38.0	51.8	76.1	2.2	2.3							
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]				
33.3 34.0 36.0 38.0 40.0 42.0 44.0	65.0 64.1 61.5 58.8 56.0 53.1 50.0	81.0 80.7 79.7 78.5 77.2 75.7 74.1	4.6 4.1 3.5 3.0 2.5 2.1	4.8 4.8 4.2 3.6 3.1 2.5 2.0							



N° de ident.: 9842523/95738/ Piez

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

- Vía ancha

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

Valor de vuelco:	2 - Vía ancha
Lastre trasero [t]:	54.0
Lastre central [t]:	0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		35.0	0 m Plum Cabeza 52.0	de plumi	'n (1916-	o de carç 1) 95.5 r nidfall (19	n Plumín	dfall I		
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]			
Ángulo de pluma principal 88.0 [°] 15.5 78.0 89.0 9.2 10.4 16.0 77.4 88.9 9.2 10.4 18.0 75.2 88.4 8.3 9.3 20.0 72.9 87.8 7.3 7.8 22.0 70.5 87.1 6.0 6.2 24.0 68.2 86.3 5.2 5.2 26.0 65.8 85.5 4.2 4.3 28.0 63.3 84.5 3.5 3.6 30.0 60.8 83.4 2.9 3.0 32.0 58.2 82.2 2.4 2.5										
23.0	73.0	87.5	6.6	6.8	лпа рпп	cipal 83.0)]			
23.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0	73.0 71.8 69.5 67.1 64.7 62.2 59.6 57.0	87.5 87.2 86.5 85.6 84.7 83.7 82.6 81.3	6.6 6.6 5.6 4.7 3.9 3.2 2.7 2.2	6.8 6.7 5.7 4.8 4.0 3.4 2.8 2.3						
	Ángulo de pluma principal 75.0 [°]									
34.6 36.0 38.0 40.0 42.0	65.0 63.3 60.8 58.2 55.5	83.7 83.1 82.0 80.8 79.5	3.6 3.0 2.5 2.0	3.7 3.7 3.1 2.6 2.1						



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]: 54.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 13.0	de plumí	oal, Punt ín (1916- osición m	1) 32.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
Ángulo de pluma principal 88.0 [°] 7.5										
18.0	39.3	48.9	8.2 Ápgi	7.7	ıma prin	cinal 75 (
18.9 20.0 22.0 24.0	65.0 59.3 47.9 33.6	51.3 50.7 49.1 46.7	14.9 10.1 7.3	16.0 13.0 9.2 7.1	·					
	Ángulo de pluma principal 65.0 [°]									
27.1 28.0 30.0	55.0 49.7 35.9	47.6 46.9 44.7	9.1 6.8	9.5 7.2						
			Ángı	ılo de plu	ıma prin	cipal 45.0	[°]			
40.9 42.0	35.0 24.7	36.2 34.6	3.3	3.0 2.6						



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]: 54.0 Lastre central [t]: 0.0

Inserción			1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
38.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (1916-1) 35.5 m Plumín 16.0 [m] Posición midfall (1916)										
Ángulo de pluma principal 88.0 [°]										
8.1 9.0 10.0 11.0 12.0 13.0 14.0 16.0	78.0 74.7 70.9 67.1 63.0 58.9 54.5 44.7	56.8 56.6 56.2 55.8 55.3 54.7 54.0 52.2	15.1 15.1 15.1 15.1 13.9 12.3 9.7	30.1 30.1 23.8 19.2 15.8 13.5 11.7 9.3						
18.0	32.6	49.6	7.6	7.5						
Ángulo de pluma principal 83.0 [°]										
12.8	73.0	56.1		26.1						
13.0 14.0 16.0 18.0 20.0	72.3 68.5 60.4 51.5 41.2 27.7	56.0 55.6 54.6 53.2 51.2 48.2	15.1 15.1 14.6 11.6 8.9	26.1 20.5 14.2 10.8 8.6 7.1						
Ángulo de pluma principal 75.0 [°]										
20.2 22.0 24.0 26.0	65.0 57.3 48.0 36.9	54.0 53.0 51.4 49.1	15.1 14.2 10.4 8.0	16.5 12.7 9.9 7.9	٠					
Ángulo de pluma principal 65.0 [°]										
28.8 30.0 32.0	55.0 49.4 38.6	50.1 49.2 47.0	10.7 8.2	11.4 10.1 8.1						
Ángulo de pluma principal 45.0 [°]										
43.4 44.0 45.0	35.0 30.8 24.2	38.0 37.3 35.3	2.6 2.2	2.3 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

Valor de vuelco: 2 - Vía ancha Lastre trasero [t]: 54.0

Lastre central [t]:

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 16.0	de plumí	oal, Punt n (2316- osición m	1) 38.5 r	n Plumír	dfall 1		
			Ánaı	ılo de plu	ıma prin	cipal 88.0	1°10			
8.2 9.0 10.0 11.0 12.0 13.0 14.0 16.0 18.0 12.9 13.0 14.0	78.0 74.9 71.2 67.3 63.3 59.1 54.7 45.0 32.9 73.0 72.5 68.7	56.8 56.6 56.3 55.8 55.3 54.7 54.0 52.3 49.7 56.1 56.0 55.7	15.1 15.1 15.1	30.1 30.1 29.0	uma prind	cipal 83.	D [°]			
16.0 18.0 20.0 22.0	60.6 51.7 41.5 28.0	54.6 53.2 51.2 48.2	15.1 15.1 12.4 10.3	20.1 15.0 11.8 9.8						
			Ángu	ılo de plu	ıma prin	cipal 75.0	1°10	•		•
20.2 22.0 24.0 26.0	65.0 57.5 48.2 37.1	54.0 53.0 51.4 49.1	15.1 14.3 10.9	20.0 17.0 13.6 10.8		,	. ,			
			Ángu	ılo de plu	ıma prin	cipal 65.0	[°]			
28.9 30.0 32.0	55.0 49.6 38.9	50.0 49.2 47.1	10.0 8.5	8.9 8.0 6.7						

0.0



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]: 54.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 19.0	de plumí	ín (1916-		n Plumín			
			Ángı	ılo de plu	uma prin	cipal 88.0] (°)			
8.7 9.0 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0	78.0 77.2 74.1 70.9 67.6 64.3 60.8 53.5 45.3 35.6	59.7 59.7 59.4 59.0 58.6 58.2 57.6 56.2 54.5 52.0	15.1 15.1 15.1 15.1 15.1 14.9 12.6 10.4 8.3	30.1 30.1 28.9 23.3 19.7 16.9 14.8 11.7 9.6 8.0						
20.0	33.0	32.0			ıma nrin	cipal 83.0	\			
13.7	73.0	58.9	Angu	25.3	лна рин Г] 			
14.0 16.0 18.0 20.0 22.0 24.0	72.0 65.5 58.5 51.0 42.4 31.9	58.8 58.0 56.9 55.4 53.4 50.7	15.1 15.1 13.8 11.4 9.1 7.5	25.2 17.7 13.6 11.0 9.0 7.6						
21.0	01.0	00.7			ıma prin	cipal 75.0	1°10			
21.4 22.0 24.0 26.0 28.0 30.0	65.0 63.0 55.9 48.0 38.9 27.2	56.7 56.5 55.2 53.6 51.4 48.3	15.1 13.9 11.2 8.9 7.4	16.7 16.0 12.5 10.2 8.5 7.2						
					ıma prin	cipal 65.0	1°10			
30.5 32.0 34.0 36.0	55.0 49.2 40.3 29.2	52.5 51.4 49.3 46.3	10.8 8.7 7.3	10.5 9.5 8.4 7.4	and pill		- 1			
			Ángı	ılo de plu	ıma prin	cipal 45.0	[°]			
46.0	35.0	39.7	2.1	· ·		i i				



N° de ident.: 9842523/95738/

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

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 19.0		n (2316-	1) 41.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
8.8 9.0 10.0 11.0 13.0 14.0 16.0 18.0 20.0	78.0 77.4 74.2 71.1 67.8 64.5 61.0 53.7 45.5 35.8	59.8 59.7 59.4 59.1 58.2 57.6 56.3 54.5 52.1	15.1 15.1 15.1	30.1 30.1 30.1 30.1 27.5 23.2 20.2 15.7 12.7 10.3 Ilo de plu 30.1 30.1 24.6	uma prind	cipal 83.0	D[°]			
18.0 20.0	58.7 51.2	56.9 55.4	15.1 15.1	18.5 14.6						
22.0 24.0	42.6 32.2	53.5 50.8	12.6 10.5	11.9 9.8						
			Ángı	ılo de plu	ıma prin	cipal 75.0	D[°]			
21.5 22.0 24.0 26.0 28.0 30.0	65.0 63.2 56.1 48.2 39.1 27.5	56.7 56.5 55.3 53.6 51.5 48.3	15.1 15.1 14.6 12.0 9.9	18.1 17.4 14.8 12.6 10.9 9.3						
			Ángu	ılo de plu	ıma prin	cipal 65.0	0 [°]			
30.6 32.0 34.0 36.0 37.0	55.0 49.4 40.5 29.4 21.8	52.5 51.4 49.4 46.4 44.3	8.3 7.1 6.0 5.5	7.7 6.8 5.7 4.7 4.2						



N° de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór)	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0) m Plum Cabeza 22.0	de plumí	n (1916-	o de caro 1) 41.5 r nidfall (19	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
9.4	78.0	62.7	15.1	30.1						
10.0	76.3	62.5	15.1	29.5						
11.0	73.6	62.2	15.1	24.2						
12.0	70.8	61.9	15.1	20.2						
13.0	68.0	61.5	15.1	17.5						
14.0	65.2	61.0	15.1	15.3						
16.0	59.2	59.9	13.7	12.2						
18.0	52.8 45.7	58.5 56.7	10.7 8.8	10.0 8.4						
20.0 22.0	37.6	56.7 54.4	7.3	7.1						
24.0	27.4	51.2	6.2	6.2						
24.0	21.7	31.2			ıma prin	cipal 83.0) [°]		l	
44.0	70.0	04.0			лна рин	Cipai 63.	J []		l	
14.6 16.0	73.0 69.0	61.8 61.3	15.1 15.1	22.0 18.3						
18.0	63.3	60.3	15.1	14.1						
20.0	57.2	59.1	12.6	11.4						
22.0	50.6	57.6	10.1	9.5						
24.0	43.3	55.7	8.3	8.0		İ			İ	
26.0	34.7	53.1	6.9	6.8						
28.0	23.2	49.5	5.9	5.9						
			Ángu	ılo de plu	ıma prin	cipal 75.0	[°]C			
22.7	65.0	59.5		14.6						
24.0	61.1	58.8	14.4	13.0						
26.0	54.9	57.5	11.6	10.6						
28.0	48.0	55.8	9.4	8.9						
30.0	40.3	53.7	7.7	7.5						
32.0	31.0	50.8	6.6	6.5						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
32.2	55.0	55.0		9.4						
34.0	49.1	53.6	9.0	8.4						
36.0	41.5	51.6	7.5	7.5						
38.0	32.5	48.9	6.5	6.6						
40.0	19.9	44.8	5.6	5.8						



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]
		38.0	0 m Plum Cabeza 22.0	de plumí	n (2316-	o de caro 1) 44.5 r nidfall (23	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
9.4	78.0	62.7		30.1		-				
10.0	76.4	62.5	15.1	30.1						
11.0	73.7	62.3	15.1	29.8						
12.0	71.0	61.9	15.1	27.2						
13.0	68.2	61.5	15.1	24.5						
14.0	65.3	61.0	15.1	21.1						
16.0	59.3	59.9	14.8	16.5						
18.0	52.9	58.5	14.1 12.2	13.4 11.2						
20.0 22.0	45.9 37.8	56.7 54.4	9.7	9.3						
24.0	27.6	51.3	8.1	7.9						
24.0	27.0	31.3			ıma nrin	cipal 83.0) [°]		ı	
14.6	73.0	61.8	Angu	30.1		lipai 65.	J []		l	
16.0	69.2	61.3	15.1	25.7						
18.0	63.4	60.4	15.1	19.3						
20.0	57.3	59.2	14.3	15.4						
22.0	50.8	57.7	13.4	12.7						
24.0	43.4	55.7	10.8	10.5						
26.0	34.8	53.2	8.8	8.9						
28.0	23.5	49.6	7.4	7.5						
			Ángu	ılo de plu	ıma prin	cipal 75.0	[°]			
22.7	65.0	59.5		16.7						
24.0	61.3	58.8	15.1	15.1						
26.0	55.0	57.5	13.7	13.1						
28.0	48.2	55.9	11.5	11.3						
30.0	40.5	53.7	9.4	9.8						
32.0	31.2	50.9	8.0	8.5						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			•
32.3	55.0	55.0		6.8						
34.0	49.2	53.7	7.2	5.9						
36.0	41.7	51.6	6.1	5.0						
38.0 40.0	32.7 20.1	48.9 44.9	5.2 4.3	4.1 3.4						
40.0	20.1	44.5	4.3	3.4						



2821-1

2821-1

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 25.0	de plumi	oal, Punt ín (1916- osición m	1) 44.5 r	n Plumín	dfall I		
			Ángu	ılo de plu	uma prin	cipal 88.0	[°]			
10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0	78.0 75.6 73.2 70.8 68.3 63.2 57.9 52.2 46.0 39.0	65.6 65.4 65.1 64.7 64.3 63.4 62.2 60.7 58.9 56.7	15.1 15.1 15.1 15.1 14.9 13.6 11.3 9.0 7.6 6.4 5.6	27.8 24.5 20.8 17.9 15.8 12.6 10.4 8.7 7.5 6.4						
26.0	30.7	53.6				-:	2			
					ıma prin	cipai 83.i	ן י	l	ı	ı
15.5 16.0 18.0 20.0	73.0 71.7 66.7 61.6	64.7 64.5 63.7 62.7	15.1 15.1 14.7 13.3	19.4 18.8 14.6 11.9						
22.0 24.0 26.0 28.0 30.0	56.1 50.3 43.9 36.6 27.5	61.4 59.9 57.9 55.5 52.3	10.5 8.6 7.2 6.2 5.4	9.8 8.3 7.1 6.2 5.4						
			Ánaı	ılo de plu	uma prin	cipal 75.0	1°10			
24.0 26.0 28.0 30.0 32.0	65.0 59.6 54.1 48.1 41.4	62.2 61.1 59.7 58.1 56.0	14.6 12.0 9.6 8.0 6.8	13.0 11.0 9.2 7.9 6.7	·					
34.0	33.6	53.3	5.9	5.9						
36.0	23.4	49.6	5.1	5.2	L					
			Angı		ıma prin	cipal 65.0	D[°]			
34.0 36.0 38.0	55.0 49.0 42.4	57.4 55.9 53.9	8.2 6.9	8.5 7.6 6.7						
40.0 42.0 43.0	34.8 25.1 18.5	51.3 47.8 45.3	6.0 5.3 4.9	6.0 5.3 4.9						



N° de ident.: 9842523/95738/

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

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
38.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (2316-1) 47.5 m Plumín 25.0 [m] Posición midfall (2316)										
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0 24.0 26.0 15.5 16.0 18.0 20.0 22.0 24.0	78.0 75.7 73.4 70.9 68.5 63.4 58.1 52.4 46.2 39.2 30.9 71.8 66.9 61.7 56.3 50.5	65.6 65.4 65.1 64.7 64.3 63.4 62.2 60.8 59.0 56.8 53.8 64.7 64.5 63.7 62.7 61.4 59.9	15.1 15.1 15.1 12.9 11.2	27.0 26.5 20.1 16.0 13.0 11.0	uma prin	cipal 83.) [°]			
26.0 28.0	44.1 36.7	58.0 55.6	9.3 7.7	9.3 7.9						
30.0	27.7	52.3	6.6	6.8						
04.0	05.0	00.0	Angu		ıma prin	cipal 75.0	[°]		1	
24.0 26.0 28.0 30.0 32.0 34.0 36.0	65.0 59.8 54.2 48.2 41.5 33.7 23.6	62.2 61.1 59.8 58.1 56.0 53.4 49.7	15.1 12.7 10.5 8.7 7.4 6.3	15.1 13.1 11.4 9.9 8.6 7.5 6.5						
			Ángu	ılo de plu	ıma prin	cipal 65.0	[°]			
34.0 36.0 38.0 40.0 42.0	55.0 49.1 42.5 34.9 25.3	57.4 55.9 53.9 51.3 47.8	5.8 4.9 4.1 3.4	5.8 4.9 4.1 3.3 2.7						
43.0	18.7	45.4	3.0	2.4						



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]: 54.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plun Cabeza 28.0	de plumí	ín (1916-	o de carç 1) 47.5 r nidfall (19	n Plumín	dfall		
			Ángi	ılo de plı	ıma prin	cipal 88.0	1°10			
10.6	78.0	68.5	79	30.1			, <u>, , , , , , , , , , , , , , , , , , </u>			
11.0 12.0 13.0	77.2 75.1 72.9	68.5 68.2 67.9	15.1 15.1 15.1	30.1 30.1 28.5						
14.0 16.0 18.0	70.8 66.3 61.7	67.5 66.7 65.7	15.1 15.1 15.1	25.4 20.8 17.5						
20.0 22.0 24.0	56.9 51.8 46.3	64.5 63.0 61.2	14.4 13.8 12.4	17.5 15.0 13.1 11.7						
26.0 28.0 30.0	40.1 33.0 24.1	59.0 56.3 52.5	10.8 9.6 8.6	10.5 9.5 8.7						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
16.3 18.0	73.0 69.4	67.5 66.9	15.1	27.4 23.8						
20.0 22.0	64.9 60.2	66.1 65.0	15.1 14.9	19.5 16.6						
24.0 26.0 28.0	55.3 50.1 44.4	63.7 62.1 60.2	13.9 13.0 11.4	14.3 12.7 11.3						
30.0 32.0	38.0 30.4	57.9 54.9	10.0 9.0	10.1 9.3						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
25.2 26.0 28.0	65.0 63.2 58.5	64.9 64.5 63.4	15.1 15.1	16.5 15.7 14.0						
30.0 32.0 34.0	53.5 48.1 42.2	62.0 60.3 58.3	14.0 12.9 11.2	12.6 11.3 10.2						
36.0 38.0	35.4 27.2	55.7 52.4	9.9 9.0	9.2 8.3						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
35.7 36.0 38.0 40.0	55.0 54.2 48.9 43.0	59.9 59.7 58.1 56.1	8.5 7.7 6.9	7.6 7.4 6.6 5.9						
42.0 44.0 46.0	36.5 28.5 17.4	53.7 50.5 45.8	6.2 5.5 4.9	5.2 4.7 4.1						



2821-1

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

Lastre trasero [t]: 54.0

Lastre central [t]: 0.0

Radio de descarga:	360 °	Cabeza de pluma principal:	2821-1
Valor de vuelco:	2 - Vía ancha		

	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			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
8.7 9.0 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0	78.0 77.2 74.1 70.9 67.6 64.3 60.8 53.5 45.3 35.6	59.7 59.7 59.4 59.0 58.6 58.2 57.6 56.2 54.5 52.0	15.1 15.1 15.1 15.1 15.1 15.1 15.0 13.2 10.3	30.1 30.1 30.1 27.7 24.8 21.1 18.4 14.4 11.7 9.6		cipal 83.				
14.0 16.0 18.0 20.0 22.0 24.0	72.0 65.5 58.5 51.0 42.4 31.9	58.8 58.0 56.9 55.4 53.4 50.7	15.1 15.1 15.1 15.1 12.1 9.8	30.0 22.2 17.0 13.5 11.0 9.2						
			Ángu	ılo de plu	ıma prin	cipal 75.0	1°10			
21.4 22.0 24.0 26.0 28.0	65.0 63.0 55.9 48.0 38.9	56.7 56.5 55.2 53.6 51.4	15.1 15.0 14.2 11.2	17.3 16.4 13.8 11.7 10.0	-					
30.0	27.2	48.3	9.2	8.6						
30.5 32.0	55.0 49.2	52.5 51.4	Ángı 8.9	7.7 6.8	ıma prin	cipal 65.0	0 [°]			
34.0 36.0 37.0	40.3 29.2 21.6	49.3 46.3 44.2	7.7 6.5 6.0	5.7 4.7 4.2						



 N° de ident.: 9842523/95738/ Pieza de articula Radio de descarga: 360 $^{\circ}$ Cabeza de plum

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
38.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (2316-1) 50.5 m Plumín 28.0 [m] Posición midfall (2316)										
			Ánaı	ılo de plu	ıma prin	cipal 88.0	1°10			
10.7	78.0	68.6	15.1	30.1						
11.0 12.0 13.0 14.0	77.3 75.2 73.1 70.9	68.5 68.2 67.9 67.6	15.1 15.1 15.1 15.1	30.1 30.1 29.8 29.0						
16.0	66.5	66.7	15.1	24.7						
18.0 20.0 22.0 24.0	61.9 57.0 51.9 46.4	65.7 64.5 63.0 61.2	15.1 15.1 15.1 13.7	20.4 17.3 14.9 13.1						
26.0	40.3	59.1	11.9	11.5						
28.0 30.0	33.2 24.2	56.3 52.6	10.4 9.2	10.2 9.1						
			Ángı	ılo de plı	ıma prin	cipal 83.0	[°]C			
16.4	73.0	67.5	15.1	29.4						
18.0 20.0	69.5 65.0	67.0 66.1	15.1 15.1	25.7 22.1						
22.0 24.0	60.3 55.4	65.0 63.7	15.1 15.1 15.1	19.2						
26.0	50.2	62.1	14.8	14.3						
28.0 30.0	44.5 38.1	60.2 57.9	13.0 11.4	12.5 11.1						
32.0	30.6	54.9	10.2	10.0						
34.0	20.6	50.7	8.9	8.9						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
25.3	65.0	64.9		13.8						
26.0 28.0	63.3 58.6	64.6 63.4	15.1 13.6	13.1 11.4						
30.0	53.6	62.0	12.0	10.0						
32.0	48.2	60.3	10.6	8.7						
34.0	42.3	58.3	9.4	7.6						
36.0	35.6	55.8	8.3	6.6						
38.0	27.4	52.4	7.3 Ápgu	5.8	ıma prin	oinal 65 () [°]			
35.7	55.0	59.9	Angu	4.9	uma prin	upai 05.0	<u> </u>		I	
36.0	54.3	59.8	5.7	4.8						
38.0	49.0	58.1	4.8	4.0						
40.0	43.2	56.2	4.0	3.3						
42.0 44.0	36.6 28.7	53.7 50.5	3.3 2.6	2.7 2.1						
45.0	25.0	48.5	2.3	2.1						



2821-1 2821-1

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

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 54.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0		de plumi	ín (1916-	o de carç 1) 53.5 r nidfall (19	n Plumír			
			Ángı	ılo de plı	ıma prin	cipal 88.0	0 [°]			
9.4 10.0 11.0 12.0 13.0 14.0 16.0 20.0 22.0 24.0 14.6 16.0 18.0 20.0 22.0 24.0	78.0 76.3 73.6 68.0 65.2 59.2 52.8 45.7 37.6 27.4 73.0 69.0 63.3 57.2 50.6 43.3	62.7 62.5 62.2 61.9 61.5 61.0 59.9 58.5 56.7 54.4 51.2	15.1 15.1 15.1 13.4 11.3 9.1	24.4 20.9 16.0 12.7 10.4 8.6	uma prin	cipal 83.0	0[°]			
26.0 28.0	34.7 23.2	53.1 49.5	7.4 6.3	7.3 6.2						
					uma prin	cipal 75.0	0 [°]			
22.7	65.0	59.5		15.8						
24.0 26.0 28.0 30.0 32.0	61.1 54.9 48.0 40.3 31.0	58.8 57.5 55.8 53.7 50.8	15.1 13.1 10.5 8.4 7.1	14.2 11.8 9.8 8.1 7.0						
			Ángı	ılo de plı	ıma prin	cipal 65.	0[°]			
32.2 34.0 36.0	55.0 49.1 41.5	55.0 53.6 51.6	7.6 6.5	6.8 5.8 4.9						

38.0

40.0

32.5

48.9

5.5

4.1 3.3



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

Cabeza de pluma principal:

2821-1 2821-1

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 54.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plun Cabeza 31.0	de plumi	ín (2316-		n Plumír			
						cipal 88.				
11.3	78.0	71.5	15.1	30.1						
12.0	76.7	71.3	15.1	30.1						
13.0	74.7	71.1	15.1	30.1						
14.0	72.8	70.7	15.1	28.4						
16.0	68.9	70.0	15.1	23.7						
18.0 20.0	64.8 60.6	69.1 68.0	15.1 14.9	19.4 16.4						
20.0	56.2	68.0 66.8	14.9 13.7	16.4						
24.0	51.6	65.3	12.8	12.3						
26.0	46.6	63.5	11.3	10.9						
28.0	41.1	61.3	9.7	9.6						
30.0	34.9	58.7	8.4	8.5						
32.0	27.5	55.4	7.5	7.6						
			Ángı	ılo de plı	ıma prin	cipal 83.	0[°]			
17.3	73.0	70.4	15.1	27.2						
18.0	71.6	70.2	15.1	25.6						
20.0 22.0	67.6 63.5	69.4 68.4	15.1 15.1	22.1 18.3						
24.0	59.2	67.3	14.5	15.6						
26.0	54.8	66.0	13.5	13.5						
28.0	50.0	64.4	12.6	11.9						
30.0	44.9	62.5	10.8	10.5						
32.0	39.2	60.2	9.3	9.2						
34.0 36.0	32.7 24.7	57.4 53.7	8.2 7.3	8.3 7.4						
30.0	24.1	55.7	· ,		ıma nrin	cipal 75.	0 [0]			
26.5	65.0	67.6	Angu	12.4	лна рин 	Cipai 75.	 			
28.0	62.0	66.9	13.2	11.2						
30.0	57.6	65.7	11.6	9.8						
32.0	53.1	64.3	10.3	8.6						
34.0	48.2	62.6	9.1	7.5						
36.0	42.9	60.6	8.0	6.6						
38.0 40.0	37.0 30.1	58.1 55.0	7.0 6.1	5.7 4.9						
40.0 42.0	21.0	55.0 50.8	5.3	4.9						
		,			ıma prin	cipal 65.	0 [°]			
37.5	55.0	62.3		4.0			. ,			
38.0	53.7	62.0	4.4	3.8						
40.0	48.9	60.4	3.7	3.1						
42.0	43.7	58.4	3.0	2.5						
44.0 45.0	38.5 35.3	56.0 54.7	2.3 2.0							
40.0	J JJ.J	J4. <i>1</i>	2.0	l						l



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]: 54.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 22.0	de plumi	n (2316-	o de caro 1) 56.5 r nidfall (23	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
9.4 10.0 11.0 12.0 13.0 14.0 16.0	78.0 76.4 73.7 71.0 68.2 65.3 59.3	62.7 62.5 62.3 61.9 61.5 61.0 59.9	15.1 15.1 15.1 15.1 15.1	30.1 30.1 30.1 28.5 26.6 22.9 17.9						
18.0 20.0 22.0 24.0	52.9 45.9 37.8 27.6	58.5 56.7 54.4 51.3	14.9 13.2 10.5 8.6	14.5 12.0 9.9 8.4						
			Ángu	ılo de plu	ıma prin	cipal 83.0	[°]			
14.6 16.0 18.0 20.0 22.0 24.0 26.0 28.0	73.0 69.2 63.4 57.3 50.8 43.4 34.8 23.5	61.8 61.3 60.4 59.2 57.7 55.7 53.2 49.6	15.1 15.1 15.1 15.1 12.3 9.9 8.2	28.7 24.7 20.1 16.5 13.7 11.3 9.5 8.0						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
22.7 24.0 26.0 28.0 30.0 32.0	65.0 61.3 55.0 48.2 40.5 31.2	59.5 58.8 57.5 55.9 53.7 50.9	14.9 12.6 10.5 8.8 7.2	12.8 11.2 9.2 7.5 6.1 4.9						
32.3 34.0 36.0	55.0 49.2 42.4	55.0 53.7 51.6	Ángu 3.9 2.7	3.8 2.9	uma prin	cipal 65.0	[°]			
37.0	38.3	50.4	2.2							



2821-1 2821-1

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 25.0	de plumí		1) 56.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0	78.0 75.6 73.2 70.8 68.3 63.2 57.9 52.2 46.0 39.0	65.6 65.4 65.1 64.7 64.3 63.4 62.2 60.7 58.9 56.7	15.1 15.1 15.1 15.1 15.1 14.6 12.7 10.4 8.8 7.4	30.1 27.8 23.7 20.3 18.0 14.3 11.9 10.0 8.6 7.4						
26.0	30.7	53.8	6.4	6.4						
			Ángι	ılo de plu	ıma prin	cipal 83.0	[°]C			
15.5 16.0 18.0 20.0 22.0 24.0 26.0	73.0 71.7 66.7 61.6 56.1 50.3 43.9	64.7 64.5 63.7 62.7 61.4 59.9 57.9	15.1 15.1 15.0 14.4 11.9 10.0 8.4	21.5 21.5 16.6 13.5 11.2 9.6 8.2						
28.0	36.6	55.5	7.1	7.1						
30.0	27.5	52.3	6.2	6.2						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
24.0 26.0 28.0 30.0 32.0	65.0 59.6 54.1 48.1 41.4	62.2 61.1 59.7 58.1 56.0	15.1 13.4 11.0 9.3 7.9	14.6 12.5 10.5 9.1 7.7						
34.0 36.0	33.6 23.4	53.3 49.6	6.8 6.0	6.8 5.9						
30.0	Z3.4	49.0			ıma nri:-	oinal 65 t				
34.0 36.0	55.0 49.0	57.4 55.9	Angu 6.5	6.1 5.1	ıma prin	cipai 65.0) [·]			
38.0	49.0	53.9	5.6	4.3						
40.0 42.0 43.0	34.8 25.1 18.5	51.3 47.8 45.3	4.7 3.9 3.6	3.6 2.9 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]: 54.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			Cabeza	de plumí		1) 59.5 r	ga 3 - Mi n Plumín 316)			
			Ángu	ılo de plu	ıma prin	cipal 88.0	0 [°]			
10.0	78.0	65.6		30.1						
11.0	75.7	65.4	15.1	30.1						
12.0	73.4	65.1	15.1	29.8						
13.0	70.9	64.7	15.1	26.3						
14.0	68.5	64.3	15.1	23.7						
16.0	63.4	63.4	15.1	18.4						
18.0	58.1	62.2	14.2	15.0						
20.0	52.4	60.8	12.8	12.4						
22.0	46.2	59.0	11.1	10.5						
24.0	39.2	56.8	9.1	8.8						
26.0	30.9	53.8	7.5	7.5						
			Ángu	ılo de plu	ıma prin	cipal 83.0	0 [°]			
15.5	73.0	64.7		26.5						
16.0	71.8	64.5	15.1	25.1						
18.0	66.9	63.7	15.1	20.6						
20.0	61.7	62.7	15.1	17.1						
22.0	56.3	61.4	13.6	14.1						
24.0	50.5	59.9	12.2	11.8						
26.0	44.1	58.0	10.1	10.0						
28.0	36.7	55.6	8.3	8.5						
30.0	27.7	52.3	7.1	7.2						
			Ángu	ılo de plu	ıma prin	cipal 75.0	0 [°]			
24.0	65.0	62.2		11.4						
26.0	59.8	61.1	12.4	9.4						
28.0	54.2	59.8	10.4	7.7						
30.0	48.2	58.1	8.7	6.3						
32.0	41.5	56.0	7.2	5.1						
34.0	33.7	53.4	5.9	4.1						
36.0	23.6	49.7	4.6	3.2						
			Ángu	ılo de plu	ıma prin	cipal 65.0	0[°]			
34.0	55.0	57.4		2.8						
36.0	49.6	55.9	2.6							
37.0	46.4	55.0	2.1							

Source:a9841388



N° de ident.: 9842523/95738/

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

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 28.0	de plumí	oal, Punt n (1916- osición m	1) 59.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	0 [°]			
10.6 11.0 12.0 13.0 14.0	78.0 77.2 75.1 72.9 70.8	68.5 68.5 68.2 67.9 67.5	15.1 15.1 15.1 15.1	28.0 28.0 24.6 21.5 18.8						
16.0 18.0 20.0 22.0 24.0	66.3 61.7 56.9 51.8 46.3	66.7 65.7 64.5 63.0 61.2	14.4 13.4 11.0 8.9 7.5	15.1 12.5 10.3 8.7 7.5						
26.0 28.0 30.0	40.1 33.0 24.1	59.0 56.3 52.5	6.4 5.5 4.8	6.4 5.6 4.9	ıma prin	oinal 92	0.1.01			
16.3	73.0	67.5	Angu	19.9	лна рин Г	lipai 65.	 			
18.0 20.0 22.0 24.0 26.0	69.4 64.9 60.2 55.3 50.1	66.9 66.1 65.0 63.7 62.1	15.1 13.9 12.2 9.8 8.1	17.3 14.1 11.7 9.7 8.3						
28.0 30.0	44.4 38.0	60.2 57.9	7.0 6.0	7.2 6.2						
32.0	30.4	54.9	5.2	5.4		-i175/	0.00			
25.2	65.0	64.9	Angu	13.4	ıma prind	upai /5.	 			
26.0 28.0	63.2 58.5	64.5 63.4	13.9 11.2	12.7 11.0						
30.0 32.0 34.0 36.0 38.0	53.5 48.1 42.2 35.4 27.2	62.0 60.3 58.3 55.7 52.4	9.2 7.7 6.6 5.7 5.1	9.2 8.0 6.8 5.9 5.2						
			Ángu	ılo de plu	ıma prin	cipal 65.0	0 [°]			
35.7 36.0 38.0 40.0 42.0	55.0 54.2 48.9 43.0 36.5	59.9 59.7 58.1 56.1 53.7	6.4 5.5 4.6 3.9	5.2 5.1 4.3 3.6 3.0						
44.0 46.0	28.5 19.1	50.5 45.8	3.2 2.5	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]
		38.0	0 m Plun Cabeza 28.0	de plumi	pal, Punt ín (2316- osición m	1) 62.5 r	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	1°10			
10.7 11.0 12.0 13.0 14.0	78.0 77.3 75.2 73.1 70.9	68.6 68.5 68.2 67.9 67.6	15.1 15.1 15.1 15.1 15.1	30.1 30.1 28.8 26.1 22.6	·	•				
16.0 18.0 20.0 22.0 24.0	66.5 61.9 57.0 51.9 46.4	66.7 65.7 64.5 63.0 61.2	15.1 14.9 12.4 10.0 8.4	17.8 14.5 12.0 10.0 8.5						
26.0 28.0 30.0	40.3 33.2 24.2	59.1 56.3 52.6	7.0 5.9 5.0	7.2 6.1 5.2	uma prin	cinal 83 () [°]			
16.4	73.0	67.5	15.1	24.1			<u> </u>			
18.0 20.0 22.0 24.0 26.0 28.0	69.5 65.0 60.3 55.4 50.2 44.5	67.0 66.1 65.0 63.7 62.1 60.2	15.1 15.1 14.6 11.9 10.0 8.3	20.8 16.5 13.7 11.3 9.6 8.1						
30.0 32.0 34.0	38.1 30.6 20.6	57.9 54.9 50.7	6.9 5.9 4.9	6.9 5.9 5.0						
			Ánaı	ılo de plu	ıma prin	cipal 75.0	1°10			
25.3 26.0	65.0 63.3	64.9 64.6	12.3	10.2 9.6	Pills		- []			
28.0 30.0 32.0 34.0 36.0 38.0	58.6 53.6 48.2 42.3 35.6 27.4	63.4 62.0 60.3 58.3 55.8	10.4 8.7 7.2 5.9 4.7	7.9 6.5 5.3 4.3 3.4 2.6						
					ıma prin	cipal 65.0	[°]C			
35.7 36.0 37.0	55.0 54.7 52.1	59.9 59.8 59.0	2.6 2.1	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]
		38.0	0 m Plun Cabeza 31.0	de plumí	pal, Punt ín (1916- osición m	1) 62.5 r	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0	1°10			
11.2	78.0	71.5	I	25.5						
12.0 13.0 14.0	76.5 74.6 72.7	71.3 71.0 70.7	15.1 15.1 15.1	25.2 21.7 19.2						
16.0	68.8	70.0	15.1	15.5						
18.0 20.0 22.0 24.0 26.0	64.7 60.5 56.1 51.4 46.5	69.1 68.0 66.7 65.2 63.4	13.0 11.5 9.4 7.8 6.7	12.7 10.7 9.0 7.7 6.7						
28.0 30.0 32.0	41.0 34.8 27.4	61.3 58.7 55.3	5.7 5.0 4.4	5.8 5.1 4.5						
32.0	27.4	33.3			ıma prin	cinal 83 () [°]			
47.0	70.0	70.4	Angu	18.0	лна рин І	lipai oo.i	J		ı	
17.2 18.0	73.0 71.4	70.4 70.1	15.1	17.8						
20.0	67.5	69.4	15.1	14.5						
22.0	63.4	68.4	12.6	11.9						
24.0	59.1	67.3	10.7	10.1						
26.0 28.0	54.6 49.9	65.9 64.3	8.8 7.4	8.6 7.4						
30.0	44.8	62.4	6.4	6.4						
32.0	39.1	60.2	5.6	5.6						
34.0	32.6	57.3	4.9	4.9						
36.0	24.5	53.6	4.3	4.4						
			Angı		ıma prin	cipal 75.0) [°]			
26.5	65.0	67.6	12.2	12.1						
28.0 30.0	61.9 57.5	66.9 65.7	12.2 10.0	11.2 9.6						
32.0	53.0	64.2	8.3	8.1						
34.0	48.1	62.5	7.1	7.1						
36.0	42.8	60.5	6.1	6.2						
38.0	36.9	58.1	5.3	5.4						
40.0 42.0	29.9 20.9	55.0 50.8	4.7 4.1	4.8 4.2						
12.0	20.0	00.0			ıma prin	cipal 65.0	[°]		ı	
37.4	55.0	62.3		4.7	<u> </u>					
38.0	53.6	62.0	5.5	4.4						
40.0	48.8	60.3	4.7	3.7						
42.0 44.0	43.6 37.8	58.4 56.0	3.9 3.3	3.1 2.5						
46.0	31.0	53.0	2.6	2.0						
48.0	23.5	49.0	2.1							



N° de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

Valor de vuelco: 2 - Vía ancha Lastre trasero [t]: 54.0 Lastre central [t]: 0.0

55.0

30.9

40.0

2.7

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 31.0	de plumí	n (2316-	o de carç 1) 65.5 r nidfall (23	n Plumín	dfall		
			Ángı	ılo de plı	ıma prin	cipal 88.0	0 [°]			
11.3 12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0 26.0	78.0 76.7 74.7 72.8 68.9 64.8 60.6 56.2 51.6 46.6	71.5 71.3 71.1 70.7 70.0 69.1 68.0 66.8 65.3 63.5 61.3	15.1 15.1 15.1 15.1 15.1 15.1 15.0 13.1 11.7 10.2 8.6	30.1 30.1 30.1 28.6 23.0 18.8 15.9 13.6 11.8 10.3						
30.0	34.9	58.7	7.3	7.7						
32.0	27.5	55.4	5.8 Ángi	lo de nli	ıma nrin	cipal 83.0	l ° 1			
17.3 18.0 20.0	73.0 71.6 67.6	70.4 70.2 69.4	15.1 15.1 15.1	22.7 21.1 17.7	, , , , , , , , , , , , , , , , , , ,					
22.0 24.0 26.0 28.0	63.5 59.2 54.8 50.0	68.4 67.3 66.0 64.4	15.1 14.5 13.1 11.9	14.9 12.7 10.8 9.2						
30.0 32.0 34.0 36.0	44.9 39.2 32.7 24.7	62.5 60.2 57.4 53.7	10.2 8.8 7.6 6.7	7.8 6.6 5.6 4.6						
			Ángu	ılo de plu	ıma prin	cipal 75.0	0 [°]			
26.5 28.0 30.0 32.0 34.0 36.0	65.0 62.0 57.6 53.1 48.2 42.9	67.6 66.9 65.7 64.3 62.6 60.6	10.1 8.5 7.0 5.8 4.6	9.0 7.9 6.5 5.4 4.3 3.4						



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]
		38.0		de plumí	pal, Punt n (1916- osición m	1) 65.5 r̀	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	0 [°]			
11.9	78.0	74.4	15.1	23.1						
12.0	77.8	74.4	15.1	23.1						
13.0	76.0	74.1	15.1	22.1						
14.0	74.3	73.9	15.1	19.4						
16.0 18.0	70.7 67.1	73.2 72.4	15.1 13.9	15.6 13.1						
20.0	63.3	72.4	11.5	10.9						
22.0	59.5	70.3	9.7	9.4						
24.0	55.4	69.0	8.1	8.0						
26.0	51.2	67.5	6.8	6.9						
28.0	46.6	65.7	5.9	6.0						
30.0	41.7	63.6	5.1	5.2						
32.0 34.0	36.2 29.8	61.0 57.9	4.5 4.0	4.6 4.1						
36.0	29.6	53.7	3.5	3.6						
00.0		00.7			ıma prin	rinal 83 (1 0 1			
10.1	72.0	70.0	15.1	16.5		sipai oo.	J []			
18.1 20.0	73.0 69.6	73.3 72.6	14.7	14.7						
22.0	65.9	71.7	12.7	12.3						
24.0	62.1	70.7	10.3	10.3						
26.0	58.2	69.6	8.7	8.8						
28.0	54.1	68.2	7.4	7.6						
30.0	49.7	66.6	6.4	6.6						
32.0	45.1	64.7	5.6	5.8						
34.0 36.0	40.0 34.3	62.5 59.8	4.9 4.3	5.0 4.4						
38.0	27.5	56.4	3.8	4.0						
			Ángı	ılo de plı	ıma prin	cipal 75.0	1°10			
27.8	65.0	70.3	11.0	11.0		,				
28.0	64.5	70.2	11.0	11.0						
30.0	60.7	69.2	9.6	9.8						
32.0	56.7	67.9	8.2	8.4						
34.0	52.5	66.5	7.0	7.3						
36.0 38.0	48.1 43.3	64.8 62.8	6.1 5.3	6.4 5.6						
40.0	38.0	60.4	4.6	4.9						
42.0	32.0	57.5	4.1	4.4		<u></u>				
44.0	24.6	53.7	3.7	3.8						
			Ángu	ılo de plu	ıma prin	cipal 65.0	[°]			
39.1	55.0	64.8		3.9						
40.0	53.2	64.2	4.5	3.6						
42.0	48.8	62.6	3.8	3.0						
44.0	44.0	60.6	3.1	2.5						
46.0 47.0	39.3 36.5	58.3 57.0	2.5 2.2							
77.0		01.0	۷.۷							



Nº de ident.: 9842523/95738/

Radio de descarga:

Pieza de articulación de pluma principal: 2821-1

Valor de vuelco:

Lastre trasero [t]:

Lastre central [t]:

360°

2 - Vía ancha 54.0 0.0 Cabeza de pluma principal: 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 34.0	de plumi		1) 68.5 r	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.	0 [°]			
11.9 12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0	78.0 77.9 76.1 74.4 70.8 67.2 63.4 59.6 55.5 51.3 46.7 41.8 36.3 29.9	74.4 74.4 74.2 73.9 73.2 72.4 71.5 70.3 69.0 67.5 65.7 63.6 61.1 58.0	15.1 15.1 15.1 15.1 14.9 14.5 13.3 11.2 9.5 8.3 7.2 6.3 5.3	30.1 30.1 30.1 27.0 21.6 17.9 15.0 12.9 11.1 9.7 8.6 7.5 6.6 5.5						
36.0	21.8	53.8	4.1	4.2						
			Ángı		ıma prin	cipal 83.	0[°]			
18.1 20.0 22.0 24.0 26.0 28.0	73.0 69.7 66.0 62.2 58.3	73.3 72.6 71.8 70.8 69.6 68.2	15.1 15.1 15.0 13.2	21.1 17.9 15.2 12.9 11.0 9.4						
30.0 32.0 34.0 36.0 38.0	49.9 45.2 40.1 34.4 27.6	66.6 64.7 62.5 59.8 56.5	9.5 8.3 7.2 6.3 5.6	8.1 6.9 5.8 4.9						
			Ángu	ılo de plu	ıma prin	cipal 75.	0[°]			
27.8 28.0 30.0 32.0 34.0 36.0 38.0	65.0 64.7 60.8 56.8 52.7 48.2 43.4	70.3 70.3 69.2 68.0 66.5 64.8 62.8	10.0 8.4 7.0 5.8 4.7 3.7	8.0 7.9 6.6 5.5 4.5 3.6 2.8			-			
40.0 41.0	38.1 35.8	60.4 59.1	2.8 2.3	2.0						



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 37.0	de plumi		1) 68.5 r	n Plumín			
			Ángı		ıma prin	cipal 88.0	0 [°]			
12.5	78.0	77.3	15.1	22.5						
13.0 14.0	77.2 75.6	77.2 77.0	15.1 15.1	22.5 20.8						
16.0	72.3	76.4	15.1	16.8						
18.0	69.0	75.6	15.1	14.1						
20.0	65.7	74.8	12.7	11.9						
22.0	62.2	73.8	10.6	10.2						
24.0	58.6	72.6	9.0	8.8						
26.0	54.9	71.2	7.7	7.6						
28.0	50.9	69.7	6.6	6.7						
30.0 32.0	46.7 42.2	67.9 65.8	5.8 5.1	6.0 5.3						
34.0	37.3	63.4	4.5	4.6						
36.0	31.7	60.4	4.1	4.2						
38.0	24.9	56.7	3.6	3.7						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
19.0	73.0	76.1	15.1	16.1						
20.0	71.3	75.8	15.1	15.9						
22.0	68.0	75.0	14.3	13.4						
24.0 26.0	64.6 61.1	74.1 73.1	12.0 10.1	11.3 9.8						
28.0	57.4	71.8	8.6	8.4						
30.0	53.6	70.4	7.4	7.4						
32.0	49.6	68.8	6.5	6.5						
34.0	45.3	66.9	5.7	5.8						
36.0	40.7	64.7	5.0	5.1						
38.0	35.6	62.2	4.4	4.5						
40.0 42.0	29.7 22.3	59.0 54.9	4.0 3.6	4.1 3.7						
42.0	44.5	J4.3			ıma prin	cipal 75 (1°10			
29.0	65.0	73.0	Ig	10.5		. p.s 3				
30.0	63.3	72.6	11.2	9.9						
32.0	59.8	71.5	9.4	8.7						
34.0	56.1	70.2	8.1	7.6						
36.0	52.2	68.7	7.0	6.7						
38.0 40.0	48.1 43.7	67.0 65.0	6.2 5.5	5.9 5.2						
42.0	38.9	62.7	4.8	4.5						
44.0	33.6	59.9	4.3	3.9						
46.0	27.2	56.5	3.9	3.4						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
40.8	55.0	67.3		3.3						
42.0	52.8	66.5	3.7	3.0						
44.0	48.7	64.8	3.0	2.5						
46.0 47.0	44.7 42.4	62.9 61.8	2.4 2.2							
4 1.U	42.4	01.0	۷.۷	I					l .	I



N° de ident.: 9842523/95738/

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

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 37.0	de plumí	oal, Punt n (2316- osición m	1) 71.5 r	n Plumín	dfall		
			Ángu	ılo de plu	ıma prin	cipal 88.	1°10			
12.5 13.0 14.0 16.0 18.0	78.0 77.3 75.7 72.4 69.1	77.4 77.3 77.0 76.4 75.7	15.1 15.1 15.1 15.1	28.1 28.1 25.7 20.4 16.8	·					
20.0 22.0 24.0 26.0 28.0	65.8 62.3 58.7 55.0 51.0	73.7 74.8 73.8 72.6 71.3 69.7	13.4 11.9 10.3 8.7 7.5	14.1 12.0 10.4 8.9 7.8						
30.0 32.0 34.0 36.0 38.0	46.9 42.4 37.4 31.8 25.0	67.9 65.9 63.4 60.5 56.8	6.5 5.7 4.9 4.2 3.2	6.8 6.0 5.2 4.4 3.3						
					ıma prin	cipal 83.	1°10			
19.0 20.0 22.0 24.0 26.0	73.0 71.4 68.1 64.7 61.2	76.1 75.8 75.1 74.2 73.1	15.1 15.1 13.5 12.2	19.5 17.9 15.1 12.8 11.0						
28.0 30.0 32.0 34.0 36.0	57.5 53.7 49.7 45.5 40.8	71.9 70.5 68.8 67.0 64.8	10.2 8.6 7.4 6.5 5.6	9.4 8.1 6.9 5.8 4.9						
38.0 40.0 42.0	35.7 29.8 22.5	62.2 59.1 55.0	4.9 4.3 3.7	4.1 3.3 2.6						
			Ángı		ıma prin	cipal 75.	[°]			
29.1 30.0 32.0 34.0 36.0 38.0 40.0	65.0 63.4 59.9 56.2 52.3 48.2 44.2	73.0 72.6 71.5 70.2 68.7 67.0 65.1	8.0 6.7 5.5 4.4 3.5 2.6	6.9 6.4 5.3 4.3 3.5 2.7						
41.0	41.9	64.0	2.2							



Nº de ident.: 9842523/95738/ 360°

Radio de descarga:

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

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 54.0 0.0 Lastre central [t]:

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0		na princip de plumí 0 [m] Po	ín (1916-	1) 71.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0) [°]			
13.1 14.0 16.0 18.0 20.0	78.0 76.7 73.7 70.7 67.6	80.3 80.1 79.5 78.8 78.1	15.1 15.1 15.1 15.1 14.3	23.4 23.4 19.4 16.2 14.0						
22.0 24.0 26.0 28.0 30.0	64.5 61.2 57.9 54.4 50.7	77.1 76.1 74.9 73.5 71.9	12.3 10.8 9.3 8.1 7.2	11.9 10.5 9.2 8.1 7.3						
32.0 34.0 36.0 38.0 40.0	46.9 42.7 38.2 33.2 27.3	70.1 68.1 65.7 62.9 59.4	6.4 5.7 5.2 4.7 4.3	6.6 5.9 5.3 4.8 4.4						
42.0	19.9	54.8	3.8	4.0						
			Ángı	ılo de plu	ıma prin	cipal 83.0] [°]			
19.8 20.0 22.0 24.0	73.0 72.8 69.7 66.6	79.0 79.0 78.3 77.4	15.1 14.8 13.5	17.1 17.1 15.4 13.2						
26.0 28.0 30.0 32.0	63.4 60.2 56.8 53.2	76.5 75.4 74.1 72.7	11.4 9.9 8.6 7.6	11.4 10.1 8.9 7.9						
34.0 36.0 38.0 40.0 42.0	49.5 45.6 41.3 36.7 31.4	71.0 69.2 67.0 64.5 61.5	6.8 6.1 5.5 4.9 4.5	7.1 6.4 5.8 5.2 4.8						
44.0	25.2	57.8	4.1	4.3						
20.2	65.0	75.0	Angı	ılo de plu	uma prin	cipal 75.0) [°]			
30.3 32.0 34.0 36.0 38.0	65.0 62.3 58.9 55.5 51.9	75.8 74.9 73.8 72.5 71.0	10.4 9.2 8.2 7.2	9.6 8.6 7.5 6.6 5.8						
40.0 42.0 44.0 46.0	48.1 44.1 39.7 34.9	69.2 67.3 65.0 62.3	6.4 5.6 4.9 4.2	5.1 4.4 3.9 3.3						
48.0 50.0	29.3 22.5	59.1 55.0	3.6 3.1	2.8						
			-	ılo de plu	ıma prin	cipal 65.0] [°]			
42.6	55.0	69.7		2.7						
44.0 46.0	52.4 48.9	68.7 67.0	2.8 2.2	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

	Inserción		1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 31.0	de plumí		1) 74.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
11.2	78.0	71.5		21.0						
12.0 13.0 14.0 16.0	76.5 74.6 72.7 68.8	71.3 71.0 70.7 70.0	15.1 15.1 15.1 14.4	21.0 18.3 16.2 13.0						
18.0	64.7	69.1	11.2	10.3						
20.0 22.0 24.0	60.5 56.1 51.4	68.0 66.7 65.2	8.8 7.1 5.8	8.5 7.0 5.8						
26.0	46.5	63.4	4.9	4.9 4.1						
28.0 30.0 32.0	41.0 34.8 27.4	61.3 58.7 55.3	4.1 3.5 2.9	3.5 3.0						
			Ángı	ılo de plu	ıma prin	cipal 83.0	1°10			
17.2	73.0	70.4		15.0						
18.0 20.0	71.4 67.5	70.1 69.4	15.1 13.1	15.0 11.9						
22.0	63.4	68.4	10.1	9.6						
24.0	59.1	67.3	8.2	7.9						
26.0 28.0	54.6 49.9	65.9 64.3	6.7 5.6	6.6 5.6						
30.0	44.8	62.4	4.7	4.7						
32.0	39.1	60.2	4.0	4.0						
34.0 36.0	32.6 24.5	57.3 53.6	3.4 2.9	3.5 3.0						
30.0	24.5	33.0			ıma prin	cinal 75 (1°1		l	
26.5	65.0	67.6	, uige	9.6						
28.0	61.9	66.9	8.8	8.5						
30.0	57.5	65.7	7.3	7.2						
32.0 34.0	53.0 48.1	64.2 62.5	6.0 5.2	6.0 5.0						
34.0 36.0	48.1 42.8	62.5	5.2 4.4	5.0 4.1						
38.0	36.9	58.1	3.7	3.4						
40.0	29.9	55.0	3.2	2.7						
42.0	20.9	50.8	2.8	2.0	<u> </u>					l
			Angı	<u>.</u>	ıma prin	cipal 65.0	ן נין ט			
37.4 38.0	55.0 53.6	62.3 62.0	3.1	2.5 2.3						
40.0	49.1	60.3	2.2	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:

2 - Vía ancha Valor de vuelco:

Lastre trasero [t]: 54.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 40.0	de plumi	oal, Punt ín (2316- osición m	1) 74.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
13.2 14.0 16.0 18.0 20.0 22.0 24.0	78.0 76.8 73.8 70.8 67.7 64.5 61.3	80.3 80.1 79.5 78.9 78.1 77.2 76.1	15.1 15.1 15.1 15.1 14.7 13.3 12.4	28.0 28.0 22.6 18.6 15.9 13.5						
26.0 28.0 30.0	57.9 54.5 50.8	74.9 73.5 72.0	10.7 9.1 7.9	10.3 9.1 8.0						
32.0 34.0 36.0 38.0 40.0	47.0 42.8 38.3 33.3 27.5	70.2 68.1 65.8 62.9 59.5	6.8 5.7 4.7 3.9 2.9	6.9 5.8 4.9 4.0 3.0						
			Ángı	ılo de plu	ıma prin	cipal 83.0	1°10			
19.9 20.0 22.0 24.0 26.0 28.0	73.0 72.8 69.8 66.7 63.5	79.0 79.0 78.3 77.5 76.5	15.1 15.1 14.7 13.2	18.0 17.9 15.0 12.8 10.9						
30.0 32.0 34.0 36.0	56.8 53.3 49.6 45.7	74.1 72.7 71.1 69.2	10.1 8.7 7.7 6.5	8.0 6.9 5.9 4.9						
38.0 40.0 42.0 44.0	41.4 36.8 31.5 25.3	67.1 64.6 61.6 57.8	5.5 4.5 3.6 2.8	4.1 3.3 2.7 2.0						
			Ángı	ılo de plı	ıma prin	cipal 75.0	[°]			
30.3 32.0 34.0 36.0 38.0 40.0	65.0 62.3 59.0 55.6 52.0 48.5 46.5	75.8 75.0 73.8 72.5 71.0 69.3 68.3	6.4 5.3 4.3 3.3 2.5	6.0 5.1 4.2 3.4 2.6						



N° de ident.: 9842523/95738/ Pi

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

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 34.0	de plumí		1) 77.5 r̀	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
11.9 12.0 13.0 14.0	78.0 77.8 76.0 74.3	74.4 74.4 74.1 73.9	15.1 15.1 15.1 15.1	18.8 18.8 18.2 16.1						
16.0 18.0 20.0 22.0	70.7 67.1 63.3 59.5	73.2 72.4 71.4 70.3	13.4 11.3 8.8 7.1	12.8 10.4 8.4 7.0						
24.0 26.0 28.0	55.4 51.2 46.6	69.0 67.5 65.7	5.8 4.8 4.1	5.8 4.9 4.1						
30.0 32.0 34.0	41.7 36.2 29.8	63.6 61.0 57.9	3.4 2.9 2.4	3.5 3.0 2.4						
40.4	70.0	70.0		13.3	ıma prin	cipai 83.0	֓֓֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓			
18.1 20.0 22.0 24.0 26.0 28.0	73.0 69.6 65.9 62.1 58.2 54.1	73.3 72.6 71.7 70.7 69.6 68.2	14.9 13.1 10.2 8.1 6.6 5.5	11.9 9.6 7.8 6.6 5.5						
30.0 32.0 34.0 36.0 38.0	49.7 45.1 40.0 34.3 27.5	66.6 64.7 62.5 59.8 56.4	4.7 4.0 3.3 2.8 2.4	4.7 4.0 3.4 2.9 2.5						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
27.8 28.0 30.0 32.0 34.0	65.0 64.5 60.7 56.7 52.5	70.3 70.2 69.2 67.9 66.5	8.5 8.5 7.5 6.3 5.3	8.4 8.4 7.3 6.1 5.1	·					
36.0 38.0 40.0 42.0	48.1 43.3 38.0 32.0	66.5 64.8 62.8 60.4 57.5	4.5 3.8 3.2 2.8	4.2 3.5 2.8 2.1						
			Ángu	ılo de plu	ıma prin	cipal 65.0	[°]			
39.2 40.0	55.0 53.4	64.8 64.2	2.4 2.1							



360°

Cargas pluma principal + plumín abatible + midfall

N° de ident.: 9842523/95738/

Radio de descarga:

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		38.0	0 m Plum Cabeza 43.0	de plumí	oal, Punt ín (2316- osición m	1) 77.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
13.8 14.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0	78.0 77.7 75.0 72.2 69.3 66.4 63.5 60.4 57.3 54.0 50.6 47.0 43.2	83.2 83.2 82.7 82.1 81.3 80.5 79.5 78.4 77.2 75.8 74.2 72.4 70.4	15.1 15.1 15.1 15.1 15.1 15.1 12.6 11.5 9.9 8.6 7.5 6.3 5.0	27.7 27.7 24.2 20.2 17.2 14.9 13.0 11.5 10.1 9.0 7.9 6.7 5.3						
38.0 40.0	39.1 34.5	68.1 65.4	3.9 2.9	4.1 3.1						
			Ángu	ılo de plu	uma prin	cipal 83.0	[°]			
20.8 22.0 24.0 26.0 28.0 30.0	73.0 71.3 68.4 65.5 62.5	81.9 81.5 80.7 79.8 78.8	15.1 15.1 15.1 13.7 11.8	16.4 14.8 12.5 10.7 9.1 7.8 6.7						
32.0 34.0 36.0 38.0 40.0	56.3 53.0 49.5 45.8 41.9	76.4 75.0 73.3 71.5 69.3	8.7 7.5 6.3 5.3 4.3	5.8 4.9 4.0 3.3						
42.0 44.0	37.7 33.5	66.9 64.0	3.4 2.6	2.6						
44.0	1 33.3	04.0		ılo de pli	ıma prin	cinal 75 (1°1	l	l	
31.6 32.0 34.0 36.0 38.0	65.0 64.4 61.4 58.3 55.1	78.5 78.3 77.3 76.1 74.7	5.9 4.8 3.9 3.1	5.0 4.8 3.9 3.1 2.4	ania pilli	οιραι <i>1</i> σ.	× []			
40.0	52.0	73.2	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]
		38.0	0 m Plum Cabeza 37.0	de plumí	oal, Punt n (1916- osición m	1) 80.5 r	n Plumín	dfall I		
			Ángı	ılo de plı	ıma prin	cipal 88.	D[°]			
12.5 13.0 14.0 16.0 18.0 20.0	78.0 77.2 75.6 72.3 69.0 65.7	77.3 77.2 77.0 76.4 75.6 74.8	15.1 15.1 15.1 14.5 12.9	19.4 19.4 18.2 14.7 12.1						
22.0 24.0 26.0 28.0 30.0	62.2 58.6 54.9 50.9 46.7	73.8 72.6 71.2 69.7 67.9	8.5 7.1 6.0 5.2 4.5	8.4 7.1 6.1 5.3 4.6						
32.0 34.0 36.0	42.2 37.3 31.7	65.8 63.4 60.4	3.9 3.4 2.8	4.0 3.5 2.8	ıma nrin	oin al 92	0.1.01			
19.0	73.0	76.1	14.7	13.8	ıma prin	cipai os.i	J []			
20.0 22.0 24.0 26.0 28.0	71.3 68.0 64.6 61.1 57.4	75.8 75.0 74.1 73.1 71.8	14.7 12.0 9.7 8.0 6.8	13.7 11.2 9.3 7.9 6.8						
30.0 32.0 34.0 36.0 38.0 40.0 42.0	53.6 49.6 45.3 40.7 35.6 29.7 22.3	70.4 68.8 66.9 64.7 62.2 59.0 54.9	5.8 5.1 4.4 3.8 3.4 3.0 2.5	5.9 5.2 4.5 3.9 3.5 3.0 2.6						
42.0	22.3	54.9			ıma prin	rinal 75 i	1 ° 1			
29.0 30.0 32.0 34.0 36.0 38.0 40.0 42.0	65.0 63.3 59.8 56.1 52.2 48.1 43.7 38.9	73.0 72.6 71.5 70.2 68.7 67.0 65.0 62.7	8.9 7.6 6.5 5.6 4.9 4.0 3.2 2.4	8.0 7.4 6.2 5.2 4.4 3.6 2.9 2.3			- []			
44.0 45.0	31.2	58.3	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]
		38.0	0 m Plum Cabeza 40.0	de plumi	oal, Punt ín (1916- osición m	1) 83.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	ıma prin	cipal 88.	[°]			
13.1 14.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0	78.0 76.7 73.7 70.7 67.6 64.5 61.2 57.9 54.4 50.7 46.9 42.7 38.2	80.3 80.1 79.5 78.8 78.1 77.1 76.1 74.9 73.5 71.9 70.1 68.1 65.7	15.1 15.1 13.4 11.3 9.7 7.8 6.5 5.5 4.6 4.0 3.4 2.9 2.5	16.5 16.5 13.9 11.2 9.4 7.7 6.5 5.5 4.7 4.1 3.5 3.0 2.6						
30.0	36.2	05.7			ıma prin	cinal 83 i) [°]			
19.8 20.0	73.0 72.8	79.0 79.0	11.5	11.7 11.7	лпа рпп	lipai os.				
22.0 24.0 26.0 28.0 30.0	69.7 66.6 63.4 60.2 56.8	78.3 77.4 76.5 75.4 74.1	10.5 8.9 7.3 6.2 5.3	10.5 8.7 7.3 6.2 5.3						
32.0 34.0 36.0 38.0 40.0	53.2 49.5 45.6 41.3 36.7	72.7 71.0 69.2 67.0 64.5	4.5 3.9 3.4 2.9 2.5	4.6 4.0 3.4 3.0 2.5						
42.0	31.4	61.5	2.1 Ápgu	2.2	ıma prin	oinal 75 i	\			
30.3	65.0	75.8	Angl	7.2	ıma prind	upai /5.	ן ן			
32.0 34.0 36.0	62.3 58.9 55.5	74.9 73.8 72.5	7.0 5.9 5.1	6.2 5.2 4.4						
38.0 40.0 42.0 44.0 45.0	51.9 48.1 44.1 40.1 37.8	71.0 69.2 67.3 65.0 63.7	4.3 3.8 3.1 2.4 2.0	3.6 2.9 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]
) m Plum Cabeza 43.0	de plumí		1) 86.5 r	n Plumín			
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]			
13.7 14.0	78.0 77.6	83.2 83.2	15.1	14.8 14.8		•				
16.0 18.0	74.9 72.1	82.6 82.0	14.0 11.2	12.9 10.5						
20.0 22.0	69.3 66.4	81.3 80.5	8.8 7.2	8.6 7.2						
24.0 26.0 28.0	63.4 60.4 57.2	79.5 78.4 77.1	5.9 5.0 4.2	5.9 5.0 4.2						
30.0 32.0	54.0 50.5	75.7 74.2	3.5	3.6						
34.0	47.0	72.4	2.5 Ángi	ılo de nlı	ıma prin	rinal 83 () [°]			
20.7	73.0	81.9	Aligo	10.0	лпа рпп	51pai 00.1	<u> </u>			
22.0 24.0	71.2 68.3	81.5 80.7	9.6 7.7	9.8 8.0						
26.0 28.0 30.0	65.4 62.4 59.4	79.8 78.8 77.7	6.4 5.4 4.6	6.7 5.6 4.8						
32.0 34.0	56.2 52.9	76.4 74.9	3.9 3.3	4.1 3.5						
36.0 38.0	49.4 45.8	73.3 71.4	2.9 2.4	3.0 2.6						
			Ángu	ılo de plu	ıma prin	cipal 75.0	[°]			
31.6 32.0 34.0	65.0 64.4 61.3	78.5 78.3 77.3	5.8 5.7 5.2	6.0 6.0 5.3						
36.0 38.0	58.2 55.0	76.1 74.7	4.4 3.8	4.4 3.7						
40.0 42.0 44.0	51.6 48.1 44.7	73.2 71.5 69.5	3.2 2.8 2.4	3.0 2.3						
45.0	42.7	68.5	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]
			0 m Plum Cabeza 46.0	de plumí	n (1916-		n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
14.4 16.0 18.0 20.0 22.0	78.0 75.9 73.3 70.7 68.0	86.1 85.8 85.2 84.5 83.7	15.0 14.2 11.1 8.7 7.1	13.8 13.1 10.6 8.6 7.2						
24.0 26.0 28.0 30.0 32.0	65.3 62.5 59.6 56.7 53.6	82.8 81.8 80.7 79.4 78.0	5.9 4.9 4.2 3.5 2.9	5.9 5.0 4.2 3.6 3.0						
34.0	50.4	76.4	2.5	2.6						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
21.6 22.0 24.0 26.0	73.0 72.5 69.8 67.1	84.7 84.6 83.9 83.1	8.7 8.7 7.7 6.4	9.0 9.0 8.0 6.7						
28.0 30.0 32.0 34.0 36.0	64.4 61.6 58.7 55.7 52.6	82.2 81.1 80.0 78.6 77.2	5.3 4.6 3.9 3.3 2.8	5.6 4.8 4.1 3.5 3.0						
38.0	49.3	75.5	2.4	2.5						
32.8 34.0 36.0 38.0 40.0	65.0 63.4 60.5 57.6 54.6	81.2 80.7 79.6 78.3 77.0	5.2 4.5 3.9 3.2	5.4 5.2 4.4 3.6 2.9	ıma prin	cipal 75.	0[°]			
42.0 44.0	51.4 48.4	75.4 73.7	2.8 2.3	2.3						



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]: 54.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 49.0	de plumí		1) 92.5 r	n Plumín			
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]			
15.0 16.0 18.0 20.0 22.0	78.0 76.8 74.4 71.9 69.4	89.1 88.8 88.3 87.7 87.0	11.4 11.4 10.1 8.5 6.9	12.5 12.5 10.3 8.4 7.0						
24.0 26.0 28.0 30.0 32.0	66.9 64.3 61.7 58.9 56.2	86.1 85.2 84.2 83.0 81.7	5.8 4.8 4.0 3.4 2.9	5.9 4.9 4.1 3.5 2.9						
34.0	53.3	80.2	2.4	2.5						
					ıma prin	cipal 83.0	0[°]			
22.5 24.0 26.0 28.0	73.0 71.1 68.6 66.1	87.6 87.1 86.4 85.5	7.7 7.5 6.2 5.3	8.1 7.8 6.5 5.5						
30.0 32.0 34.0 36.0 38.0	63.5 60.8 58.1 55.2 52.3	84.5 83.4 82.2 80.9 79.4	4.4 3.8 3.2 2.7 2.3	4.7 4.0 3.4 2.8 2.4						
			Ángu	ılo de plu	ıma prin	cipal 75.0	[°]			
34.1 36.0 38.0 40.0 42.0	65.0 62.5 59.8 57.1 54.2	83.9 83.0 81.9 80.6 79.2	4.4 3.7 3.2 2.7	4.7 4.3 3.6 2.9 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]
			0 m Plum Cabeza 52.0	de plumí		1) 95.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	0 [°]			
15.6 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0	78.0 77.6 75.3 73.0 70.7 68.3 65.9 63.4 60.9	92.0 91.9 91.4 90.8 90.2 89.4 88.5 87.5 86.5	9.0 9.0 8.3 7.2 6.0 5.2 4.2 3.5 2.9	10.1 10.1 9.3 7.8 6.3 5.2 4.3 3.6 3.0						
32.0	58.4	85.3	2.4 Ángi	2.5 Ilo de nli	ıma prin	rinal 83 (1 ° 1			
23.3 24.0 26.0 28.0 30.0 32.0	73.0 72.2 69.9 67.5 65.1 62.6	90.5 90.3 89.6 88.8 87.9 86.9	6.4 5.7 4.8 4.0 3.3	6.7 6.7 5.9 5.0 4.1	та рин	orpar 00.	V 1			
34.0 36.0	60.1 57.5	85.8 84.5	2.8 2.3	2.9 2.4						
30.0	1 07.0	U-T.U			ıma prin	cipal 75.0	l°10			
35.4 36.0	65.0 64.2	86.6 86.4	3.6 3.6	3.7 3.7	p	. ,				
38.0 40.0 42.0	61.7 59.2 56.6	85.3 84.2 82.9	3.2 2.7 2.2	3.3 2.8 2.2						



N° de ident.: 9842523/95738/

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

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

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	0 m Plum Cabeza 13.0	de plumi	n (1916-		n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
7.6 8.0 9.0 10.0 11.0 12.0 13.0 14.0 16.0	78.0 76.2 71.5 66.7 61.7 56.5 50.8 44.5 28.6 73.0 69.7 64.9 54.4	56.9 56.8 56.4 56.0 55.5 54.8 54.0 53.1 50.3 56.2 55.9 55.5	15.1 15.1 15.1 15.1 15.1 12.8 11.1 9.3 6.9 Ángu	25.7 21.3 16.3 11.0	uma prin	cipal 83.) [°]			
18.0	42.0	52.3		Ilo de nii	ıma nrin	cipal 75.0	1 ° 1			
19.7 20.0 22.0 24.0	65.0 63.3 52.6 39.7	54.2 54.1 52.7 50.7	15.1 15.1 11.6 8.2	15.9 15.2 10.4 7.7	лна рш	ыраі <i>1</i> 3.0	7 []			
			Ángı	ılo de plı	ıma prin	cipal 65.0	0[°]			
28.3 30.0 32.0	55.0 45.1 29.5	50.3 48.9 46.2	8.1 6.2	10.9 8.6 6.6						
			Ángı	ılo de plu	ıma prin	cipal 45.	[°]			



Nº de ident.: 9842523/95738/

Radio de descarga:

360°

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2 - Vía ancha

2821-1 2821-1

Valor de vuelco: Lastre trasero [t]: 54.0 Lastre central [t]: 0.0

Inserción			1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
41.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (1916-1) 35.5 m Plumín 16.0 [m] Posición midfall (1916)										
Ángulo de pluma principal 88.0 [°]										
8.2 9.0 10.0 11.0 12.0 13.0 14.0 18.0 13.2 14.0 16.0 18.0 20.0	78.0 75.1 71.3 67.5 63.5 59.3 54.9 45.3 33.4 73.0 69.9 61.9 53.2 43.2	59.8 59.6 59.3 58.8 58.4 57.8 57.1 55.3 52.8 59.0 58.7 57.8 59.0 58.7 57.8	15.1 15.1 15.1 15.1 14.1 12.5 9.8 7.7 Ángu 15.1 15.1 15.1 12.0 9.3	25.9 22.1 15.1 11.2 8.9	ıma prin	cipal 83.	D[°]			
22.0	30.6	51.8	7.4	7.4			2 5 0 3			
Ángulo de pluma principal 75.0 [°]										
20.9 22.0 24.0 26.0 28.0	65.0 60.6 51.8 41.5 28.1	56.9 56.4 54.9 53.0 50.0	15.0 11.6 8.8 7.2	16.4 14.2 10.7 8.6 7.1						
Ángulo de pluma principal 65.0 [°]										
30.1 32.0 34.0	55.0 45.7 33.9	52.8 51.2 48.7	9.7 7.6	10.0 8.7 7.5						



Nº de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

2821-1 2821-1

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
	-	41.0	0 m Plum Cabeza 16.0	de plumi	n (2316-	o de caro 1) 38.5 r nidfall (23	n Plumín	dfall I		
			Ángı	ılo de plı	ıma prin	cipal 88.0	[°]			
8.3 9.0 10.0 11.0 12.0	78.0 75.3 71.6 67.7 63.7	59.8 59.6 59.3 58.9 58.4	15.1 15.1 15.1 15.1 15.1	30.1 30.1 30.1 27.4 22.7						
14.0 16.0 18.0	55.2 45.5 33.6	57.1 55.4 52.8	15.1 15.6 11.1	16.5 12.9 10.5						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
13.2	73.0	59.0		30.1						
14.0 16.0 18.0 20.0 22.0	70.1 62.1 53.4 43.5 30.9	58.8 57.8 56.5 54.6 51.9	15.1 15.1 15.1 12.9 10.7	29.5 21.2 15.6 12.3 10.1						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
21.0 22.0 24.0 26.0 28.0	65.0 60.8 52.0 41.8 28.4	56.9 56.4 55.0 53.0 50.1	15.1 14.2 11.4 9.3	18.3 16.7 14.0 11.7 9.7	·					
			Ángu	ılo de plu	ıma prin	cipal 65.0	[°]			
30.1 32.0 34.0 36.0	55.0 46.0 34.2 15.0	52.8 51.2 48.7 44.4	7.8 6.5 5.4	7.5 6.3 5.1 4.1						



Nº de ident.: 9842523/95738/ 360°

Radio de descarga:

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

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 54.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0) m Plum Cabeza 19.0	de plumí	oal, Punt n (1916- osición m	1) 38.5 r	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	0 [°]			
8.8 9.0 10.0 11.0 12.0 13.0 14.0 16.0 20.0 22.0	78.0 77.5 74.4 71.2 68.0 64.6 61.2 53.9 45.8 36.2 23.1	62.7 62.7 62.4 62.1 61.7 61.2 60.7 59.3 57.6 55.2 51.6	15.1 15.1 14.1	25.2 18.7 14.3	uma prind	cipal 83.	0[°]			
20.0 22.0	52.4 44.1	58.7 56.8	11.0 8.9	9.4						
24.0	34.1	54.3	7.4 Á	7.9		-in al 75 (0.00			
22.2	65.0	59.6	Angı	16.6	ıma prin	cipai 75.0	o [·]		l	
22.2 24.0 26.0 28.0 30.0	55.0 58.7 51.2 42.7 32.3	59.6 58.6 57.2 55.2 52.5	15.0 12.1 9.6 7.9	16.6 13.7 11.0 9.1 7.7						
			Ángı	ılo de plu	ıma prin	cipal 65.0	0 [°]			
31.8 32.0 34.0	55.0 54.2 46.1	55.2 55.2 53.4	10.5 9.4	9.2 9.0 7.9	-					
36.0 38.0 39.0	36.6 23.8 16.5	51.1 47.6 44.7	8.4 7.2 6.6	6.9 6.1						



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

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

Lastre trasero [t]:

Lastre central [t]:

2 - Vía ancha 54.0 0.0 Pieza de articulación de pluma principal: 2821-1 Cabeza de pluma principal: 2821-1

Alcan- ce	Ángu- Óngu- o de plumín [°]	Altura de rolda- nas	1 Carga [t]	2 Carga	3 Caraa	4	5	6	7	8
ce	o de plumín	de rolda-		Carga	Caraa					
		[m]		[t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	0 m Plum Cabeza 19.0	de plumí	n (2316-		n Plumín			
			Ángu	ılo de plu	ıma prin	cipal 88.0) [°]			
8.9 9.0 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0 14.1 16.0 18.0 20.0	78.0 77.7 74.6 71.4 68.1 64.8 61.4 54.1 46.0 36.4 23.4 73.0 66.9 60.0 52.6	62.7 62.7 62.5 62.1 61.7 61.2 60.7 59.4 57.6 55.2 51.7 61.9 61.2 60.1 58.7	15.1 15.1 15.1 15.1 15.1 15.1 15.1 15.1	30.1 30.1 30.1 30.1 30.0 28.0 23.6 20.5 15.9 12.8 10.4 8.6 4 40 de plu 30.1 26.2 19.5 15.2	uma prind	cipal 83.)[°]			
22.0 24.0	44.3 34.3	56.9 54.3	13.0 11.0	12.3 10.2						
24.0	J4.J	J4.J			ıma prin	cipal 75.0	1°1C			
22.3 24.0 26.0 28.0 30.0	65.0 58.9 51.4 42.9 32.5	59.6 58.7 57.2 55.3 52.6	15.1 15.1 15.1 12.9 10.8	16.5 14.3 12.2 10.5 9.0			- , 1			
·				ılo de plu	ıma prin	cipal 65.0) [°]			
31.8 32.0 34.0 36.0 38.0 39.0	55.0 54.4 46.3 36.8 24.1 17.0	55.2 55.2 53.5 51.1 47.7 44.8	7.5 6.4 5.3 4.3 3.9	6.4 6.3 5.2 4.2 3.4	·					



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		n (1916-	1) 41.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
9.5 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0	78.0 76.6 73.9 71.1 68.3 65.5 59.5 53.1 46.1 38.1	65.7 65.5 65.3 64.9 64.5 64.1 63.0 61.6 59.8 57.5	15.1 15.1 15.1 15.1 15.1 15.1 15.1 13.9 10.9 8.9 7.3	30.1 29.7 24.6 20.4 17.7 15.4 12.3 10.1 8.5 7.2						
24.0	28.0	54.4	6.3	6.2						
			Ángu	ılo de plu	ıma prin	cipal 83.0	[°]C			
14.9 16.0 18.0 20.0 22.0 24.0 26.0 28.0	73.0 70.1 64.4 58.3 51.8 44.7 36.4 25.7	64.8 64.4 63.5 62.4 60.9 59.1 56.6 53.3	15.1 15.1 13.2 10.5 8.6 7.1 6.1	21.8 19.2 14.7 11.8 9.8 8.2 7.0 6.1						
			Ángi	ılo de plu	ıma nrin	rinal 75 (1°1			
23.5	65.0	62.3	15.1	14.6	IIII PIIII	J. Pai 70.	·			
24.0 26.0 28.0 30.0 32.0 34.0	63.4 57.3 50.8 43.5 34.9	62.1 60.9 59.4 57.5 55.0	15.1 12.8 10.1 8.3 6.9	14.2 11.5 9.5 8.0 6.8						
<u> </u>		00		ılo de plu	ıma nrin	cinal 65 (1 0 1			
33.5 34.0 36.0 38.0 40.0	55.0 53.4 46.4 38.4 28.5	57.7 57.4 55.7 53.4 50.3	9.2 8.2 7.3 6.4	8.1 7.9 7.0 6.1 5.4	лпа рпп	ыраі 05.I	J []			
42.0	15.2	45.1	5.5							



Nº de ident.: 9842523/95738/

62.4

62.4

20.0

22.0 24.0 26.0

23.5

58.5

52.0

65.0

Radio de descarga:

Lastre trasero [t]:

360°

54.0

Pieza de articulación de pluma principal:

2821-1

Valor de vuelco:

2 - Vía ancha

Cabeza de pluma principal:

2821-1

Lastre o	central [t]:		0.0							
	Inserciór	1	1	2	2 3 4 5 6 7 8 arga Carga Carga Carga Carga [t]						
ce o de de [t] [Carga [t]	
		41.0	Cabeza	de plumí	ín (2316-	·1) 44.5 r	n Plumír	dfall 1			
			Ángı	ılo de plu	ıma prin	cipal 88.	0 [°]				
9.5	78.0	65.7		30.1							
10.0	76.7	65.6	15.1	30.1							
11.0	74.0	65.3	15.1	30.1							
12.0	71.3	64.9	15.1	27.4							
13.0	68.5	64.5	15.1	24.8							
14.0	65.6	64.1	15.1	21.3							
16.0 18.0	59.7 53.3	63.0 61.6	14.9 14.2	16.7 13.6							
20.0	46.3	59.9	12.3	11.3							
22.0	38.3	57.6	9.9	9.4							
24.0	28.2	54.5	8.2	8.0							
				ılo de plu	uma prin	cipal 83.	0[°]				
15.0	73.0	64.8		30.1							
16.0	70.2	64.4	15.1	27.1							
18.0	64.5	63.5	15.1	20.2							

00.9	14.3	13.1		
59.1	11.9	10.9		
56.7	9.6	9.2		

16.0

15.2

24.0	63.6	62.2	15.1	14.6					
26.0	57.5	61.0	14.7	12.6					
28.0	50.9	59.5	12.4	10.9					
30.0	43.6	57.5	10.2	9.4					
32.0	35.1	55.0	8.5	8.2					
34.0	23.8	51.4	7.2	7.0					
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]		
33.6	55.0	57.7		5.6					
34.0	53.6	57.4	6.4	5.4					
36.0	46.6	55.7	5.4	4.5					
00.0	10.0	33.7	0.7	7.0				1	
38.0	38.6	53.5	4.5	3.6					
40.0									

Ángulo de pluma principal 75.0 [°]



N° de ident.: 9842523/95738/ Pi

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

Valor de vuelco: Lastre trasero [t]:

Lastre central [t]:

2 - Vía ancha 54.0

0.0

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	0 m Plum Cabeza 25.0	de plumí	oal, Punt ín (1916- osición m	1) 44.5 r	n Plumín	dfall I		
			Ángı	ılo de plu	uma prin	cipal 88.	0 [°]			
10.1	78.0	68.6	15.1	27.6						
11.0	75.9	68.4	15.1	24.9						
12.0	73.5	68.1	15.1	21.1						
13.0	71.0	67.7	15.1	18.1						
14.0	68.6	67.3	15.0	16.0						
16.0	63.5	66.4	13.6	12.7						
18.0 20.0	58.2 52.5	65.2 63.8	11.5 9.1	10.5 8.8						
20.0	52.5 46.4	62.0	9.1 7.7	7.5						
24.0	39.4	59.8	6.5	6.5						
26.0	31.2	57.0	5.6	5.6						
20.0	J1.2	31.0			uma prin	cipal 92	0 1 0		1	
			Angu		ıma prine	cipai 83.	υ[]		1	
15.8	73.0	67.6		19.3						
16.0	72.6	67.6	15.1	19.3						
18.0 20.0	67.6 62.5	66.8 65.8	15.0 13.4	15.3 12.2						
22.0	57.2	64.6	10.9	10.1						
24.0	51.4	63.1	8.8	8.6						
26.0	45.1	61.3	7.5	7.3						
28.0	38.0	59.0	6.3	6.3						
30.0	29.4	55.9	5.5	5.5						
			Ánaı	ılo de plu	ıma prin	cipal 75.	1°10			
24.7	65.0	65.1		13.0	<u> </u>					
26.0	61.7	64.4	13.2	11.8						
28.0	56.3	63.2	10.5	9.8						
30.0	50.5	61.6	8.5	8.4						
32.0	44.1	59.7	7.2	7.1						
34.0	36.8	57.3	6.2	6.2						
36.0	27.8	54.1	5.4	5.4						
			Ángı	ılo de plu	ıma prin	cipal 65.	0[°]			
35.2	55.0	60.1		7.4						
36.0	52.8	59.7	8.1	7.0						
38.0	46.6	57.9	7.3	6.2						
40.0	39.7	55.7	6.5	5.5						
42.0	31.6	52.9	5.7	4.8						
44.0	20.5	48.7	5.0	4.3						



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]
			0 m Plun Cabeza 25.0	de plumi		1) 47.5 r	n Plumín			
			Ángı	ılo de plı	ıma prin	cipal 88.0	[°]			
10.1 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0	78.0 76.0 73.6 71.2 68.7 63.7 58.3 52.7 46.5 39.6	68.6 68.4 68.1 67.8 67.4 66.4 65.3 63.9 62.1 59.9	15.1 15.1 15.1 15.1 15.1 13.4 11.2 9.4 7.8	30.1 30.1 29.4 25.1 22.2 17.2 14.1 11.7 9.9 8.3						
26.0	31.4	57.0	6.7	7.2						
				 	ıma prin	cipal 83.0	D[°]			
15.9 16.0 18.0 20.0 22.0 24.0 26.0 28.0	73.0 72.7 67.8 62.7 57.3 51.6 45.3 38.2	67.6 67.6 66.9 65.9 64.7 63.2 61.3 59.0	15.1 15.1 15.1 15.1 13.6 12.1 10.0 8.3	26.8 26.8 21.1 16.5 13.5 11.3 9.6 8.1						
30.0	29.6	56.0	7.0	7.0						
			Angı		ıma prin	cipal 75.0	[°]			
24.8 26.0 28.0 30.0 32.0 34.0	65.0 61.9 56.4 50.6 44.2 36.9	65.1 64.5 63.2 61.7 59.8 57.4	14.9 13.1 11.6 9.8 8.1	13.7 12.6 10.9 9.4 8.2 7.1						
36.0	28.0	54.2	7.0	6.2	<u> </u>					
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
35.3 36.0 38.0 40.0 42.0	55.0 52.9 46.8 39.9 31.8	60.1 59.7 57.9 55.8 52.9	5.1 4.2 3.4 2.7	4.6 4.3 3.5 2.8 2.2			-			
44.0	22.3	48.8	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]
			0 m Plum Cabeza 28.0	de plumi		1) 47.5 r	n Plumín			
			Ángu	ılo de plu	ıma prin	cipal 88.0	0 [°]			
10.7	78.0	71.5	ı	30.1	<u>'</u>					
11.0 12.0 13.0 14.0	77.4 75.3 73.2 71.0	71.5 71.2 70.9 70.6	15.1 15.1 15.1 15.1	30.1 30.1 28.9 25.6						
16.0	66.6	69.7	15.1	20.9						
18.0 20.0 22.0 24.0	62.0 57.2 52.1 46.6	68.7 67.5 66.1 64.3	15.1 14.4 13.7 12.4	17.5 15.1 13.2 11.8						
26.0	40.5	62.1	10.9	10.5						
28.0 30.0	33.4 24.6	59.4 55.8	9.6 8.7	9.6 8.7						
			Ángu	ılo de plu	uma prin	cipal 83.0	[°]C			
16.7	73.0	70.5	15.1	27.3						
18.0	70.2	70.1	15.1	24.7						
20.0 22.0	65.7 61.1	69.2 68.2	15.1 15.1	20.1 17.0						
24.0	56.2	66.9	14.4	14.7						
26.0	51.1	65.4	13.9	13.0						
28.0	45.5	63.5	12.1	11.5						
30.0	39.2	61.3	10.6	10.3						
32.0 34.0	32.0 22.6	58.4 54.5	9.5 8.6	9.4 8.6						
34.0	22.0	54.5			ıma prin	oinal 75 () [°]			
26.0	65.0	67.8	Aligo	15.2		lipai 75.	J []			
28.0	60.3	66.7	15.1	13.5						
30.0	55.4	65.4	14.1	12.1						
32.0	50.2	63.9	12.8	10.8						
34.0	44.5	62.0	11.6	9.8						
36.0 38.0	38.2 30.7	59.7 56.7	10.4 9.4	8.8 7.9						
40.0	20.7	52.5	8.5	7.2						
					ıma prin	cipal 65.0	1°10			
37.0	55.0	62.6		6.5						
38.0	52.3	61.9	7.0	6.1						
40.0	46.8	60.1	6.2	5.4						
42.0	40.7	58.0	5.6	4.8						
44.0 46.0	33.8 25.1	55.3 51.7	4.9 4.4	4.2 3.7						
47.0	19.3	49.3	4.1	3.4						



Nº de ident.:9842523/95738/Pieza de articulación de pluma principal:2821-1Radio de descarga:360 °Cabeza de pluma principal:2821-1

Valor de vuelco: 2 - Vía ancha Lastre trasero [t]: 54.0 Lastre central [t]: 0.0

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	0 m Plum Cabeza 19.0	de plumí	oal, Punt n (1916- osición m	1) 50.5 r	n Plumín	dfall I		
			Ángı	ılo de plı	ıma prin	cipal 88.0	D[°]			
8.8 9.0 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0	78.0 77.5 74.4 71.2 68.0 64.6 61.2 53.9 45.8 36.2 23.1	62.7 62.7 62.4 62.1 61.7 61.2 60.7 59.3 57.6 55.2 51.6	15.1 15.1 15.1 15.1 15.1 15.0 13.3 10.5 8.6 Ángu	30.1 30.1 30.1 27.9 25.1 21.3 18.6 14.6 11.9 9.7 8.2 ulo de plu 30.1 23.6 17.7 14.0	uma prind	cipal 83.)[°]			
22.0 24.0	44.1 34.1	56.8 54.3	12.7 10.1	11.4 9.5						
24.0	J 04.1	0-1.0			ıma prin	cipal 75.0	1°1C	1	1	
22.2 24.0 26.0 28.0 30.0	65.0 58.7 51.2 42.7 32.3	59.6 58.6 57.2 55.2 52.5	15.1 14.8 12.3 9.9	15.9 13.6 11.5 9.8 8.3	F-1111	. ,,	- , ,			
30.0	1 02.0	J2.J			ıma prin	cipal 65 (1°10			
31.8 32.0 34.0 36.0 38.0 39.0	55.0 54.2 46.1 36.6 23.8 16.5	55.2 55.2 53.4 51.1 47.6 44.7	8.3 7.0 5.9 4.9 4.4	6.6 6.4 5.3 4.4 3.5	ина рин	οιραί 00.t	× []			

Source:a9841388



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]
		41.0	0 m Plum Cabeza 28.0	de plumí		1) 50.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
10.8 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0	78.0 77.5 75.4 73.3 71.1 66.7 62.1 57.3 52.2	71.6 71.5 71.2 70.9 70.6 69.8 68.8 67.6 66.1	15.1 15.1 15.1 15.1 15.1 15.1 15.1 15.1	30.1 30.1 30.1 29.9 29.0 25.0 20.6 17.4 15.0						
24.0 26.0 28.0 30.0	46.7 40.6 33.6 24.8	64.3 62.2 59.5 55.8	13.9 12.0 10.5 9.3	13.2 11.6 10.3 9.2						
			Ángı	ılo de plu	ıma prin	cipal 83.0] [°]			
16.7 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0	73.0 70.3 65.8 61.2 56.4 51.2 45.6 39.4 32.1 22.7	70.5 70.1 69.2 68.2 66.9 65.4 63.6 61.3 58.5 54.6	15.1 15.1 15.1 15.1 15.1 15.1 13.3 11.7 10.4 9.1	27.8 25.2 21.6 18.7 16.4 14.4 12.7 11.2 10.0 8.8						
34.0	22.1	34.0			ıma prin	cinal 75 (1 ° 1			
26.1 28.0 30.0 32.0 34.0 36.0 38.0	65.0 60.5 55.6 50.4 44.7 38.3 30.8	67.8 66.8 65.5 63.9 62.0 59.7 56.8	14.5 12.9 11.3 10.0 8.8 7.7 6.8	12.5 10.9 9.5 8.3 7.2 6.2 5.4	апта ріпп	ограг 7 3.1	, i			
40.0	20.9	52.6	5.9	4.6						
			Ángu	ılo de plu	ıma prin	cipal 65.0	[°]C			
37.0 38.0 40.0 42.0 43.0	55.0 52.4 46.9 40.9 38.2	62.6 61.9 60.2 58.0 56.8	4.1 3.3 2.6 2.3	3.8 3.4 2.8 2.2						



N° de ident.: 9842523/95738/ Pie

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 22.0	de plumí	n (1916-	o de caro 1) 53.5 r nidfall (19	n Plumín	dfall		
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]C			
9.5 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0	78.0 76.6 73.9 71.1 68.3 65.5 59.5 53.1 46.1 38.1	65.7 65.5 65.3 64.9 64.5 64.1 63.0 61.6 59.8 57.5	15.1 15.1 15.1 15.1 15.1 15.1 14.4 11.9 9.8 7.9	30.1 30.1 27.8 23.4 20.2 17.5 13.9 11.1 9.2 7.7						
24.0	28.0	54.4	6.6	6.5						
				ılo de plı	ıma prin	cipal 83.0	1°10			
14.9 16.0 18.0 20.0 22.0 24.0 26.0 28.0	73.0 70.1 64.4 58.3 51.8 44.7 36.4 25.7	64.8 64.4 63.5 62.4 60.9 59.1 56.6 53.3	15.1 15.1 13.9 11.6 9.5 7.6 6.5	24.2 22.1 16.6 13.3 10.8 8.9 7.5 6.4			. ,			
20.0	20.7	00.0			ıma nrin	cipal 75.0) [°]			
23.5	65.0	62.3	15.1	14.5	лна рип	ыраі <i>і</i> Э.(٠ _[]			
24.0 26.0 28.0 30.0 32.0	63.4 57.3 50.8 43.5 34.9	62.1 60.9 59.4 57.5 55.0	15.1 14.6 11.4 9.2 7.5	13.9 11.9 10.2 8.7 7.4						
34.0	23.6	51.3	6.4	6.3	<u> </u>					
33.5 34.0 36.0 38.0	55.0 53.4 46.4 38.4	57.7 57.4 55.7 53.4	6.9 5.9 4.9	5.7 5.5 4.5 3.7	ıma prin	cipal 65.	0[°]			
40.0 42.0	28.5 15.2	50.3 45.1	4.1 3.2	3.0						



N° de ident.: 9842523/95738/

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

3/95738/ Pieza de articulación de pluma principal: 2821-1
360 ° Cabeza de pluma principal: 2821-1
ía ancha

	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	1°10			
11.4 12.0 13.0 14.0	78.0 76.9 74.9 73.0	74.5 74.4 74.1 73.8	15.1 15.1 15.1 15.1	30.1 30.1 30.1 28.7	·	•				
16.0 18.0 20.0	69.1 65.0 60.8	73.0 72.2 71.1	15.1 15.1 15.0	23.9 19.5 16.5						
22.0 24.0 26.0	56.5 51.8 46.9	69.8 68.3 66.6	13.8 12.8 11.4	14.2 12.4 11.0						
28.0 30.0 32.0	41.4 35.3 28.0	64.5 61.9 58.6	9.8 8.5 7.6	9.6 8.6 7.7						
			Angu	<u>-</u>	ıma prin	cipal 83.0	0[°]			
17.6 18.0 20.0	73.0 72.3 68.3	73.4 73.3 72.5	15.1 15.1	25.8 25.0 21.5						
22.0 24.0 26.0	64.2 60.0 55.6	71.6 70.5 69.2 67.7	15.1 14.8 13.7 12.9	18.7 16.1 13.8 12.1						
28.0 30.0 32.0 34.0	50.9 45.9 40.3 34.0	65.8 63.6 60.9	11.1 9.6 8.4	10.7 9.5 8.5						
36.0	26.3	57.5	7.5	7.6						
			Angı		ıma prin	cipal 75.0	0[°]		1	
27.3 28.0 30.0 32.0	65.0 63.6 59.3 54.9	70.5 70.2 69.1 67.7	12.4 10.9 9.6	11.2 10.7 9.3 8.1						
34.0 36.0 38.0	50.1 45.0 39.4	66.2 64.3 62.0	8.5 7.4 6.5	7.1 6.1 5.3						
40.0 42.0	32.9 24.9	59.2 55.6	5.6 4.8	4.6 3.9	uma prin	cinal SE	0.1.0			
38.7	55.0	65.1	Angu	2.9	лна рии	upai 05.	∪[] 			
40.0	52.0	64.2	3.0	2.5						
42.0	47.5	62.4	2.3							



Nº de ident.: 9842523/95738/

Pieza de articulación de pluma principal:

2821-1

Radio de descarga:

360°

Cabeza de pluma principal:

2821-1

2 - Vía ancha Valor de vuelco: Lastre trasero [t]: 54.0 0.0 Lastre central [t]:

10.1 11.0 12.0 13.0 14.0	Ángu- o de olumín [°] 78.0 75.9 73.5 71.0					Carga [t] o de carg	Carga [t]	Carga [t]	Carga [t]	Carga [t]
11.0 12.0 13.0 14.0	75.9 73.5	68.6	Cabeza 25.0	de plumí		o de car	10 2 M			
11.0 12.0 13.0 14.0	75.9 73.5		Ángu				n Plumín			
11.0 12.0 13.0 14.0	75.9 73.5			ılo de plu	ıma prin	cipal 88.0	[°]			
18.0 20.0 22.0 24.0 26.0 15.8 16.0 18.0 20.0	68.6 63.5 58.2 52.5 46.4 39.4 31.2 73.0 72.6 67.6 62.5 57.2	68.1 67.7 67.3 66.4 65.2 63.8 62.0 59.8 57.0	15.1 15.1 14.5 12.3	30.1 28.2 24.0 20.5 18.1 14.4 12.0 10.1 8.6 7.4 6.5 Ilo de plu 21.4 21.3 17.3 13.9						
24.0 26.0 28.0 30.0	51.4 45.1 38.0 29.4	63.1 61.3 59.0 55.9	10.3 8.7 7.3 6.4	9.8 8.4 7.3 6.4						
			Ángu	ılo de plu	ıma prin	cipal 75.0)[°]			
24.7 26.0 28.0 30.0 32.0 34.0 36.0	65.0 61.7 56.3 50.5 44.1 36.8 27.8	65.1 64.4 63.2 61.6 59.7 57.3 54.1	14.6 11.9 9.9 8.4 7.2 6.3	13.4 12.2 10.5 9.1 7.9 6.8 5.9						
			Ángu	ılo de plu	ıma prin	cipal 65.0)[°]			
35.2 36.0 38.0 40.0 42.0 44.0	55.0 52.8 46.6 39.7 31.6 22.0	60.1 59.7 57.9 55.7 52.9 48.7	5.9 5.0 4.2 3.4 2.7	5.0 4.7 3.9 3.2 2.6						



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

Radio de descarga: Valor de vuelco:

Lastre trasero [t]:

360° Cabeza de pluma principal: 2 - Vía ancha 54.0

2821-1 2821-1

Lastre o	entral [t]:		0.0						
	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
) m Plum Cabeza 28.0		n (1916-	1) 59.5 r	n Plumín			
			Ángı	ılo de plu	ıma prin	cipal 88.0	[°]			
10.7	78.0	71.5		27.8						
11.0	77.4	71.5	15.1	27.8						
12.0	75.3	71.2	15.1	24.9						
13.0	73.2	70.9	15.1	21.8						
14.0	71.0	70.6	15.1	18.9						
16.0	66.6	69.7	14.5	15.2						
18.0	62.0	68.7	13.4	12.5						
20.0	57.2	67.5	11.1	10.4						
22.0	52.1	66.1	9.0	8.8						
24.0	46.6	64.3	7.6	7.5						
26.0 28.0	40.5 33.4	62.1 59.4	6.5 5.6	6.5 5.6						
30.0	24.6	55.8	4.9	4.9						
30.0	24.0	33.6			ıma prin	oinal 92 () [°]			
				ılo de plu	inia pilli	upai os.i	ν[]			
16.7	73.0	70.5	15.1	19.8						
18.0	70.2	70.1	15.1	18.1						
20.0 22.0	65.7 61.1	69.2 68.2	14.5 13.3	14.6 12.2						
24.0	56.2	66.9	10.7	10.1						
24.0 26.0	56.∠ 51.1	65.4	8.7	8.6						
28.0	45.5	63.5	7.4	7.4						
30.0	39.2	61.3	6.3	6.3						

			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
16.7	73.0	70.5	15.1	19.8						
18.0	70.2	70.1	15.1	18.1						
20.0	65.7	69.2	14.5	14.6						
22.0	61.1	68.2	13.3	12.2						
24.0	56.2	66.9	10.7	10.1						
26.0	51.1	65.4	8.7	8.6						
28.0	45.5	63.5	7.4	7.4						
30.0	39.2	61.3	6.3	6.3						
32.0	32.0	58.4	5.5	5.6						
34.0	22.6	54.5	4.8	4.9						
			Ángı	ılo de plu	ıma prind	cipal 75.0	[°]C			
26.0	65.0	67.8		12.3						
28.0	60.3	66.7	12.8	10.6						
30.0	55.4	65.4	10.4	9.2						
32.0	50.2	63.9	8.6	8.0						
34.0	44.5	62.0	7.3	7.0						
36.0	38.2	59.7	6.3	6.1						
38.0	30.7	56.7	5.5	5.3						
40.0	20.7	52.5	4.8	4.5						
			Ángı	ılo de plu	ıma prind	cipal 65.0	[°]			
37.0	55.0	62.6		4.3						
38.0	52.3	61.9	4.8	3.9						
		1		1	1	1	1	I	1	ı

40.0

42.0

46.0

46.8

40.7

60.1

58.0

4.0

3.3

3.2

2.6 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

	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 plumi		1) 62.5 r	n Plumín			
			Ángu	ılo de plu	ıma prin	cipal 88.0	1°10			
11.3	78.0	74.5	ı	25.3	<u>'</u>					
12.0 13.0 14.0 16.0	76.7 74.8 72.9 69.0	74.3 74.0 73.7 73.0	15.1 15.1 15.1 15.1	25.3 21.9 19.4 15.6						
18.0	64.9	72.1	13.1	12.8						
20.0 22.0 24.0 26.0	60.7 56.3 51.7 46.7	71.1 69.8 68.3 66.5	11.6 9.5 7.8 6.7	10.8 9.1 7.8 6.7						
28.0	41.3	64.4	5.8	5.8						
30.0 32.0	35.1 27.8	61.8 58.5	5.0 4.4	5.1 4.5						
			Ángı	ılo de plu	uma prin	cipal 83.0	[°]			
17.6	73.0	73.4	15.1	17.9						
18.0	72.2	73.3	15.1	17.9						
20.0 22.0	68.2 64.1	72.5	15.1 13.0	14.9 12.3						
24.0	59.9	71.6 70.5	11.1	10.4						
26.0	55.5	69.2	9.1	8.8						
28.0	50.8	67.6	7.7	7.6						
30.0	45.7	65.8	6.6	6.6						
32.0 34.0	40.2 33.9	63.6 60.9	5.7 5.0	5.7 5.1						
36.0	26.2	57.4	4.4	4.5						
			Ánaı	ılo de plu	ıma prin	cipal 75.0	1°10			
27.3	65.0	70.5		11.4	<u>'</u>					
28.0	63.5	70.2	13.0	10.8						
30.0	59.2	69.0	10.7	9.4						
32.0	54.8	67.7	8.9	8.2						
34.0 36.0	50.0 44.9	66.1 64.2	7.5 6.5	7.2 6.3						
38.0	39.3	62.0	5.6	5.5						
40.0	32.8	59.2	5.0	4.8						
42.0	24.8	55.5	4.4	4.1						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
38.7	55.0	65.1		3.7						
40.0	51.9	64.1	4.1	3.3						
42.0 44.0	46.9 41.5	62.4 60.3	3.4 2.7	2.7 2.1						
46.0	36.0	57.7	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]
		41.0	0 m Plum Cabeza 34.0	de plumí	ín (1916-	o de carç 1) 65.5 r nidfall (19	n Plumín	dfall I		
			Ánaı	ılo de plu	uma prin	cipal 88.0	1°10			
12.0	78.0	77.4	15.1	23.0						
13.0 14.0	76.2 74.5	77.2 76.9	15.1 15.1	22.2 19.5						
16.0 18.0	70.9 67.3	76.2 75.4	15.1 14.1	15.8 13.2						
20.0	63.5	74.5	11.6	11.0						
22.0 24.0 26.0	59.7 55.6 51.4	73.4 72.1 70.5	9.8 8.1 6.8	9.4 8.0 6.9						
28.0	46.9	68.8	5.9	6.1						
30.0 32.0 34.0	41.9 36.5 30.2	66.7 64.2 61.1	5.2 4.5 4.0	5.3 4.6 4.1						
36.0	22.2	57.0	3.5	3.6						
			Ángı	ılo de plu	uma prin	cipal 83.0	[°]C			
18.4	73.0	76.2		16.4						
20.0	70.2	75.7	15.1	15.3						
22.0 24.0	66.6 62.8	74.9 73.9	13.9 11.2	12.7 10.6						
26.0	58.9	73.9	9.4	9.1						
28.0	54.9	71.4	7.9	7.8						
30.0	50.6	69.9	6.8	6.8						
32.0	46.0	68.0	5.9	5.9						
34.0 36.0	41.0 35.4	65.9 63.3	5.1 4.5	5.2 4.5						
38.0	28.8	60.1	4.0	4.0						
40.0	20.3	55.7	3.5	3.6						
			Ángı	ılo de plu	ıma prin	cipal 75.0	0 [°]			
28.5	65.0	73.2		10.4	<u> </u>					
30.0	62.2	72.5	9.9	9.4						
32.0	58.3	71.3	8.3	8.2						
34.0	54.2	70.0	7.1	7.2						
36.0 38.0	49.9 45.2	68.4 66.5	6.3 5.5	6.3 5.5						
40.0	40.1	64.3	4.8	4.8						
42.0	34.4	61.6	4.2	4.1						
44.0	27.7	58.2	3.8	3.5						
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
40.4	55.0	67.5		3.0						
42.0	51.6	66.4	3.2	2.6						
44.0 45.0	47.1 45.0	64.6 63.6	2.5 2.2	2.0						
45.0	45.0	03.0	۷.۷		l				l	



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: Lastre trasero [t]:

2 - Vía ancha 54.0

Lastre central [t]: 0.0

	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]
		41.0	0 m Plum Cabeza 37.0	de plumi	oal, Punt n (1916- osición m	1) 68.5 r	n Plumín	dfall I		
			Ángı	ılo de plı	ıma prin	cipal 88.0	[°]			
12.6	78.0	80.3	15.1	22.3						
13.0	77.3 75.7	80.3	15.1	22.3 21.0						
14.0 16.0	75.7	80.0 79.4	15.1 15.1	16.9						
18.0	69.2	78.7	15.1	14.2						
20.0	65.9	77.8	12.8	12.0						
22.0	62.4	76.8	10.7	10.3						
24.0	58.8	75.7	9.1	8.9						
26.0	55.1	74.3	7.7	7.7						
28.0	51.1	72.8	6.7	6.8						
30.0 32.0	47.0 42.5	71.0 68.9	5.9 5.2	6.0 5.3						
34.0	37.6	66.5	4.6	4.7						
36.0	32.0	63.6	4.1	4.2						
38.0	25.3	59.9	3.7	3.8						
			Ángı	ılo de plı	ıma prin	cipal 83.0	[°]0			
19.3	73.0	79.1		16.1						
20.0	71.9	78.9	15.1	16.0						
22.0	68.6	78.2	14.4	13.7						
24.0 26.0	65.2 61.7	77.3 76.2	12.4 10.3	11.6 10.0						
28.0	58.1	75.0	8.8	8.7						
30.0	54.3	73.7	7.6	7.5						
32.0	50.4	72.1	6.6	6.7						
34.0	46.2	70.3	5.8	5.9						
36.0	41.6	68.2	5.1	5.2						
38.0 40.0	36.6 30.8	65.6 62.6	4.5 4.1	4.6 4.2						
42.0	23.8	58.7	3.6	3.8						
					ıma prin	cipal 75.0	1°10			
29.8	65.0	75.9		9.6						
30.0	64.7	75.9	11.3	9.4						
32.0	61.2	74.8	10.1	8.3						
34.0	57.5	73.6	8.6	7.2						
36.0 38.0	53.7 49.7	72.2 70.6	7.4 6.6	6.3 5.5						
38.0 40.0	49.7 45.5	70.6 68.7	5.8	5.5 4.8						
42.0	40.8	66.6	5.1	4.2						
44.0	35.7	64.0	4.5	3.6						
46.0	29.8	60.8	4.0	3.1						
48.0	22.6	56.7	3.4	2.6						
			Angu		ıma prin	cipal 65.0) [°]			
42.1	55.0	70.0		2.5						
44.0	51.3	68.6	2.5	2.0						
45.0	49.5	67.8	2.2							



Nº de ident.: 9842523/95738/

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

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 40.0	de plumi		1) 71.5 r̀	n Plumín			
			Ánaı	ılo de plı	uma prin	cipal 88.0	1°10			
13.2	78.0	83.3		23.2						
14.0 16.0 18.0	76.8 73.9 70.9	83.1 82.5 81.9	15.1 15.1 15.1	23.2 19.4 16.3						
20.0 22.0 24.0 26.0	67.8 64.6 61.4 58.0	81.1 80.2 79.1 77.9	14.4 12.3 10.8 9.4	14.0 12.0 10.5 9.2						
28.0 30.0 32.0	54.6 50.9 47.1	76.6 75.0 73.2	8.2 7.2 6.4	8.2 7.3 6.6						
34.0 36.0 38.0 40.0	42.9 38.5 33.5 27.7	71.2 68.8 66.0 62.6	5.8 5.2 4.7 4.3	5.9 5.3 4.9 4.4						
42.0	20.4	58.1	3.9	4.0						
			Ángı	ılo de plu	ıma prin	cipal 83.0	1°10			
20.2	73.0	82.0	l J	17.0						
22.0 24.0 26.0	70.3 67.2 64.0	81.4 80.6 79.6	15.0 13.3 11.2	15.9 13.6 11.7						
28.0 30.0 32.0	60.8 57.4 53.9	78.6 77.3 75.9	9.8 8.6 7.5	10.4 9.1 8.1						
34.0 36.0	50.2 46.3	74.3 72.5	6.8 6.1	7.3 6.5						
38.0 40.0 42.0 44.0	42.1 37.6 32.5 26.4	70.4 68.0 65.1 61.5	5.4 4.9 4.5 4.1	5.9 5.3 4.8 4.4						
44.0	20.4	01.5			ıma prin	cinal 75 () [°]			
31.1	65.0	78.7	Angu	8.7	Jilia Pilli	o.pa. 73.	- L J			
32.0 34.0	63.5 60.2	78.2 77.1	9.8 8.7	8.1 7.1						
36.0 38.0 40.0	56.8 53.3 49.6	75.9 74.5 72.8	7.6 6.7 5.9	6.2 5.5 4.7						
42.0 44.0 46.0 48.0	45.7 41.4 36.8 31.6	71.0 68.8 66.3 63.3	5.2 4.5 3.8 3.2	4.1 3.5 3.0 2.5						
50.0	25.4	59.6	3.2 2.7	2.5 2.1						
			Ánaı		ıma prin	cipal 65.0	0 [°]			
44.0	55.0	72.4	2.2							
		_								



Nº de ident.: 9842523/95738/ Pieza de articulación

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

Lastre trasero [t]: 54.0
Lastre central [t]: 0.0

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
			0 m Plum Cabeza 31.0	de plumí	n (1916-		n Plumín			
			Ánaı	ılo de plu	ıma prin	cipal 88.0	1°10			
11.3	78.0	74.5		20.8						
12.0	76.7	74.3	15.1	20.8						
13.0	74.8	74.0	15.1	18.5						
14.0	72.9	73.7	15.1	16.4						
16.0	69.0	73.0	14.3	13.1						
18.0	64.9	72.1 71.1	11.3	10.4						
20.0 22.0	60.7 56.3	71.1 69.8	8.9 7.2	8.6 7.0						
24.0	51.7	68.3	7.2 5.9	5.8						
26.0	46.7	66.5	4.9	4.9						
28.0	41.3	64.4	4.2	4.2						
30.0	35.1	61.8	3.5	3.5						
32.0	27.8	58.5	2.9	3.0						
			Ángı	ılo de plu	ıma prin	cipal 83.0	[°]			
17.6	73.0	73.4	15.1	14.9						
18.0	72.2	73.3	15.1	14.9						
20.0	68.2	72.5	13.5	12.3						
22.0	64.1	71.6	10.6	9.9						
24.0	59.9	70.5	8.5	8.2						
26.0 28.0	55.5 50.8	69.2 67.6	6.9 5.8	6.8 5.7						
30.0	45.7	65.8	4.9	4.9						
32.0	40.2	63.6	4.9	4.9						
34.0	33.9	60.9	3.5	3.5						
36.0	26.2	57.4	3.0	3.1						
			Ángu	ılo de plu	ıma prin	cipal 75.0	[°]			
27.3	65.0	70.5		8.8						
28.0	63.5	70.2	8.8	8.2						
30.0	59.2	69.0	7.4	6.9						
32.0	54.8	67.7	6.2	5.7						
34.0	50.0	66.1	5.3	4.7						
36.0	44.9	64.2	4.5	3.9						
38.0 40.0	39.3 32.8	62.0 59.2	3.9 3.3	3.1 2.4						
40.0 42.0	32.8 25.8	59.2 55.5	2.7	2.4						
.2.0	_5.0	00.0		ılo de pli	ıma prin	cipal 65.0	1°10			
38.8	55.0	65.1	2.2	ac pic	and pilli	J. Dai 00.	, ,			
39.0	55.0 54.5	64.9	2.2							
- 00.0	00	00								



N° de ident.: 9842523/95738/

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

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
		41.0	0 m Plum Cabeza 34.0	de plumí	oal, Punt ín (1916- osición m	1) 77.5 r	n Plumín	dfall		
			Ángu	ılo de plu	uma prin	cipal 88.0	[°]			
12.0 13.0 14.0 16.0 18.0 20.0 22.0 24.0 26.0	78.0 76.2 74.5 70.9 67.3 63.5 59.7 55.6 51.4	77.4 77.2 76.9 76.2 75.4 74.5 73.4 72.1 70.5	15.1 15.1 15.1 13.6 11.4 8.9 7.2 5.9 4.9	18.7 18.4 16.2 12.9 10.5 8.5 7.1 5.9 4.9						
28.0 30.0 32.0 34.0	46.9 41.9 36.5 30.2	68.8 66.7 64.2 61.1	4.1 3.5 2.9 2.4	4.2 3.5 3.0 2.4						
34.0	30.2	01.1			uma prin	rinal 83 (1 ° 1			
18.4 20.0 22.0 24.0 26.0 28.0	73.0 70.2 66.6 62.8 58.9 54.9	76.2 75.7 74.9 73.9 72.8 71.4	13.8 10.7 8.4 6.9 5.7	13.3 12.4 10.0 8.1 6.8 5.7		, par 55.				
30.0 32.0 34.0 36.0 38.0	50.6 46.0 41.0 35.4 28.8	69.9 68.0 65.9 63.3 60.1	4.8 4.1 3.5 2.9 2.5	4.9 4.1 3.5 3.0 2.6						
00.0	20.0	00.1			uma prin	cipal 75 (0 [°]			
28.5 30.0 32.0 34.0 36.0 38.0	65.0 62.2 58.3 54.2 49.9 45.2	73.2 72.5 71.3 70.0 68.4 66.5	8.1 6.7 5.6 4.8 4.1	7.9 6.9 5.8 4.8 3.9 3.2			- 1			
40.0 42.0 43.0	40.1 35.0 31.9	64.3 61.6 60.0	3.5 2.7 2.3	2.5						



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]
		41.0	0 m Plum Cabeza 37.0	de plumí	pal, Punt n (1916- osición m	1) 80.5 r	n Plumín	dfall		
			Ángu	ılo de plu	uma prin	cipal 88.0	0 [°]			
12.6 13.0 14.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0	78.0 77.3 75.7 72.5 69.2 65.9 62.4 58.8 55.1 51.1 47.0 42.5 37.6	80.3 80.3 80.0 79.4 78.7 77.8 76.8 75.7 74.3 72.8 71.0 68.9 66.5	15.1 15.1 15.1 14.7 12.9 10.6 8.6 7.2 6.1 5.2 4.6 4.0 3.5	19.3 19.3 18.4 14.9 12.2 10.1 8.4 7.2 6.1 5.3 4.6 4.1 3.5						
36.0	32.0	63.6	2.9	2.9						
			Ángı		ıma prin	cipal 83.0	0 [°]			
19.3 20.0 22.0 24.0 26.0 28.0	73.0 71.9 68.6 65.2 61.7 58.1	79.1 78.9 78.2 77.3 76.2 75.0	14.5 12.4 10.1 8.2 7.0	13.7 13.7 11.5 9.6 8.1 7.0						
30.0 32.0 34.0 36.0 38.0 40.0	54.3 50.4 46.2 41.6 36.6 30.8	73.7 72.1 70.3 68.2 65.6 62.6	6.0 5.2 4.6 4.0 3.5	6.0 5.3 4.6 4.0 3.5						
42.0	23.8	58.7	2.6	2.7						
			Angu		ıma prin	cipal 75.0	֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓		ı	
29.8 30.0 32.0 34.0 36.0 38.0 40.0 42.0	65.0 64.7 61.2 57.5 53.7 49.7 45.5 41.2	75.9 75.9 74.8 73.6 72.2 70.6 68.7 66.6	8.9 7.7 6.5 5.4 4.5 3.6 2.8	7.2 7.0 5.9 4.9 4.0 3.3 2.6						
44.0	36.2	64.0	2.1							



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

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

360 ° Cabeza de pluma principal:

	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]
41.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (1916-1) 83.5 m Plumín 40.0 [m] Posición midfall (1916)										
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]			
13.2	78.0	83.3		16.4						
14.0	76.8	83.1	15.1	16.4						
16.0	73.9	82.5	13.4	13.9						
18.0	70.9	81.9	11.3	11.3						
20.0	67.8	81.1	9.7	9.4						
22.0	64.6	80.2	7.9	7.8						
24.0	61.4	79.1	6.5	6.6						
26.0	58.0	77.9	5.5 4.7	5.6						
28.0 30.0	54.6 50.9	76.6 75.0	4.7	4.8 4.1						
32.0	47.1	73.0	3.4	3.6						
34.0	42.9	71.2	3.4	3.0						
36.0	38.5	68.8	2.5	2.6						
				ılo de plu	ıma prin	cipal 83.0	1°1			
20.2	73.0	82.0	ı	11.6	· ·	·				
22.0	70.3	81.4	10.8	10.9						
24.0	67.2	80.6	9.2	9.0						
26.0	64.0	79.6	7.5	7.5						
28.0	60.8	78.6	6.4	6.4						
30.0	57.4	77.3	5.4	5.5						
32.0	53.9	75.9	4.6	4.7						
34.0	50.2	74.3	4.0	4.1						
36.0	46.3 42.1	72.5	3.5	3.5						
38.0 40.0	42.1 37.6	70.4 68.0	3.0 2.5	3.0 2.6						
42.0	32.5	65.1	2.5	2.0						
				ılo de plu	ıma prin	cipal 75 (1°10			
31.1	65.0	78.7	Ig	6.4						
32.0	63.5	78.2	7.2	5.9						
34.0	60.2	77.1	6.3	4.9						
36.0	56.8	75.9	5.3	4.0						
38.0	53.3	74.5	4.3	3.3						
40.0	49.6	72.8	3.5	2.6						
42.0	46.0	71.0	2.7							
43.0	43.9	69.9	2.3							



2821-1

2821-1

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
41.0 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	[°]			
13.8 14.0 16.0 18.0 20.0 22.0 24.0 26.0	78.0 77.8 75.0 72.2 69.4 66.5 63.6 60.5	86.2 86.2 85.7 85.1 84.3 83.5 82.5 81.4	15.1 14.2 11.3 8.8 7.2 5.9 5.0	14.6 14.6 13.1 10.6 8.7 7.2 6.0 5.1						
28.0 30.0	57.4 54.1	80.2 78.8	4.2 3.5	4.3 3.6						
32.0 34.0 36.0	50.7 47.1 43.3	77.3 75.5 73.5	3.0 2.6 2.2	3.1 2.6 2.2						
			Ángu	ılo de plu	ıma prin	cipal 83.0	[°]			
21.1 22.0 24.0 26.0 28.0 30.0 32.0	73.0 71.7 68.9 66.0 63.0 59.9 56.8	84.9 84.6 83.8 83.0 82.0 80.9 79.6	9.3 9.2 7.6 6.4 5.4 4.6 3.9	9.9 9.9 8.2 6.9 5.8 5.0 4.2						
34.0 36.0 38.0 40.0	53.5 50.1 46.4 42.6	78.2 76.6 74.7 72.7	3.3 2.9 2.5 2.1	3.6 3.1 2.6 2.2						
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]			
32.3 34.0 36.0 38.0 40.0 42.0	65.0 62.5 59.4 56.3 53.0 49.5	81.4 80.6 79.4 78.2 76.7 75.1	5.7 4.8 4.1 3.5 2.7	5.7 5.0 4.1 3.3 2.7 2.1						



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Nº de ident.: 9842523/95738/

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

Lastre central [t]:

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

Valor de vuelco: 2 - Vía ancha Lastre trasero [t]: 54.0

		_								
	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
41.0 m 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 [°]			
14.5 16.0 18.0 20.0 22.0 24.0	78.0 76.0 73.4 70.8 68.1 65.4	89.1 88.8 88.2 87.5 86.8 85.9	14.9 14.3 11.1 8.8 7.2 5.9	13.7 13.1 10.6 8.6 7.2 6.0						
26.0 28.0 30.0 32.0	62.6 59.8 56.8 53.8	84.9 83.8 82.5 81.1	4.9 4.2 3.5 3.0	5.0 4.3 3.6 3.0						
34.0	50.6	79.5	2.5	2.6						
22.0 24.0 26.0 28.0	73.0 70.3 67.6 64.9 62.1	87.7 87.0 86.2 85.3	9.0 8.3 6.7 5.7	9.0 9.0 8.3 6.9 5.8	ıma prin	cipal 83.	0[*]			
30.0 32.0 34.0 36.0 38.0 40.0	59.2 56.2 53.2 49.9 46.6	83.2 81.9 80.4 78.8	4.6 4.1 3.5 3.0 2.5 2.1	4.9 4.2 3.6 3.0 2.6						
	-				ıma prin	cipal 75.	1°10			-
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	5.0 4.8 4.0 3.3	. ,	,				

0.0

40.0

42.0

55.8

52.9

80.4

78.9

3.3

2.6



Nº de ident.: 9842523/95738/

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

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

	Inserciór	1	1	2	3	4	5	6	7	8
Alcan- ce [m]	Ángu- o de plumín [°]	Altura de rolda- nas [m]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]	Carga [t]
41.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (1916-1) 92.5 m Plumín 49.0 [m] Posición midfall (1916)										
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]			
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 Ángi	ılo de nlı	ıma prin	rinal 83 (1 ° 1 C			
22.8	73.0	90.6	7 1190	8.0	lina pini	l l l l l l l l l l l l l l l l l l l	<u> </u>			
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						
			Ángı	ılo de plu	ıma prin	cipal 75.0	D[°]			
34.9 36.0 38.0 40.0 42.0 43.0	65.0 63.5 60.9 58.1 55.5	86.8 86.3 85.2 84.0 82.7	4.6 4.0 3.3 2.5 2.2	4.3 3.9 3.2 2.6	-					



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]
44.0 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (1916-1) 32.5 m Plumín 13.0 [m] Posición midfall (1916)										
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]			
7.7 8.0 9.0 10.0 11.0 12.0 13.0 14.0 16.0	78.0 76.7 72.0 67.3 62.3 57.0 51.4 45.2 29.7	59.9 59.8 59.5 59.1 58.5 57.9 57.1 56.2 53.5	15.1 15.1	30.1 30.1 24.9 18.5 14.6 12.0 10.1 8.7 6.7 Ilo de plu 25.5 23.9	uma prind	cipal 83.	O [°]			
14.0 16.0 18.0 20.0	66.7 56.4 44.4 28.5	58.6 57.4 55.7 52.9	15.1 12.8 9.2 6.9	17.8 11.7 8.5 6.6						
			Ángı	ılo de plu	ıma prin	cipal 75.0	0 [°]			
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	·		- -			
			Ángı	ılo de plu	ıma prin	cipal 65.0	[°]			
29.6 30.0 32.0 34.0	55.0 52.8 40.1 20.9	53.0 52.8 50.8 47.4	10.9 7.7 6.0	9.6 9.3 7.7 6.0						



N° de ident.: 9842523/95738/

Radio de descarga:

360 °

Pieza de articulación de pluma principal:

Cabeza de pluma principal:

na 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	Cabeza	m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (1916-1) 35.5 m Plumín 16.0 [m] Posición midfall (1916)							
			Ángu	ılo de plu	ıma prin	cipal 88.0	[°]				
8.3	78.0	62.8		30.1							
9.0	75.5	62.6	15.1	29.9							
10.0	71.7	62.3	15.1	24.8							
11.0	67.9	61.9	15.1	19.8							
12.0	63.9	61.4	15.1	16.3							
13.0	59.8	60.8	14.1	13.9							
14.0	55.4	60.2	12.2	12.0							
16.0	45.8	58.4	9.4	9.4							
18.0	34.1	55.9	7.4	7.7							
			Ángu	ılo de plu	ıma prin	cipal 83.0	[°]				
13.6	73.0	62.0	15.1	25.6							
14.0	71.3	61.9	15.1	24.1							
16.0	63.4	61.0	15.1	15.8							
18.0	54.9	59.7	12.4	11.7							
20.0	45.2	57.9	9.7	9.3							
22.0	33.3	55.4	7.6	7.6							
			Ángı	ılo de plu	ıma prin	cipal 75.0	[°]				
21.7	65.0	59.8		16.3							
22.0	63.8	59.7	15.1	16.1							
24.0	55.3	58.4	13.0	11.8							
26.0	45.7	56.7	9.8	9.3							
28.0	33.9	54.2	7.6	7.6							
			Ángu	ılo de plu	ıma prin	cipal 65.0	[°]				
31.3	55.0	55.5		8.5							
32.0	52.0	55.1	9.6	8.1							
34.0	41.8	53.1	8.5	7.0							
36.0	28.5	50.2	7.1	6.0							
37.0	18.5	47.9	6.4	5.6							



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2821-1

 N° de ident.: 9842523/95738/ Pieza de articulación de pluma principal: Radio de descarga: 360 $^{\circ}$ 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 m Pluma principal, Punto de carga 3 - Midfall Cabeza de plumín (1916-1) 38.5 m Plumín 19.0 [m] Posición midfall (1916)									
			Ángu	ılo de plu	ıma prin	cipal 88.0	1°10			
9.0 10.0 11.0 12.0 13.0 14.0 16.0 18.0 20.0 22.0	78.0 74.7 71.6 68.3 65.0 61.6 54.3 46.2 36.7 24.0 73.0 67.9 61.1 53.8 45.7	65.7 65.5 65.1 64.7 64.3 63.7 62.4 60.7 58.3 54.9 64.9 64.3 63.3 61.9 60.2	15.1 15.0 12.2 10.0	25.0 19.8 14.9 11.7 9.7	uma prind	cipal 83.)[°]			
24.0 26.0	36.1 23.0	57.8 54.2	8.0 6.8	8.1 6.9						
			Ángı	ılo de plı	ıma prin	cipal 75.0	0 [°]			
23.0 24.0 26.0 28.0 30.0 32.0	65.0 61.5 54.2 46.1 36.6 23.8	62.5 62.0 60.7 59.0 56.6 53.1	15.1 13.2 10.6 8.4 7.1	16.5 14.9 11.8 9.8 8.1 7.0			-			
			Ángı	ılo de plı	ıma prin	cipal 65.0	D[°]			
33.1 34.0 36.0 38.0 40.0	55.0 51.4 42.9 32.5 16.8	58.0 57.3 55.4 52.7 48.4	8.5 7.6 6.7 5.9	7.8 7.3 6.4 5.5 4.8	·					