

## الکترو پمپ سانتریفیوژ چدنی FSA

پمپ های سری FSA از جمله پمپ هایی می باشد که قابلیت نصب موتور با سرعت های مختلف جهت تنظیم فشار و دبی دلخواه در نقطه کاری مورد نظر می باشد. جنس بدنه این پمپ ها از فولاد سری GG25 بوده و از آن برای تامین آب شهری و مصارف صنعتی و آتشنشانی استفاده می شود.

البته جنس پروانه این پمپ ها از برنز می باشند که با یک شفت استیل 403 کار می کند.



### موارد مصرف الکترو پمپ سانتریفیوژ چدنی FSA

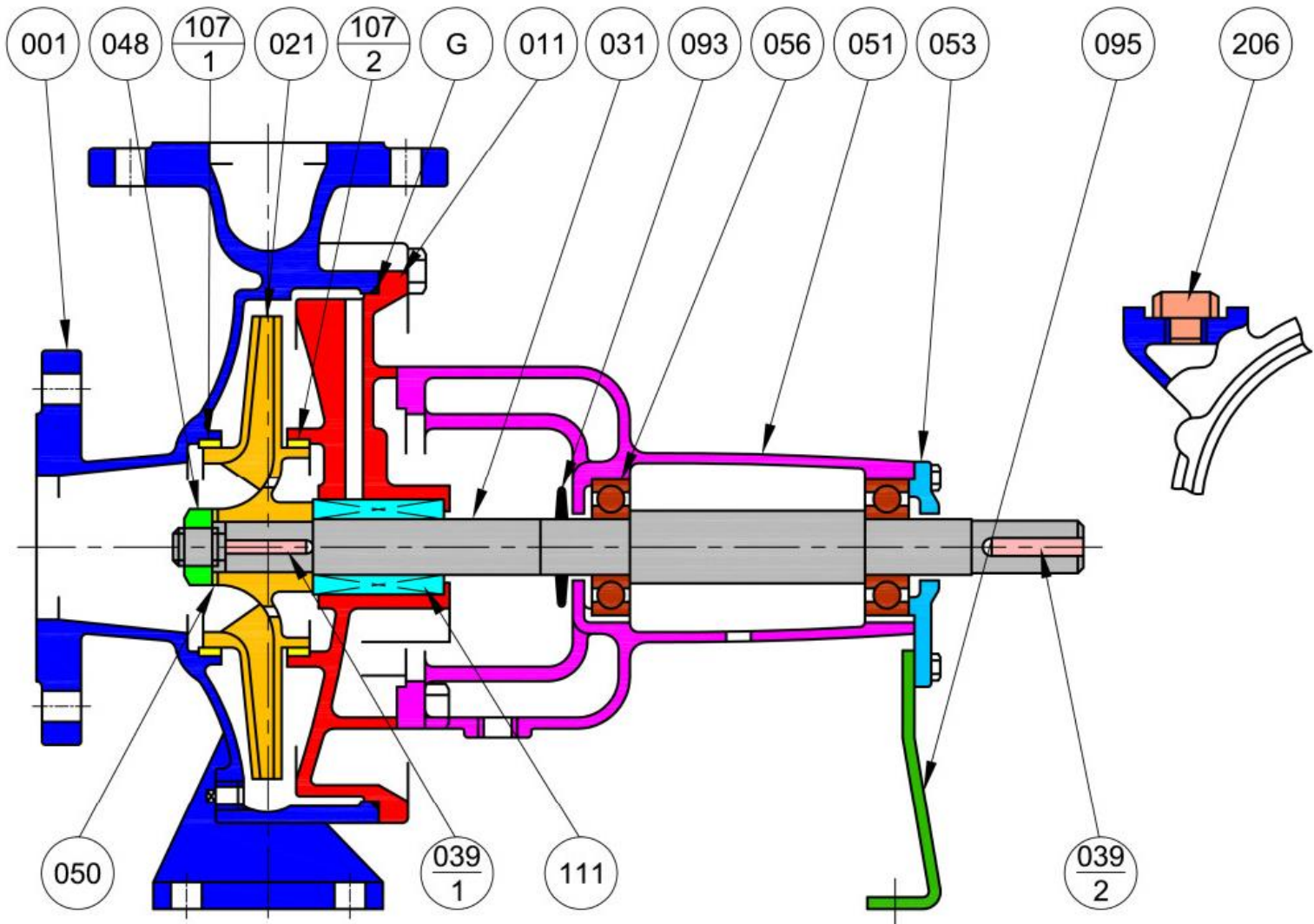
- ❖ تامین آب شهری
- ❖ مصارف صنعتی
- ❖ آبیاری
- ❖ گرمایش و تهویه مطبوع
- ❖ پمپاژ آب داغ و سرد
- ❖ آتش نشانی

### اجزاء تشکیل دهنده پمپ FSA (نمای داخلی)

- ❖ پوسته
- ❖ پروانه
- ❖ شفت



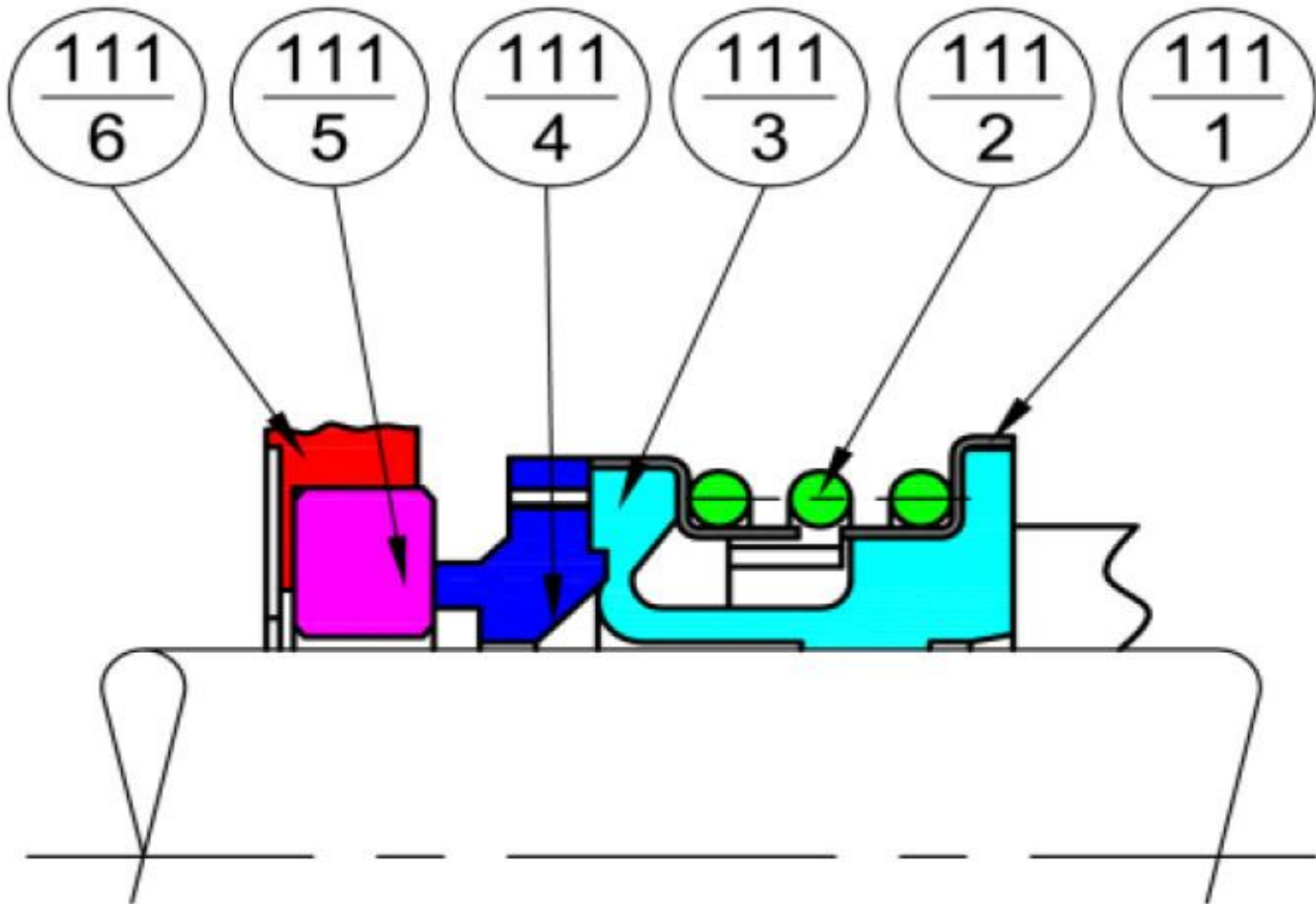
# SECTIONAL VIEW (General)



NO	Part Name	Material	Qty
001	Casing	Cast iron	1
011	Casing Cover		
021	Impeller	Bronze	
031	Shaft	Stainless steel	
039-1	Impeller key		
039-2	Coupling key		
048	Impeller nut	Brass	
050	Impeller nut washer		
051	Bearing housing	Cast iron	
053	Bearing cover		
056	Ball bearing	--	2
093	Deflector	Rubber	1
095	Bearing support	Steel	
107-1	Casing ring	Bronze	
107-2	Casing ring		
111	Mechanical seal	--	
206	Plug	Steel	
G	O - ring	rubber	



# Mechanical Seal Type (Standard)

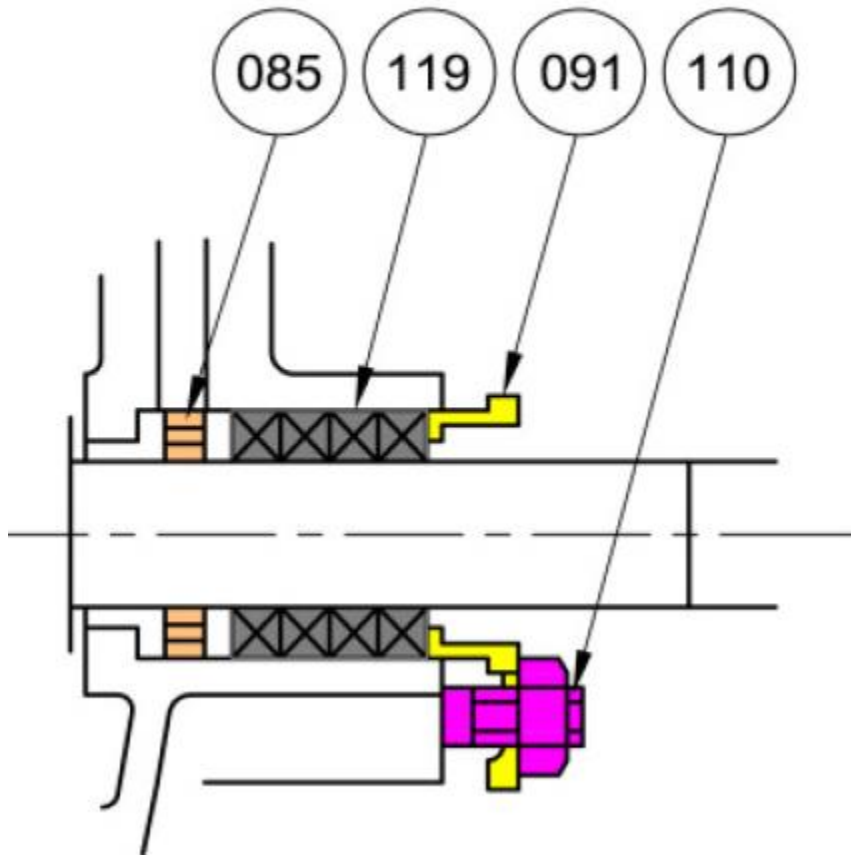


NO	Part Name	Material	Qty
111-1	Spring holder	Stainless steel	1
111-2	Coil spring		
111-3	Bellows	NBR	
111-4	Seal ring	Carbon	
111-5	Matting ring	Ceramic	
111-6	Cup gasket	NBR	



## Gland packing type

# With Lantern Ring

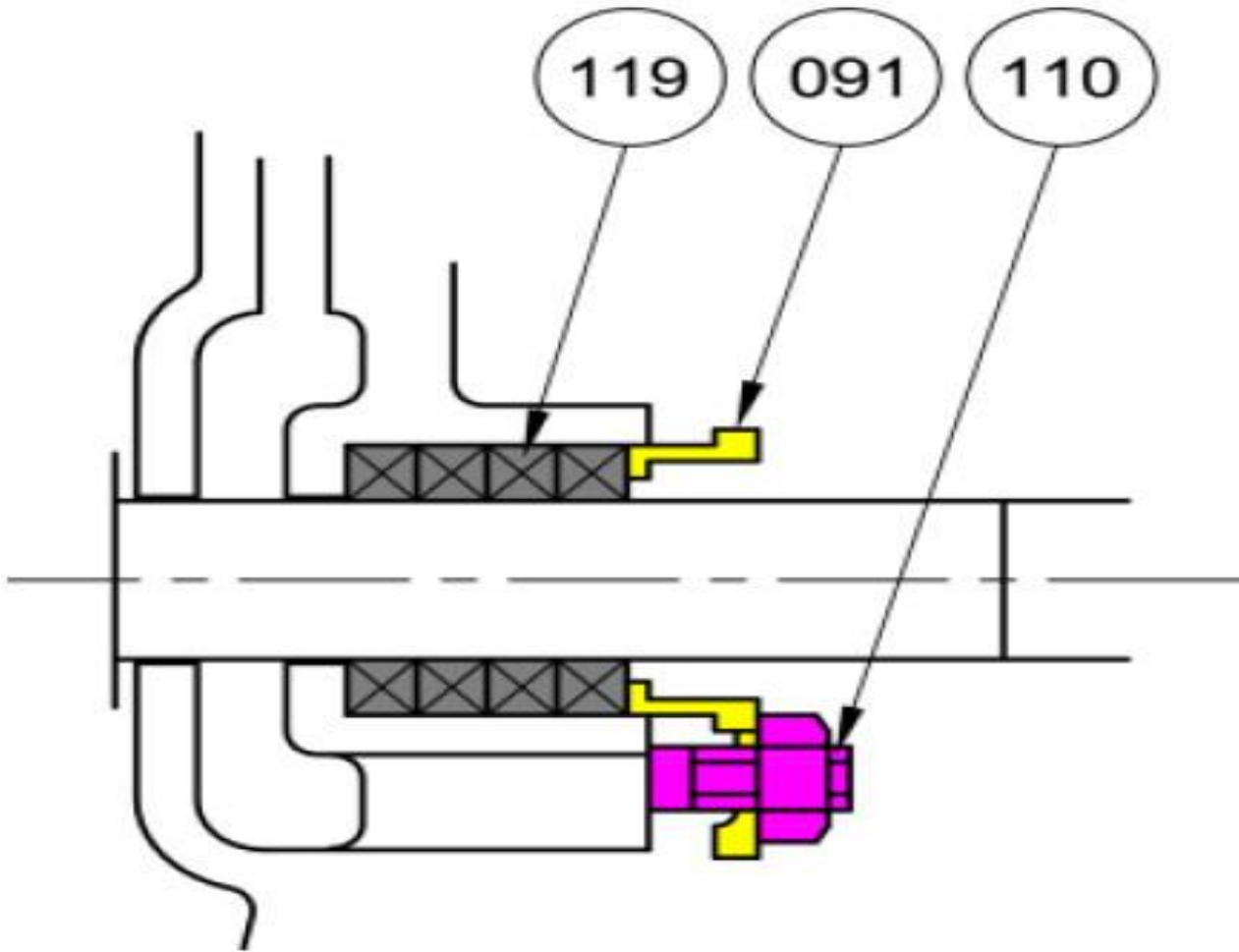


NO	PART NAME	Material	Qty
085	Lantern ring	Bronze	1
091	Gland		
110	Gland bolt	Brass	2
119	Gland packing	Non-Asbestos	4 or 5





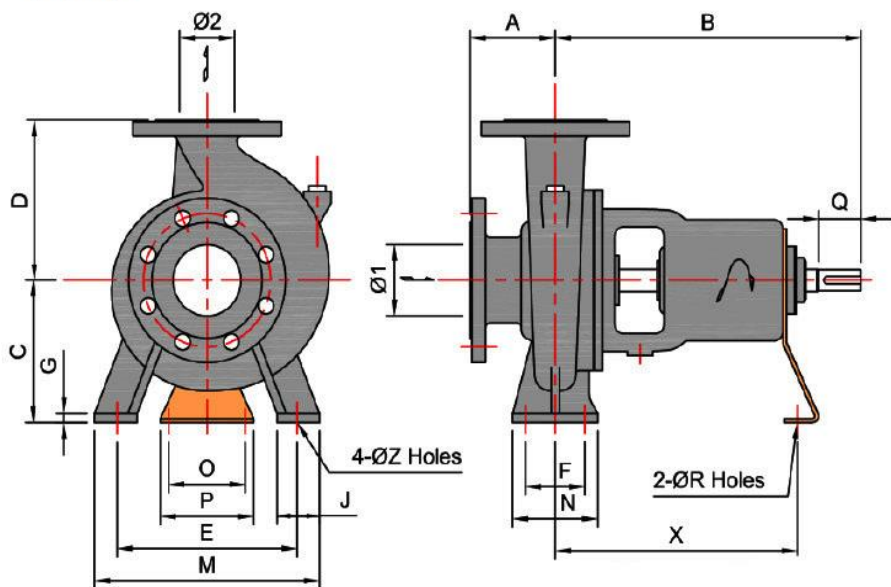
# Without Lantern Ring



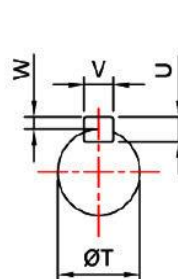
NO	PART NAME	Material	Qty
091	Gland	Bronze	1
110	Gland bolt	Brass	2
119	Gland packing	Non-Asbestos	4 or 5



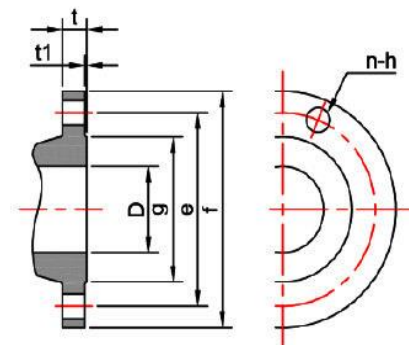
Pump



Shaft End



Flange



D	F	E	G	T1	T	N	H
mm	mm	mm	mm	mm	mm	Mm	mm
65	175	140	116	2	22	8	19
100	225	185	160	2	26	8	23
150	305	260	230	2	28	12	25
200	350	305	275	2	30	12	25
250	430	380	345	2	34	12	27

D	F	E	G	T1	T	N	H
mm	mm	mm	mm	mm	mm	Mm	mm
40	140	105	81	2	20	4	19
50	155	120	96	2	20	4	19
65	175	140	116	2	22	4	19
80	185	150	126	2	22	8	19
100	210	175	151	2	24	8	19
125	250	210	182	2	24	8	23
150	280	240	212	2	26	8	23
200	330	290	262	2	26	12	23



جدول انتخاب پمپ FSA

Q (m3/h)

1450 RPM

نام مدل	قطر پروانه	kW	H (m)																												
			0	3	4.5	6	7.5	9	10.5	12	13.5	15	16.5	18	21	24	27	30	33	36	39	42	48	54	60	66	72	78	84	90	
50*40 FS4HA	209	0.75	14.0	-	13.5	13	12.4	11.6	10.6	9.5																					
	200	0.75	12.6	-	12	11.6	11	10	9	8.2																					
	190	0.75	11.1	-	10.5	10	9.3	8.4	7.5																						
	182	0.4	10.0	-	9.2	8.6	7.9	7.2	6.4																						
	165	0.4	8.1	-	7.5	6.9	6	5.3																							
65*50 FS4HA	209	1.1	13.7	-	-	-	13.4	13.2	13.0	12.7	12.3	11.8	11.3	10.7	9.1																
	204	1.1	13.0	-	-	-	12.7	12.5	12.2	11.9	11.5	11.1	10.6	10.0	8.4																
	199	0.75	12.2	-	-	-	11.9	11.7	11.5	11.2	10.8	10.4	9.9	9.3	7.8																
	190	0.75	11.0	-	-	-	10.7	10.5	10.3	10.0	9.5	9.1	8.5	7.9	6.5																
	180	0.75	9.9	-	-	-	9.5	9.3	9.0	8.7	8.3	7.9	7.3	6.7																	
65*50 FS4JA	261	2.2	23.3	-	-	-	22.4	22	21.8	21.5	21	20.7	20.2	19.5	17.5																
	255	2.2	21.5	-	-	-	20.6	20.3	20	19.8	19.4	19.0	18.4	17.7	15.7																
	242	1.5	19.5	-	-	-	18.5	18.2	18	17.5	17	16.6	15.9	15.2	13.4																
	230	1.5	17.0	-	-	-	16	15.8	15.5	15	14.7	14.1	13.5	12.7																	
	210	1.1	13.9	-	-	-	13	12.8	12.5	12.2	11.9	11.4	10.8	10																	
80*65 FS4GA	176	1.1	10.5	-	-	-	-	-	-	10.0	9.9	9.7	9.6	9.2	8.8	8.3	7.8	7.3	6.6	5.9	5.2										
	170	1.1	9.8	-	-	-	-	-	-	9.2	9.1	9.0	8.8	8.4	8.1	7.6	7.1	6.6	6.0	5.3	4.5										
	150	0.75	7.5	-	-	-	-	-	-	6.8	6.7	6.6	6.4	6.0	5.6	5.1	4.6	4.1	3.6												
	140	0.5	6.4	-	-	-	-	-	-	5.7	5.5	5.4	5.2	4.9	4.5	4.1	3.6	3.1	2.6												
80*65 FS4HA	215	2.2	16.3	-	-	-	-	-	15.8	15.6	15.5	15.3	15	14.7	14	13.7	13.0	12.3	11.5	10.7	9.7										
	207	1.5	14.7	-	-	-	-	-	14.3	14.2	14	13.9	13.7	13.2	12.7	12	11.4	10.6	10	9											
	195	1.5	12.7	-	-	-	-	-	12.3	12.2	12	11.8	11.6	11	10.7	10	9.5	8.8	8												
	185	1.1	11.4	-	-	-	-	-	11	10.8	10.6	10.4	10	9.8	9.3	8.7	8	7.4													
	175	1.1	10.0	-	-	-	-	-	9.6	9.5	9.4	9.2	9	8.6	8	7.5	6.8														
80*65 FS4JA	261	3.7	24.0	-	-	-	-	-	23.6	23.4	23.3	23	22.9	22.4	21.8	21	20	19.4	18.4	17.4	16.3										
	250	3	21.8	-	-	-	-	-	21.3	21	20.9	20.7	20.5	20	19.4	18.7	18	17	16.3	15.4	14.4										
	237	2.2	19.1	-	-	-	-	-	18.8	18.7	18.5	18.3	18	17.6	17	16.4	15.7	15	14	13	12										
	225	2.2	16.9	-	-	-	-	-	16.5	16.4	16.2	16	15.8	15.3	15	14	13.5	12.8	12	11	10										
	210	1.5	14.7	-	-	-	-	-	14.1	14.0	13.8	13.6	13.4	13	12.3	11.6	11	10.3	9.6	9											
80*65 FS4KA	333	11	39.2	-	-	-	-	-	-	-	-	-	-	-	-	-	38.4	38.2	38.1	37.9	37.6	37	36	35	33.7	32	30	28	25.7		
	328	11	38.6	-	-	-	-	-	-	-	-	-	-	-	-	-	37.7	37.5	37.3	37.1	36.8	36	35	34	32.5	31	29	27	24.7		
	318	11	36.1	-	-	-	-	-	-	-	-	-	-	-	-	-	34.9	34.7	34.4	34.1	33.7	33	32	30.7	29.3	28	26	24	22		
	305	7.5	32.8	-	-	-	-	-	-	-	-	-	-	-	-	-	31.6	31.3	31.0	30.7	30	29.5	28.5	27.4	26	24.6	23	21	18.7		
	286	7.5	28.8	-	-	-	-	-	-	-	-	-	-	-	-	-	27.6	27.4	27.2	26.9	26.5	25.8	25	23.8	22.5	21	19.5	17.6	15.6		
	277	7.5	27.4	-	-	-	-	-	-	-	-	-	-	-	-	-	26.0	25.7	25.4	25.1	24.7	24	23	22	20.5	19	17.3	15.4			
100*80 FS4GA	180	2.2	10.6	-	-	-	-	-	-	-	-	-	-	10.4	10.3	10.2	10.1	9.9	9.8	9.6	9.2	8.8	8.3	7.8	7.3	6.7	6.1				
	175	2.2	10.0	-	-	-	-	-	-	-	-	-	-	9.7	9.6	9.5	9.4	9.2	9.1	8.9	8.6	8.2	7.7	7.3	6.7	6.1					
	169	1.5	9.1	-	-	-	-	-	-	-	-	-	-	8.8	8.7	8.6	8.5	8.4	8.2	8.1	7.7	7.3	6.8	6.3	5.8	5.2					
	160	1.5	8.1	-	-	-	-	-	-	-	-	-	-	7.7	7.6	7.5	7.4	7.3	7.1	7.0	6.6	6.3	5.8	5.3	4.7						
	145	1.1	6.5	-	-	-	-	-	-	-	-	-	-	6.1	6.0	5.8	5.7	5.6	5.4	5.2	4.9	4.5	4.1	3.6							
100*80 FS4HA	223	3.7	17.0	-	-	-	-	-	-	-	-	-	-	16.6	16.4	16.3	16.1	15.9	15.7	15.5	15.0	14.5	13.9	13.2	12.5	11.7	10.8	9.8			
	210	3.7	14.9	-	-	-	-	-	-	-	-	-	-	14.5	14.4	14.2	14.0	13.8	13.6	13.4	12.8	12.2	11.5	10.8	10.0	9.2	8.3				
	199	2.2	13.1	-	-	-	-	-	-	-	-	-	-	12.7	12.5	12.4	12.2	12.0	11.8	11.6	11.0	10.4	9.7	9.0	8.1	7.2					
	180	1.5	10.6	-	-	-	-	-	-	-	-	-	-	10.0	9.9	9.7	9.5	9.4	9.2	9	8.5	8	7.2	6.4							
100*80 FS4JA	269	5.5	25.0	-	-	-	-	-	-	-	-	-	-	-	-	-	24.4	24.2	24.0	23.7	23.4	22.8	22	21	20	18.9	17.7	16.4	15		
	265	5.5	24.2	-	-	-	-	-	-	-	-	-	-	-	-	-	23.7	23.5	23.3	23.0	22.7	22	21.3	20.4	19.4	18.3	17	15.8	14.4		
	255	5.5	22.1	-	-	-	-	-	-	-	-	-	-	-	-	-	21.7	21.5	21.3	21.0	20.8	20	19.3	18.4	17.3	16.2	15	13.7	12.4		
	236	3.7	18.3	-	-	-	-	-	-	-	-	-	-	-	-	-	17.7	17.5	17.2	17.0	16.7	16.0	15.2	14.3	13.3	12	10.9				
	215	3.7	14.8	-	-	-	-	-	-	-	-	-	-	-	-	-	13.9	13.7	13.4	13.2	13	12.2	11.4	10.4	9.4	8.3					







Q (m3/h)

نام مدل	قطر پروانه	kW	0	39	42	48	54	60	66	72	78	84	90	100	110	120	130	140	150	165	180	195	210	225	240	270	300	330	350	
		H (m)																												
100°80 FS4GCA	193	4	12.1	-	11.4	11.2	11	10.7	10.5	10.2	10	9.6	9.3	8.8	8.2	7.5	6.8	6												
	178	3	10.5	-	9.7	9.4	9.2	9	8.6	8.3	8	7.7	7.4	6.8	6	5.4	4.6													
	166	2.2	8.6	-	8	7.6	7.4	7	6.8	6.5	6.2	5.9	5.5	4.9	4.3	3.6														
100°80 FS4HCA	223	7.5	18.0	-	17.5	17.3	17	16.9	16.6	16.4	16	15.8	15.4	14.8	14	13.6	12.9	12	11.4	10										
	205	5.5	14.4	-	14	13.7	13.4	13.2	13	12.6	12.3	12	11.7	11	10.4	9.7	9	8	7											
	187	3.7	11.6	-	11	10.8	10.5	10.3	10	9.7	9.4	9	8.8	8.2	7.5	6.8	6													
125°100 FS4JCA	273	11	23.5	-	-	-	-	22.8	22.7	22.6	22.4	22.2	22	21.7	21	20.7	20	19.4	18.7	17.4	16	14.5	13	11.4	10					
	258	11	20.9	-	-	-	-	20	19.9	19.7	19.5	19.3	19	18.6	18.2	17.6	17	16.4	15.7	14.6	13.3	11.8	10	8.5						
	243	11	18.7	-	-	-	-	17.7	17.5	17.3	17	16.8	16.6	16	15.6	15	14.4	13.8	13	12	10.6	9	7.3							
	230	7.5	16.6	-	-	-	-	15.5	15.3	15	14.8	14.6	14.3	13.8	13.2	12.6	12	11.3	10.5	9.2	7.8	6								
125°100 FS4KA	333	18.5	39.0	-	-	-	-	38	37.8	37.5	37.2	37	36.5	35.8	34.8	33.7	32.5	31	29.4	26.5	23	19.5	15.3							
	319	15	35.4	-	-	-	-	35	34.6	34.3	34	33.5	33	32	31	29.7	28.2	26.6	24.8	21.8	18.4	14.6								
	302	15	31.8	-	-	-	-	31	30.7	30.3	30	29.4	29	28	27	25.7	24.4	22.8	21	17.9	14									
	289	15	28.6	-	-	-	-	27.4	27	26.8	26.4	26	25.5	24.6	23.6	22.4	21	19.4	17.7	14.5	11									
	275	11	25.8	-	-	-	-	24	23.8	23.4	23	22.4	21.8	20.7	19.4	18	16	14.4	12.4											
125°100 FS4LA	413	37	80.1	-	-	-	-	58.4	58	57.3	56.7	56	55.3	54	52.4	50.7	48.8	46.7	44.3	40	35									
	389	30	52.8	-	-	-	-	51	50.4	50	49.3	48.7	48	46.7	45	43.3	41.2	39	36.2	31.6	26									
	372	22	48.1	-	-	-	-	46.2	45.7	45.2	44.6	44	43	41.6	40	38.0	35.8	33.4	30.7	26										
	356	18.5	43.2	-	-	-	-	40.5	40	39.3	38.6	37.8	37	35.2	33.2	31	28.4	25.5	22.4	17										
	340	15	38.7	-	-	-	-	35.3	34.7	34	33	32.3	31.4	29.7	27.7	25.4	23	19.7	16											
150°125 FS4HA	224	15	16.7	-	-	-	-	-	-	-	-	-	16.7	16.7	16.6	16.6	16.6	16.6	16.5	16.4	16.3	16.1	15.9	15.7	15.4	14.7	14.2	13.6		
	213	11	15.0	-	-	-	-	-	-	-	-	-	15.0	15.0	15.0	14.9	14.9	14.8	14.6	14.4	14.2	14	13.5	13	12.3	11.8	11			
	202	11	13.4	-	-	-	-	-	-	-	-	-	13.1	13.1	13.0	12.9	12.8	12.7	12.6	12.4	12	11.8	11.4	11	10					
	191	7.5	11.9	-	-	-	-	-	-	-	-	-	11.6	11.5	11.4	11.3	11.1	11	10.8	10.6	10.3	10	9.5	9	8.6					
150°125 FS4JA	274	22	26.0	-	-	-	-	-	-	-	-	-	-	25.6	25.5	25.4	25.3	25	24.9	24.7	24.4	24	23.8	23.4	22.5	21.3	20	19		
	261	18.5	23.0	-	-	-	-	-	-	-	-	-	-	22.6	22.5	22.3	22.2	22	21.9	21.6	21.3	21	20.6	20	19	17.7	16			
	248	15	20.4	-	-	-	-	-	-	-	-	-	-	20.1	20.0	19.8	19.7	19.6	19.4	19	18.9	18.7	18.3	17.9	16.8	15.3				
	235	15	18.2	-	-	-	-	-	-	-	-	-	-	17.9	17.8	17.8	17.7	17.5	17.3	17	16.7	16.3	16	15.4	14.2					
	222	15	16.0	-	-	-	-	-	-	-	-	-	-	15.8	15.8	15.7	15.6	15.4	15.2	15	14.8	14.2	13.7	13.2	12					
150°125 FS4KA	334	37	39.6	-	-	-	-	-	-	-	-	-	-	-	38.9	38.7	38.5	38.3	38	37.6	37	36.7	36	35.7	34.5	33	31.4	30		
	318	30	35.4	-	-	-	-	-	-	-	-	-	-	-	34.8	34.6	34.5	34.3	34	33.7	33.3	33	32.4	32	30.6	29	27.4	26		
	302	30	32.0	-	-	-	-	-	-	-	-	-	-	-	31.2	31.0	31	30.6	30.3	30	29.4	29	28.4	28	26.4	25	23	21.7		
	286	30	28.4	-	-	-	-	-	-	-	-	-	-	-	27.4	27.2	27	26.6	26	25.7	25	24.6	24	23	21.7	20	18			
	270	22	24.9	-	-	-	-	-	-	-	-	-	-	-	23.3	23.2	23	22.8	22.4	22	21.4	21	20.2	19.5	18	16				
150°125 FS4LA	424	75	65.6	-	-	-	-	-	-	-	-	-	-	-	63.5	63.3	63	62.8	62.4	62	61.4	61	60.3	59.7	58.2	56.5	54.5	53		
	401	55	57.9	-	-	-	-	-	-	-	-	-	-	-	56.5	56.3	56	55.7	55	54.7	54	53.4	52.6	52	50	47.5	44.7	42		
	378	45	50.7	-	-	-	-	-	-	-	-	-	-	-	48.8	48.5	48	47.8	47.2	46.5	46	45	44	43	41	38.3	35.3			
	355	45	43.4	-	-	-	-	-	-	-	-	-	-	-	42.4	42.1	42	41.5	41	40.3	39.5	38.7	37.7	36.6	34	30				
	332	30	39.2	-	-	-	-	-	-	-	-	-	-	-	36.5	36.2	36	35.3	34.6	33.8	33	32	30.7	29.3	26	22.4				
150°100 FS4NA	511	90	91.3	-	-	-	-	-	-	-	-	-	-	90.1	89.8	89.4	89	88.6	88	87	86	84.7	83.3	82	78.5	74.5	70	66.5		
	485	90	82.1	-	-	-	-	-	-	-	-	-	-	81.2	80.9	80.5	80	79.6	79	78	76.7	75.5	74	72.7	69.4	65.5	61	58		
	460	75	73.9	-	-	-	-	-	-	-	-	-	-	72.9	72.5	72.0	71.5	71	70	69	68	67	65.5	64	61	57.5	53.4	50.5		
	434	75	66.4	-	-	-	-	-	-	-	-	-	-	65.0	64.6	64.1	63.6	63	62.2	61	60	59	57.5	56	53	49.3	45	42		
	409	55	59.4	-	-	-	-	-	-	-	-	-	-	57.9	57.4	56.8	56.2	55.5	54.5	53.3	52	51	49.3	48	44.7	41	37.6			
200°150 FS4HA	224	15	14.1	-	-	-	-	-	-	-	-	-	-	-	13.8	13.8	13.7	13.6	13.4	13.2	13.0	12.8	12.5	12.2	11.4	10.6	9.7	9.0		
	213	11	12.4	-	-	-	-	-	-	-	-	-	-	-	12.1	12.0	11.9	11.8	11.6	11.4	11.2	11.0	10.7	10.4	9.7	8.9	7.9			
	202	7.5	10.5	-	-	-	-	-	-	-	-	-	-	-	10.1	10.0	9.9	9.8	9.6	9.3	9.1	8.8	8.5	8.2	7.4	6.5				
	191	7.5	9.7	-	-	-	-	-	-	-	-	-	-	-	9.0	8.8	8.7	8.6	8.3	8.1	7.8	7.5	7.1	6.7	5.8	4.8				

1450 RPM





Q (m<sup>3</sup>/h)

نام مدل	قطر پروانه	kW	H (m)																										
			0	140	150	165	180	195	210	225	240	270	300	330	350	400	450	500	550	600	650	700	800	900	1000	1100	1200	1300	
200*150 FS4JA	274	37	25.0	-	24.9	24.8	24.7	24.6	24.5	24.4	24.3	24	23.7	23.3	23	22	21	19.4	17.4	14.7									
	261	30	22.6	-	22.3	22.2	22.1	22.1	22	21.9	21.8	21.5	21	20.7	20.4	19.3	18	16	13.7										
	248	22	20.0	-	19.5	19.4	19.3	19.2	19.1	19	18.8	18.5	18	17.6	17.2	16	14.5	12.4											
	235	22	17.6	-	17.2	17.1	17	16.9	16.8	16.6	16.4	16	15.4	14.7	14	12.6	10.5	8											
200*150 FS4KA	222	18.5	15.4	-	15	14.9	14.7	14.6	14.4	14	14	13.5	13	12.3	12	10	8												
	334	55	38.4	-	38	38	38	38	37.6	37.4	37	37	36.3	35.7	35.3	34	32.6	31	29	26.6									
	318	55	34.5	-	34	34	34.1	34.0	34	34	33.7	33.4	33	32.4	32	30.7	29.2	27.4	25.5	23.6									
	302	45	30.3	-	30.4	30.4	30.4	30	30	30	30	30	29	29	28	27	25	23	21.4										
200*150 FS4LA	286	45	26.4	-	26.5	26	26	26	26	26	26	25.4	25	24	24	23	21	19											
	411	90	56.0	-	-	-	56	56	56	55.5	55	55	54	53.5	53	51	49	47	44	40.5	37	33							
	393	75	51.4	-	-	-	51	50.5	50	50	50	49	48	47.6	47	45	43	40.6	38	34	30								
	370	75	45.5	-	-	-	45	44.5	44	44	44	43	42	41	41	39	37	34	31	27	23								
200*150 FS4NA	350	55	40.9	-	-	-	40	39	39	39	38	37	36	35	33	31	28	25	21.5										
	329	45	34.9	-	-	-	35	34.5	34	34	33.5	33	32	31	30	28	25	22	20	17									
	511	185	89.5	-	-	-	90	90	90	90	90	89	89	88	87	85	83	79	75	71	65	60							
	485	150	81.0	-	-	-	81	81	81	81	81	80.4	79.7	79	78	75.7	73	69	64	59	53								
250*200 FS4LA	460	132	70.9	-	-	-	70.4	70	70	70	69.6	69	68	67	66	64	60.5	56.6	52	46.5									
	434	110	63.1	-	-	-	62.4	62	62	62	62	61	60	59	58	55.5	52	48	43	38									
	409	75	56.5	-	-	-	56	56	56	55	55	54	53	51	50	47	43	38	34										
	349	90	37.2	-	-	-	-	-	-	-	-	-	-	-	-	35.4	35	34	33	32	30.7	29.4	28	25	22	19			
250*200 FS4NA	434	185	60.3	-	-	-	-	-	-	-	-	-	-	-	60	60	59	59	58	58	57	56	54	51	48	44	41	37	
	418	150	55.1	-	-	-	-	-	-	-	-	-	-	-	55	54	54	53	53	52	51	50	47	44	41	37	33		
	399	132	49.5	-	-	-	-	-	-	-	-	-	-	-	49	48	48	47	46	45	44	43	40	37	33	29.4	25		
	374	110	43.8	-	-	-	-	-	-	-	-	-	-	-	42	42	41	40	39	38	37	36	33	30	26	22			
250*200 FS4NA	349	90	37.2	-	-	-	-	-	-	-	-	-	-	-	35.4	35	34	33	32	30.7	29.4	28	25	22	19				
	542	315	94.8	-	-	-	-	-	-	-	-	-	-	-	94.5	94	94	93	92	92	91	89	87	83	79	75	70	64	
	520	280	88.9	-	-	-	-	-	-	-	-	-	-	-	88	88	87	87	86	85	84	82.5	79.5	76	72	67	62	56	
	488	250	78.1	-	-	-	-	-	-	-	-	-	-	-	77	77	76	75.5	75	73.5	72	71	68	64	60	55	49	43	
250*200 FS4NA	461	200	69.0	-	-	-	-	-	-	-	-	-	-	-	68	67.5	67	66	65	64	62	61	57.5	53	49	43	37		
	434	150	59.9	-	-	-	-	-	-	-	-	-	-	-	59	58	57	56	55	53	52	50	47	43	38				

1450 RPM







Q (m<sup>3</sup>/h)

2900 RPM

2900 RPM

نام مدل	قطر پروانه	kW	Q (m <sup>3</sup> /h)																										
			0	6	7.5	9	10.5	12	13.5	15	16.5	18	21	24	27	30	33	36	39	42	48	54	60	66	72	78	84	90	
50°40 FS2HA	209	7.5	59.7	58.4	58	57.8	57.3	56.6	55.8	54.7	53.3	51.7	48	43	38														
	202	5.5	54.3	53.3	52.9	52.5	51.9	51.1	50.2	49.2	48.0	46.5	43.1	38.8	33.6														
	195	5.5	49.5	48.5	48	47.4	46.7	45.9	45	44	43	41.5	38.3	34	28.5														
	185	3.7	44.9	43.5	42.9	42.2	41.4	40.5	39.4	38.2	36.8	35.2	31.5	27.1															
	174	3.7	39.9	38.2	37.6	37	36.2	35.2	34	33	31.5	30	26	22															
164	3.0	35.3	33.8	33.1	32.4	31.6	30.6	29.5	28.3	26.9	25.3	21.4																	
65°50 FS2HA	209	7.5	57.1	-	-	-	-	56	55.7	55.2	54.7	54	52.7	51	49.3	47	45	42.4	39.7	37									
	197	7.5	51.4	-	-	-	-	49.2	48.7	48.2	47.6	47.0	45.6	44.1	42.4	40.4	38.2	35.8	33.1	30.0									
	186	5.5	45.1	-	-	-	-	43.5	43	42.4	42	41.2	39.7	38	36.3	34.4	32.3	30	27.6	25									
	176	5.5	39.8	-	-	-	-	38.2	37.8	37.3	36.7	36.1	34.7	33.1	31.2	29.2	26.9	24.4	21.7	19.0									
	166	3.7	34.5	-	-	-	-	32.8	32.5	32	31.7	31.2	30	28.6	27	25	22.4	19.6	16.4										
65°50 FS2JA	250	15.0	94.0	-	-	-	-	92.2	91.6	91.0	90.2	89.3	87.2	84.7	81.7	78.3	74.5	70.3	65.7	60.9	50.8								
	222	11.0	70.9	-	-	-	-	70	69.3	69	68.4	67.8	66.4	64.7	62.7	60.2	57.3	54	50	45.6									
	210	11.0	63.8	-	-	-	-	62.5	62	61.6	61	60.5	59.2	57.5	55.5	52.9	49.7	45.6	40.6										
	198	11.0	56.1	-	-	-	-	54.7	54.3	54	53.3	52.7	51.2	49.3	47	44	40	35.5	30										
	184	7.5	49.0	-	-	-	-	47.8	47.4	47.0	46.4	45.8	44.2	42.2	39.5	36	32	26.8											
80°65 FS2GA	176	7.5	43.4	-	-	-	-	-	-	-	-	43	42.7	42.4	42	41.6	41	40.6	40	39.4	38	36.5	34.6	32.5	30	27	24	20	
	170	7.5	40.5	-	-	-	-	-	-	-	-	39	38.9	38.5	38	37.7	37	36.7	36	35.5	34	32.4	30.5	28.3	26	23	19.6		
	155	5.5	32.4	-	-	-	-	-	-	-	-	32	31.7	31.2	31	30.3	29.7	29	28.3	27.6	26	24	22	19.6	17	14			
	147	5.5	28.3	-	-	-	-	-	-	-	-	27.4	27.0	26.7	26	25.7	25	24.6	24	23.3	21.7	19.8	17.6	15	12				
80°65 FS2HA	215	15.0	64.3	-	-	-	-	-	-	-	-	63.8	63.4	63	62.3	61.7	61	60.3	59.5	58.7	56.8	54.8	52.4	50	46.8	43.3	39	35	
	206	15.0	59.0	-	-	-	-	-	-	-	-	58.5	58.0	57.5	57	56	55.5	54.7	54	53	51.4	49.4	47	44.6	41.6	38	33.4	28	
	196	11.0	52.6	-	-	-	-	-	-	-	-	52	51.7	51.2	50.7	50	49.4	48.7	48	47.1	45.2	43	40	37.5	34	30	26		
	180	7.5	44.1	-	-	-	-	-	-	-	-	43.0	42.6	42.2	41.7	41	40.6	40	39	38.4	36.6	34.4	32	29	25.5	21.5			
80°65 FS2JA	261	30.0	97.2	-	-	-	-	-	-	-	-	95	94.5	94	93.3	92.5	91.7	91	90	89	86.2	83.2	80	76	72	67	62	56.7	
	249	22.0	88.5	-	-	-	-	-	-	-	-	86.6	86.1	85.5	84.8	84	83.3	82.5	81.5	80.5	78	75.5	72	68.5	64	59	53		
	240	18.5	83.5	-	-	-	-	-	-	-	-	82.3	82	81.2	80.4	79.6	78.8	77.8	76.8	75.7	73.2	70.4	67.2	63.6	59.5	54.8	49.3		
	220	15.0	65.5	-	-	-	-	-	-	-	-	64.0	63.4	62.8	62	61.3	60.5	59.7	58.8	58	55.8	53.4	50.6	47.2	43.0	37.9			
182	11.0	49.6	-	-	-	-	-	-	-	-	47.6	47	46.4	45.8	45	44.5	43.7	43	42.1	40	38	35	31	26					

Q (m<sup>3</sup>/h)

نام مدل	قطر پروانه	kW	Q (m <sup>3</sup> /h)																													
			0	39	42	48	54	60	66	72	78	84	90	100	110	120	130	140	150	165	180	195	210	225	240	270	300	330				
100°80 FS2GA	180	15.0	41.6	-	39.8	39.5	39	38.8	38.4	38	37.6	37.2	36.8	36	35	34	32.4	30.6	28.4	24												
	172	15.0	38.0	-	36.5	36.2	35.8	35.4	35.1	34.6	34	33.7	33.2	32	31	29.7	28	26	23.7													
	167	11.0	33.4	-	32.1	31.8	31.4	31	30.5	30	29.5	29	28.3	27	26	24.3	22.5	20	17.5													
	160	7.5	27.5	-	26.3	26.0	25.5	25.1	24.6	24.2	23.6	23.0	22.4	21.1	19.5	17.5	14.8															
100°80 FS2HA	223	30.0	65.4	-	64.8	64.5	64.1	63.7	63	62.7	62	61.4	60.6	59	57.2	55	52	49	46	39												
	213	22.0	58.8	-	57.8	57.4	56.9	56.4	55.8	55.1	54.4	53.7	53	51	49.4	47	44.6	42	38	31												
	197	18.5	51.5	-	50.4	49.9	49.4	49	48.2	47.5	46.8	46	45	43.6	42	39.6	37	34	30													
	187	15.0	43.0	-	41.6	41.1	40.5	39.9	39.2	38.5	38	37	36	34	32	29	26	22														
100°80 FS2JA	269	45.0	100.0	-	99.4	99	98.5	98	97	96.5	95.6	94.6	93.5	91	89	86	82	78	73	65	55											
	252	37.0	89.6	-	87.0	86.7	86.3	85.8	85.2	84.5	83.7	82.8	81.8	79.8	77.2	74.2	70.4	65.9	60.6	50.9												
	233	30.0	76.3	-	74.6	74	73.5	73	72	71.4	70.4	69.4	68	66	63	60	56	51	45	34												
	216	30.0	64.7	-	62.7	62.1	61.4	60.7	59.8	58.9	58	56.5	55	52	48.6	44	38.7	32	24													
100°80 FS2GCA	193	30.0	48.4	-	-	-	-	47	46.8	46.5	46	45.7	45	44.3	43.5	42.7	41.8	41	39.4	37.8	36	34.3	32	30	24.6							
	178	22.0	40.6	-	-	-	-	39.2	38.9	38.5	38.1	37.7	37.0	36.2	35.4	34.6	33.7	32.8	31.3	29.8	28.1	26.2	24.0	21.6								
	166	18.5	34.7	-	-	-	-	33	32.4	32	31.4	31	30	29	28	27	26	25	23.6	22	20	18.5	16.5									
100°80 FS2HCA	223	55.0	68.9	-	-	-	-	68.5	68.2	68	67.6	67	66.6	66	65	64.3	63.5	62.6	61	60	58	56	54	52	47	39						
	205	45.0	58.1	-	-	-	-	58	57.8	57.5	57.3	57	56.4	56	55	54.3	53.4	52.5	51	49	47	45	43	40	35							
	187	30.0	46.8	-	-	-	-	45.9	45.6	45.2	44.8	44.4	43.6	42.7	42	41	40	39	37.3	35.6	34	32	30	27								
	333	75.0	157.3	-	156	155	154.4	153.5	152	151	149	147.5	145.5	142	137	133	127.5	122	117													
100°65 FS2KA	318	75.0	144.4	-	141.7	140.9	140.0	138.9	137.5	136.0	134	132	130	126	122	117	112	107	102													
	305	75.0	129.3	-	127	126.4	125.6	124.6	123.5	122	120.7	119	117	114	110	106	101	96	91													
	286	55.0	112.3	-	111.0	110.6	110.1	109.4	108.6	107.7	106.5	105	103.7	101	97	93	89	84	78													
	277	45.0	103.1	-	103	102.5	102	101	100	99	98	96.6	95	92	88	84	79	74														
	273	75.0	93.3	-	-	-	-	92.2	92.1	92	91.9	91.8	91.6	91.4	91	90.7	90.3	90	89	88	86.8	85.3	83.6	81.5	76.3	69.3						
125°100 FS2JCA	258	75.0	81.8	-	-	-	-	81.2	81.1	81	80.9	80.8	80.6	80.3	80	79.6	79	78.5	77.5	76	75	73	71	69	64	58	52					
	243	55.0	72.2	-	-	-	-	71.6	71.5	71.5	71.4	71.2	71	70.7	70.3	70	69	68.6	67.5	66	64	63	61	58	53	48						
	230	55.0	64.0	-	-	-	-	63.6	63.5	63.3	63.2	63	62.6	62	61.6	61	60.3	59.5	58													







