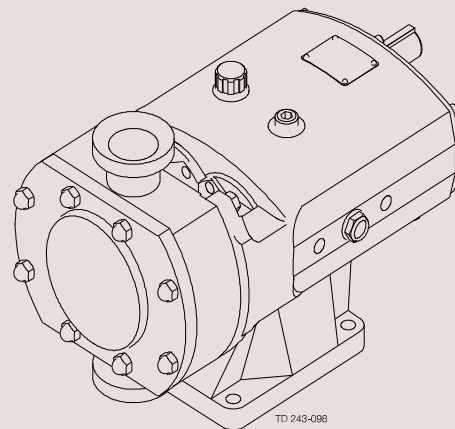
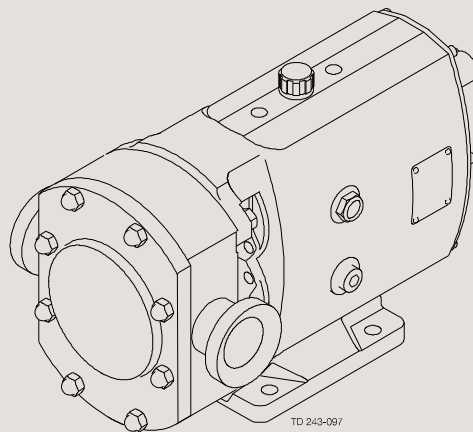




Instruction Manual

Rotary Lobe Pumps – SRU Range



ESE00693-EN15 2022-10

Original manual

6 Technical data

6.1 Technical data

6.1.1 Approximate oil capacities

Pump model	Port orientation		Port orientation	
	Vertical litres	Horizontal litres	Vertical US pints	Horizontal US pints
SRU1	0.3	0.4	0.6	0.8
SRU2	0.6	0.7	1.2	1.4
SRU3	1.0	1.5	2.2	3.1
SRU4	1.5	2.0	3.2	4.2
SRU5	3.0	4.0	6.3	8.4
SRU6	4.5	7.0	9.5	14.8

6.1.2 Weights

Pump model	Bare Shaft Pump kg (lb)		Typical pump with drive unit kg (lb)	
	Port Orientation		Port Orientation	
	Horizontal	Vertical	Horizontal	Vertical
SRU1/005	15 (33)	16 (35)	45 (99)	46 (101)
SRU1/008	17 (37)	18 (40)	55 (121)	56 (123)
SRU2/013	28 (62)	30 (66)	75 (165)	77 (170)
SRU2/018	29 (64)	31 (68)	80 (176)	82 (181)
SRU3/027	53 (117)	56 (123)	145 (320)	148 (326)
SRU3/038	56 (123)	59 (130)	150 (331)	153 (337)
SRU4/055	105 (231)	111 (245)	260 (573)	266 (586)
SRU4/079	110 (243)	116 (256)	265 (584)	271 (597)
SRU5/116	148 (326)	185 (408)	396 (873)	433 (955)
SRU5/168	156 (344)	193 (425)	411 (906)	448 (988)
SRU6/260	228 (503)	260 (573)	493 (1087)	525 (1157)
SRU6/353	233 (514)	265 (584)	513 (1131)	545 (1202)

The above weights are for guidance purposes only and will vary dependent upon specification of pump, baseplate and drive unit.

6.1.3 Tool requirements

Description	Tool required	Pump Model					
		SRU1	SRU2	SRU3	SRU4	SRU5	SRU6
Rotorcase cover nut (13)	Socket Size (mm)	13	17	17	17	17	19
	Torque Setting (Nm)	20	39	39	39	39	105
	Torque Setting (lbft)	14.8	28.8	28.8	28.8	28.8	77.4
Rotor retention nut (22)	Socket Size (mm)	17	24	24	36	36	36
	Torque Setting (Nm)	14	77	120	161	161	161
	Torque Setting (lbft)	10.3	56.8	88.5	118.8	118.8	118.8
Rotor TLA (19)	Key Size (mm)	-	-	-	-	-	5
	Torque Setting (Nm)	-	-	-	-	-	8
	Torque Setting (lbft)	-	-	-	-	-	5.9
Rotorcase retaining nut (4)	Spanner Size (mm)	13	17	17	19	19	24
	Torque Setting (Nm)	20	40	40	64	64	175
	Torque Setting (lbft)	14.8	29.5	29.5	47.2	47.2	129.1
Seal retainer screw (15)	Key Size (mm)	5	5	5	6	6	6
	Torque Setting (Nm)	10	10	10	25	25	25
	Torque Setting (lbft)	7.4	7.4	7.4	18.4	18.4	18.4
Gearcase cover screw (6)	Key Size (mm)	5	5	5	6	6	6
	Torque Setting (Nm)	10	10	10	25	25	25
	Torque Setting (lbft)	7.4	7.4	7.4	18.4	18.4	18.4
TLA/Clamp plate screw (40)	Key Size (mm)	5	5	5	5	6	6
	Torque Setting (Nm)	12	17	12	14	35	35
	Torque Setting (lbft)	8.9	12.5	8.9	10.3	25.8	25.8
Drain plug (45)	Key Size (in)	¼	¼	¼	¼	½	½
Foot bolt (58)	Key Size (mm)	5	6	6	8	10	10
	Torque Setting (Nm)	15	30	30	60	50	50
	Torque Setting (lbft)	11.1	22.1	22.1	44.3	37.0	37.0
Grub screw	Key size (mm)	2.5	2.5	2.5	2.5	4.0	4.0
Shaft seal, Single	Torque Setting (Nm)	3	3	3	3	8	13.5
	Torque Setting (lbft)	2.2	2.2	2.2	2.2	6	10
Shaft seal, Double	Torque Setting (Nm)	3	3	3	3	13.5	13.5
	Torque Setting (lbft)	2.2	2.2	2.2	2.2	10	10
Sight glass (46)	Socket Size (mm)	22	22	22	22	22	22
	Torque Setting (Nm)	2	2	2	2	2	2
	Torque Setting (lbft)	0.9	0.9	0.9	0.9	0.9	0.9

6 Technical data

6.1.4 Pump Data Table

Model	Displacement			Suction & Discharge				Differential Pressure		Max. Speed rev/min	Max. Capacity at 1000 rpm m3/hr
	litres/r- ev	Imp gal/ 100 rev	US gal/ 100 rev	Sanitary		Enlarged					
				mm	inch.	mm	inch.	bar	psi		
SRU1/005/LD or H	0.053	1.17	1.40	25	1.0	-	-	8	115	1000	3.18
SRU1/008/LD or H	0.085	1.87	2.25	25	1.0	40	1.5	5	75	1000	5.10
SRU2/013/LS or HS	0.128	2.82	3.38	25	1.0	40	1.5	10	145	1000	7.68
SRU2/013/LD or HD	0.128	2.82	3.38	25	1.0	40	1.5	15	215	1000	7.68
SRU2/018/LS or HS	0.181	3.98	4.78	40	1.5	50	2.0	7	100	1000	10.86
SRU2/018/LD or HD	0.181	3.98	4.78	40	1.5	50	2.0	10	145	1000	10.86
SRU3/027/LS or HS	0.266	5.85	7.03	40	1.5	50	2.0	10	145	1000	15.96
SRU3/027/LD or HD	0.266	5.85	7.03	40	1.5	50	2.0	15	215	1000	15.96
SRU3/038/LS or HS	0.384	8.45	10.14	50	2.0	65	2.5	7	100	1000	23.04
SRU3/038/LD or HD	0.384	8.45	10.14	50	2.0	65	2.5	10	145	1000	23.04
SRU4/055/LS or HS	0.554	12.19	14.64	50	2.0	65	2.5	10	145	1000	33.24
SRU4/055/LD or HD	0.554	12.19	14.64	50	2.0	65	2.5	20	290	1000	33.24
SRU4/079/LS or HS	0.790	17.38	20.87	65	2.5	80	3.0	7	100	1000	47.40
SRU4/079/LD or HD	0.790	17.38	20.87	65	2.5	80	3.0	15	215	1000	47.40
SRU5/116/LS or HS	1.160	25.52	30.64	65	2.5	80	3.0	10	145	600	41.76
SRU5/116/LD or HD	1.160	25.52	30.64	65	2.5	80	3.0	20	290	600	41.76
SRU5/168/LS or HS	1.680	36.95	44.38	80	3.0	100	4.0	7	100	600	60.48
SRU5/168/LD or HD	1.680	36.95	44.38	80	3.0	100	4.0	15	215	600	60.48
SRU6/260/LS or HS	2.600	57.19	68.68	100	4.0	100	4.0	10	145	500	78.00
SRU6/260/LD or HD	2.600	57.19	68.68	100	4.0	100	4.0	20	290	500	78.00
SRU6/353/LS or HS	3.530	77.65	93.25	100	4.0	150	6.0	7	10	500	105.90
SRU6/353/LD or HD	3.530	77.65	93.25	100	4.0	150	6.0	15	215	500	105.90

Please Note:

Maximum differential pressure capability of the pump does not apply to the pressure rating of the mechanical seals which is 20 bar, and the selected port connection as stated below:

SMS – 10 bar (all sizes)

RJT – 10 bar (all sizes)

DIN11851 – 40 bar (25-40mm), 25 bar (50-100mm), 16 bar (150mm)

IDF/ISS – 16 bar (25-50mm), 10 bar (65-150mm) providing provision for support ring is to be made.

Tri-clamp (BS4825) – Pressure rating is dictated by the clamp band used.

Refer to clamp band supplier.

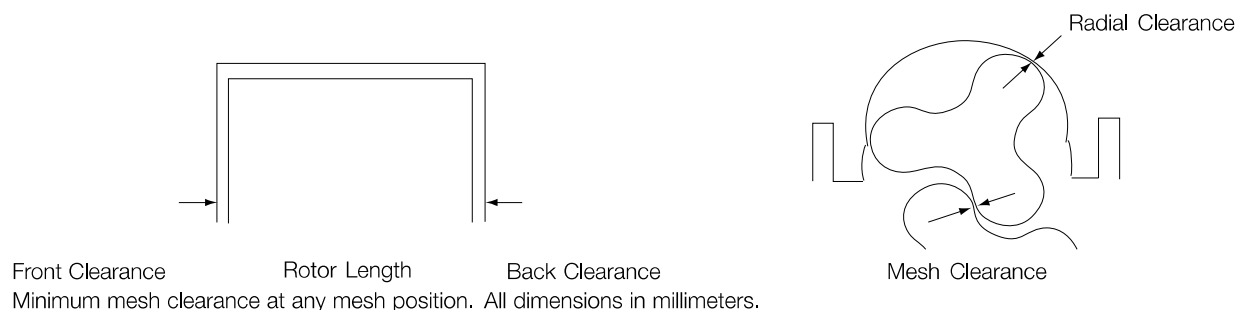
For size 150mm on SRU6/0353 pumps, only DIN11851, SRJT or Tri-clamp connections are available.

Note:



ATEX applications: Differential pressure, Max. speed and Max. capacity are not applicable for ATEX applications.

6.2 Pumphead Clearance information



SRU1/005/LD (HD) TRILOBE and BILOBE ST.STL. ROTORS

8 BAR

Temperature °C	Rotor Length	Front Clearance	Back Clearance	Rotor Diameter	Radial Clearance	Min. TRILOBE	MESH* BILOBE 70°C
70°C	16.59	(min.)	0.15	64.66	(min.)	0.12	0.28
	16.56	0.12	0.10	64.62	0.14		
130°C	16.57	(min.)	0.15	64.64	(min.)	0.12	0.28
	16.54	0.14	0.10	64.60	0.15		
200°C	16.55	(min.)	0.15	64.62	(min.)	0.12	0.28
	16.52	0.16	0.10	64.58	0.16		

SRU1/008/LD (HD) TRILOBE and BILOBE ST.STL. ROTORS

5 BAR

Temperature °C	Rotor Length	Front Clearance	Back Clearance	Rotor Diameter	Radial Clearance	Min. TRILOBE	MESH* BILOBE 70°C
70°C	26.57	(min.)	0.15	64.62	(min.)	0.12	0.28
	26.54	0.14	0.10	64.58	0.16		
130°C	26.55	(min.)	0.15	64.60	(min.)	0.12	0.28
	26.52	0.16	0.10	64.56	0.17		
200°C	26.53	(min.)	0.15	64.58	(min.)	0.12	0.28
	26.50	0.18	0.10	64.54	0.18		

SRU2/013/LS (HS) TRILOBE and BILOBE ST.STL. ROTORS

10 BAR

Temperature °C	Rotor Length	Front Clearance	Back Clearance	Rotor Diameter	Radial Clearance	Min. TRILOBE	MESH* BILOBE 70°C
70°C	22.63	(min.)	0.12	86.28	(min.)	0.08	0.24
	22.60	0.14	0.07	86.24	0.16		
130°C	22.52	(min.)	0.15	86.22	(min.)	0.08	0.24
	22.49	0.22	0.10	86.18	0.19		
200°C	22.35	(min.)	0.22	86.18	(min.)	0.08	0.24
	22.32	0.32	0.17	86.14	0.21		

SRU2/013/LD (HD) TRILOBE and BILOBE ST.STL. ROTORS

15 BAR

Temperature °C	Rotor Length	Front Clearance	Back Clearance	Rotor Diameter	Radial Clearance	Min. TRILOBE	MESH* BILOBE 70°C
70°C	22.48	(min.)	0.18	86.20	(min.)	0.20	0.24
	22.45	0.23	0.13	86.16	0.20		
130°C	22.42	(min.)	0.21	86.14	(min.)	0.20	0.24
	22.39	0.25	0.16	86.19	0.23		
200°C	22.30	(min.)	0.28	86.10	(min.)	0.20	0.24
	22.27	0.33	0.23	86.06	0.25		

SRU2/018/LS (HS) TRILOBE and BILOBE ST.STL. ROTORS

7 BAR

Temperature °C	Rotor Length	Front Clearance	Back Clearance	Rotor Diameter	Radial Clearance	Min. TRILOBE	MESH* BILOBE 70°C
70°C	32.02	(min.)	0.12	86.26	(min.)	0.08	0.34
	31.99	0.15	0.07	86.22	0.17		
130°C	31.90	(min.)	0.15	86.18	(min.)	0.08	0.34
	31.87	0.24	0.10	86.14	0.21		
200°C	31.72	(min.)	0.22	86.12	(min.)	0.08	0.34
	31.69	0.35	0.17	86.08	0.24		

SRU2/018/LD (HD) TRILOBE and BILOBE ST.STL. ROTORS

10 BAR

Temperature °C	Rotor Length	Front Clearance	Back Clearance	Rotor Diameter	Radial Clearance	Min. TRILOBE	MESH* BILOBE 70°C
70°C	31.96	(min.)	0.15	86.20	(min.)	0.11	0.34
	31.93	0.18	0.10	86.16	0.20		
130°C	31.91	(min.)	0.18	86.12	(min.)	0.11	0.34
	31.88	0.20	0.13	86.08	0.24		
200°C	31.82	(min.)	0.25	86.06	(min.)	0.11	0.34
	31.79	0.22	0.20	86.02	0.27		

6 Technical data



SRU3/027/LS (HS) TRILOBE and BILOBE ST.STL. ROTORS

Temperature °C	Rotor Length	Front Clearance	Back Clearance	Rotor Diameter	Radial Clearance	Min. TRILOBE	MESH* BILOBE 70°C
70°C	30.13	(min.)	0.15	107.88	(min.)	0.13	0.32
	30.10	0.16	0.10	107.83	0.20		
130°C	29.99	(min.)	0.18	107.80	(min.)	0.13	0.32
	29.96	0.27	0.13	107.75	0.24		
200°C	29.80	(min.)	0.25	107.72	(min.)	0.13	0.32
	29.77	0.39	0.20	107.67	0.28		

SRU3/027/LD (HD) TRILOBE and BILOBE ST.STL. ROTORS

Temperature °C	Rotor Length	Front Clearance	Back Clearance	Rotor Diameter	Radial Clearance	Min. TRILOBE	MESH* BILOBE 70°C
70°C	30.08	(min.)	0.17	107.60	(min.)	0.17	0.40
	30.05	0.19	0.12	107.55	0.34		
130°C	30.02	(min.)	0.20	107.56	(min.)	0.17	0.40
	29.99	0.22	0.15	107.51	0.36		
200°C	29.92	(min.)	0.27	107.52	(min.)	0.17	0.40
	29.89	0.25	0.22	107.47	0.38		

SRU3/038/LS (HS) TRILOBE and BILOBE ST.STL. ROTORS

Temperature °C	Rotor Length	Front Clearance	Back Clearance	Rotor Diameter	Radial Clearance	Min. TRILOBE	MESH* BILOBE 70°C
70°C	43.14	(min.)	0.15	107.76	(min.)	0.13	0.40
	43.11	0.17	0.10	107.71	0.26		
130°C	43.00	(min.)	0.18	107.64	(min.)	0.13	0.40
	42.97	0.28	0.13	107.59	0.32		
200°C	42.79	(min.)	0.25	107.52	(min.)	0.13	0.40
	42.76	0.42	0.20	107.47	0.38		

SRU3/038/LD (HD) TRILOBE and BILOBE ST.STL. ROTORS

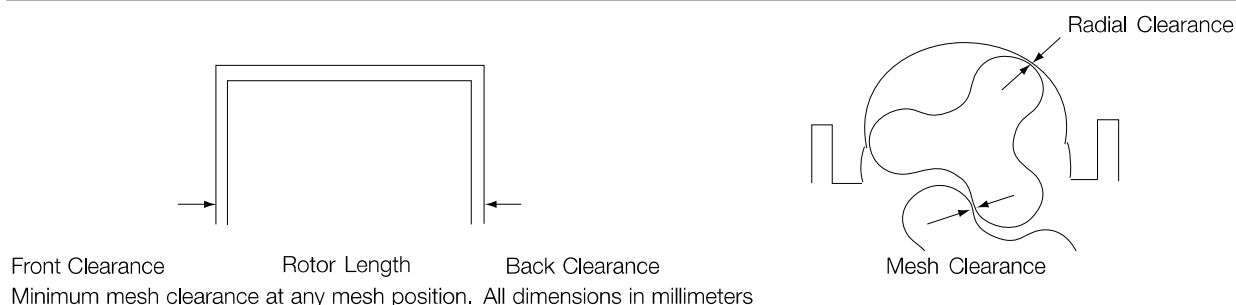
Temperature °C	Rotor Length	Front Clearance	Back Clearance	Rotor Diameter	Radial Clearance	Min. TRILOBE	MESH* BILOBE 70°C
70°C	42.99	(min.)	0.26	107.48	(min.)	0.17	0.40
	42.96	0.25	0.21	107.43	0.40		
130°C	43.02	(min.)	0.20	107.50	(min.)	0.17	0.40
	42.99	0.24	0.15	107.45	0.39		
200°C	42.92	(min.)	0.27	107.46	(min.)	0.17	0.40
	42.89	0.27	0.22	107.41	0.41		

SRU4/055/LS (HS) TRILOBE and BILOBE ST.STL. ROTORS

Temperature °C	Rotor Length	Front Clearance	Back Clearance	Rotor Diameter	Radial Clearance	Min. TRILOBE	MESH* BILOBE 70°C
70°C	38.20	(min.)	0.15	138.20	(min.)	0.15	0.32
	38.17	0.17	0.10	138.15	0.18		
130°C	38.07	(min.)	0.20	138.10	(min.)	0.15	0.32
	38.04	0.20	0.15	138.05	0.23		
200°C	38.03	(min.)	0.24	138.00	(min.)	0.15	0.32
	38.00	0.25	0.19	137.95	0.28		

SRU4/055/LD (HD) TRILOBE and BILOBE ST.STL. ROTORS

Temperature °C	Rotor Length	Front Clearance	Back Clearance	Rotor Diameter	Radial Clearance	Min. TRILOBE	MESH* BILOBE 70°C
70°C	38.11	(min.)	0.20	137.90	(min.)	0.20	0.32
	38.08	0.21	0.15	137.85	0.33		
130°C	38.07	(min.)	0.20	137.80	(min.)	0.20	0.32
	38.04	0.25	0.15	137.75	0.38		
200°C	38.03	(min.)	0.20	137.70	(min.)	0.20	0.32
	38.00	0.29	0.15	137.65	0.43		



SRU4/079/LS (HS) TRILOBE and BILOBE ST.STL. ROTORS

Temperature °C	Rotor Length	Front Clearance	Back Clearance	Rotor Diameter	Radial Clearance	Min. TRILOBE	MESH* BILOBE 70°C
70°C	54.99	(min.)	0.17	137.96	(min.)	0.15	0.32
	54.96	0.20	0.12	137.91	0.30		
130°C	54.88	(min.)	0.22	137.82	(min.)	0.15	0.32
	54.85	0.25	0.17	137.77	0.37		
200°C	54.75	(min.)	0.27	137.66	(min.)	0.15	0.32
	54.72	0.30	0.22	137.61	0.45		

SRU4/079/LD (HD) TRILOBE and BILOBE ST.STL. ROTORS

Temperature °C	Rotor Length	Front Clearance	Back Clearance	Rotor Diameter	Radial Clearance	Min. TRILOBE	MESH* BILOBE 70°C
70°C	54.81	(min.)	0.23	137.64	(min.)	0.20	0.32
	54.78	0.32	0.18	137.59	0.46		
130°C	54.77	(min.)	0.23	137.50	(min.)	0.20	0.32
	54.74	0.36	0.18	137.45	0.53		
200°C	54.73	(min.)	0.23	137.34	(min.)	0.20	0.32
	54.70	0.40	0.18	137.29	0.61		

SRU5/116/LS (HS) TRILOBE and BILOBE ST.STL. ROTORS

Temperature °C	Rotor Length	Front Clearance	Back Clearance	Rotor Diameter	Radial Clearance	Min. TRILOBE	MESH* BILOBE 70°C
70°C	51.07	(min.)	0.18	172.58	(min.)	0.20	0.31
	51.04	0.25	0.13	172.53	0.28		
130°C	50.99	(min.)	0.18	172.46	(min.)	0.20	0.31
	50.96	0.33	0.13	172.41	0.34		
200°C	50.94	(min.)	0.18	172.32	(min.)	0.20	0.31
	50.91	0.38	0.13	172.27	0.41		

SRU5/116/LD (HD) TRILOBE and BILOBE ST.STL. ROTORS

Temperature °C	Rotor Length	Front Clearance	Back Clearance	Rotor Diameter	Radial Clearance	Min. TRILOBE	MESH* BILOBE 70°C
70°C	50.98	(min.)	0.20	172.22	(min.)	0.20	0.31
	51.04	0.29	0.15	172.17	0.46		
130°C	50.93	(min.)	0.20	172.10	(min.)	0.20	0.31
	50.90	0.37	0.15	172.05	0.52		
200°C	50.79	(min.)	0.20	171.96	(min.)	0.20	0.31
	50.76	0.51	0.15	171.91	0.59		

SRU5/168/LS (HS) TRILOBE and BILOBE ST.STL. ROTORS

Temperature °C	Rotor Length	Front Clearance	Back Clearance	Rotor Diameter	Radial Clearance	Min. TRILOBE	MESH* BILOBE 70°C
70°C	74.06	(min.)	0.20	172.27	(min.)	0.20	0.31
	74.03	0.30	0.15	172.22	0.44		
130°C	73.93	(min.)	0.20	172.09	(min.)	0.20	0.31
	73.90	0.43	0.15	172.04	0.53		
200°C	73.79	(min.)	0.20	171.89	(min.)	0.20	0.31
	73.76	0.57	0.15	171.84	0.63		

SRU5/168/LD (HD) TRILOBE and BILOBE ST.STL. ROTORS

Temperature °C	Rotor Length	Front Clearance	Back Clearance	Rotor Diameter	Radial Clearance	Min. TRILOBE	MESH* BILOBE 70°C
70°C	73.91	(min.)	0.27	171.97	(min.)	0.20	0.71
	73.88	0.38	0.22	171.92	0.59		
130°C	73.87	(min.)	0.27	171.79	(min.)	0.20	0.71
	73.84	0.42	0.22	171.74	0.68		
200°C	73.82	(min.)	0.27	171.59	(min.)	0.20	0.71
	73.79	0.47	0.22	171.54	0.78		

6 Technical data



SRU6/260/LS (HS) TRILOBE and BILOBE ST.STL. ROTORS

10 BAR

Temperature °C	Rotor Length	Front Clearance	Back Clearance	Rotor Diameter	Radial Clearance	Min. TRILOBE	MESH* BILOBE 70°C
70°C	84.34 84.31	(min.) 0.24	0.25 0.20	201.27 201.22	(min.) 0.40	0.30	0.39
130°C	84.19 84.16	(min.) 0.39	0.25 0.20	201.13 201.08	(min.) 0.47	0.30	0.39
200°C	84.01 83.98	(min.) 0.57	0.25 0.20	200.97 200.92	(min.) 0.55	0.30	0.39

SRU6/260/LD (HD) TRILOBE and BILOBE ST.STL. ROTORS

20 BAR

Temperature °C	Rotor Length	Front Clearance	Back Clearance	Rotor Diameter	Radial Clearance	Min. TRILOBE	MESH* BILOBE 70°C
70°C	84.08 84.05	(min.) 0.40	0.35 0.30	200.67 200.62	(min.) 0.70	0.35	0.80
130°C	84.03 84.00	(min.) 0.45	0.35 0.30	200.53 200.48	(min.) 0.77	0.35	0.80
200°C	83.97 83.94	(min.) 0.51	0.35 0.30	200.37 200.32	(min.) 0.85	0.35	0.80

SRU6/353/LS (HS) TRILOBE and BILOBE ST.STL. ROTORS

7 BAR

Temperature °C	Rotor Length	Front Clearance	Back Clearance	Rotor Diameter	Radial Clearance	Min. TRILOBE	MESH* BILOBE 70°C
70°C	113.68 113.65	(min.) 0.40	0.25 0.20	201.11 201.06	(min.) 0.48	0.35	0.40
130°C	113.50 113.47	(min.) 0.58	0.25 0.20	200.91 200.86	(min.) 0.58	0.35	0.40
200°C	113.30 113.27	(min.) 0.78	0.25 0.20	200.67 200.62	(min.) 0.70	0.35	0.40

SRU6/353/LD (HD) TRILOBE and BILOBE ST.STL. ROTORS

15 BAR

Temperature °C	Rotor Length	Front Clearance	Back Clearance	Rotor Diameter	Radial Clearance	Min. TRILOBE	MESH* BILOBE 70°C
70°C	113.23 113.20	(min.) 0.65	0.45 0.40	200.47 200.42	(min.) 0.80	0.40	0.55
130°C	113.17 113.14	(min.) 0.71	0.45 0.40	200.27 200.22	(min.) 0.90	0.40	0.55
200°C	113.11 113.08	(min.) 0.77	0.45 0.40	200.03 199.98	(min.) 1.02	0.40	0.55