

	Client No: 28C3-D-4IN-DSH-033-1505-02-ME-1044	Rev
	Document Number: 12002-D-ME-DSH-303-FLO-1044	Client Vendor
Class: FA	Library Code: 303-E03-1505-02-ME-DSH-1044-01	01 00
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Data Sheet for CU-Mo thickener underflow
Bredell Pumps

01	2026-07-20	Issued For Approval				
00	2026-06-11	Issued For Review				
Rev.	Date	Description	Prepared By	Checked By	Approved By	Authorized By

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Sheet	Revisions							Sheet	Revisions						
	00	01	02	03	04	05			00	01	02	03	04	05	
1	x	x						38							
2	x	x						39							
3	x							40							
4	x	x						41							
5	x	x						42							
6	x							43							
7	x							44							
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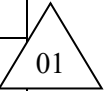
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1. CU-MO THICKENER UNDERFLOW TRANSFER PUMP

No.	Description	Units	Value
General data			
1	Quantity	#	2 Operational & 2 Standby
2	Tag No. / Location (indoors/ outdoors)	-	PU 3-33-1505-01 /outdoor PU 3-33-1505-02 / outdoor PU 4-33-1505-01 / outdoor PU 4-33-1505-02 / outdoor
3	Application Description	-	Underflow thickener discharge pump to Mo-plant
Process / Operating Conditions			
Material Processed			
4	Ore Type	-	Copper ore
5	Fluid Type	-	Slurry
6	Ore specific gravity	t/m ³	4
7	Feed top size (F100)	μ	90
8	Feed F80	μ	38
9	Feed slurry temp	°C	5-60
Operating conditions			
10	Service Type	-	Continuous
11	Configuration	-	Horizontal
12	Duty (from-to)	-	From TH 3-33-3301-01 & TH 3-33-3301-01 to MO Plant
13	solids feed rate per pump (rated)	dtph	47.02
14	solid feed rate per pump (nominal)	dtph	40.75
15	Solid's content	%(m/m)	50
16	Slurry density	t/m ³	1.6
17	Solid density	t/m ³	4
18	Slurry viscosity	Pa.s	0. 00158
19	Slurry flowrate (design)	m ³ /h	58.77
20	Slurry flowrate (nominal)		50.94

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No.	Description	Units	Value
21	Slurry PH range	-	11-13
22	Limiting settling velocity	m/s	0.57
23	Discharge pressure	bar	13 (WFL)
24	Total Dynamic Head (TDH)	bar	12.46 (WFL)
25	Head Ratio	-	0.94
26	Vapor Pressure	m-H2O	0.4323
27	NPSH required (Maximum)	m	VTs (Note 6)
28	NPSH Available	m-slurry	6.24
29	Hydraulic Power	kW	20.33 (WFL)
30	Absorbed Power	kW	29.04 (WFL)
31	Installed Power	kW	37 (WFL)
32	Efficiency at the design point	%	70 (VTC)
Mechanical Information			
Technical specs			
33	Manufacturer	-	ACC. TO AVL
34	Model	-	VTs
35	Type	-	Heavy -duty peristaltic hose pumps
36	Design pump operating speed	rpm	VTs
37	Max pump operating speed	rpm	60 (VTC)
38	Inlet diameter	inch	4” (VTC)
39	Discharge diameter	inch	3” (VTC)
40	Flange specification	-	ASME B16.5 (VTC)
41	Number of Sliding Shoes	#	VTs
42	Sealing arrangement	-	Gland packing in normal execution
Materials of construction/wear protection			



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No.	Description	Units	Value
43	Pump case	-	Cast iron (VTC)
44	Cover		Cast iron (VTC)
45	Pump hose	-	EPDM (VTC) -Note 10
46	Liner	-	VTs
47	Rotor	-	Cast iron (VTC)
48	Seal ring	-	VTs
49	Wear ring	-	AISI 316L
50	Motor enclosure/frame material	-	CAST IRON
Drive specifications			
51	Drive type	-	Direct Drive
52	Starting Method	-	VFD
53	Power supply	-	3 Phase, 400±10% V, 50±5% Hz
54	Insulation Grade	-	F
55	Temp. Class:	-	B
56	IEC Motor Protection	-	IP 55
57	Manufacturer	-	ACC TO AVL
58	Ambient Temperature (Max/Min)	° C	Indoor +40/+5
			Outdoor +40/-25 (NOTE 4)
59	Altitude above sea level	m	2500 (NOTE 4)
Speed reducer			
60	Speed reducer system	-	Gear BOX
61	Type	-	Integrally
62	Speed reducer manufacturer		Acc. To AVL
63	Ratio	-	VTs
Bearing details			
64	Motor end bearing type	-	VTs

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No.	Description	Units	Value
65	Pump end bearing type	-	VTs
66	Lubrication type	-	VTs
Piping details			
67	Pipe size (Suction /Discharge)	mm	DN 100 / DN 100
68	Static head (Suction /Discharge)	m	2.5/8 (WFL)
69	Total Pipe Length (Suction /Discharge)	m	5/1100 (WFL)
70	90 deg bends (Suction /Discharge)	Qty	4/14 (WFL)
71	45 deg bends (Suction /Discharge)	Qty	1/17 (WFL)
72	T pieces (Suction /Discharge)	Qty	1/3 (WFL)
DIMENSION & WEIGHT			
73	Total length (l)	m	VTs
74	Total width (b)	m	VTs
75	Total height (h)	m	VTs
76	Total weight	kg	VTs
77	Heaviest Weight for Transfer	kg	VTs
78	Casing	kg	VTs
79	Drive Component	kg	VTs

Notes:

1. VTs: Vendor to Specify
2. VTC: Vendor to Confirm
3. WFL: Will Be Finalized Later
4. For site condition, please see the client No.:**28C3-D-4IN-DOC-090-0000-00-PR-0001**
5. DOL: Direct On-Line
6. $NPSH_A - NPSH_R \geq 1.5$
7. For the LV & MV motors datasheet please refer to **28C3-D-4IN-DSH-090-0220-00-EL-0038**