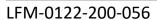
#### LFM-0122-200-056



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ReportNumber: 0				01	1									١	ProjectNumber:												_	LFM-0122-200-056							
Par	PartNumber: L				FM-0122-200-056								ı	InquiryNumber:												_	LFM-0122-200-056.001								
Requirements: D				00-01								l	DrawingNumber:												_	LFM-0122-200-056.idw									
PartTitle: T			Tube honeycomb								Visual testing date:													_	04.04.2022										
													1	Гes	sti	ng	g ir	nfo	or	ma	iti	ioi	n												
Test standards: D						DIN EN 13018										ı	Printing process/ machine:											e:		FDM (metal)/ Makerbot Method X					
Test instruction:						internal									ı	Printing specifications:												_	-						
					100%									,	Acceptance rule:												_	internal							
Tes	t device:			D	Digital vernier caliper									-	Te	sti	ing	ai	ids	;:								Lamp, Camera, Lens							
Illu	minance m	neter:			olto															nea				:						_	455				
Me	asuring de	vice n	0.:	1	1662853																														
															1	٦٥	ct	re	SI	ılts	:														
					Visual inspection - documentati											it results										3			Evaluation <sup>2)</sup>						
Exam	Exam area		Scope <sup>1)</sup> / Actual [mm]	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	114	115	170	117	118	118-a	118-b	201	202	301	302	303		A	NA		Remark
				L	Ш	Ц	Ц								_	201	+ n		205	ties	<u> </u>		_	_							L				
(1)	Outer		ES100	x	x	х		х	х		х				Ι,	aı	T p	ı oş	Jei	lies	T		T	T									X		further pro-
(2)	diameter Initial	_	ES100	х	$\vdash$		х				х																						х	But:	ng for paper further pro-
(3)	layer Top layer area		ES100	x			x																										x	But:	ng for paper further pro- ng for paper
	area														Р	art	t di	me	ens	ion	s													Cessi	ing for paper
(D1)	Overall diameter	30,00	30,52									_						I			Ī	7	×	T	х							х		Devia	tion accepted
(D2)	Overall height	25,00	25,40																			,	×		х							х		Devia	tion accepted
(D3)	Hole diameter	8,00	7,76																			,	x	х								х		Devia	tion accepted
						6)			2											acco				ed							1		<u> </u>		
Surface irregularities: 100 General 101 Rough surface 102 Blobs on surface				107 Layer delamination 108 Curling									1	114 Bad corners 115 Bad overhangs												2	Infill irregularities: 201 False infill 202 Defect infill								
103 Over extrusion					109 Warping 110 Overheating								1	116 Waves on surfaces 117 z-seam on surfaces													Other irregularities:								
104 Under extrusion 105 Gaps in Walls 106 Stringing					111 Layershifting 112 Bad support structures 113 Missing support								1	118 Dimensional issue 118-a Undersize 118-b Oversize												3	301 Clogged extruder 302 Broken filament 303 No print bed adhesion								
									1									_														1			
	Appendix XYES / NO General No Gen				ner	al	tes	st i	ins	trı	uct	io	ns,	, a	CC6	ept	taı	nce	r	ule	e, <sub> </sub>	pri	nt	in	g p	ro	pe	rt	ies	/ 2 p	ages				
	Remarks:				<ul> <li>Preview with LABS extruder, Raft, no support</li> <li>ABS was used for the preview simulation because an OEM metal template does not</li> </ul>																														





	Checked		Rated	Customer release (if requested)				
Name:	Inspector #2	Name:	Production manager	Name:				
Test location:	Test area							
Date:	04.04.2022	Date:	04.04.2022	Date:				
Signature:	XXX	Signature:	XXX	Signature:				

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#### **Appendix**

Test instruction  Acceptance rule	<ul> <li>The assessment and evaluation must be carried out by experienced and trained personnel.</li> <li>Visual inspection after printing the part.</li> <li>The surfaces must be free of any coating, dirt, dust, powder etc.</li> <li>The testing/ inspection is carried out in daylight or under artificial light. The illuminance during the test must be at least 350lx, 500lx is recommended.</li> <li>There is currently no existing standard for 3D printing that defines the possible irregularities and limits for evaluation.</li> <li>For this reason, only internal evaluation standards can be used.</li> </ul>
	<ul> <li>The acceptance of the examinations here is based on the individual assessment of the examiner.</li> </ul>
	Part images after printing
General view immedi- ately after printing	
View under test condi- tions	
View of the defects (if occurred)	

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Rough surface Blobs Under extrusion Gaps Layer delamination	
Rough surface Over extrusion at hon- eycombs Layer delamination due to raft removal	
Rough surface Over extrusion at hon- eycombs and walls	