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Azhar, M.A.M., Sukindar, N.A., Ani, M.H., Anuar, H.B., Kamaruddin, S.B., Shaharuddin, S.I.S., Mustafa, M.Y., Adesta, E.Y.T., Arief, R.K., Sulaiman, M.H.

Review on Fused Deposition Modelling Extruder Types with Their Specialities in Filament Extrusion Process
(2023) *Lecture Notes in Mechanical Engineering*, pp. 407-413.

DOI: 10.1007/978-981-19-9509-5_54

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Abstract
3D printing is one of the growing technologies in the entry era of the industrial revolution 4.0. Fused Deposition Modelling (FDM), one of the 3D printing methods, has advantages in the manufacturing process where various product shapes can be made. One of the advantages of FDM lies in the extruder used. Various types of extruders can be used and installed on FDM machines. Findings from a review of five types of extruders found that some models have the ability to extrude specific types of material. Each extruder has advantages and specializations, which can affect the printing result. Therefore, this paper reviews the types of extruders for FDM and their capabilities so that the selection of the type of extruder to be used can be made accurately. © 2023, The Author(s), under exclusive license to Springer Nature Singapore Pte Ltd.

Author Keywords
Additive manufacturing; FDM 3D printer; FDM extruder; Rapid prototyping

Index Keywords
Deposition, Extruders, Extrusion, Layered manufacturing; 3-D printing, 3D-printing, Extrusion process, Fused deposition modeling 3d printer, Fused deposition modeling extruder, Industrial revolutions, Manufacturing process, Model machine, Printing method, Rapid-prototyping; Fused Deposition Modeling

Funding details
TBRG21-001-0001
International Islamic University MalaysiaIIUMRMCG20-033-0033
Research Management Centre, International Islamic University MalaysiaRMC
Funding details
Acknowledgements The authors express their appreciation for the Tin Grant under the Tin Industry (Research and Development) Board of Malaysia under project number TBRG21-001-0001 and Research Management Centre, International Islamic University Malaysia under project number RMCG20-033-0033.

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Editors: Maleque M.A., Ahmad Azhar A.Z., Sarifuddin N., Syed Shaharuddin S.I., Mohd Ali A., Abdul Halim N.F.
Publisher: Springer Science and Business Media Deutschland GmbH

Conference name: 5th International Conference on Advances in Manufacturing and Materials Engineering, ICAMME 2022
Conference date: 9 August 2022 through 10 August 2022
Conference code: 294689

ISSN: 21954356
ISBN: 9789811995088
Language of Original Document: English
Abbreviated Source Title: Lect. Notes Mech. Eng.
2-s2.0-85161180741
Document Type: Conference Paper
Publication Stage: Final
Source: Scopus