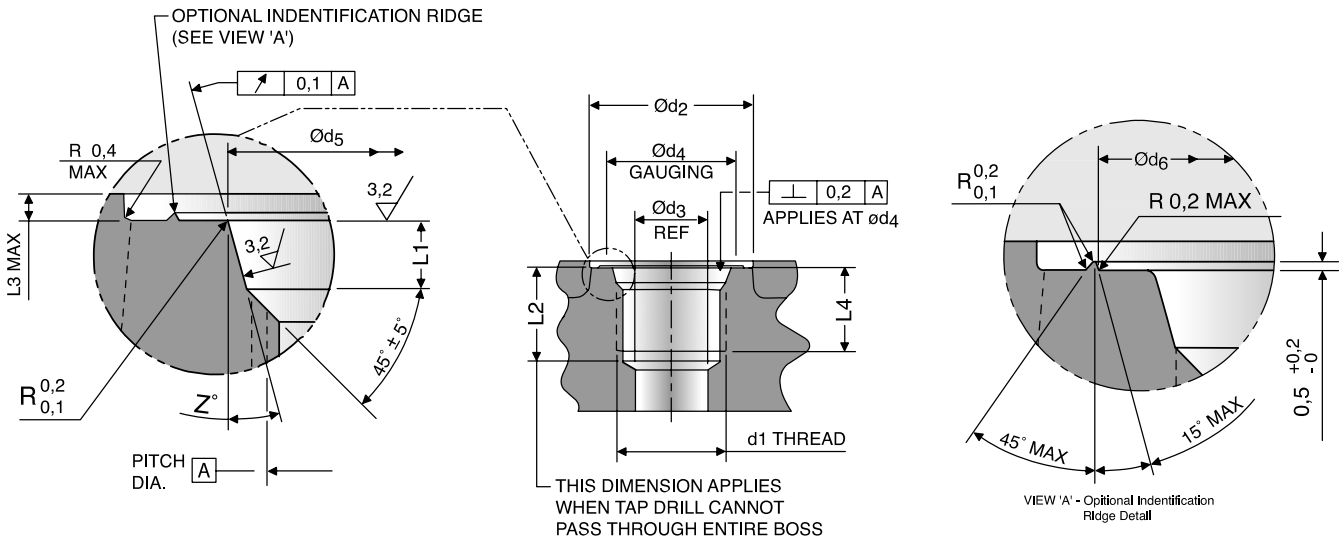




ISO 6149-1 — Metric Straight Thread O-Ring Port (SAE 2244-1/DIN 3852, Part 3) Metric ISO 261, “M” Thread



Thread Size d1 ¹⁾	Large d2 ²⁾ min	Small d3 ³⁾ min	d3 ⁴⁾ ref.	d4	d5 + 0.1 0	d6 +0.5 0	L1 +0.4 0	L2 ⁵⁾ min	L3 max	L4 min full thread	Z° ±1°	Parker O-ring Size ⁸⁾
M8 X 1	17	14	3	12.5	9.1	14	1.6	11.5	1	10	12°	M8 ISO O-ring
M10 X 1	20	16	4.5	14.5	11.1	16	1.6	11.5	1	10	12°	M10 ISO O-ring
M12 X 1.5	23	19	6	17.5	13.8	19	2.4	14	1.5	11.5	15°	M12 ISO O-ring
M14 X 1.5 ⁶⁾	25	21	7.5	19.5	15.8	21	2.4	14	1.5	11.5	15°	M14 ISO O-ring
M16 X 1.5	28	24	9	22.5	17.8	24	2.4	15.5	1.5	13	15°	M16 ISO O-ring
M18 X 1.5	30	26	11	24.5	19.8	26	2.4	17	2	14.5	15°	M18 ISO O-ring
M22 X 1.5	33	29	14	27.5	23.8	29	2.4	18	2	15.5	15°	M22 ISO O-ring
M27 X 2	40	34	18	32.5	29.4	34	3.1	22	2	19	15°	M27 ISO O-ring
M30 X 2	44	38	21	36.5	32.4	38	3.1	22	2	19	15°	M30 ISO O-ring
M33 X 2	49	43	23	41.5	35.4	43	3.1	22	2.5	19	15°	M33 ISO O-ring
M42 X 2	58	52	30	50.5	44.4	52	3.1	22.5	2.5	19.5	15°	M42 ISO O-ring
M48 X 2	63	57	36	55.5	50.4	57	3.1	25	2.5	22	15°	M48 ISO O-ring
M60 X 2	74	67	44	65.5	62.4	67	3.1	27.5	2.5	24.5	15°	M60 ISO O-ring

FOR CARTRIDGE VALVE CAVITIES ONLY (SEE ISO 7789)

M20X1.5 ⁷⁾	32	27	—	25.5	21.8	27	2.4	—	2	14.5	15°	M20 ISO O-ring
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Table U17— Port Detail — ISO 6149-1

- 1) Per ISO 261 tolerance class 6H. Tap drill per ISO 2306 class 6H.
- 2) Spotface diameter with the optional identification ridge.
- 3) Spotface diameter without identification ridge. Port to be identified by marking “metric” next to it or “ISO 6149-1 Metric” on component name plate.
- 4) Reference only. Connecting hole application may require a different size.
- 5) Tap drill depths given require use of a bottoming tap to produce the specified full thread lengths. Where standard taps are used, increase tap drill depths accordingly.
- 6) Preferred for diagnostic port applications.
- 7) For cartridge valve cavity applications only.
- 8) 90 durometer nitrile is standard for hydraulic applications.

NOTE: For port tapping tools, see [pages S34 and S35](#). See [page T6](#) for assembly torques.

Dimensions and pressures for reference only, subject to change.