

Metric Parallel

In Europe, primarily in Germany, the traditional metric parallel thread form is used extensively to connect components in hydraulic systems. This metric thread is designed to thread into and seal in a female Metric parallel port conforming to ISO-9974-1 (DIN-3852, Part 1). Fittings in this section with male metric threads use a primary sealing method of an O-ring and retaining ring (similar to Fig. G5). Additional sealing methods such as a cutting face or an EOlastic seal (similar to Fig. G6) are also available on other fittings within the catalog. Sealing is accommodated with one of the aforementioned sealing methods, not with the threads. It is also important to note that with these male metric threads, the seal occurs on the top face (spotface) of the port, not in an O-ring gland or chamfer as in SAE and ISO-6149 straight threads. A detail of this metric port is shown on [page U25](#).

To minimize further proliferation of additional port thread styles, the International Standards Organization Technical Committee 131 completed the development of a world standard leak-free port connection. It is recommended that this port, ISO 6149-1, be specified in all new hydraulic fluid power applications.

Parker and other fluid connector manufacturers have expanded product offering to incorporate the ISO 6149 male studs as a standard on many tube fitting products. Parker offers the ISO 6149 male stud end, shown in Fig. G7, on several tube fitting products including: Seal-Lok, Triple-Lok, EO, EO-2, Conversion Adapters, Plugs, etc. This port, utilizes metric parallel threads for mechanical holding power and a sealing method similar to the proven SAE Straight Thread O-ring port. A detail of this metric port is shown on [page U26](#).

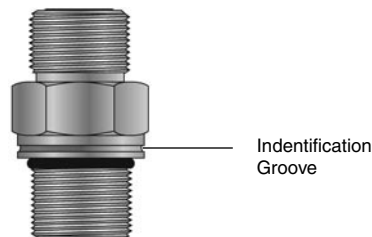


Fig. G7 — ISO 6149 Male

Feature	Advantage	Benefit
Tapered Thread Fittings		
Compact size	Suitable selection for plumbing in limited or tight space in a compact system.	Compact systems are more efficient and reduce the need for excessive routing of costly hose or tube
Widespread acceptability	Available worldwide for OEM and MRO applications	Eases efforts to find component parts and replacement fittings, reducing unnecessary downtime
High static pressure rating	Allows for use in high pressure applications	Increases versatility of fitting
Offered in three standard materials (Steel, Stainless Steel, and Brass)	Allows customer to match media and temperature applications without special fittings and seals.	Reduces component procurement costs and increases fitting availability
Adaptable to ORFS, Flareless Bite-type, Metric Bite-type, 37° flare, etc.	Versatility for end customer and for customer standardization efforts	Standardization reduces procurement costs
High temperature applications	Is not limited by temperature range of elastomeric seal	Increases versatility of fitting
Straight Thread Fittings		
Reliable sealing in dynamics applications	Ideal in systems with high pressure and cycling	Provides reliable, long-term sealing
Unlimited reusability/remakeability	Extends the service life of the fitting	Reduces maintenance costs and component replacement costs
No thread sealant needed	Eliminates the potential for contaminating and damaging sensitive hydraulic components due to thread sealant	Reduces maintenance costs and component replacement costs
Infinite positioning of shaped adapters	Eliminates potential of damaging adapter and/or component by incorrectly assembling to accomplish correct orientation	Improves assembly time and reduces maintenance costs
Elastomeric seal	Tolerant of minor surface imperfections to provide leak-free connection	Reduces operational and maintenance costs

Dimensions and pressures for reference only, subject to change.