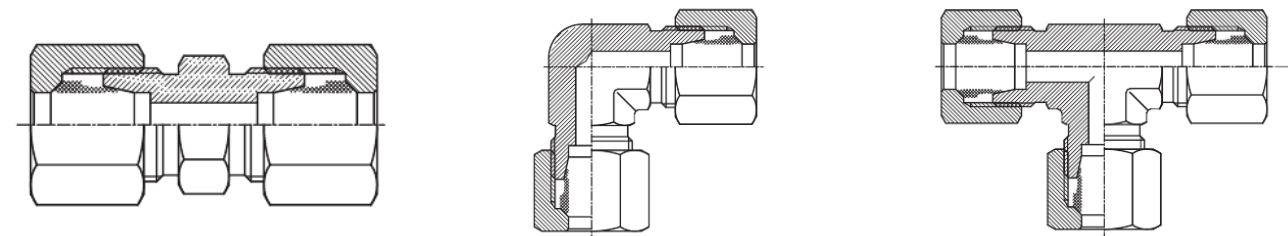


DIN 2353 hydraulic tube fittings

Metric 24° connections for hydraulic tube systems



Selection scope

Family	Tube OD scope	Selection note
LL - very light	4-12 mm	Confirm supplied configuration
L - light	6-42 mm	Select by exact item and duty
S - heavy	6-38 mm	Select by exact item and duty

A cutting-ring tube connection uses a fitting body, nut and ring. The tube must be suitable for the system and assembled using the supplied instructions. Series and thread identify connection geometry; neither supplies a universal working-pressure rating.

Configuration options for enquiry

Straight unions, elbows, tees, crosses, reducers, bulkhead fittings, tube-to-port connectors, adjustable and swivel arrangements, welding fittings, gauge and test connections, adaptors, blanking plugs, caps and spare components.

Define both ends

Specify tube OD and LL/L/S series separately from the equipment-port thread and seal. Port options may include BSPP, BSPT, metric, NPT and UN/UNF O-ring arrangements. JIC 37° transitions require a distinct 37° flare interface.

Reference illustrations are not to scale. Dimensions, materials, availability and permissible operating conditions are confirmed for the supplied configuration. Enquiries: ram@fluidline.co.za.

DIMENSIONAL IDENTIFICATION

Tube outside diameter & union thread

Use this chart for the tube-end union connection. It is not a chart of equipment-port threads. Identify OD and series together, then confirm the seat and sealing arrangement.

Series	Tube OD (mm)	Union thread
LL	4	M8 x 1
LL	6	M10 x 1
LL	8	M12 x 1
LL	10	M14 x 1
LL	12	M16 x 1
L	6	M12 x 1.5
L	8	M14 x 1.5
L	10	M16 x 1.5
L	12	M18 x 1.5
L	15	M22 x 1.5
L	18	M26 x 1.5
L	22	M30 x 2
L	28	M36 x 2
L	35	M45 x 2
L	42	M52 x 2
S	6	M14 x 1.5
S	8	M16 x 1.5
S	10	M18 x 1.5
S	12	M20 x 1.5
S	14	M22 x 1.5
S	16	M24 x 1.5
S	20	M30 x 2
S	25	M36 x 2
S	30	M42 x 2
S	38	M52 x 2

LL 10 and 12 mm are within the reference scope; confirm that the required configuration is supplied. Sizes that share a thread can still have different tube diameters or series.

Examples: 8L and 6S share M14 x 1.5. 22L and 20S share M30 x 2. Thread fit alone is not a selection check.

APPLICATION SELECTION

Materials, seals & pressure selection

Select the whole assembly

Provide the fluid, normal working pressure, maximum pressure including peaks, and the full operating temperature range. Include pressure cycling, vibration, environmental exposure and cleaning media where relevant.

Material option for enquiry	Selection considerations
Carbon steel	Hydraulic duty; confirm surface protection and environment.
316L stainless steel	Confirm grade, medium, tube and supplied configuration.
316Ti stainless steel	Different grade from 316L; specify it explicitly.

These materials can be specified in an enquiry; availability and suitability must be confirmed for the item. Stainless steel does not automatically carry a higher pressure rating than carbon steel.

Pressure is specific to the selected item

- Verify the rating for the configuration, size, material and operating temperature.
- Include the tube, wall thickness, port and seals in the selection. The most restrictive applicable limit governs.
- Account for pressure peaks, repeated cycling and mechanical loads. Do not use burst or test pressure as working pressure.
- Request any required temperature derating and confirm seal compatibility with the fluid.

Seals and tubing

NBR and FKM/FPM have different fluid and temperature characteristics. Specify seal profile, dimensions, material and hardness where required. Tube OD alone is insufficient: wall thickness, tolerances, hardness and end condition also affect suitability. Thin-wall or softer tube may require an approved support sleeve.

No blanket pressure or temperature rating is assigned to the complete catalogue range. Obtain the permissible values and documentation for the exact assembly being ordered.

CONNECTION SELECTION

Port threads, sealing forms & transitions

Connection	What to confirm
BSP parallel (BSPP / G)	Thread size; sealing face; washer, ED or O-ring arrangement.
BSP tapered (BSPT / R)	Mating taper thread; sealing method for the service.
Metric parallel	Diameter and pitch; port form and specified seal.
Metric tapered	Taper specification and matching port; do not assume parallel.
NPT	Correct NPT size; do not interchange with BSP taper.
UN/UNF O-ring boss	Thread size and boss/groove geometry; correct O-ring.
JIC 37° transition	37° flare interface and unified thread; distinct from DIN 24°.

A male connector has two different ends

Specify the tube-end OD and LL/L/S series separately from the equipment-port thread. For example, the tube union thread in the size chart does not establish which BSP, metric, NPT or unified port is needed.

O-ring and ED profile seals

An O-ring seals in its designed groove or boss arrangement. An ED profile ring seals at its specified port face. These are not interchangeable generic rings. Match the profile and material to the connection and medium. Thread sealant cannot replace a missing or damaged seal.

Supplementary transition options

For systems that include 37° flare connections, request a DIN 24°-to-JIC 37° transition with both ends fully specified. For a unified straight-thread equipment port, request the correct O-ring boss arrangement. A unified thread alone does not tell you whether the seal is a 37° cone or an O-ring boss.

Transition options are subject to enquiry and configuration confirmation. Identify whether the quoted item is a complete assembly with nuts and cutting rings or a body only. Do not combine parts solely because the threads engage.

Assembly & ordering checklist

Before installation

- Isolate and release stored pressure before opening any hydraulic connection.
- Confirm tube, series and matched components. Prepare the tube square, deburred and clean.
- Use the required preassembly tools, lubrication and inspection method.
- Follow the supplied final assembly procedure; no single torque or turn count applies to every system.
- Support the tube, check alignment and inspect during controlled commissioning.
- Inspect dismantled components and follow the specified reassembly procedure.

Send these details with your enquiry

Field	Required detail
Configuration	Name, quantity and marked sketch or photograph
Tube	OD, wall thickness, material and LL/L/S series
Ports	Type, size, pitch and seal at every connection
Duty	Fluid, pressure including peaks, temperature range
Supply	Complete fitting / body only / matched spare
Documents	Required drawing and supporting documentation

F-LINE hydraulic systems & fittings

ram@fluidline.co.za | +27 11 312 9339

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Use the full catalogue for the configuration selector and dimensional reference. The approved order-specific drawing and supplied assembly instructions govern the actual item. Reference edition: October 2026.