

ADIT TURNTech

BPE STD Fittings — product catalogue

Adit Turntech machines BPE standard sanitary fittings and precision turned components for pharmaceutical, biotech, dairy, food, beverage and water process equipment manufacturers. Over 80,000 components delivered since 2023, in SS316L, SS304L, alloy steel, Hastelloy and Delrin, to your drawing tolerances, with material test certificates.

Tolerance	Per drawing
Materials	SS316L / SS304L / Alloy steel / Hastelloy / Delrin
Batch size	Prototype to medium volume
Inspection	In-process and pre-dispatch, calibrated gauges
Machines	Jyoti DX 200-3 (8" chuck), Victor TNS-1A (6" chuck), conventional lathe

RANGE OVERVIEW

COMPONENT	CODE	APPLICATION	MATERIAL	TOL.
TC Ferrule × Hosetail	TC-HT	Hose connections	SS316L / SS304L*	To drawing
TC Ferrule × BSPT Male	TC-BSPT	Tapered thread	SS316L / SS304L*	To drawing
TC Ferrule × BSP Female	TC-BSPF	Female thread	SS316L / SS304L	To drawing
TC Ferrule × BSPP Male	TC-BSPP	Parallel thread	SS316L / SS304L*	To drawing
TC Blind / Blank	TC-BL	Line closure	SS316L / SS304L*	To drawing
NAC Connector	NAC	Aseptic sampling	SS316L / SS304L*	To drawing
Spray Balls & Nozzles	SB-NZ	CIP / SIP / WIP	SS316L / SS304L*	To drawing
Agitation & Mixing Parts	AGT	Tanks & vessels	SS316L / SS304L / Alloy steel / Hastelloy*	To drawing
TC Liner	TC-LNR	Vessel / pipe lining	SS316L / SS304L*	To drawing
Tank Ferrule	TNK-F	Vessel ports	SS316L / SS304L*	To drawing
Ingold Socket & Port Assembly	ING	Probe mounting	SS316L / SS304L*	To drawing
Probe Adaptor	PRB-AD	pH / DO probes	SS316L / SS304L*	To drawing

COMPONENT	CODE	APPLICATION	MATERIAL	TOL.
Tri-Clamp Adaptor, RD thread	TC-RD	RD thread interface	SS316L / SS304L*	To drawing
TC Hose Fitting	TC-HF	Flexible hose lines	SS316L / SS304L*	To drawing
SMS Union Assembly, RD thread	SMS-U	Dairy pipelines	SS316L / SS304L*	To drawing
DIN Union Assembly	DIN-U	DIN pipelines	SS316L / SS304L*	To drawing
Eccentric Reducer	ECC-RED	Drainable size change	SS316L / SS304L*	To drawing
Concentric Reducer	RED	Plain / fitting end	SS316L / SS304L*	To drawing
Sight Glass Assembly	SGT	Vessel viewing	SS316L / SS304L*	To drawing
Domed End Cap, weld ended	DEC	Line termination	SS316L / SS304L*	To drawing
BSP Full & Half Socket	BSP-SKT	Threaded fittings	SS316L / SS304L	To drawing
Hex, Barrel & Weld Nipple	NPL	BSPP threaded	SS316L / SS304L	To drawing
Reducing Bush & Plug	RB-PLG	Size adaption	SS316L / SS304L	To drawing

* available on request

COMPONENT SPECIFICATIONS

TC Ferrule x Hosetail TC-HT

Tri-Clamp ferrule with a serrated hosetail for flexible transfer lines. Turned single-piece in SS316L with a crevice-free clamp face for CIP.

Sizes	1/2" to 4" clamp sizes
End connections	Tri-Clamp face x serrated hosetail
Materials	SS316L, SS304L on request
Finishes	Mill / machined finish, 180-220 grit satin polish, Mirror polish, Ra ≤ 0.4 µm on request, Electropolished on request
Tolerance	To drawing

TC Ferrule × BSPT Male TC-BSPT

Clamp-to-tapered-thread adaptor for instrument and utility take-offs, with clean thread flanks cut on CNC in one setting.

Sizes	1/2" to 3" clamp × 1/4" to 2" BSPT
End connections	Tri-Clamp face × BSPT male tapered thread
Materials	SS316L, SS304L on request
Finishes	Mill / machined finish, 180–220 grit satin polish, Mirror polish, Ra ≤ 0.4 µm on request, Electropolished on request
Tolerance	To drawing

TC Ferrule × BSP Female TC-BSPF

Female-threaded clamp adaptor for gauges, valves and sensor bodies. Available in SS316L or SS304L to suit your build spec.

Sizes	1/2" to 3" clamp × 1/4" to 2" BSP
End connections	Tri-Clamp face × BSP female thread
Materials	SS316L, SS304L
Finishes	Mill / machined finish, 180–220 grit satin polish, Mirror polish, Ra ≤ 0.4 µm on request, Electropolished on request
Tolerance	To drawing

TC Ferrule × BSPP Male TC-BSPP

Parallel-thread clamp adaptor for sealed instrument connections where a bonded washer or O-ring seat is used.

Sizes	1/2" to 3" clamp × 1/4" to 2" BSPP
End connections	Tri-Clamp face × BSPP male parallel thread
Materials	SS316L, SS304L on request
Finishes	Mill / machined finish, 180–220 grit satin polish, Mirror polish, Ra ≤ 0.4 µm on request, Electropolished on request
Tolerance	To drawing

TC Blind / Blank TC-BL

Solid clamp blanks for closing off vessel ports and pipe runs during CIP, pressure testing and validation.

Sizes	1/2" to 6" clamp sizes
End connections	Solid Tri-Clamp face, flat or domed
Materials	SS316L, SS304L on request
Finishes	Mill / machined finish, 180–220 grit satin polish, Mirror polish, Ra ≤ 0.4 µm on request, Electropolished on request
Tolerance	To drawing

NAC Connector NAC

Novaseptum-style aseptic connector bodies for sterile sampling points on bioreactors and holding vessels.

Sizes	Standard NAC bodies and matching nuts
End connections	NAC body × clamp or threaded outlet
Materials	SS316L, SS304L on request
Finishes	180–220 grit satin polish, Mirror polish, Ra ≤ 0.4 µm, Electropolished on request
Tolerance	To drawing

Spray Balls & Nozzles SB-NZ

Static spray balls and nozzles drilled to your coverage pattern for CIP, SIP and WIP circuits in tanks and vessels.

Sizes	25 mm to 100 mm ball dia., drilling to your pattern
End connections	Weld, clamp or threaded stem
Materials	SS316L, SS304L on request
Finishes	Mill finish, 180–220 grit satin polish, Electropolished on request
Tolerance	To drawing

Agitation & Mixing Parts AGT

Agitator hubs, bushes, shaft ends and mixing components turned to drawing, including alloy steel and Hastelloy grades.

Sizes	Shafts, hubs, bushes and blades to drawing
End connections	Keyed, splined or bolted hubs
Materials	SS316L, SS304L, Alloy steel, Hastelloy on request
Finishes	Mill / machined finish, 180 grit satin polish, Ground shaft seats
Tolerance	To drawing

TC Liner TC-LNR

Turned and polished clamp liners with crevice-free bores, standard sizes or made to your vessel drawing.

Sizes	1/2" to 4" clamp sizes
End connections	Tri-Clamp face × plain bore liner
Materials	SS316L, SS304L on request
Finishes	Mill / machined finish, 180–220 grit satin polish, Mirror polish, Ra ≤ 0.4 µm on request, Electropolished on request
Tolerance	To drawing

Tank Ferrule TNK-F

Weld-on tank ferrules in standard and custom lengths for vessel wall ports, sampling and instrument nozzles.

Sizes	Standard and custom, 1/2" to 6"
End connections	Weld-on tank flange × Tri-Clamp face
Materials	SS316L, SS304L on request
Finishes	Mill / machined finish, 180–220 grit satin polish, Mirror polish, $Ra \leq 0.4 \mu\text{m}$ on request, Electropolished on request
Tolerance	To drawing

Ingold Socket & Port Assembly ING

Complete Ingold port assemblies — weld-in socket, knurled union nut, blanking plug and seal seat — for pH and DO probe mounting.

Sizes	25 mm Ingold standard, others to drawing
End connections	Weld-in socket with union nut and blanking plug
Materials	SS316L, SS304L on request
Finishes	Mill / machined finish, 180–220 grit satin polish, Mirror polish, $Ra \leq 0.4 \mu\text{m}$ on request, Electropolished on request
Tolerance	To drawing

Probe Adaptor PRB-AD

Probe adaptors and extension bodies that mate PG13.5 instrument threads to Ingold sockets or clamp ports.

Sizes	PG13.5 and 25 mm Ingold interfaces
End connections	PG13.5 thread × Ingold or clamp
Materials	SS316L, SS304L on request
Finishes	Mill / machined finish, 180–220 grit satin polish, Mirror polish, $Ra \leq 0.4 \mu\text{m}$ on request, Electropolished on request
Tolerance	To drawing

Tri-Clamp Adaptor, RD thread TC-RD

Adaptors joining Tri-Clamp lines to RD-threaded dairy and SMS unions, cut with true DIN 405 round thread profiles.

Sizes	RD 28 to RD 78 × matching clamp sizes
End connections	Tri-Clamp face × RD (DIN 405) thread
Materials	SS316L, SS304L on request
Finishes	Mill / machined finish, 180–220 grit satin polish, Mirror polish, $Ra \leq 0.4 \mu\text{m}$ on request, Electropolished on request
Tolerance	To drawing

TC Hose Fitting TC-HF

Hose fittings for silicone and braided PTFE hose assemblies, with serrated or crimp-ready shanks.

Sizes	1/2" to 3" hose bore
End connections	Tri-Clamp face × serrated or crimp shank
Materials	SS316L, SS304L on request
Finishes	Mill / machined finish, 180-220 grit satin polish, Mirror polish, Ra ≤ 0.4 µm on request, Electropolished on request
Tolerance	To drawing

SMS Union Assembly, RD thread SMS-U

Full SMS union sets — male part, liner and RD nut — for dairy, beverage and food process pipework.

Sizes	SMS 1145, 25 mm to 100 mm
End connections	Male part, liner and RD union nut
Materials	SS316L, SS304L on request
Finishes	Mill / machined finish, 180-220 grit satin polish, Mirror polish, Ra ≤ 0.4 µm on request, Electropolished on request
Tolerance	To drawing

DIN Union Assembly DIN-U

DIN 11851 union assemblies with matched cone, liner and nut for hygienic process lines.

Sizes	DIN 11851, DN 10 to DN 100
End connections	Cone, liner and DIN union nut
Materials	SS316L, SS304L on request
Finishes	Mill / machined finish, 180-220 grit satin polish, Mirror polish, Ra ≤ 0.4 µm on request, Electropolished on request
Tolerance	To drawing

Eccentric Reducer ECC-RED

Single-piece eccentric reducer turned from solid SS316L, with a flat invert so lines stay fully drainable through the size change.

Sizes	3/4" to 4" tube OD combinations
End connections	Tube × tube, weld ends (clamp ends on request)
Materials	SS316L, SS304L on request
Finishes	Mill / machined finish, 180-220 grit satin polish, Mirror polish, Ra ≤ 0.4 µm on request, Electropolished on request
Tolerance	To drawing

Concentric Reducer RED

Turned concentric reducers with plain weld or clamp ends, keeping bores smooth and drainable through the transition.

Sizes	Reductions from 4" down to 1/2"
End connections	Plain weld end or clamp fitting end
Materials	SS316L, SS304L on request
Finishes	Mill / machined finish, 180-220 grit satin polish, Mirror polish, $Ra \leq 0.4 \mu m$ on request, Electropolished on request
Tolerance	To drawing

Sight Glass Assembly SGT

Sight glass bodies and retaining rings machined with true glass seats for borosilicate discs and gaskets.

Sizes	1.5" to 6" viewing dia.
End connections	Clamp or weld-on frames with glass seat
Materials	SS316L, SS304L on request
Finishes	Mill / machined finish, 180-220 grit satin polish, Mirror polish, $Ra \leq 0.4 \mu m$ on request, Electropolished on request
Tolerance	To drawing

Domed End Cap, weld ended DEC

Weld-ended domed caps for terminating tube runs without dead legs or sharp internal corners.

Sizes	1/2" to 4" tube OD
End connections	Weld end, domed crown
Materials	SS316L, SS304L on request
Finishes	Mill / machined finish, 180-220 grit satin polish, Mirror polish, $Ra \leq 0.4 \mu m$ on request, Electropolished on request
Tolerance	To drawing

BSP Full & Half Socket BSP-SKT

Full and half sockets in SS316L and SS304L for utility, instrument and general threaded pipework.

Sizes	1/8" to 2" BSP
End connections	BSP female both ends, or one end plain
Materials	SS316L, SS304L
Finishes	Mill / machined finish, 180 grit satin polish, Passivated on request
Tolerance	To drawing

Hex, Barrel & Weld Nipple NPL

Hex, barrel and weld nipples turned from bar in stainless grades, in standard and made-to-drawing lengths.

Sizes	1/8" to 2" BSPP, lengths to drawing
End connections	Male thread both ends, or thread x weld
Materials	SS316L, SS304L
Finishes	Mill / machined finish, 180 grit satin polish, Passivated on request
Tolerance	To drawing

Reducing Bush & Plug RB-PLG

Reducing bushes and solid plugs for adapting or closing threaded ports on skids and utility lines.

Sizes	1/8" to 2" BSP combinations
End connections	Male x female thread, or solid plug
Materials	SS316L, SS304L
Finishes	Mill / machined finish, 180 grit satin polish, Passivated on request
Tolerance	To drawing

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FULL SPECIFICATION

Every item in this catalogue is machined and inspected to the standards, ASME BPE tube dimensions, tolerances, materials and SF1-SF6 surface finishes set out in our BPE STD Fitting Spec Sheet. Download it

from the Spec Sheet page on our website (/spec-sheet), or ask us to email the PDF. Pricing is on request: we quote per drawing, size, material grade, finish and quantity, ex-works Bhosari, Pune.

CONTACT

Mr. Dnyaneshwar Karale	Ops Manager – Machining	+91 98813 53334
Mr. Suraj Karale	Business Development	+91 96045 01780
Mr. Tejas Mutke	Executive – Account & Sales	+91 93220 87734

Adit Turntech · 681/1, Godse Industrial Estate, Behind Swami Samarth Mandir, Landewadi, Bhosari, Pune, Maharashtra 411039 · info@aditturntech.com · GSTIN 27GMZPM2639N1ZV