TORUS	· Owner SPECIALTY ITEMS LIST			Document No.	MEC-LST-005	
				Revision / Date	A · September 29, 2026	
				Issue purpose	Issued for Review	
MECHANICAL · SPECIALTY ITEMS LIST						
Rev.	Date	Revision description	Prepared	Reviewed	Approved	
A	2026-09-29	Issued for Review				

NOTES

1. This list covers piping specialty items that are not standard pipe, fittings, flanges or valves: insulating joints, restriction orifices, flow conditioners, quick-opening closures, pig handling items, blinds and test spools, strainers, sample probes, thermowells, couplings, vents and transition coatings. Each item carries a specialty tag used on the general arrangement, the isometrics and the material take-off.
2. Restriction orifice bores are set by the process relief and blowdown calculations (

PRO-CAL-007

 and

PRO-CAL-008

); plates are stamped with tag, bore and flow direction.
3. Permanent spectacle blinds are not used. Maintenance isolation is by double block and bleed valves and by the V-101 and H-101 bypasses. Test blinds are temporary and are removed and recorded before gas-in (

SPC-SPC-018

).
4. Strainers are temporary commissioning items; V-101 is the permanent protection for the meters.
5. The isolation pad quantity equals the number of pipe supports in

MEC-CAL-005

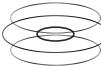
, Pipe Supports.

SPECIALTY ITEMS

Table 1-1: Specialty Items

Tag	Description	NPS	Rating	Location / line	Qty	Supply	Reference
IJ-101	Monolithic insulating joint, BW pups X52 0.375 in, 1,440 psig design, 2,160 psig test	12	Class 600 equiv.	1001 (26.5, 8)	1	Buy	MEC-DS-008
IJ-102	Monolithic insulating joint, as IJ-101	12	Class 600 equiv.	1041 (220, 152.5)	1	Buy	MEC-DS-008
RO-102	Restriction orifice plate 3/16 in bore downstream of BDV-102, Class 600 x S1 flanges	2	Class 600	BDV-102 / 1075	1	Buy	PRO-CAL-007 / MEC-DS-002
RO-104	Restriction orifice in Class 600 orifice flanges on 1060 downstream of LCV-104, limits blow-by	2	Class 600	1060 (77, 35)	1	Buy	PRO blow-by calc
EV-193	Emergency vent, 16 in, weighted hinged cover, on T-101 roof	16	atm	T-101 roof	1	T-101 vendor	MEC-DS-004
HV-180A pan	Portable drain collection pan under drain valve HV-180A at VS-101 base (untagged), emptied by vacuum truck	-	-	VS-101	1	Buy	MEC-DS-005
RO-181	Restriction orifice plate in Class 600 orifice flanges (bore per PRO-CAL-007)	2	Class 600	BDV-181 / 1072	1	Buy	PRO-CAL-007
RO-182	Restriction orifice, as RO-181	2	Class 600	BDV-182 / 1073	1	Buy	PRO-CAL-007
RO-183	Restriction orifice, as RO-181	2	Class 600	BDV-183 / 1074	1	Buy	PRO-CAL-007
RO-172B	Restriction orifice, as RO-181	2	Class 600	HV-172A / 1170	1	Buy	PRO-CAL-007
FC-111 / FC-121	Perforated-plate flow conditioner, AGA 9 tested with the meter tube	10	Class 600	1011 / 1012	2	SK-110 vendor	MEA
QOC-V101	Quick-opening closure, yoke / clamp type, with pressure warning device (UG-35.2)	36	1,440 psig	V-101 east head	1	V-101 vendor	MEC-DS-001
QOC-PR101	Quick-opening closure with pressure warning and BDV-102 / PI-102 interlock I-08	16	1,440 psig	PR-101 west end	1	PR-101 vendor	MEC-DS-002
BT-1001	Barred tee, flow bars at 1/3 D spacing, pig guide	12	WPHY-52, 0.375 in	1001 (53, 26)	1	Buy	PIP-SPC-001
XI-102	Intrusive pig signaler, flanged 2 in Class 600, bi-directional	2	Class 600	PR-101 minor barrel	1	Buy	INS / MEC-DS-002
SP-141	Pressure-reducing insertion sample probe, 2 in Class 600 flanged mount	2	Class 600	1020 (104, 116)	1	MEA	MEA sampling design
TW-(8)	Thermowells TW-101, 111, 112, 121, 122, 135, 156, 173, flanged 1-1/2 in Class 600 (wake-frequency per MEA-CAL-004)	1-1/2	Class 600	various	8	INS / MEA	MEA-CAL-004
DB-1191	Dry-break loadout coupling with dust cap, 3 in, and static grounding clamp	3	Class 150	1191 (30, 116)	1	Buy	PRO-DWG-110
FA-193 / PVRV-193	Flame arrestor and pressure-vacuum relief valve, NPS 6	6	atm	T-101 roof	1	T-101 vendor	MEC-DS-004
SB-TEST	Test blinds / spectacle blinds for hydrotest isolation at V-101 N1 / N2, H-101 N1 / N2, PR-101 flange, FCV-131 / 132 (spools)	12 / 8	Class 600 / 900	per MEC-CAL-003	7	Contractor (temporary)	MEC-CAL-003
SPOOL-USM	Temporary test spools replacing FE-111 / FE-121 (30 in F2F) during hydrotest (SPC-SPC-011 8-05)	10	Class 600	1011 / 1012	2	Contractor (temporary)	MEC-CAL-003
SPOOL-FCV	Temporary test spools replacing FCV-131 / FCV-132 (24 in F2F)	8	Class 600	1031 / 1032	2	Contractor (temporary)	MEC-CAL-003
STR-T	Temporary conical start-up strainers, 100 mesh, at SK-110 inlet flange TI-S1 and FCV-131 / 132 inlets (commissioning only)	12 / 8	Class 600	TI-S1, 1031, 1032	3	Contractor (temporary)	SPC-SPC-018
ISO-PAD	Pipe-to-support isolation pads (SPC-SPC-004 , item 8-06)	all	-	every support	225	Buy	PIP-DWG-006
VS-TIP	Vent stack tip with drain hole, no rain cap flapper (P&ID DWG-109)	8	Class 150	VS-101	1	Fabricate	MEC-DS-005



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Tag	Description	NPS	Rating	Location / line	Qty	Supply	Reference		
HT-TEE	12 in hot tap split tee on 24 in trunk and tap valve (receiving pipeline operator scope, information)	24 x 12	Class 600	TI-02	1	By others	MEC-CAL-002 / PIP-DWG-004		
STA	Soil-to-air transition coating system at risers (1042, 1051 x 2, 1052 x 2)	12 / 2 / 1	-	risers	5	Buy	SPC-SPC-009 / PIP-DWG-007		