Process, Power and Marine Division

SP3D Piping Reference Data

2-Piping Commodity Filter



INTERGRAPH

Piping Commodity Filter

Piping Commodity Filter sheet defines all the piping components associated with a particular piping material class. This rule is intended to provide the data that is required to select an unique piping commodity code to access the part catalog.

SpecName	ShortCode	OptionCode	FirstSizeFrom	FirstSizeTo	FirstSizeUnits	SecondSizeFrom	SecondSizeTo	SecondSizeUnits	MultisizeOption	Comments	SelectionBasis	JacketedPipingBasis	MaximumTemperature	MinimumTemperature	EngineeringTag	CommodityCode	FabricationCategoryOverride	SupplyResponsibilityOverride	FirstSizeSchedule	SecondSizeSchedule
	Nipple	745	0.75	1.5	in						1					PBAZZBNZZABAABSAAAGUS			S-160	S-160
1C0031																				
	Piping	1	0.75	1.5	in						1					PAAZZBPZZABAABSAAZZUS			S-XS	
	Piping	1	2	24	in						1					PAAZZBOZZABAABOAAZZUS			S-STD	
	Piping	1	26	36	in						1					PAAZZBOZZABAABHAUZZUS			ANSI B31.3	
	Gate Valve	1	0.75	1.5	in						1				VG333	VADAQBVAHAHPABQZZZZUS				
	Gate Valve	24	0.75	1.5	in						1				VG335	VACAQBVAHAHUABQZZZZUS				
	Gate Valve	221	0.75	1.5	in						1				VG7	VAAAHABAHAHQABQZZZZUS				
	Gate Valve	773	0.75	1.5	in						1				VG52	VAAAMABAHAHRABQZZZZUS				
	Gate Valve	1	2	12	in						1				VG3	VAAAHABAHADJADAZZZZUS				
	Gate Valve	773	2	10	in						1				VG49	VAAAMABAHADEADAZZZZUS				
	Gate Valve	1	14	24	in						1				VG4	VAAAHABAHADJADACFZZUS				
	Gate Valve	1	30	30	in						1				VG5	VAAAHABAHADJADAHIZZUS				
	Gate Valve	1	36	36	in						1				VG6	VAAAHABAHADKADACFZZUS				

Spec Name

SpecName	ShortCode	OptionCode	FirstSizeFrom	FirstSizeTo	FirstSizeUnits	SecondSizeFrom	SecondSizeTo	SecondSizeUnits	MultisizeOption	Comments	SelectionBasis	JacketedPipingBasis	MaximumTemperature	MinimumTemperature	EngineeringTag	CommodityCode	FabricationCategoryOverride	SupplyResponsibilityOverride	FirstSizeSchedule	SecondSizeSchedule
	Nipple	745	0.75	1.5	in						1					PBAZZBNZZABAABSAAAGUS			S-160	S-160
1C0031																				
	Piping	1	0.75	1.5	in						1					PAAZZBPZZABAABSAAZZUS			S-XS	
	Piping	1	2	24	in						1					PAAZZBOZZABAABOAAZZUS			S-STD	
	Piping	1	26	36	in						1					PAAZZBOZZABAABHAUZZUS			ANSI B31.3	
	Gate Valve	1	0.75	1.5	in						1				VG333	VADAQBVAHAHPABQZZZZUS				
	Gate Valve	24	0.75	1.5	in						1				VG335	VACAQBVAHAHUABQZZZZUS				
	Gate Valve	221	0.75	1.5	in						1				VG7	VAAAHABAHAHQABQZZZZUS				
	Gate Valve	773	0.75	1.5	in						1				VG52	VAAAMABAHAHRABQZZZZUS				
	Gate Valve	1	2	12	in						1				VG3	VAAAHABAHADJADAZZZZUS				
	Gate Valve	773	2	10	in						1				VG49	VAAAMABAHADEADAZZZZUS				
	Gate Valve	1	14	24	in						1				VG4	VAAAHABAHADJADACFZZUS				
	Gate Valve	1	30	30	in						1				VG5	VAAAHABAHADJADAHIZZUS				
	Gate Valve	1	36	36	in						1				VG6	VAAAHABAHADKADACFZZUS				

This is a string representing the unique name of the piping materials class for which the piping commodity is intended.

Short Code

SpecName	ShortCode	OptionCode	FirstSizeFrom	FirstSizeTo	FirstSizeUnits	SecondSizeFrom	SecondSizeTo	SecondSizeUnits	MultisizeOption	Comments	SelectionBasis	JacketedPipingBasis	MaximumTemperature	MinimumTemperature	EngineeringTag	CommodityCode	FabricationCategoryOverride	SupplyResponsibilityOverride	FirstSizeSchedule	SecondSizeSchedule
	Nipple	745	0.75	1.5	in						1					PBAZZBNZZABAABSAAAGUS			S-160	S-160
1C0031																				
	Piping	1	0.75	1.5	in						1					PAAZZBPZZABAABSAAZZUS			S-XS	
	Piping	1	2	24	in						1					PAAZZBOZZABAABOAAZZUS			S-STD	
	Piping	1	26	36	in						1					PAAZZBOZZABAABHAUZZUS			ANSI B31.3	
	Gate Valve	1	0.75	1.5	in						1				VG333	VADAQBVAHAHPABQZZZZUS				
	Gate Valve	24	0.75	1.5	in						1				VG335	VACAQBVAHAHUABQZZZZUS				
	Gate Valve	221	0.75	1.5	in						1				VG7	VAAAHABAHAHQABQZZZZUS				
	Gate Valve	773	0.75	1.5	in						1				VG52	VAAAMABAHAHRABQZZZZUS				
	Gate Valve	1	2	12	in						1				VG3	VAAAHABAHADJADAZZZZUS				
	Gate Valve	773	2	10	in						1				VG49	VAAAMABAHADEADAZZZZUS				
	Gate Valve	1	14	24	in						1				VG4	VAAAHABAHADJADACFZZUS				
	Gate Valve	1	30	30	in						1				VG5	VAAAHABAHADJADAHIZZUS				
	Gate Valve	1	36	36	in						1				VG6	VAAAHABAHADKADACFZZUS				

This is a string representing a name for a specific type of piping commodity, e.g. a gate valve, or a functional type of piping commodity. The short code appears in the Type box on the Place Component ribbon.

Option Code

SpecName	ShortCode	OptionCode	FirstSizeFrom	FirstSizeTo	FirstSizeUnits	SecondSizeFrom	SecondSizeTo	SecondSizeUnits	MultisizeOption	Comments	SelectionBasis	JacketedPipingBasis	MaximumTemperature	MinimumTemperature	EngineeringTag				
	Nipple	745	0.75	1.5	in						1					PBAZZBNZZABAABSAAAGU			
1C0031																			
	Piping	1	0.75	1.5	in						1					PAAZZBPZZABAABSAAZZUS			S-XS
	Piping	1	2	24	in						1					PAAZZBOZZABAABOAAZZUS			S-STD
	Piping	1	26	36	in						1					PAAZZBOZZABAABHAUZZUS			ANSI B31.3
	Gate Valve	1	0.75	1.5	in						1				VG333	VADAQBVAHAHPABQZZZZUS			
	Gate Valve	24	0.75	1.5	in						1				VG335	VACAQBVAHAHUABQZZZZUS			
	Gate Valve	221	0.75	1.5	in						1				VG7	VAAAHABAHAHQABQZZZZUS			
	Gate Valve	773	0.75	1.5	in						1				VG52	VAAAMABAHAHRABQZZZZUS			
	Gate Valve	1	2	12	in						1				VG3	VAAAHABAHADJADAZZZZUS			
	Gate Valve	773	2	10	in						1				VG49	VAAAMABAHADEADAZZZZUS			
	Gate Valve	1	14	24	in						1				VG4	VAAAHABAHADJADACFZZUS			
	Gate Valve	1	30	30	in						1				VG5	VAAAHABAHADJADAHIZZUS			
	Gate Valve	1	36	36	in						1				VG6	VAAAHABAHADKADACFZZUS			

	D	F
1		
2	CommodityOption ShortDescription	Codelist Number
5		1
6	Default	1
19	Full port	24
20	Tight SO	27
21	Dbl disc	30
22	Y pattern	32
23	Wafer	33
24	Lug	34
25	Single flange	36
26	1/8" hole	38
27	Non lube	39
28	3/16" hole	40
29	1/4" hole	41
30	Lube	42
31	Quick close	43
32	Quick open	44

CommodityOption | ConduitSelectionBasis

This is an enumerated value that represents an optional commodity selection that has been enabled by the spec writer.

First size From To

SpecName	ShortCode	OptionCode	FirstSizeFrom	FirstSizeTo	FirstSizeUnits	SecondSizeFrom	SecondSizeTo	SecondSizeUnits	MultisizeOption	Comments	SelectionBasis	JacketedPipingBasis	MaximumTemperature	MinimumTemperature	EngineeringTag	CommodityCode	FabricationCategoryOverride	SupplyResponsibilityOverride	FirstSizeSchedule	SecondSizeSchedule
	Nipple	74	0.75	1.5	in						1					PBAZZBNZZABAABSAAAGUS			S-160	S-160
1C0031																				
	Piping		0.75	1.5	in						1					PAAZZBPZZABAABSAAZZUS			S-XS	
	Piping		2	24	in						1					PAAZZBOZZABAABOAAZZUS			S-STD	
	Piping		26	36	in						1					PAAZZBOZZABAABHAUZZUS			ANSI B31.3	
	Gate Valve		0.75	1.5	in						1				VG333	VADAQBVAHAHPABQZZZZUS				
	Gate Valve	2	0.75	1.5	in						1				VG335	VACAQBVAHAHUABQZZZZUS				
	Gate Valve	22	0.75	1.5	in						1				VG7	VAAAHABAHAHQABQZZZZUS				
	Gate Valve	77	0.75	1.5	in						1				VG52	VAAAMABAHAHRABQZZZZUS				
	Gate Valve		2	12	in						1				VG3	VAAAHABAHADJADAZZZZUS				
	Gate Valve	77	2	10	in						1				VG49	VAAAMABAHADEADAZZZZUS				
	Gate Valve		14	24	in						1				VG4	VAAAHABAHADJADACFZZUS				
	Gate Valve		30	30	in						1				VG5	VAAAHABAHADJADAHIZZUS				
	Gate Valve		36	36	in						1				VG6	VAAAHABAHADKADACFZZUS				

These are a unitted value representing the lower and upper bound of the components first size, for which this piping commodity applies within this piping materials class.

Second Size From To

SpecName	ShortCode	OptionCode	FirstSizeFrom	FirstSizeTo	FirstSizeUnits	SecondSizeFrom	SecondSizeTo	SecondSizeUnits	MultisizeOption	Comments	SelectionBasis	JacketedPipingBasis	MaximumTemperature	MinimumTemperature	EngineeringTag	CommodityCode	FabricationCategoryOverride	SupplyResponsibilityOverride	FirstSizeSchedule	SecondSizeSchedule
	Nipple	745	0.75	1.5	in						1					PBAZZBNZZABAABSAAAGUS			S-160	S-160
1C0031																				
	Piping	1	0.75	1.5	in						1					PAAZZBPZZABAABSAAZZUS			S-XS	
	Piping	1	2	24	in						1					PAAZZBOZZABAABOAAZZUS			S-STD	
	Piping	1	26	36	in						1					PAAZZBOZZABAABHAUZZUS			ANSI B31.3	
	Gate Valve	1	0.75	1.5	in						1				VG333	VADAQBVAHAHPABQZZZZUS				
	Gate Valve	24	0.75	1.5	in						1				VG335	VACAQBVAHAHUABQZZZZUS				
	Gate Valve	221	0.75	1.5	in						1				VG7	VAAAHABAHAHQABQZZZZUS				
	Gate Valve	773	0.75	1.5	in						1				VG52	VAAAMABAHAHRABQZZZZUS				
	Gate Valve	1	2	12	in						1				VG3	VAAAHABAHADJADAZZZZUS				
	Gate Valve	773	2	10	in						1				VG49	VAAAMABAHADEADAZZZZUS				
	Gate Valve	1	14	24	in						1				VG4	VAAAHABAHADJADACFZZUS				
	Gate Valve	1	30	30	in						1				VG5	VAAAHABAHADJADAHIZZUS				
	Gate Valve	1	36	36	in						1				VG6	VAAAHABAHADKADACFZZUS				

These are a unitted value representing the lower and upper bound of the components second size, for which this piping commodity applies within this piping materials class.

Multi Size Option

SpecName	ShortCode	OptionCode	FirstSizeFrom	FirstSizeTo	FirstSizeUnits	SecondSizeFrom	SecondSizeTo	SecondSizeUnits	MultisizeOption	Comments	SelectionBasis	JacketedPipingBasis	MaximumTemperature	MinimumTemperature	EngineeringTag	CommodityCode	FabricationCategoryOverride	SupplyResponsibilityOverride	FirstSizeSchedule	SecondSizeSchedule
	Nipple	745	0.75	1.5	in						1					PBAZZBNZZABAABSAAAGUS			S-160	S-160
1C0031																				
	Piping	1	0.75	1.5	in						1					PAAZZBPZZABAABSAAZZUS			S-XS	
	Piping	1	2	24	in						1					PAAZZBOZZABAABOAAZZUS			S-STD	
	Piping	1	26	36	in						1					PAAZZBOZZABAABHAUZZUS			ANSI B31.3	
	Gate Valve	1	0.75	1.5	in						1				VG333	VADAQBVAHAHPABQZZZZUS				
	Gate Valve	24	0.75	1.5	in						1				VG335	VACAQBVAHAHUABQZZZZUS				
	Gate Valve	221	0.75	1.5	in						1				VG7	VAAAHABAHAHQABQZZZZUS				
	Gate Valve	773	0.75	1.5	in						1				VG52	VAAAMABAHAHRABQZZZZUS				
	Gate Valve	1	2	12	in						1				VG3	VAAAHABAHADJADAZZZZUS				
	Gate Valve	773	2	10	in						1				VG49	VAAAMABAHADEADAZZZZUS				
	Gate Valve	1	14	24	in						1				VG4	VAAAHABAHADJADACFZZUS				
	Gate Valve	1	30	30	in						1				VG5	VAAAHABAHADJADAHIZZUS				
	Gate Valve	1	36	36	in						1				VG6	VAAAHABAHADKADACFZZUS				

This is a string that represents an optional piping commodity selection that has been enabled by the spec writer for multi-size fittings, where first size and second size are inadequate.

Multi Size Option

Examples:

Note that the second size values is not required. The system uses the first size to select the applicable multi-size options.

Piping Specialties													
Equal Steam Trap3	15	15	mm				1						WONICJRFLTST3
Steam Trap3	20	25	mm				1	25x20x15					WONICJRFLTST3
Steam Trap3	15	25	mm				1	25x15x15					WONICJRFLTST3
Steam Trap3	15	25	mm				521	25x15x15					WONICJRFLSST3

Comments

SpecName	ShortCode	OptionCode	FirstSizeFrom	FirstSizeTo	FirstSizeUnits	SecondSizeFrom	SecondSizeTo	SecondSizeUnits	MultisizeOption	Comments	SelectionBasis	JacketedPipingBasis	MaximumTemperature	MinimumTemperature	EngineeringTag	CommodityCode	FabricationCategoryOverride	SupplyResponsibilityOverride	FirstSizeSchedule	SecondSizeSchedule
	Nipple	745	0.75	1.5	in						1					PBAZZBNZZABAABSAAAGUS			S-160	S-160
1C0031																				
	Piping	1	0.75	1.5	in						1					PAAZZBPZZABAABSAAZZUS			S-XS	
	Piping	1	2	24	in						1					PAAZZBOZZABAABOAAZZUS			S-STD	
	Piping	1	26	36	in						1					PAAZZBOZZABAABHAUZZUS			ANSI B31.3	
	Gate Valve	1	0.75	1.5	in						1				VG333	VADAQBVAHAHPABQZZZZUS				
	Gate Valve	24	0.75	1.5	in						1				VG335	VACAQBVAHAHUABQZZZZUS				
	Gate Valve	221	0.75	1.5	in						1				VG7	VAAAHABAHAHQABQZZZZUS				
	Gate Valve	773	0.75	1.5	in						1				VG52	VAAAMABAHAHRABQZZZZUS				
	Gate Valve	1	2	12	in						1				VG3	VAAAHABAHADJADAZZZZUS				
	Gate Valve	773	2	10	in						1				VG49	VAAAMABAHADEADAZZZZUS				
	Gate Valve	1	14	24	in						1				VG4	VAAAHABAHADJADACFZZUS				
	Gate Valve	1	30	30	in						1				VG5	VAAAHABAHADJADAHIZZUS				
	Gate Valve	1	36	36	in						1				VG6	VAAAHABAHADKADACFZZUS				

This is an optional string that is simply provided for the benefit of the spec writer in managing the piping commodity data. This is intended to be used as a brief description of the piping commodity, and can be used in reporting.

Selection Basis

SpecName	ShortCode	OptionCode	FirstSizeFrom	FirstSizeTo	FirstSizeUnits	SecondSizeFrom	SecondSizeTo	SecondSizeUnits	MultisizeOption	Comments	SelectionBasis	JacketedPipingBasis	MaximumTemperature	MinimumTemperature	EngineeringTag	
	Nipple	745	0.75	1.5	in						1					PBAZZBNZZ
1C0031																
	Piping	1	0.75	1.5	in						1					PAAZZBPZZ
	Piping	1	2	24	in						1					PAAZZBOZZ
	Piping	1	26	36	in						1					PAAZZBOZZ
	Gate Valve	1	0.75	1.5	in						1				VG333	VADAQBVAH
	Gate Valve	24	0.75	1.5	in						1				VG335	VACAQBVAH
	Gate Valve	221	0.75	1.5	in						1				VG7	VAAAHABAH
	Gate Valve	773	0.75	1.5	in						1				VG52	VAAAMABAH
	Gate Valve	1	2	12	in						1				VG3	VAAAHABAH
	Gate Valve	773	2	10	in						1				VG49	VAAAMABAH
	Gate Valve	1	14	24	in						1				VG4	VAAAHABAH
	Gate Valve	1	30	30	in						1				VG5	VAAAHABAH
	Gate Valve	1	36	36	in						1				VG6	VAAAHABAH

SelectionBasis ShortDescription	Codelist Number
This is a system codelist. The user	
Undefined	1
Flange selection logic enabled	5
Flange selection logic disabled	10
Reinforcing pad by system	15
Reinforcing pad by user	20
Reinforcing weld by system	25
Reinforcing weld by user	30
Pipe Bend	35
Mitered Elbow	40
Fitting requires validation of commodity-specific Service Limits rule	50
Fitting plus reportable commodity requiring validation of commodity-specific Service Limits rule	55
Continuous Bend	60
Elbow, fixed angle	65
Elbow, trimmed	70
Plain piping ends flared	75
Continuous pipe bend flared	80
Hub/ferrule selection logic enabled	85
Hub/ferrule selection logic disabled	90
Reinforcing pad by user, requiring calculations	95
Reinforcing weld by user, requiring calculations	100
Plain piping represents core	

SelectionBasis | ShortC

This is an enumerated value that represents an indication of whether the piping commodity is available to be selected manually by the piping designer, or is only intended to be selected as a result of a rule.

Maximum Temperature

SpecName	ShortCode	OptionCode	FirstSizeFrom	FirstSizeTo	FirstSizeUnits	SecondSizeFrom	SecondSizeTo	SecondSizeUnits	MultisizeOption	Comments	SelectionBasis	JacketedPipingBasis	MaximumTemperature	MinimumTemperature	EngineeringTag	CommodityCode	FabricationCategoryOverride	SupplyResponsibilityOverride	FirstSizeSchedule	SecondSizeSchedule
	Nipple	745	0.75	1.5	in						1					PBAZZBNZZABAABSAAAGUS			S-160	S-160
1C0031																				
	Piping	1	0.75	1.5	in						1					PAAZZBPZZABAABSAAZZUS			S-XS	
	Piping	1	2	24	in						1					PAAZZBOZZABAABOAAZZUS			S-STD	
	Piping	1	26	36	in						1					PAAZZBOZZABAABHAUZZUS			ANSI B31.3	
	Gate Valve	1	0.75	1.5	in						1				VG333	VADAQBVAHAHPABQZZZZUS				
	Gate Valve	24	0.75	1.5	in						1				VG335	VACAQBVAHAHUABQZZZZUS				
	Gate Valve	221	0.75	1.5	in						1				VG7	VAAAHABAHAHQABQZZZZUS				
	Gate Valve	773	0.75	1.5	in						1				VG52	VAAAMABAHAHRABQZZZZUS				
	Gate Valve	1	2	12	in						1				VG3	VAAAHABAHADJADAZZZZUS				
	Gate Valve	773	2	10	in						1				VG49	VAAAMABAHADEADAZZZZUS				
	Gate Valve	1	14	24	in						1				VG4	VAAAHABAHADJADACFZZUS				
	Gate Valve	1	30	30	in						1				VG5	VAAAHABAHADJADAHIZZUS				
	Gate Valve	1	36	36	in						1				VG6	VAAAHABAHADKADACFZZUS				

A unitted value representing the maximum temperature for which this piping commodity is intended within this piping materials class. A maximum temperature is required for those piping commodities, which are not suitable for the full range of temperature applicable for the piping materials class.

Minimum Temperature

SpecName	ShortCode	OptionCode	FirstSizeFrom	FirstSizeTo	FirstSizeUnits	SecondSizeFrom	SecondSizeTo	SecondSizeUnits	MultisizeOption	Comments	SelectionBasis	JacketedPipingBasis	MaximumTemperature	MinimumTemperature	EngineeringTag	CommodityCode	FabricationCategoryOverride	SupplyResponsibilityOverride	FirstSizeSchedule	SecondSizeSchedule
	Nipple	745	0.75	1.5	in						1					PBAZZBNZZABAABSAAAGUS			S-160	S-160
1C0031																				
	Piping	1	0.75	1.5	in						1					PAAZZBPZZABAABSAAZZUS			S-XS	
	Piping	1	2	24	in						1					PAAZZBOZZABAABOAAZZUS			S-STD	
	Piping	1	26	36	in						1					PAAZZBOZZABAABHAUZZUS			ANSI B31.3	
	Gate Valve	1	0.75	1.5	in						1				VG333	VADAQBVAHAHPABQZZZZUS				
	Gate Valve	24	0.75	1.5	in						1				VG335	VACAQBVAHAHUABQZZZZUS				
	Gate Valve	221	0.75	1.5	in						1				VG7	VAAAHABAHAHQABQZZZZUS				
	Gate Valve	773	0.75	1.5	in						1				VG52	VAAAMABAHAHRABQZZZZUS				
	Gate Valve	1	2	12	in						1				VG3	VAAAHABAHADJADAZZZZUS				
	Gate Valve	773	2	10	in						1				VG49	VAAAMABAHADEADAZZZZUS				
	Gate Valve	1	14	24	in						1				VG4	VAAAHABAHADJADACFZZUS				
	Gate Valve	1	30	30	in						1				VG5	VAAAHABAHADJADAHIZZUS				
	Gate Valve	1	36	36	in						1				VG6	VAAAHABAHADKADACFZZUS				

A unitted value representing the minimum temperature for which this piping commodity is intended within this piping materials class. A minimum temperature is required for those piping commodities, which are not suitable for the full range of temperature for which the piping materials class is intended.

Engineering Tag

SpecName	ShortCode	OptionCode	FirstSizeFrom	FirstSizeTo	FirstSizeUnits	SecondSizeFrom	SecondSizeTo	SecondSizeUnits	MultisizeOption	Comments	SelectionBasis	JacketedPipingBasis	MaximumTemperature	MinimumTemperature	EngineeringTag	CommodityCode	FabricationCategoryOverride	SupplyResponsibilityOverride	FirstSizeSchedule	SecondSizeSchedule
	Nipple	745	0.75	1.5	in						1					PBAZZBNZZABAABSAAAGUS			S-160	S-160
1C0031																				
	Piping	1	0.75	1.5	in						1					PAAZZBPZZABAABSAAZZUS			S-XS	
	Piping	1	2	24	in						1					PAAZZBOZZABAABOAAZZUS			S-STD	
	Piping	1	26	36	in						1					PAAZZBOZZABAABHAUZZUS			ANSI B31.3	
	Gate Valve	1	0.75	1.5	in						1				VG333	VADAQBVAHAHPABQZZZZUS				
	Gate Valve	24	0.75	1.5	in						1				VG335	VACAQBVAHAHUABQZZZZUS				
	Gate Valve	221	0.75	1.5	in						1				VG7	VAAAHABAHAHQABQZZZZUS				
	Gate Valve	773	0.75	1.5	in						1				VG52	VAAAMABAHAHRABQZZZZUS				
	Gate Valve	1	2	12	in						1				VG3	VAAAHABAHADJADAZZZZUS				
	Gate Valve	773	2	10	in						1				VG49	VAAAMABAHADEADAZZZZUS				
	Gate Valve	1	14	24	in						1				VG4	VAAAHABAHADJADACFZZUS				
	Gate Valve	1	30	30	in						1				VG5	VAAAHABAHADJADAHIZZUS				
	Gate Valve	1	36	36	in						1				VG6	VAAAHABAHADKADACFZZUS				

This string represents the generic tag that may be applicable to some commodities, e.g. valves.

Commodity Code

SpecName	ShortCode	OptionCode	FirstSizeFrom	FirstSizeTo	FirstSizeUnits	SecondSizeFrom	SecondSizeTo	SecondSizeUnits	MultisizeOption	Comments	SelectionBasis	JacketedPipingBasis	MaximumTemperature	MinimumTemperature	EngineeringTag	CommodityCode	FabricationCategoryOverride	SupplyResponsibilityOverride	FirstSizeSchedule	SecondSizeSchedule
	Nipple	745	0.75	1.5	in						1					PBAZZBNZZABAABSAAAGUS			S-160	S-160
1C0031																				
	Piping	1	0.75	1.5	in						1					PAAZZBPZZABAABSAAZZUS			S-XS	
	Piping	1	2	24	in						1					PAAZZBOZZABAABOAAZZUS			S-STD	
	Piping	1	26	36	in						1					PAAZZBOZZABAABHAUZZUS			ANSI B31.3	
	Gate Valve	1	0.75	1.5	in						1				VG333	VADAQBVAHAHPABQZZZZUS				
	Gate Valve	24	0.75	1.5	in						1				VG335	VACAQBVAHAHUABQZZZZUS				
	Gate Valve	221	0.75	1.5	in						1				VG7	VAAAHABAHAHQABQZZZZUS				
	Gate Valve	773	0.75	1.5	in						1				VG52	VAAAMABAHAHRABQZZZZUS				
	Gate Valve	1	2	12	in						1				VG3	VAAAHABAHADJADAZZZZUS				
	Gate Valve	773	2	10	in						1				VG49	VAAAMABAHADEADAZZZZUS				
	Gate Valve	1	14	24	in						1				VG4	VAAAHABAHADJADACFZZUS				
	Gate Valve	1	30	30	in						1				VG5	VAAAHABAHADJADAHIZZUS				
	Gate Valve	1	36	36	in						1				VG6	VAAAHABAHADKADACFZZUS				

This represents the engineering contractor's commodity code, if different from the client's commodity code. This is the user-specified code that together with the applicable nominal piping diameter and schedule (or thickness) values uniquely defines the piping commodity.

Schedule 1&2

SpecName	ShortCode	OptionCode	FirstSizeFrom	FirstSizeTo	FirstSizeUnits	SecondSizeFrom	SecondSizeTo	SecondSizeUnits	MultisizeOption	Comments	SelectionBasis	JacketedPipingBasis	MaximumTemperature	MinimumTemperature	EngineeringTag	CommodityCode	FabricationCategoryOverride	SupplyResponsibilityOverride	FirstSizeSchedule	SecondSizeSchedule
	Nipple	745	0.75	1.5	in						1					PBAZZBNZZABAABSAAAGUS			S-160	S-160
1C0031																				
	Piping	1	0.75	1.5	in						1					PAAZZBPZZABAABSAAZZUS			S-XS	
	Piping	1	2	24	in						1					PAAZZBOZZABAABOAAZZUS			S-STD	
	Piping	1	26	36	in						1					PAAZZBOZZABAABHAUZZUS			ANSI B31.3	
	Gate Valve	1	0.75	1.5	in						1				VG333	VADAQBVAHAHPABQZZZZUS				
	Gate Valve	24	0.75	1.5	in						1				VG335	VACAQBVAHAHUABQZZZZUS				
	Gate Valve	221	0.75	1.5	in						1				VG7	VAAAHABAHAHQABQZZZZUS				
	Gate Valve	773	0.75	1.5	in						1				VG52	VAAAMABAHAHRABQZZZZUS				
	Gate Valve	1	2	12	in						1				VG3	VAAAHABAHADJADAZZZZUS				
	Gate Valve	773	2	10	in						1				VG49	VAAAMABAHADEADAZZZZUS				
	Gate Valve	1	14	24	in						1				VG4	VAAAHABAHADJADACFZZUS				
	Gate Valve	1	30	30	in						1				VG5	VAAAHABAHADJADAHIZZUS				
	Gate Valve	1	36	36	in						1				VG6	VAAAHABAHADKADACFZZUS				

This is an optional, enumerated value representing the schedule (or thickness) for the first size and second end of this piping commodity. This data is only required, when the commodity code does not include schedule. If the thickness value is defined, the units of measure for the wall thickness may differ from the units of measure for NPD.

Reportable Commodity Code

ReportableCommodityCode	QuantityOfReportableParts	AssociatedCommodityCode	BendRadiusMultiplier	BendRadius	NumberOfMiterCuts	FirstSizeUOMBasisInCatalog	SecondSizeUOMBasisInCatalog	PDSModifier	PreferredPipeLength	PipingNote1
AACZZAHQZZZZZZZIOUS	1									206
AACZZAHRZZZZZZZIOUS	1									201
AACZZADEZZZZZZZIOUS	1									201
AACZZADJZZZZZZZIOUS	1									
AACZZADEZZZZZZZIOUS	1									201
AACZZAIAZZZZZZZIOUS	1									
AACZZACWZZZZZZZIOUS	1									
AACZZAIDZZZZZZZIOUS	1									220

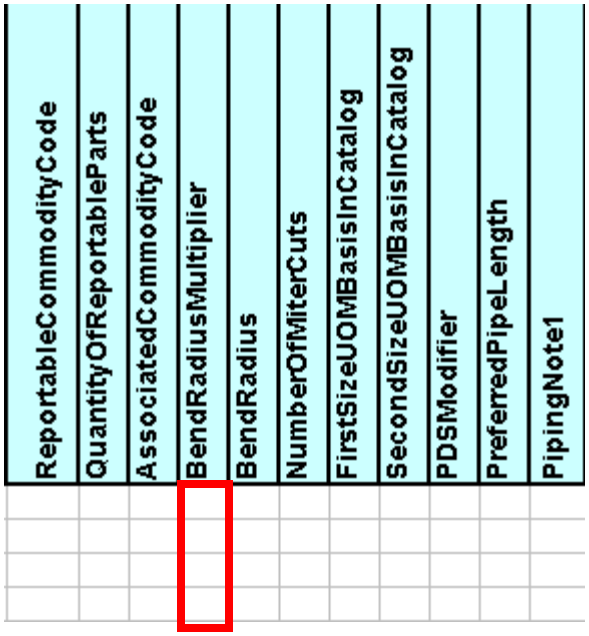
This is a string which represents the commodity code of the implied material which needs to be reported whenever the primary component is placed in the model. e.g. Stub-end for a lap joint flange. Note: There can only one implied component definition.

Quantity of Reportable Parts

ReportableCommodityCode	QuantityOfReportableParts	AssociatedCommodityCode	BendRadiusMultiplier	BendRadius	NumberOfMiterCuts	FirstSizeUOMBasisInCatalog	SecondSizeUOMBasisInCatalog	PDSModifier	PreferredPipeLength	PipingNote1
AACZZAHQZZZZZZZIOUS	1									206
AACZZAHRZZZZZZZIOUS	1									201
AACZZADEZZZZZZZIOUS	1									201
AACZZADJZZZZZZZIOUS	1									
AACZZADEZZZZZZZIOUS	1									201
AACZZAIAZZZZZZZIOUS	1									
AACZZACWZZZZZZZIOUS	1									
AACZZAIDZZZZZZZIOUS	1									220

This is an integer value that represents the quantity of items to be reported per instance of the piping commodity. Typically, this value will be one, but the value may be greater than one.

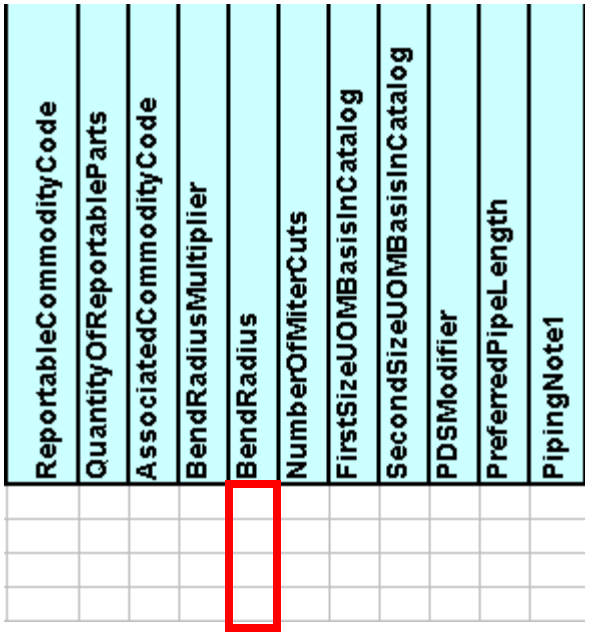
Bend Radius Multiplier



ReportableCommodityCode	QuantityOfReportableParts	AssociatedCommodityCode	BendRadiusMultiplier	BendRadius	NumberOfMiterCuts	FirstSizeUOMBasisInCatalog	SecondSizeUOMBasisInCatalog	PDSModifier	PreferredPipeLength	PipingNote1

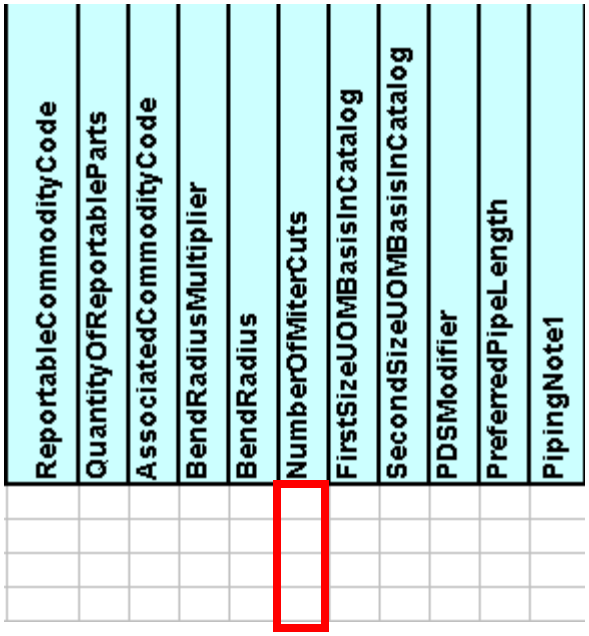
This is an optional decimal value that represents the bend radius multiplier for pipe bends.

Bend Radius



This is an optional unitted value that represents the pipe bend radius as an absolute value. This value is only required for pipe bends. In addition, the spec writer should define the pipe bend radius as a function of the nominal piping diameter or as an absolute value, but not both.

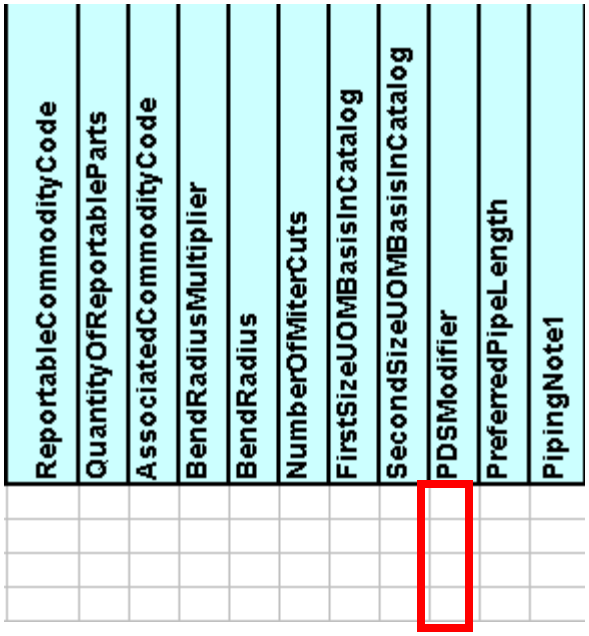
Number of miter cuts



ReportableCommodityCode	QuantityOfReportableParts	AssociatedCommodityCode	BendRadiusMultiplier	BendRadius	NumberOfMiterCuts	FirstSizeUOMBasisInCatalog	SecondSizeUOMBasisInCatalog	PDSModifier	PreferredPipeLength	PipingNote1

This is an optional integer value that represents the number of miter cuts required for a mitered elbow. This value is only required for mitered elbows.

PDS Modifier



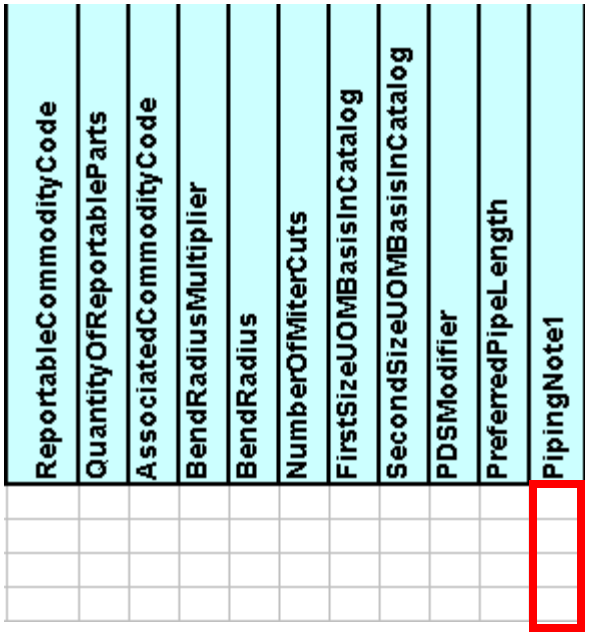
Nipple – Nipple Length

Piping/ Tubing – standard length

Orifice Flanges – Orientation of taps

By definition, this property should not be used. It is only for PDS reference

Piping Notes 1



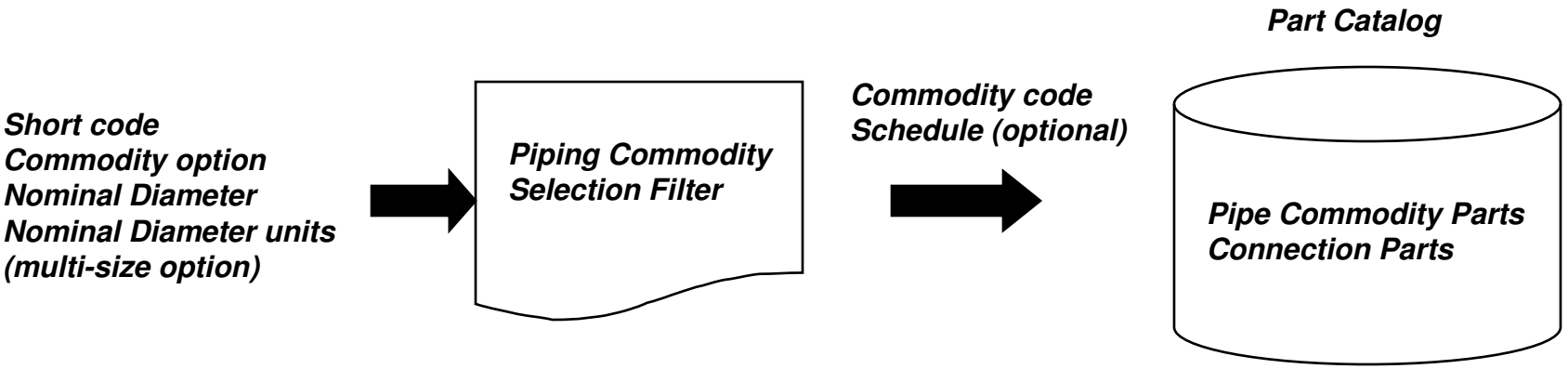
ReportableCommodityCode	QuantityOfReportableParts	AssociatedCommodityCode	BendRadiusMultiplier	BendRadius	NumberOfMiterCuts	FirstSizeUOMBasisInCatalog	SecondSizeUOMBasisInCatalog	PDSModifier	PreferredPipeLength	PipingNote1

This is an enumerated value, i.e. the standard note number that is related to a standard note that applies to the data within this piping materials class, as denoted by the spec writer.The spec writer may choose to associate multiple piping notes with the piping materials class.

Piping Commodity Filter

SP3D searches the active piping material class for an item that matches the following conditions:
- Short code returned from the selection in the ribbon bar or from a rule.
- Option 1 for default placement.
-Nominal Diameter .

SP3D retrieves the contractor commodity code from the selection filter rule and access the part catalog to retrieve the appropriate part.

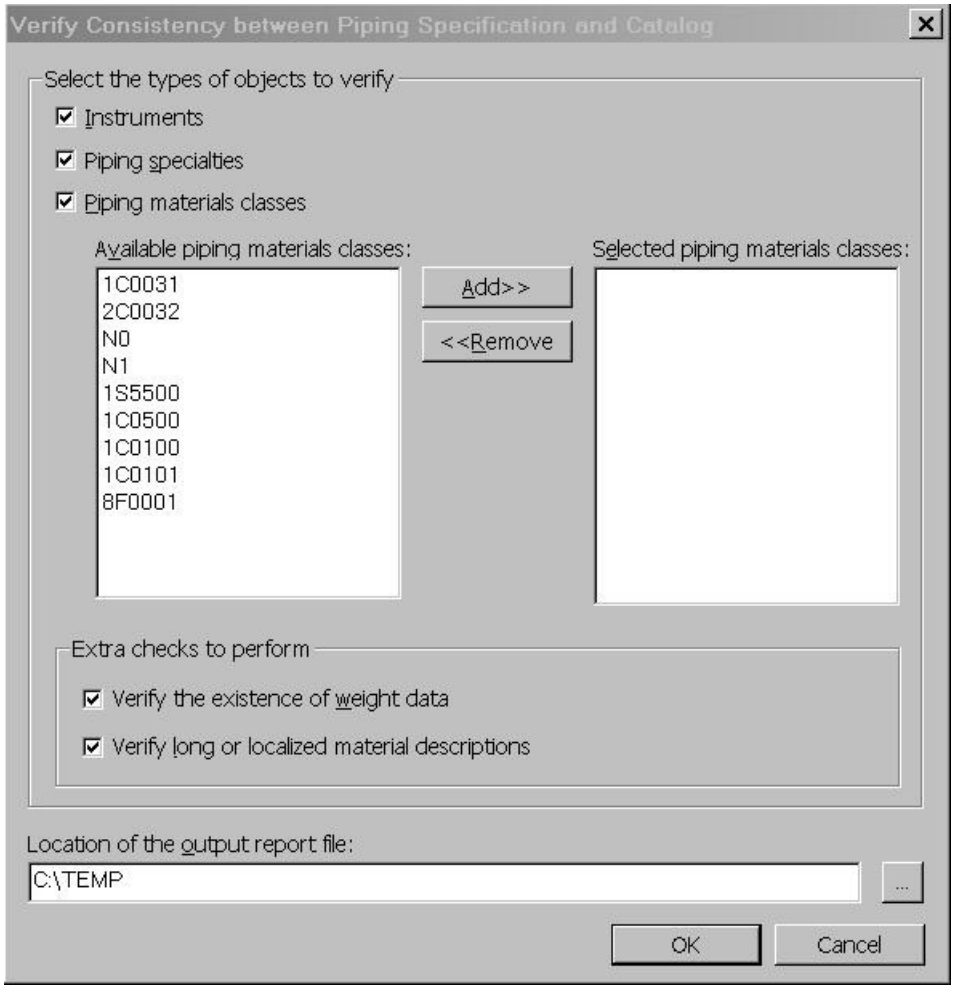


Piping Commodity Filter

- Uniqueness of spec item

Short Code	FirstSize From	FirstSize To	FirstSize Units	SecondSize From	SecondSize ...	SecondSize Units	Commodity Option	Multi Size Option	FirstSize Schedule	SecondSize Schedule
45 Degree Elbow	0.75	1.5	in	0	0	in	Default		<undefined>	<undefined>
45 Degree Elbow	2	36	in	0	0	in	Default		S-STD	S-STD
45 Degree LR Elbow	2	36	in	0	0	in	Default		S-STD	S-STD
45 Degree Trimmed ...	2	36	in	0	0	in	Default		S-STD	S-STD
90 Degree Elbow	0.75	1.5	in	0	0	in	Default		<undefined>	<undefined>
90 Degree Elbow	2	36	in	0	0	in	Default		S-STD	S-STD
90 Degree LR Elbow	2	36	in	0	0	in	Default		S-STD	S-STD
90 Degree SR Elbow	2	18	in	0	0	in	Default		S-STD	S-STD
90 Degree Trimmed ...	2	36	in	0	0	in	Default		S-STD	S-STD

Verification Utility



The verification utility can be accessed from the catalog environment.

Tools → Verify Consistency

Select the specs that needs to be verified and check the appropriate options.

The output generated is an excel sheet which has any errors identified in the spec.

Verification utility checks…

- **The following data:**
- **Piping materials class rules undefined**
- **Piping Commodity is determined to be undefined in the Piping Commodity Part Data**
- **Piping Commodity is determined to be undefined in the Piping Commodity Material Control Data**
- **Symbol is determined to be undefined in the Piping Commodity Part Data, etc…**