

Vannes cryogéniques



Introduction

À des températures très basses et dans les environnements difficiles, les vannes cryogéniques Habonim offrent un débit important, une étanchéité sûre à la fermeture, et une durée de vie sans maintenance importante. Inégalées en fiabilité, stabilité et, le plus important en sûreté, les vannes cryogéniques Habonim sont utilisées dans les unités de séparation d'air (ASU), stockage GNL (LNG), la distribution et le transport, ainsi que dans les secteurs de l'aérospatial, de la pétrochimie et de l'industrie liée aux applications médicales.

Caractéristiques techniques

Diamètres	1/4"-8" (DN8-DN200)
Pression	Vide 10 ⁻⁶ Tor à 414 bar (6000 psi)
Température	-269 °C à +200 °C (-452 °F à +392 °F)
Materiaux	Acier inoxydable A351 CF8M/CF3M, A479, 316/316L, monel 400 et autres
Connections	Taraudées, soudées, bridées
Manoeuvre	Manuelle ou avec réducteur, pneumatique ou électrique
Application	Terminaux méthaniers GNL (LNG), unité de séparation d'air (ASU), transport LNG, Aciéries, Alimentaires, laboratoires de recherche

Normes de fabrications et certificats

Certifications usine	ISO 9001-2008 ANSI B16.34, ISO 17292, API 6D/ISO14313 BS6364 EN12567 BSISO21011&BSEN1626 ANSIB1.20.1 EN 10226-1,ISO 7-1,JIS B0203 DIN3852 ANSIB16.11,EN 12760 ANSIB16.25,EN12627-4 ANSIB16.5,EN1092Pt1&2 ANSIB16.10,EN558 NACEMR-0175,ISO15156-1/2/3 EN12266-1,API598	Système de management de la qualité Conception des vannes Spécification des vannes pour service cryogénique Vannes industrielles – Vannes d'arrêt LNG (optionnel) Réservoirs cryogéniques -vannes cryogéniques NPT –(normes de filetages) BSPT -(normes de filetages-conique) BSPP -(normes de filetages-cylindrique) Connections à souder emmanchement (socket) Connections à souder bout à bout (butt) sch 5/10/40/80 Dimensions des A brides Dimensions face à face Matériaux pour gaz corrosifs, avec teneur en H ₂ S et/ou pression Test des vannes tout métal-pression/procédures/critères d'acceptabilité
Certifications	API607,ISO10497 ISO 15848-1 PED 97/23/EC Module H ATEX94/9/EC IEC 61508-2 SIL2/3	Test des vannes – Tenue au feu et Sécurité feu Vannes industrielles – mesure, test et procédures de qualification émissions fugitives DESP –Directive des équipements sous pression. Equipement et systèmes de protection pour utilisation en atmosphère potentiellement explosive (optionnel : concerne les vannes actionnées) SIL-niveau d'intégrité de sécurité (optionnel : concerne les vannes actionnées)
Documentation	Certificats EN 10204 2.2/3.1/3.2	Traçabilité des lots matière

Modèles

3 pièces	C47C/C47W series	3 pièces, passage réduit et passage intégral
Tailles		1 $\frac{1}{4}$ " - 2" (DN8 - DN50)
Classes de pression		ANSI Classe 600 Vide 10 $^{-6}$ Tor à 103 bar (1490 psi)
Tailles		2 $\frac{1}{2}$ " - 6" (DN65 - DN150)
Classes de pression		ANSI Class 300 Vide 10 $^{-6}$ Tor à 50 bar (725 psi)
Connections		Taraudé, Soudé, A bride
	C26C/C26W series	3 pièces, passage intégral
Tailles		2" - 8" (DN50 - DN200)
Classes de pression		ANSI Classe 600 Vide 10 $^{-6}$ Tor à 103 bar (1490 psi)
Connections		Taraudé, Soudé, A bride
A bride	C31C/C31W series	Passage réduit
Tailles		1 $\frac{1}{2}$ " - 8" (DN15 - DN200)
Classes de pression		ANSI Classe 150 Vide 10 $^{-6}$ Tor à 20 bar (290 psi)
Connections		A bride
	C32C/C32W series	Passage réduit
Tailles		1 $\frac{1}{2}$ " - 8" (DN15 - DN200)
Classes de pression		ANSI Classe 300 Vide 10 $^{-6}$ Tor à 50 bar (725 psi)
Connections		A bride
	C73C/C73W series	Passage intégral
Tailles		1 $\frac{1}{2}$ " - 8" (DN15 - DN200)
Classes de pression		ANSI Classe 150 Vide 10 $^{-6}$ Tor à 20 bar (290 psi)
Connections		A bride
	C74C/C74W series	Passage intégral
Tailles		1 $\frac{1}{2}$ " - 8" (DN15 - DN200)
Classes de pression		ANSI Classe 300 Vide 10 $^{-6}$ Tor à 50 bar (725 psi)
Connections		A bride
	C78C/C78W series	Passage intégral
Tailles		1 $\frac{1}{2}$ " - 2" (DN15 - DN50)
Classes de pression		DIN PN40 Vide 10 $^{-6}$ Tor à 40 bar (580 psi)
Connections		A bride
	C77C/C77W series	Passage intégral
Tailles		3" - 8" (DN80 - DN200)
Classes de pression		DIN PN16 Vide 10 $^{-6}$ Tor à 16 bar (230 psi)
Connections		A bride
Haute pression	C28C/C28W series	3 pièces, passage réduit et passage intégral
Tailles		1 $\frac{1}{4}$ " - 2" (DN8 - DN50)
Classes de pression		ANSI Classe 2500 Vide 10 $^{-6}$ Tor à 414 bar (6000 psi)
Tailles		2 $\frac{1}{2}$ " - 8" (DN65 - DN200)
Classes de pression		ANSI Class 1500 Vide 10 $^{-6}$ Tor à 255 bar (3700 psi)
Connections		Taraudé, Soudé, A bride
Multivoies	C61C/C62C/C61W/C62W	Passage réduit et passage intégral
Tailles		1 $\frac{1}{4}$ " - 2" (DN8 - DN50)
Classes de pression		ANSI Classe 600 Vide 10 $^{-6}$ Tor à 103 bar (1490 psi)
Tailles		2 $\frac{1}{2}$ " - 4" (DN65 - DN100)
Classes de pression		ANSI Classe 300 Vide 10 $^{-6}$ Tor à 50 bar (725 psi)
Connections		Taraudé, Soudé, A bride
	DC47C/DC47W series	3 pièces, passage réduit et passage intégral
Tailles		1 $\frac{1}{4}$ " - 2" (DN8 - DN50)
Classes de pression		ANSI Classe 600 Vide 10 $^{-6}$ Tor à 103 bar (1490 psi)
Tailles		2 $\frac{1}{2}$ " - 6" (DN65 - DN150)
Classes de pression		ANSI Classe 300 Vide 10 $^{-6}$ Tor à 50 bar (725 psi)
Connections		Taraudé, Soudé, A bride

Caractéristiques de construction

Transfert thermique efficace

- Une Cavité entre la réhausse et la tige est aménagée pour garder les joints supérieurs à température ambiante



Inclinaison de la vanne

- Jusqu'à 45° de la verticale pour les réhausse 12"
- En accord avec norme BS6364

Breveté HermetiX™

Etanchéité de tige HermetiX™

- ISO 15848-1
- Série feu, sans graphite
- Garantie jusqu'à 500 000 cycles
- Mécanismes Anti-abrasion
- Garnitures précontraintes

Pas de pièce à liquide

- Un trou d'évent dans le boisseau en amont empêche la montée en pression en cas de gazéification.

Dilatation thermique contrôlée

- Boulons et tirants courts et non traversants
- Rondelles ressorts compensatrices supplémentaires

Tige

- Conception de la tige anti-éjection
- Liaison boisseau-tige robuste
- Conçue pour les couples importants

Tige et Réhausse robuste

Assemblage assymétrique

- Un détrompage mécanique empêche les mauvais assemblages de l'ensemble tige-boisseau

Transfert thermique efficace

Assemblage rainure/Languette

- Aucune fuite à l'atmosphère
- Joint de siège encapsulé et comprimé
- Bon alignement des pièces

Assemblage
rainure/languette
Sans fuite

Indication du sens de passage

- Flèche unidirectionnelle du sens de passage
- Marquage en "T" sur la rehausse, repérant la position du trou d'évent

Boisseau
avec évén



Détrompeur



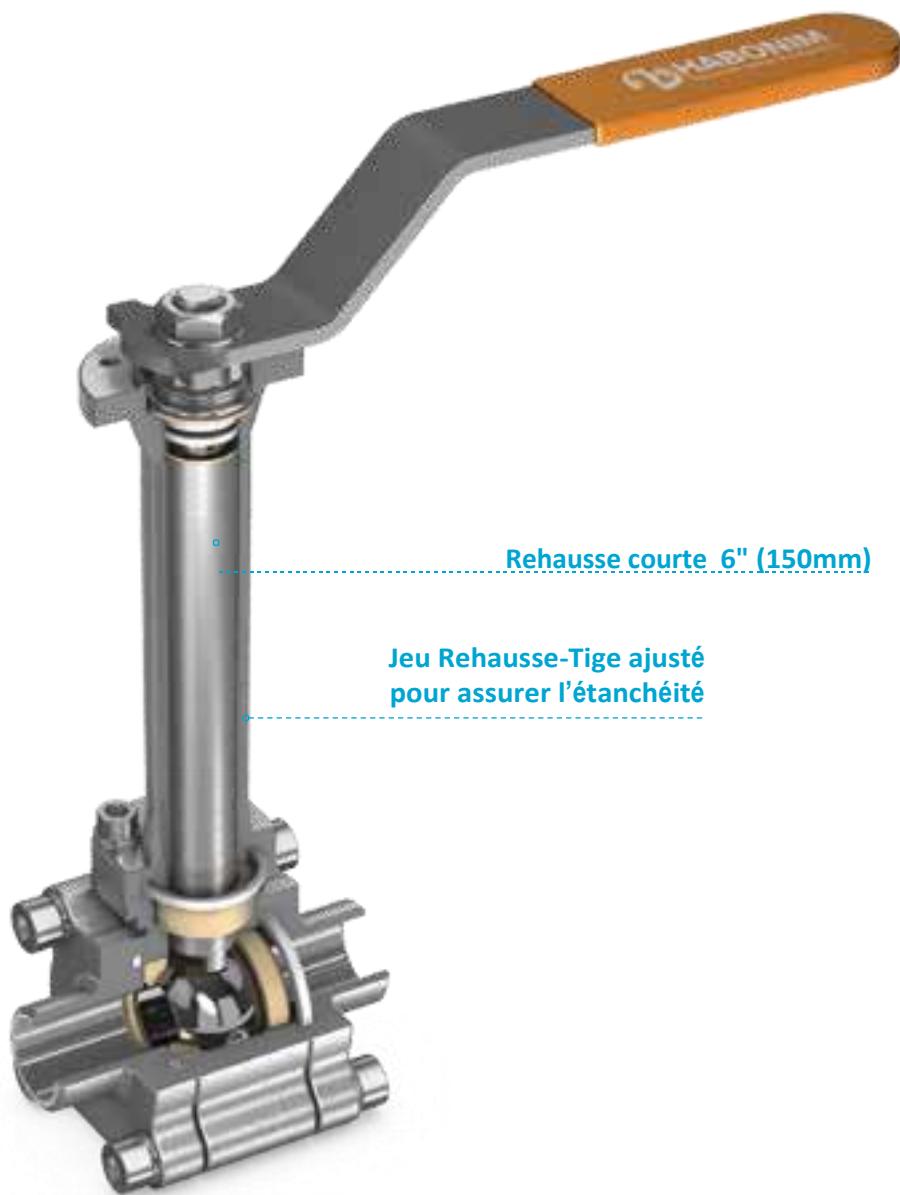
Rehausse courte 6"

Habonim a conçu une option rehausse courte 6" (150mm) pour les applications où l'espace est restreint : Skid, Réservoirs de transport et systèmes à fortes vibrations.

La rehausse une-pièce en acier inoxydable CF8M /316 est usinée précisément pour assurer un bon alignement des garnitures. La rehausse courte 6" est interchangeable avec la rehausse standard 12" (conforme elle à la norme BS6364 et ayant une hauteur droite de 250 mm (10").

Inclinaison de la vanne

- Jusqu'à 15° de la position verticale



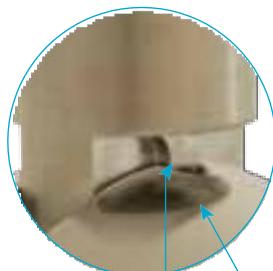
Limiter le risque de montée en pression

La vanne cryogénique Habonim est conçue avec le moins d'espaces morts pouvant piéger les liquides. Un trou d'évent sur le côté amont du boisseau élimine le risque de montée en pression soudain lié à une remontée de température



Montage sécurisé

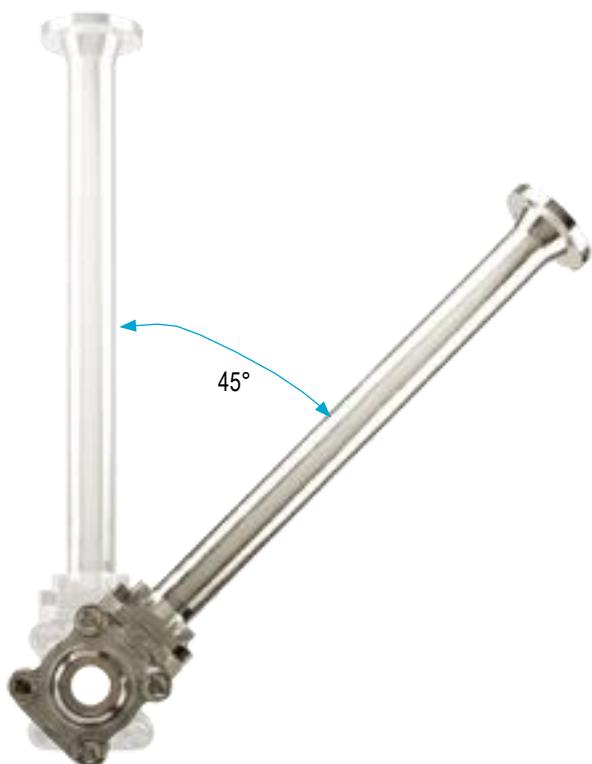
Une nervure est usinée sur un des plats de la tige pour s'emboiter dans une rainure du boisseau et s'assurer du montage correct de la vanne avec l'évent en bonne position. Un marquage en forme de "T" sur le haut de la tige rappelle la position du boisseau. La maintenance est sécurisée et tout mauvais assemblage est impossible



Nervure de la tige Rainure

Inclinaison de la vanne

La réhausse de vanne existe en 2 versions et permet d'éviter que les liquides cryogéniques le presse-étoupe. La version 12" (300mm) peut être incliné à 45° de la verticale. La version 6" (150mm) peut être incliné à 15° de la verticale.



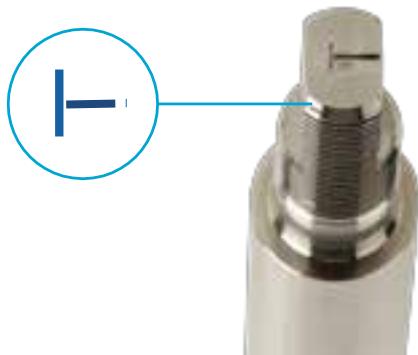
Conception cryogénique

La vanne cryogénique utilise une conception rainure et languette à emboitement commune à toutes les vannes série Feu. Cette conception unique en labyrinthe élimine les fuites à l'atmosphère.

De plus, cette conception permet de comprimer le joint de corps encapsulé et d'aligner les pièces soumises à la pression.



Siège hybride (2 matériaux) pour application cryogénique haute pression

Indication de la direction

Marquage en forme de "T" –Repère la position de l'évent et du boisseau



La flèche sur la réhausse indique le sens du fluide



Tirants courts non traversants -Limite la dilatation thermique
La flèche sur le corps indique le sens du fluide

Dilatation thermique minimale

En doublant le nombre de tirants, on réduit sensiblement la dilatation linéaire et on diminue d'autant le risque de fuite à l'atmosphère. En plus, des rondelles ressorts compensent la contraction thermique des pièces pendant les cycles thermiques.

Sièges et joints cryogéniques

Pour des températures allant jusqu'à -200 °C/-328 °F, Habonim recommande l'utilisation de sièges soit en TFM 1600™ soit en PTFE chargé Carbone, gage d'un couple de manœuvre bas, d'actionneurs de plus petites tailles, et de coûts plus réduits.

Pour des températures allant jusqu'à -269 °C/-452 °F, Habonim recommande l'utilisation de sièges PCTFE (KEL-F). Pour les applications hautes pression cryogéniques, Habonim recommande un siège hybride avec un anneau extérieur inox et un insert PCTFE (KEL-F).

Si le choix des sièges est PCTFE, la tige doit être impérativement en inox durci 17-4PH (code M) pour tenir le couple élevé.

Les joints de corps, pour les applications cryogéniques, peuvent être soit en graphite, soit en PTFE – Le graphite est utilisé sur les versions "série feu". Quel que soit le joint utilisé, il sera encapsulé.

Points d'ébullitions

Sièges

-78.3 °C \ -109 °F CO₂

-161.5 °C \ -259 °F Methane

-168 °C \ -270 °F LNG

-183 °C \ -297 °F Oxygen

-186 °C \ -303 °F Argon

-188 °C \ -306 °F Fluorine

-194.5 °C \ -318 °F Air

-196 °C \ -321 °F Nitrogen

-253.8 °C \ -425 °F Hydrogen

-269 °C \ -452 °F Helium

TFM
CF PTFE

PCTFE

Transfert thermique efficace

La rehausse de longueur standard Habonim est conforme à la norme BS6364 pour les applications hors boîte froide.

La rehausse isole le joint de tige des températures des fluides cryogéniques, permettant de sécuriser l'étanchéité dans le temps.

Une couche fine de fluide cryogénique entre la rehausse et la tige, permet l'évaporation contrôlée du fluide cryogénique à la température extérieure ambiante.

Procédure de nettoyage

La procédure de nettoyage Habonim élimine les graisses et hydrocarbures, les copeaux d'inox et autres sources de contaminants qui peuvent résulter d'un ébavurage incomplet ou des poussières d'atelier.

Les procédures de dégraissage pour service Oxygène sont aussi appliquées par défaut, suivant les standards de l'industrie listés ci-dessous :

CGA G-4.1

ASTM A380/A380M

EIGA 33.06

Standard Linde LS 141-47 part 1 et 2

Standard Linde LS 031-6X7

Standard Praxair GS-38

Habonim utilise un procédé conforme aux règles de l'art pour le dégraissage avec une station de dégraissage écologique, avec solvants alcalins, plusieurs étapes de bains ultrasoniques ,rinçages et chambres de séchage. La gestion complète de ces procédés par le biais des indications de PH et de la température, des chambres de rinçages, et de la température et de l'humidité dans la chambre de séchage ,assure des résultats optimum et reproductibles sur toute la chaîne de nettoyage des composants. 100 % des vannes sont inspectées après nettoyage, selon les codes de l'industrie.



Assemblage des vannes

Après nettoyage des vannes, celles-ci sont assemblées dans un atelier garanti sans graisses, et par du personnel qualifié à cet effet. Une tenue spécifique est exigée et des gants en latex sont utilisés tout le long de l'assemblage. Les équipements et outillages sont nettoyés avant usage et les surfaces de travail sont couvertes avec du polyéthylène avant de démarrer l'assemblage.



Test de résistance

Des tests à l'enveloppe sont conduits à 1.5 fois la pression de la classe de la vanne dans une chambre de test haute pression pilotée par ordinateur, et avec de l'azote à 99.999% pur. Ces tests sont conformes aux normes EN 12266-1 and API 598.

Tests fonctionnels

Les taux de fuite en gaz sont : EN 12266-1 Taux A \ Etanchéité à la bulle \ API 598 \ API 6D \ ISO 5208.

Les taux de fuite en cryogénie sont alignés avec les normes BS 6364, ISO 1626 and EN 12567.

Les taux de fuites en vide sont suivant l'EN 1779 - A.3 Taux de fuite ≤ 1E-6 Pa*m³/sec.

TEST NON DESTRUCTIFS

Les tests radiographiques selon l' ASME B31.3 pour les services sévères sont proposés sur les pièces soudées.

Habonim utilise à 100% des soudures bout-à-bout (Butt weld) pour assurer une bonne pénétration. 100% des soudures sont inspectées aux rayons X, Assurant le plus haut niveau de sécurité et qualité

Les tests radiographiques selon l'ASME B16.34 RT pour les pièces moulées et les parties sous pression peuvent être faits à la demande ,ainsi que le Contrôle par ressauage selon l'ASME B16.34 RT,et l'inspection visuelle des pièces moulées selon la procédure MSS-SP-55.

Assurance qualité

Les vannes cryogéniques Habonim sont livrées avec les certificats EN-10204 type 3.1 en standard.

Des certifications type 3.2, avec des inspections par tierce partie ainsi que des tests cryogéniques et d'autres services sont disponibles sur demande.

Tests standard Habonim

Test	Standard	Critère de succès
Test de l'enveloppe à 1.5 x la pression de service	EN 12266-1 (P10-P11) API 598 ASME B16.34	Pas de fuites de gaz visible
Test radiographique pour pièces soudées	ASME B31.3 Conditions de Cyclage sévère	Code BPV , Section V, Article 2
Test de fuite à l'enveloppe	EN 12266-1 Méthode EN 1779 vide technique - A.3	Fuite ≤ 1E ⁻⁶ Pa*m ³ /s
Test de fuite au siège	EN 12266-1 Méthode EN 1779 vide technique - A.3	Fuite ≤ 1E ⁻⁶ Pa*m ³ /s
Nettoyage	CGA G4.1, Praxair GS-38 ou GS40, Linde 141-74 parties 1 et 2	Selon les standards

Tests additionnels non destructifs proposés en option

Test	Standard	Success criteria
IMPACT™ Test @ -196 °C	EN12567 ASTM A370 (Méthodes de tests)	EN 10045-1 Kv > 60J Dilatation > 0.381 mm
Test visuel des pieces moulées	MSS-SP55	Selon les standards
Contrôle par ressauage (pieces fabriquées)	ASME B31.3 Conditions cycliques sévères	
Contrôle par ressauage (pieces moulées)	ASTM E165	B16.34 Appendix III
Tests cryogéniques	BS6364, EN12567	
inspections par tierce parties	Selon les contrats	

Emballage

L'assemblage se fait dans les mêmes salles blanches que celles utilisées pour la production. Les vannes et composants ne sont retirés de la salle avant d'avoir été proprement emballés et scellés. Chaque produit fini (séché, inspecté, approuvé) est bouchonné et ensacheté dans un sac polyéthylène avec un gel silice dessicant. Pour conserver la propreté du produit, il est conseillé de garder les vannes dans leurs emballage d'origine jusqu'à l'assemblage final..



Vannes multivoies et 3 voies

Les versions C61 et DC47 des vannes Habonim cryogéniques offrent des solutions modulaires et compactes. Elles permettent, intégrées dans des systèmes, de sauver de l'espace, d'éliminer des composants, tout en offrant la sécurité et simplicité. Avec une variété de configurations, en versions manuelles ou automatiques, les vannes multivoies peuvent réduire de 2/3 le nombre de vannes et faciliter la maintenance des composants des fluides cryogéniques. Les configurations de boisseaux permettent des schémas fluidiques variés .Voir le catalogue spécifique à ce sujet.



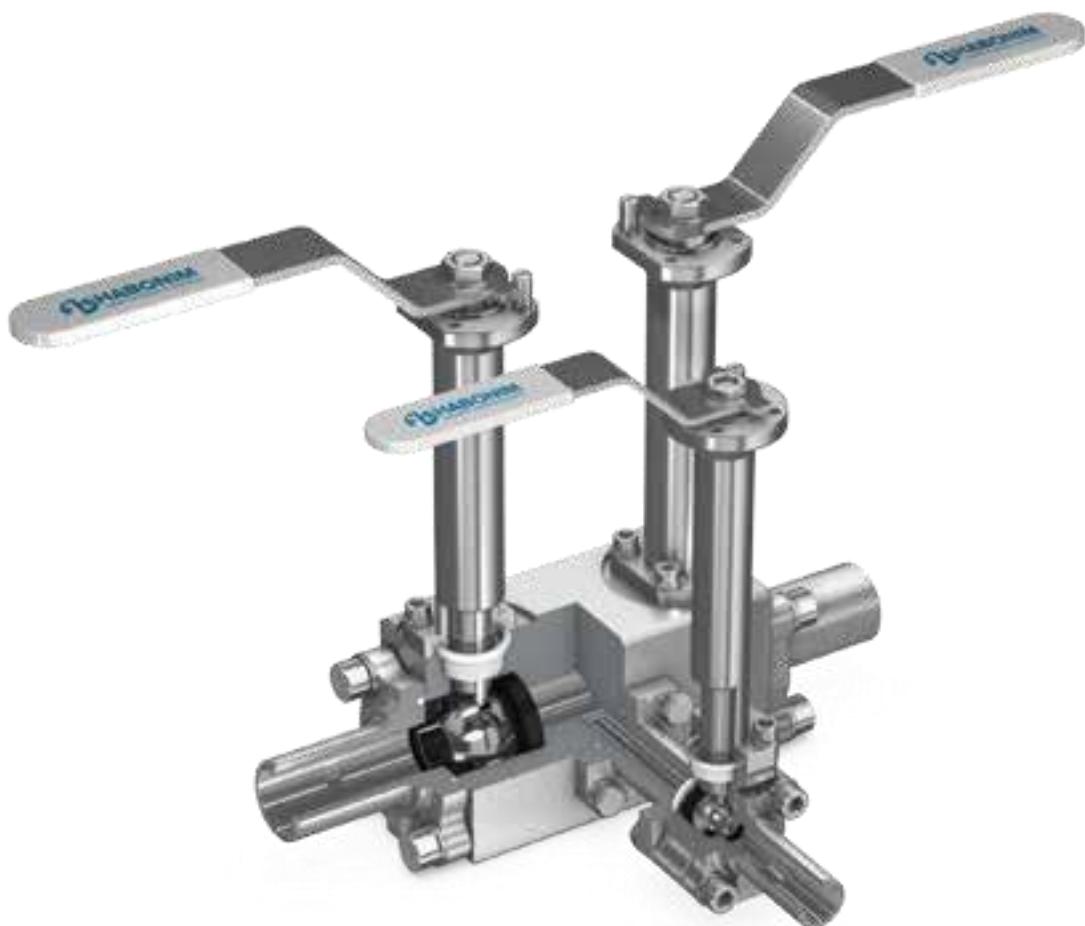
Double Block and Bleed (DBB)

Les ensembles DBB (vannes double fermeture et purge) cryogéniques sont très compacts et sûrs, assurant l'étanchéité, en capturant le volume interne entre vannes vers une purge. C'est une fonction de sécurité utile dans les applications d'alimentation en gaz des chaudières, des réservoirs cryogéniques, des camions GNL, et sur les gaz explosifs cryogéniques tels que LNG et LOX.

Le principe de fonctionnement repose sur 2 vannes d'isolement en ligne dans le sens du fluide, ou la seconde vanne assure qu'aucune fuite n'est possible à aucun moment. Une troisième vanne positionnée entre les deux premières et canalise le fluide en excès vers un événement sécurisé.

Habonim relève le défi de proposer un ensemble compact, sécurisé, tenant les conditions cryogéniques, avec des versions possibles telles que: Tout manuel ou semi-automatique, positions verrouillables. D'autres configurations selon les spécifications clients peuvent être proposées dans les tailles ½" à 6" pour les vannes principales.

Les vannes "Double block and bleed" doivent être installées en position verticale, comme représenté ci-contre.

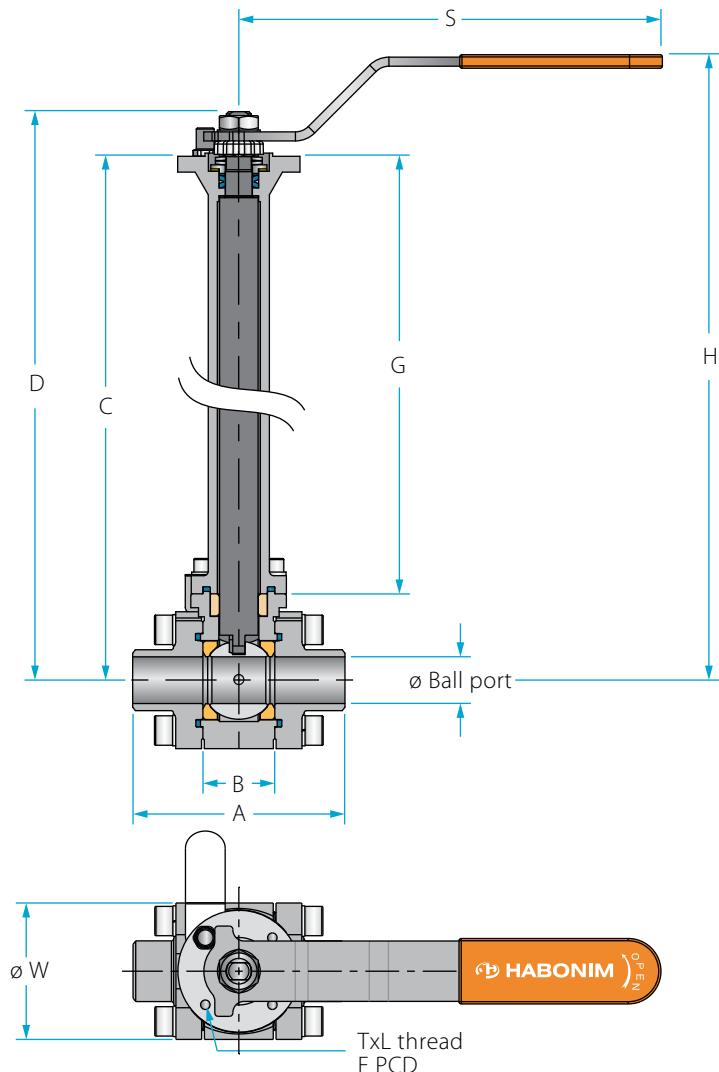


Floating Ball Valves

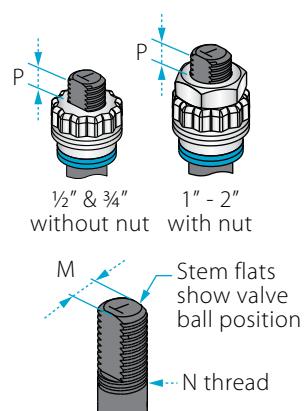
Cryogenic valves General 3 Piece Flanged High pressure Multiport Ordering code system

Size 1/4"- 2" | DN8-DN50 | Class 600 | C47W/C47C⁽¹⁾ Series

Valve dimensions

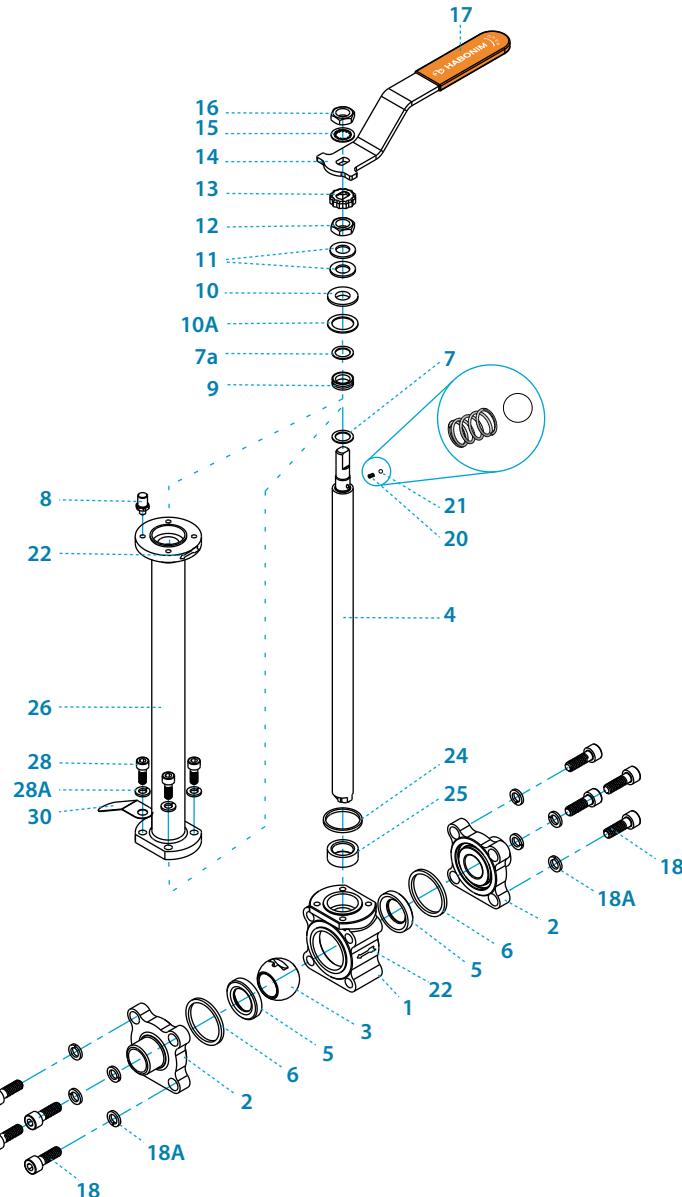


Preparation for actuation



Std. port	Full port	Unit	Ball port	A	B	Standard design				6.0" bonnet				S	W	M	N	P	F	TxL	Weight kg/lb			Kv
						C	D	G	H	C	D	G	H								Std.	6.0"	Cv	
DN15	DN10	mm	11.15	65.80	20.60	333.00	341.90	304.00	366.00	181.40	190.30	152.40	214.40	150.00	46.00	5.50	3/8"	7.20 (F03)	36.00	M5X7	1.60	1.28	7	
1/2"	3/8"	inch	0.44	2.59	0.81	13.11	13.46	11.97	14.41	7.14	7.49	6.00	8.44	5.91	1.81	0.22	UNF	0.28			3.53	2.82	8	
DN20	DN15	mm	14.30	70.55	24.55	335.40	344.30	304.00	368.00	183.80	192.70	152.40	216.40	150.00	52.00	5.50	3/8"	7.20 (F03)	36.00	M5X7	1.80	1.48	10	
3/4"	1/2"	inch	0.56	2.78	0.97	13.20	13.56	11.97	14.49	7.24	7.59	6.00	8.52	5.91	2.05	0.22	UNF	0.28			3.97	3.26	12	
DN25	DN20	mm	20.60	93.65	31.75	342.15	359.65	304.00	383.00	190.55	208.05	152.40	231.40	187.00	60.50	7.54	7/16"	7.20 (F04)	42.00	M5X7	3.00	2.65	28	
1"	3/4"	inch	0.81	3.69	1.25	13.47	14.16	11.97	15.08	7.50	8.19	6.00	9.11	7.32	2.38	0.30	UNF	0.28			6.61	5.84	32	
DN32	DN25	mm	25.40	108.25	41.25	346.65	364.15	304.00	388.00	195.05	212.55	152.40	236.40	187.00	69.00	7.54	7/16"	7.20 (F04)	42.00	M5X10	3.70	3.35	37	
1 1/4"	1"	inch	1.00	4.25	1.62	13.65	14.34	11.97	15.28	7.68	8.37	6.00	9.31	7.32	2.72	0.30	UNF	0.28			8.16	7.39	43	
DN40	DN32	mm	31.80	115.45	48.25	347.55	377.05	304.00	400.00	195.95	225.45	152.40	248.40	237.00	79.20	8.71	9/16"	8.00 (F05)	50.00	M6X8	5.20	4.65	70	
1 1/2"	1 1/4"	inch	1.25	4.55	1.90	13.68	14.84	11.97	15.75	7.71	8.88	6.00	9.78	9.29	3.12	0.34	UNF	0.31			11.46	10.25	81	
DN50	DN40	mm	38.10	127.10	56.30	352.25	381.75	304.00	405.00	200.65	230.15	152.40	253.40	237.00	90.70	8.71	9/16"	8.50 (F05)	50.00	M6X8	6.10	5.53	103	
2"	1 1/2"	inch	1.50	5.00	2.22	13.87	15.03	11.97	15.94	7.90	9.06	6.00	9.98	9.29	3.57	0.34	UNF	0.33			13.45	12.19	119	

Components & materials



Item	Description	Material specifications	Qty.
1	Body	A351 CF8M, A494 M35-1, Bronze RG5	1
2	End	A351 CF8M, A494 M35-1, Bronze RG5	2
3	Ball	A351 CF8M, B574 N06022, Bronze RG5	1
4	Stem	A479 316/316L, A564 Gr.630 H1150D 17-4PH, B574 N06022	1
5*	Seat	CF PTFE, TFM, PCTFE (KEL-F)	2
6*	Body seal	PTFE, Graphite	2
7*	Stem thrust seal	TFM ⁽²⁾ , PCTFE (KEL-F)	1
7a*	Anti-abrasion ring	TFM ⁽²⁾ , PCTFE (KEL-F)	1
8	Stop pin	A582 303	1
9*	Stem seal	TFM, Graphite ⁽²⁾	1
10	Follower	B783 316L	1
10A**	Slide bearing	TF316	1
11	Disc spring	A693 631 17-7PH	2
12	Stem nut	EN3506-2 A4-80, A194 Gr 8M	1
13	Locking clip	A167 304	1

Item	Description	Material specifications	Qty.
14	Handle	A240 430	1
15	Serrated washer	A240 410	1
16	Handle nut	EN3506-2 A4-80, A194 Gr 8M	1
17	Sleeve	PVC	1
18	Body bolt	EN 3506-1 A2-70, A193 Gr B8	8
18A	Spring washer	DIN 127 A2	8
20	Anti-static spring	A313 302	1
21	Anti-static plunger	A479 304	1
22	Arrow flow	A167 304	2
23	Tag (not shown)	A167 304	1
24	Bonnet seal	PTFE, Graphite	1
25	Stem bearing	PTFE	1
26	Bonnet	A479 316L, A351 CF8M	1
28	Bolt	A193 B8, DIN 912 A2-70	4
28A	Spring washer	DIN 127 A2	4
30	Dog tag	A167 304	1

⁽¹⁾ C47C series is Habonim's standard valve design without the HermetiX™ stem seal construction.

⁽²⁾ This material can only be used as part of the C47C design.

* Repair kit components

** Only with HermetiX™ fire safe design

Floating Ball Valves

Cryogenic valves

General

3 Piece

Flanged

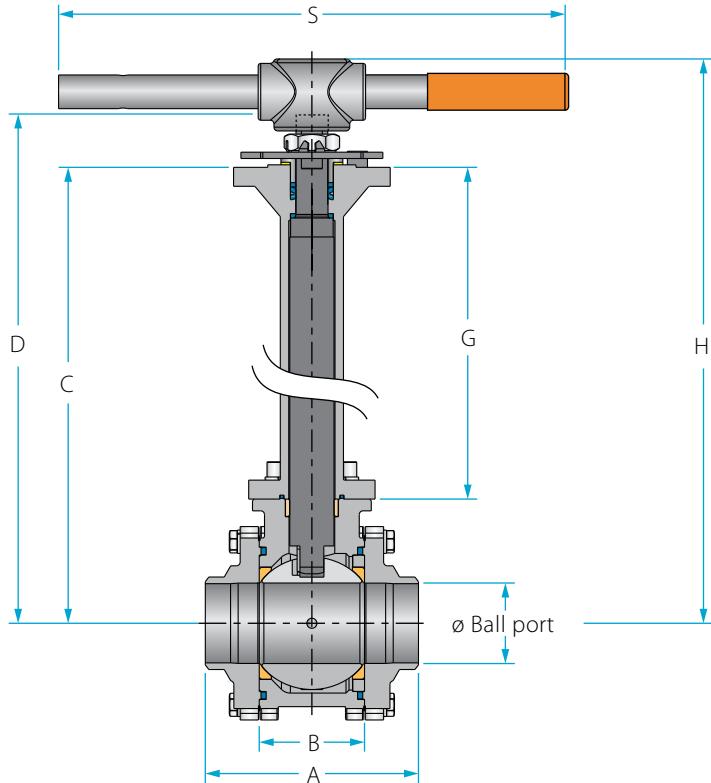
High pressure

Multiport

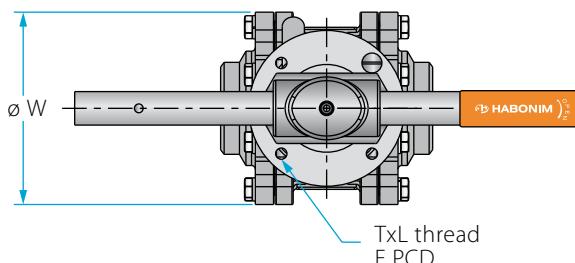
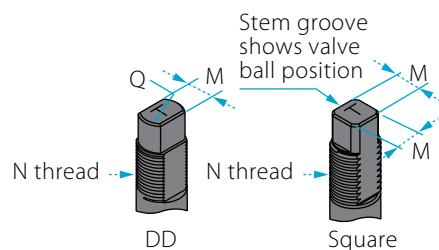
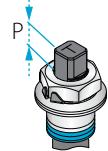
Ordering code system

Size 2½"- 6" | DN65-DN150 | Class 300 | C47W/C47C⁽¹⁾ Series

Valve dimensions



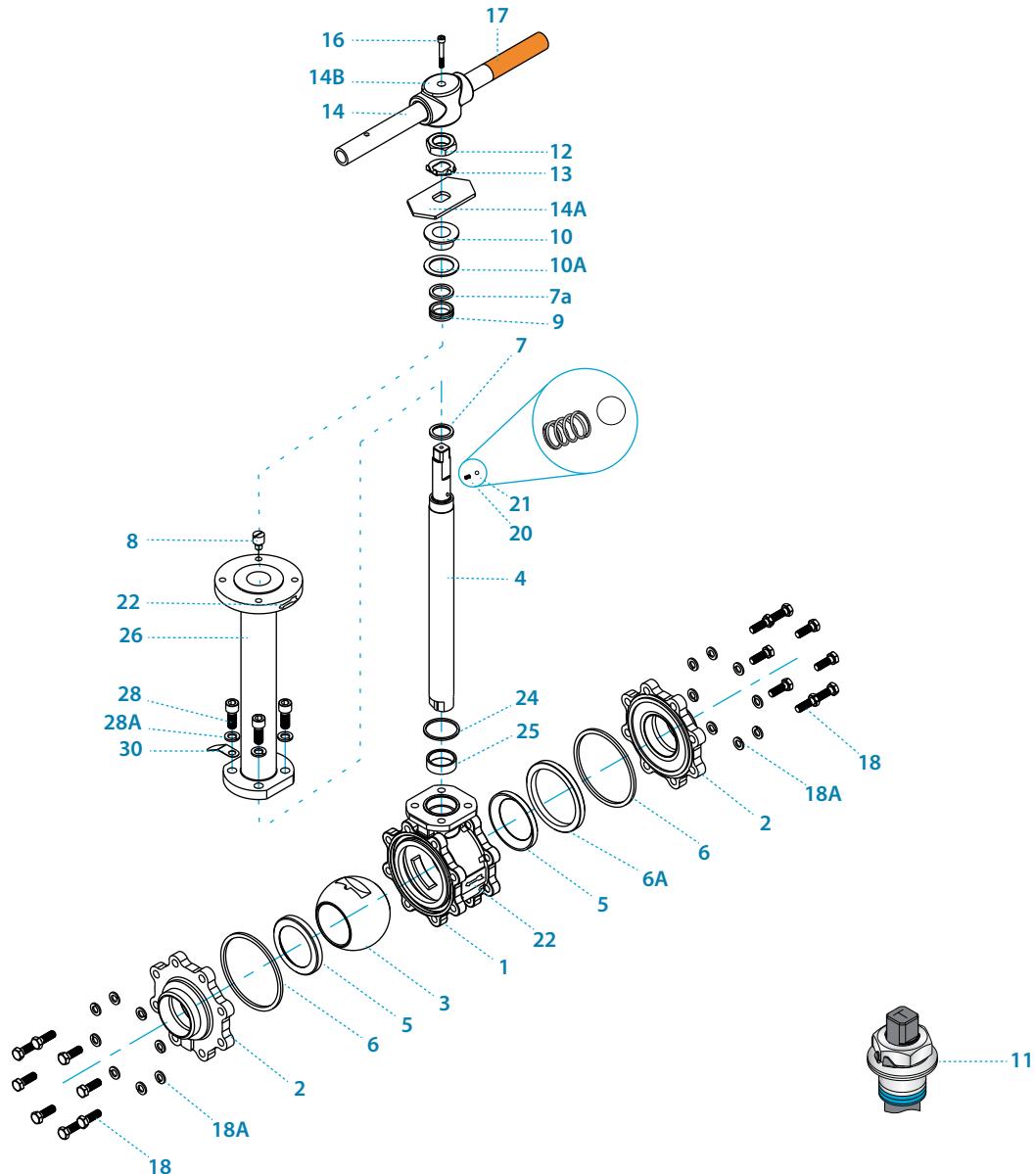
Preparation for actuation



Std. port	Full port	Unit	Ball port	A	B	Standard design				6.0" bonnet				S	W	M	M DD	N	P	Q	F	TxL	Weight kg/lb		Kv	
						C	D	G	H	C	D	G	H										Std.	6.0"	Cv	
DN65	DN50	mm	50.80	157.95	72.55	397.50	439.10	327.50	464.00	222.40	264.00	152.40	288.90	401.00	108.00	13.90	13.90	M20x2.5	13.15	20.00	(F07)	70.00	M8x8	12.00	10.60	205
																							0.52	0.79	2.76	
2½"	2"	inch	2.00	6.22	2.86	15.65	17.29	12.89	18.27	8.76	10.39	6.00	11.37	15.79	4.25	0.55	0.55	M10x15	16.70	22.70	(F10)	102.00	M10x15	20.00	18.80	385
																							0.66	0.89	4.02	
DN80	DN65	mm	63.50	169.35	83.25	441.80	488.40	343.50	528.00	250.70	297.30	152.40	336.90	401.00	153.00	18.90	15.90	1"-14	16.70	22.70	(F10)	102.00	M10x15	30.50	29.30	615
																							0.66	0.89	4.02	
DN100	DN80	mm	82.60	213.60	108.80	457.60	504.20	343.50	544.00	266.50	313.10	152.40	352.90	610.00	191.50	18.90	15.90	1"-14	16.70	22.70	(F10)	102.00	M10x15	37.30	36.10	744
																							0.66	0.89	4.02	
4"	3"	inch	3.25	8.41	4.28	18.02	19.85	13.52	21.42	10.49	12.33	6.00	13.89	24.02	7.54	0.74	0.63	UNS-2A	16.70	22.70	(F10)	102.00	M10x15	67.24	64.60	720
																							0.66	0.89	4.02	
DN100	DN100	mm	100.00	239.00	123.00	466.80	513.40	343.50	555.00	275.70	322.30	152.40	363.90	610.00	217.00	18.90	15.90	1"-14	16.70	22.70	(F10)	102.00	M10x15	82.23	79.59	870
																							0.66	0.89	4.02	
DN150		mm	111.10	346.10	146.10	542.40	611.90	385.00	665.00	309.80	379.30	152.40	432.40	916.00	266.00	28.45	23.75	1½"-12	26.20	35.20	(F12)	125.00	M12x15	75.00	71.00	872
																							1.03	1.39	4.92	
6"		inch	4.37	13.63	5.75	21.35	24.09	15.16	26.18	12.20	14.93	6.00	17.02	36.06	10.47	1.12	0.94	UNS-1A	1.03	1.39	4.92	M12x15	165.35	156.53	1020	

⁽¹⁾ C47C series is Habonim's standard valve design without the HermetiX™ stem seal construction.

Components & materials



Item	Description	Material specifications	Qty.
1	Body	A351 CF8M, A494 M35-1, Bronze RG5	1
2	End	A351 CF8M, A494 M35-1, Bronze RG5	2
3	Ball	A351 CF8M, B574 N06022, Bronze RG5	1
4	Stem	A479 316/316L, A564 Gr.630 H1150D 17-4PH, B574 N06022	1
5*	Seat	CF PTFE, TFM, PCTFE (KEL-F)	2
6*	Body seal	PTFE, Graphite	2
6A	Support ring	A351 CF8M	1
7*	Stem thrust seal	TFM ⁽²⁾ , PCTFE (KEL-F)	1
7a*	Anti-abrasion ring	TFM ⁽²⁾ , PCTFE (KEL-F)	1
8	Stop pin	A582 303	1
9*	Stem seal	TFM, Graphite ⁽²⁾	1
10	Follower	B783 316L	1
10A**	Slide bearing	TF316	1
11	Disc spring	A693 Gr. 631 17-7PH	2
12	Stem nut	EN3506-2 A4-80, A194 Gr 8M	1
13	Tab lock washer	A240 304	1

Item	Description	Material specifications	Qty.
14	Handle	C.St. Zinc plate, A240 316L	1
14A	Stop plate	A240 430	1
14B	Wrench head	A351 CF8M	1
16	Wrench bolt	EN3506-1 A2-70/A4-80, A193 Gr B8/B8M	1
17	Sleeve	PVC	1
18	Body bolt	EN 3506-1 A2-70, A193 Gr B8	8
18A	Spring washer	DIN 127 A2	8
20	Anti-static spring	A313 302	2
21	Anti-static plunger	A479 304	2
22	Arrow flow	A167 304	2
23	Tag (not shown)	A167 304	1
24	Bonnet seal	PTFE, Graphite	1
25	Stem bearing	PTFE	1
26	Bonnet	A479 316L, A351 CF8M	1
28	Bolt	A193 B8, DIN 912 A2-70	4
28A	Spring washer	DIN 127 A2	4
30	Dog tag	A167 304	1

⁽¹⁾ C47C series is Habonim's standard valve design without the HermetiX™ stem seal construction.

⁽²⁾ This material can only be used as part of the C47C design.

* Repair kit components

** Only with HermetiX™ fire safe design

Floating Ball Valves

Cryogenic valves

General

3 Piece

Flanged

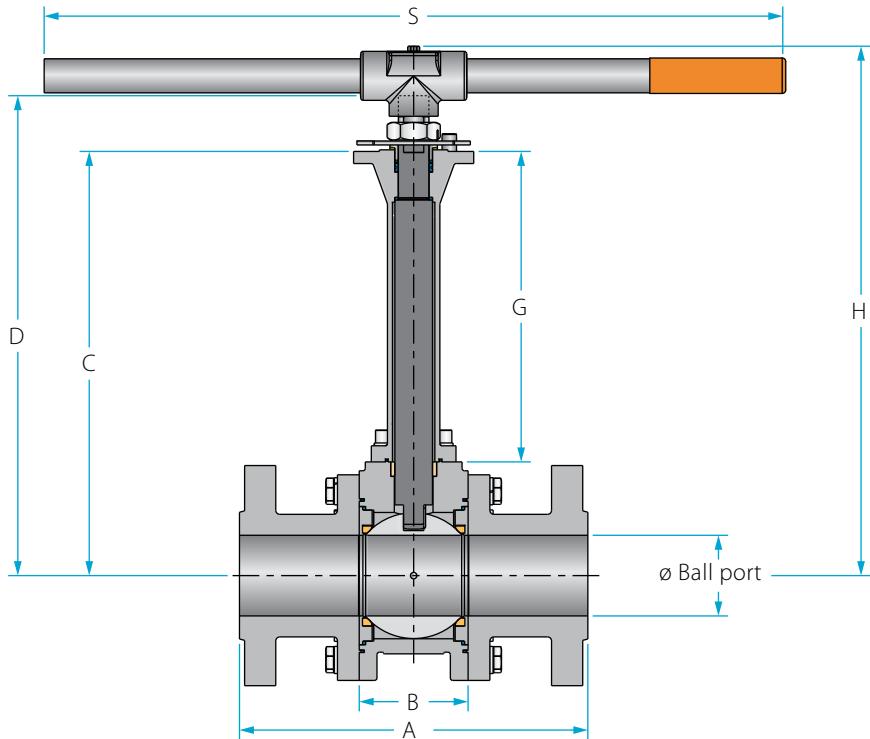
High pressure

Multiport

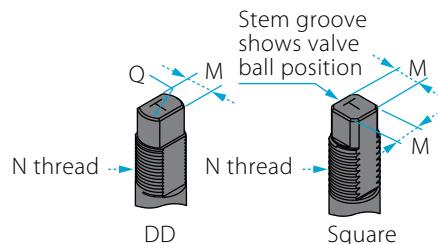
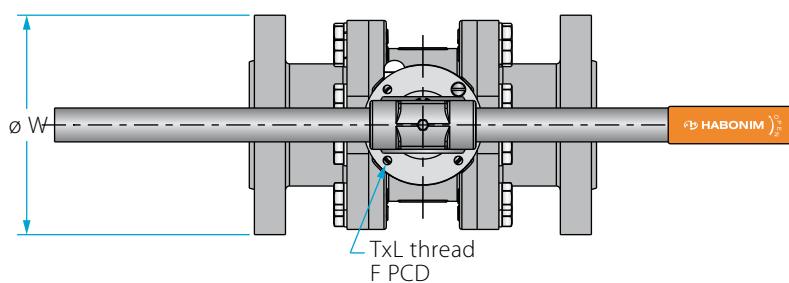
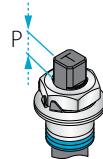
Ordering code system

Size 2"- 8" | DN50-DN200 | Class 600 | C26W/C26C⁽¹⁾ Series

Valve dimensions



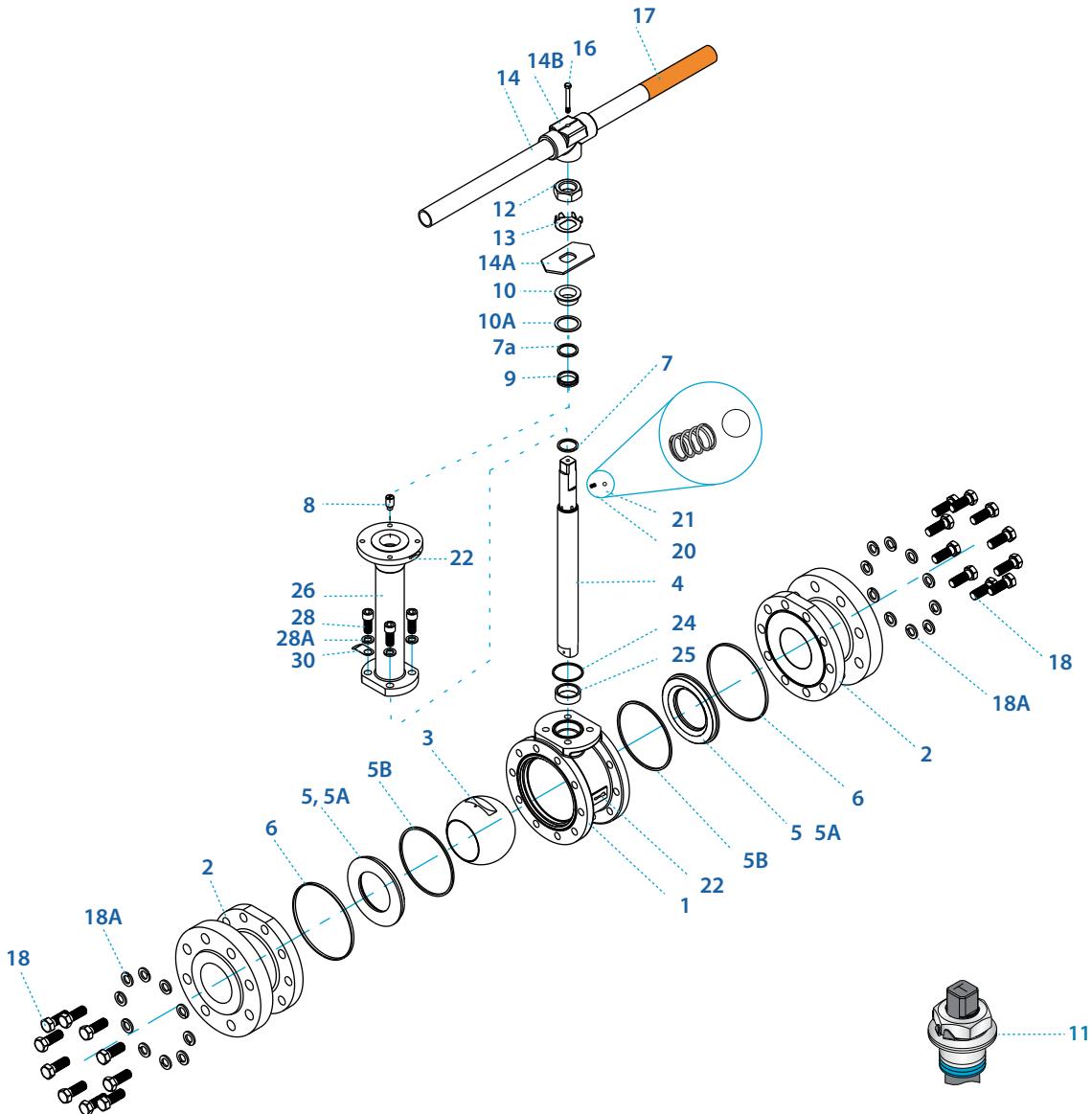
Preparation for actuation



Full Port	Unit	Ball port	A		B	Standard design				6.0" bonnet				S	W	M	MDD	N	P	Q	F	TxL	Weight Kg/lb (Welded)		Kv	
			Welded	#600		C	D	G	H	C	D	G	H										Std.	6.0"		
DN50	mm	51.05	200.00	292.00	75.00	432.50	479.10	345.00	431.00	239.90	286.50	152.40	238.40	401.00	165.00	18.90	15.90	1" - 14	16.70	22.70	(F10)	102.00	M10X15	25.00	22.00	421
2"	inch	2.01	7.87	11.50	2.95	17.03	18.86	13.58	16.97	9.44	11.28	6.00	9.39	15.79	6.50	0.74	0.63	UNS-2A	0.66	0.89		4.02		55.00	48.00	492
DN80	mm	80.00	356.00	356.00	110.00	511.50	580.60	385.00	632.00	278.90	348.00	152.40	399.40	916.00	210.00	28.45	23.75	1-1/2"	26.20	35.20	(F12)	125.00	M12X15	50.00	45.00	983
3"	inch	3.15	14.02	14.02	4.33	20.14	22.86	15.16	24.88	10.98	13.70	6.00	15.72	36.06	8.27	1.12	0.94	UNF-2A	1.03	1.39		4.92		110.00	99.00	1150
DN100	mm	100.00	400.00	432.00	135.00	527.30	596.40	385.00	646.50	294.70	363.80	152.40	413.90	916.00	275.00	28.45	23.75	1-1/2"	26.20	35.20	(F12)	125.00	M12X15	75.00	70.00	1807
4"	inch	3.94	15.75	17.01	5.31	20.76	23.48	15.16	25.45	11.60	14.32	6.00	16.30	36.06	10.83	1.12	0.94	UNF-2A	1.03	1.39		4.92		165.00	154.00	2114
DN150	mm	150.00	490.00	559.00	190.00	579.00	691.65	385.00	-	346.40	459.05	152.40	-	-	355.00	35.92	35.92	2"	40.00	46.50	(F14)	140.00	M16X20	155.00	140.00	4310
6"	inch	5.91	19.29	22.01	7.48	22.80	27.23	15.16	-	13.64	18.07	6.00	-	-	13.98	1.41	1.41	UN-2A	1.57	1.83		5.51		341.00	308.00	5043
DN200	mm	200.00	500.00	660.00	275.00	630.00	742.65	385.00	-	397.40	510.05	152.40	-	-	420.00	45.90	45.90	2-3/4"	50.00	59.00	(F16)	165.00	M20X30	400.00	380.00	7970
8"	inch	7.87	19.69	25.98	10.83	24.80	29.24	15.16	-	15.65	20.08	6.00	-	-	16.54	1.81	1.81	UN-2A	1.97	2.32		6.50		880.00	836.00	9325

⁽¹⁾ Due to high valve torque, pipe handle cannot be used. A manual gear or automation means should be used to operate the valve.

Components & materials



Item	Description	Material specifications	Qty.
1	Body	A351 CF8M, A494 M35-1, Bronze RG5	1
2	End	A479 316/316L, A351 CF8M, A494 M35-1, Bronze RG5	2
3	Ball	A351 CF8M, B574 N06022, Bronze RG5	1
4	Stem	A479 316/316L, A564 Gr.630 H1150D 17-4PH, B574 N06022	1
5*	Seat	CF PTFE, TFM, PCTFE (KEL-F)	2
5A*	Seat housing	A351 CF8M, A494 M35-1, Bronze RG5	2
5B*	Seat seal	PTFE, Graphite	2
6*	Body seal	PTFE, Graphite	2
7*	Stem thrust seal	TFM ⁽²⁾ , PCTFE (KEL-F)	1
7a	Anti-abrasion ring	TFM ⁽²⁾ , PCTFE (KEL-F)	1
8	Stop pin	A582 303	1
9*	Stem seal	TFM, Graphite ⁽²⁾	1
10	Follower	B783 316L	1
10A**	Slide bearing	TF316	1
11	Disc spring	A693 Gr. 631 17-7PH	2
12	Stem nut	EN3506-2 A4-80, A194 Gr 8M	1

⁽¹⁾ C26C series is Habonim's standard valve design without the HermetiX™ stem seal construction.

⁽²⁾ This material can only be used as part of the C26C design.

Item	Description	Material specifications	Qty.
13	Tab lock washer	A240 304	1
14***	Handle	C.St. Zinc plate, A240 316L	1
14A	Stop plate	A240 430	1
14B	Wrench head	A351 CF8M	1
16	Wrench bolt	EN3506-1 A2-70/A4-80, A193 Gr B8/B8M	1
17	Sleeve	PVC	1
18	Body bolt	EN 3506-1 A2-70, A193 Gr B8	20-32
18A	Spring washer	DIN 127 A2	20-32
20	Anti-static spring	A313 302	2
21	Anti-static plunger	A479 304	2
22	Arrow flow	A167 304	2
23	Tag (not shown)	A167 304	1
24	Bonnet seal	PTFE, Graphite	1
25	Stem bearing	PTFE	1
26	Bonnet	A479 316L, CF8M	1
28	Bolt	A193 B8, DIN 912 A2-70	4
28A	Spring washer	DIN 127 A2	4
30	Dog tag	A167 304	1

* Repair kit components

** Only with HermetiX™ fire safe design

*** Gear operator should be used for size 6" DN150 and above (handle components are not included)

Floating Ball Valves

Cryogenic valves

General

3 Piece

Flanged

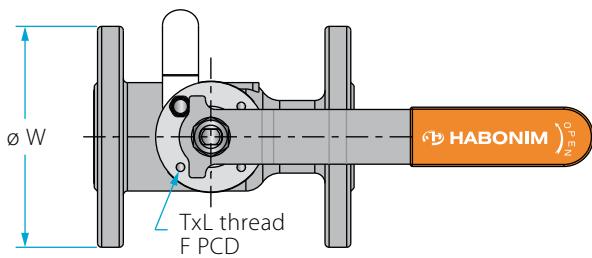
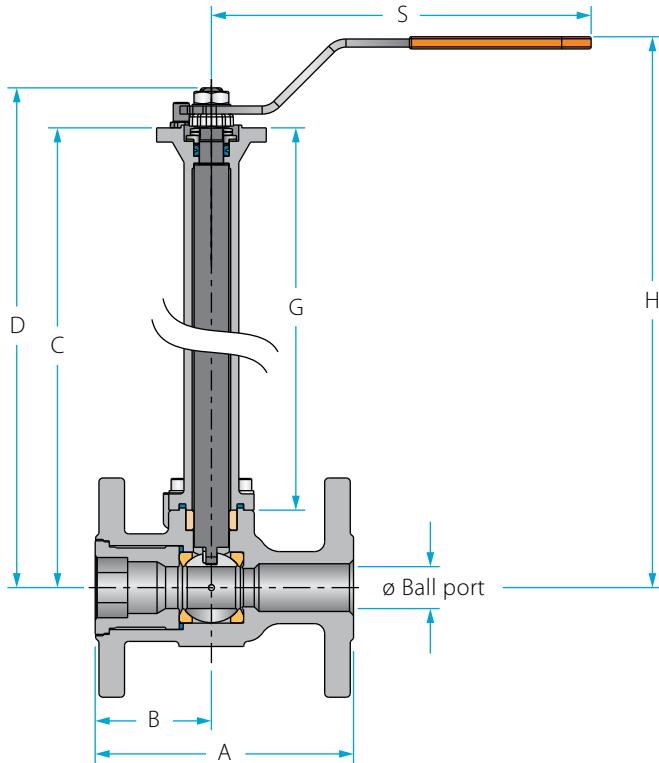
High pressure

Multiport

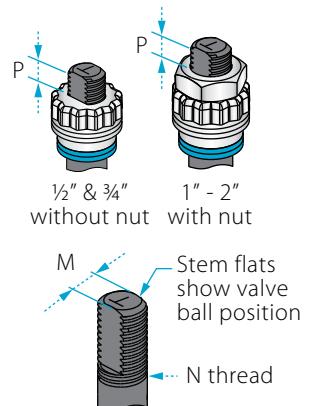
Ordering code system

Size 1/2" - 2" | DN15-DN50 | ANSI Class 150 | C31W/C31C⁽¹⁾ Series

Valve dimensions

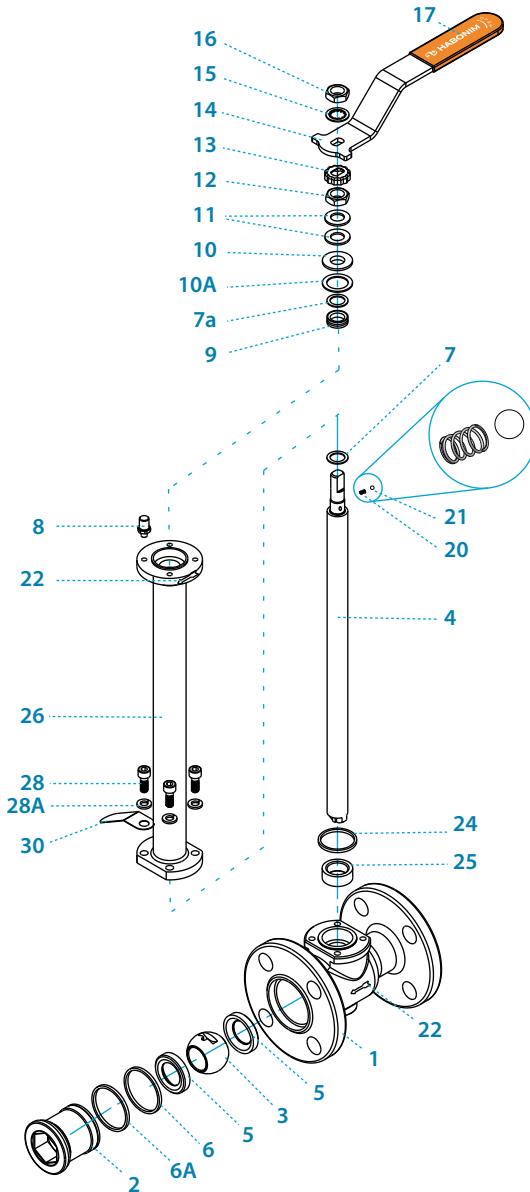


Preparation for actuation



Std. port	Unit	Ball port	A	B	Standard design				6.0" bonnet				S	W	M	N	P	F	TxL	Weight kg/lb Kv			
					C	D	G	H	C	D	G	H								Std.	6.0"	Cv	
DN15	mm	11.15	108.00	46.00	333.00	341.90	304.00	367.00	181.40	190.30	152.40	215.40	150.00	89.00	5.50	3/8" UNF	7.20	(F03)	36.00	M5X7	2.40	2.10	7
	inch	0.44	4.25	1.81	13.11	13.46	11.97	14.45	7.14	7.49	6.00	8.48	5.91	3.50	0.22		0.28		1.42		5.30	4.60	8
DN20	mm	14.30	117.00	49.35	335.40	344.30	304.00	369.40	183.80	192.70	152.40	217.80	150.00	98.00	5.50	3/8" UNF	7.20	(F03)	36.00	M5X7	3.00	2.70	10
	inch	0.56	4.61	1.94	13.20	13.56	11.97	14.54	7.24	7.59	6.00	8.57	5.91	3.86	0.22		0.28		1.42		6.60	5.90	12
DN25	mm	20.60	127.00	57.00	342.15	359.65	304.00	387.00	190.55	208.05	152.40	235.40	187.00	108.00	7.54	7/16" UNF	7.20	(F04)	42.00	M5X7	4.20	3.85	27
	inch	0.81	5.00	2.24	13.47	14.16	11.97	15.24	7.50	8.19	6.00	9.27	7.36	4.25	0.30		0.28		1.65		9.30	8.50	32
DN40	mm	31.80	165.00	62.40	347.55	377.05	304.00	404.00	195.95	225.45	152.40	252.40	237.00	127.00	8.71	9/16" UNF	8.00	(F05)	50.00	M6X8	7.00	6.43	70
	inch	1.25	6.50	2.46	13.68	14.84	11.97	15.91	7.71	8.88	6.00	9.94	9.33	5.00	0.34		0.31		1.97		15.40	14.20	82
DN50	mm	38.10	178.00	68.00	352.25	381.75	304.00	406.00	200.65	230.15	152.40	254.40	237.00	152.00	8.71	9/16" UNF	8.50	(F05)	50.00	M6X8	9.10	8.53	103
	inch	1.50	7.01	2.68	13.87	15.03	11.97	15.98	7.90	9.06	6.00	10.02	9.33	5.98	0.34		0.33		1.97		20.10	18.80	120

Components & materials



Item	Description	Material specifications	Qty.
1	Body	A351 CF8M, A494 M35-1, Bronze RG5	1
2	Plug	A351 CF8M, A494 M35-1, Bronze RG5	1
3	Ball	A351 CF8M, B574 N06022, Bronze RG5	1
4	Stem	A479 316/316L, A564 Gr.630 H1150D 17-4PH, B574 N06022	1
5*	Seat	CF PTFE, TFM, PCTFE (KEL-F)	2
6*	Body seal	PTFE, Graphite	1
6A	Support ring	A479 316L, B574 N06022	1
7*	Stem thrust seal	TFM ⁽²⁾ , PCTFE (KEL-F)	1
7a*	Anti-abrasion ring	TFM ⁽²⁾ , PCTFE (KEL-F)	1
8	Stop pin	A582 303	1
9*	Stem seal	TFM, Graphite ⁽²⁾	1
10	Follower	B783 316L	1
10A**	Slide bearing	TF316	1
11	Disc spring	A693 Gr. 631 17-7PH	2

⁽¹⁾ C31C series is Habonim's standard valve design without the HermetiX™ stem seal construction.

⁽²⁾ This material can only be used as part of the C31C design.

Item	Description	Material specifications	Qty.
12	Stem nut	EN3506-2 A4-80, A194 Gr 8M	1
13	Locking clip	A167 304	1
14	Handle	A240 430	1
15	Serrated washer	A240 410	1
16	Handle nut	EN3506-2 A4-80, A194 Gr 8M	1
17	Sleeve	PVC	1
20	Anti-static spring	A313 302	1
21	Anti-static plunger	A479 304	1
22	Arrow flow	A167 304	2
23	Tag (not shown)	A167 304	1
24	Bonnet seal	PTFE, Graphite	1
25	Stem bearing	PTFE	1
26	Bonnet	A479 316L, A351 CF8M	1
28	Bolt	A193 B8, EN3506-1 A2-70	4
28A	Spring washer	DIN 127 A2	4
30	Dog tag	A167 304	1

* Repair kit components

** Only with HermetiX™ fire safe design

Floating Ball Valves

Cryogenic valves

General

3 Piece

Flanged

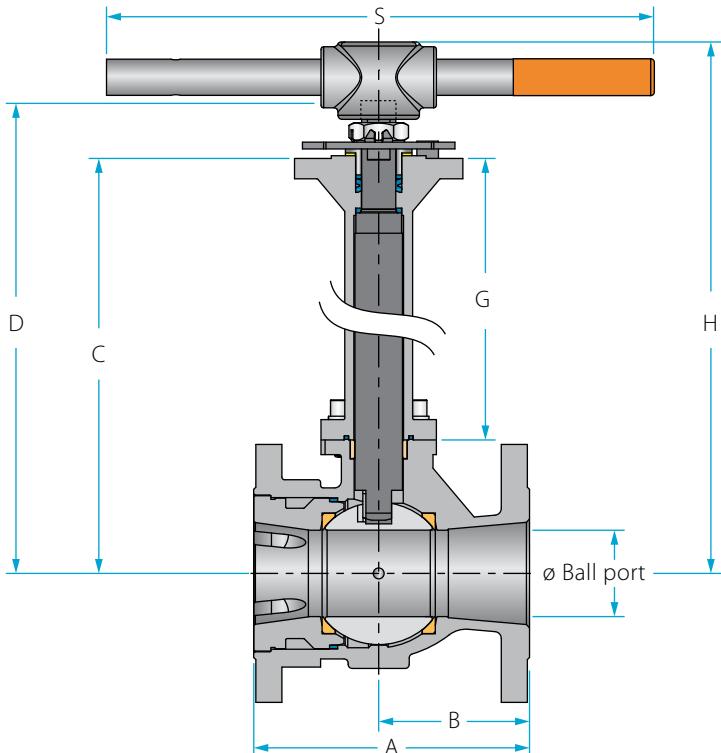
High pressure

Multiport

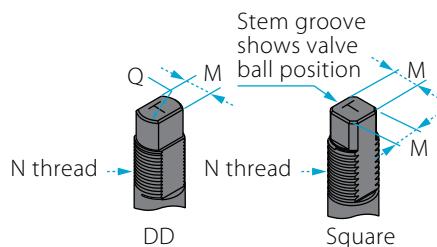
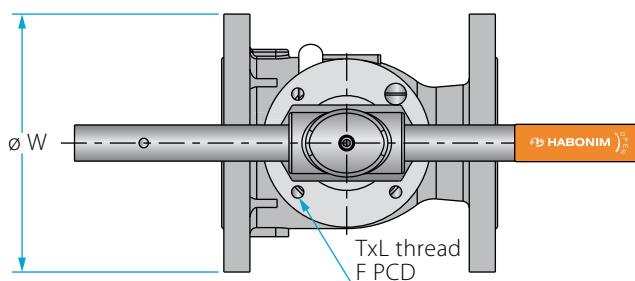
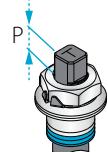
Ordering code system

Size 3"- 8" | DN80-DN200 | ANSI Class 150 | C31W/C31C⁽¹⁾ Series

Valve dimensions



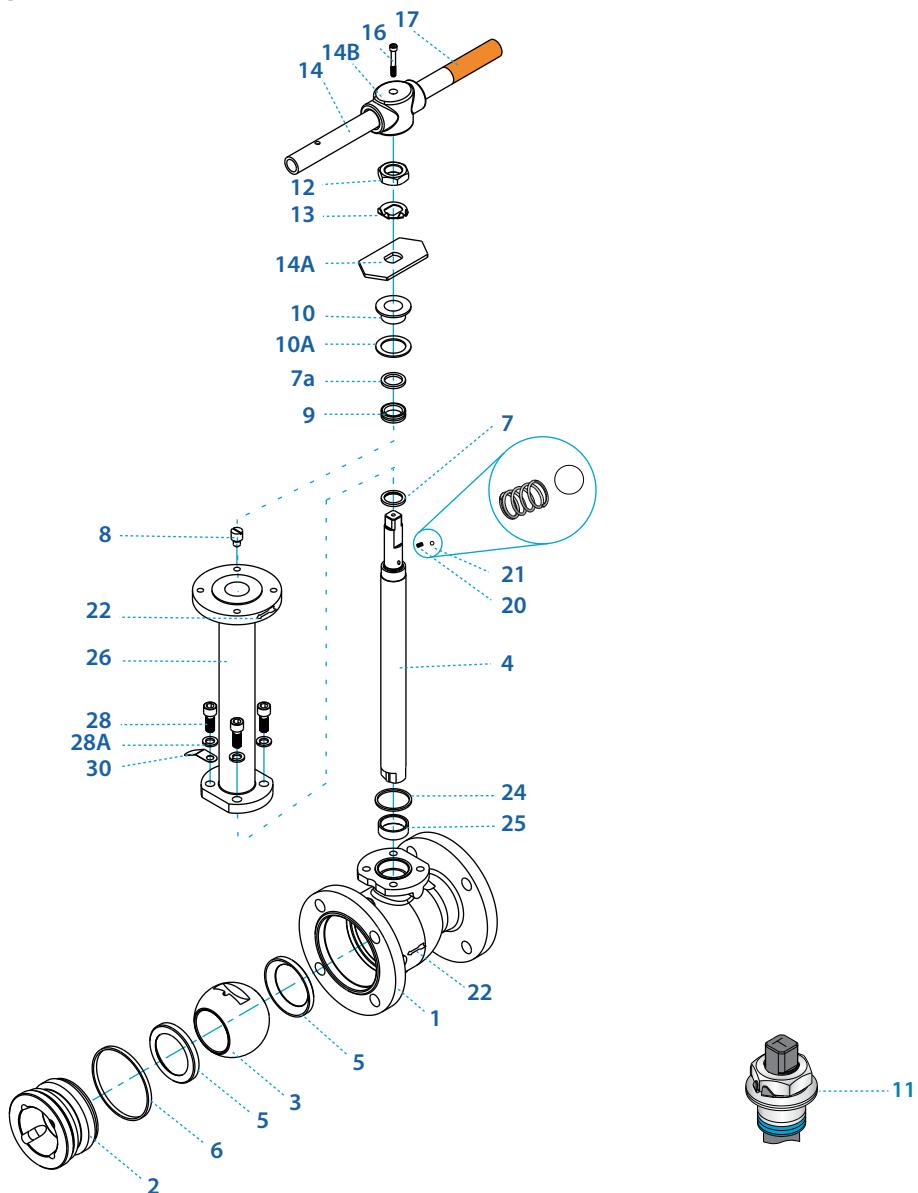
Preparation for actuation



Std. port	Unit	Ball port	A	B	Standard design				6.0" bonnet				S	W	M	MDD	N	P	Q	F	TxL	Weight kg/lb Kv			
					C	D	G	H	C	D	G	H										Std.	6.0"	Cv	
DN80	mm	63.8	282.00	92.10	463.30	509.90	343.50	550.50	272.20	318.80	152.40	359.40	610.00	210.00	18.92	15.90	1"-14	16.70	22.70	(F10)	102.00	M10X15	29.00	27.80	385
3"	inch	2.51	11.10	3.63	18.24	20.07	13.52	21.67	10.72	12.55	6.00	14.15	24.02	8.27	0.74	0.63	UNSA-2A	0.66	0.89		4.02		63.90	61.30	450
DN100	mm	82.80	304.80	101.60	457.60	504.20	343.50	543.40	266.50	313.10	152.40	352.30	610.00	254.00	18.92	15.90	1"-14	16.70	22.70	(F10)	102.00	M10X15	44.60	43.40	615
4"	inch	3.26	12.00	4.00	18.02	19.85	13.52	21.39	10.49	12.33	6.00	13.87	24.02	10.00	0.74	0.63	UNSA-2A	0.66	0.89		4.02		98.30	95.70	720
DN150	mm	111.3	403.20	107.80	561.00	630.50	385.00	-	328.40	397.90	152.40	-	-	318.00	28.45	23.75	1½"-12	26.20	35.20	(F12)	125.00	M12X15	92.00	89.00	872
6"	inch	4.38	15.87	4.24	22.09	24.82	15.16	-	12.93	15.67	6.00	-	-	12.52	1.12	0.94	UNSA-2A	1.03	1.39		4.92		202.40	195.80	1020
DN200	mm	144.40	419.10	142.25	570.10	639.60	385.00	-	337.50	407.00	152.40	-	-	381.00	28.45	23.75	1½"-12	26.20	35.20	(F12)	125.00	M12X15	118.60	114.50	1607
8"	inch	5.69	16.50	5.60	22.44	25.18	15.16	-	13.29	16.02	6.00	-	-	15.00	1.12	0.94	UNSA-2A	1.03	1.39		4.92		261.40	252.40	1880

⁽¹⁾ Due to high valve torque, pipe handle cannot be used. A manual gear or automation means should be used to operate the valve.

Components & materials



Item	Description	Material specifications	Qty.
1	Body	A351 CF8M, A494 M35-1, Bronze RG5	1
2	Plug	A351 CF8M, A494 M35-1, Bronze RG5	1
3	Ball	A351 CF8M, B574 N06022, Bronze RG5	1
4	Stem	A479 316/316L, A564 Gr.630 H1150D 17-4PH, B574 N06022	1
5*	Seat	CF PTFE, TFM, PCTFE (KEL-F)	2
6*	Body seal	PTFE, Graphite	1
7*	Stem thrust seal	TFM ⁽²⁾ , PCTFE (KEL-F)	1
7a*	Anti-abrasion ring	TFM ⁽²⁾ , PCTFE (KEL-F)	1
8	Stop pin	A582 303	1
9*	Stem seal	TFM, Graphite ⁽²⁾	1
10	Follower	B783 316L	1
10A**	Slide bearing	TF316	1
11	Disc spring	A693 Gr. 631 17-7PH	2
12	Stem nut	C.st B18 ZP	1
13	Tab lock washer	A240 304	1

Item	Description	Material specifications	Qty.
14***	Handle	C.St. Zinc plate, A240 316L	1
14A	Stop plate	A240 430	1
14B	Wrench head	A351 CF8M	1
16	Wrench bolt	EN3506-1 A2-70/A4-80, A193 Gr B8/B8M	1
17	Sleeve	PVC	1
20	Anti-static spring	A313 302	2
21	Anti-static plunger	A479 304	2
22	Arrow flow	A167 304	2
23	Tag (not shown)	A167 304	1
24	Bonnet seal	PTFE, Graphite	1
25	Stem bearing	PTFE	1
26	Bonnet	A479 316L, A351 CF8M	1
28	Bolt	A193 B8, EN3506-1 A2-70	4
28A	Spring washer	DIN 127 A2	4
30	Dog tag	A167 304	1

* Repair kit components

** Only with HermetiX™ fire safe design

*** Gear operator should be used for size 6" DN150 and above (handle components are not included)

⁽¹⁾ C31C series is Habonim's standard valve design without the HermetiX™ stem seal construction.⁽²⁾ This material can only be used as part of the C31C design.

Floating Ball Valves

Cryogenic valves

General

3 Piece

Flanged

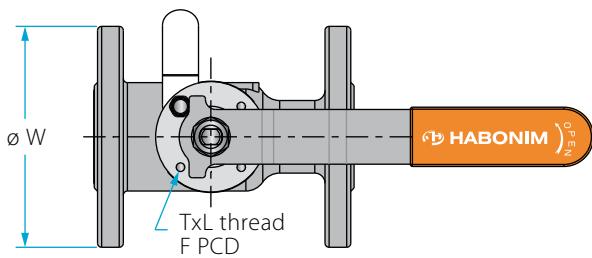
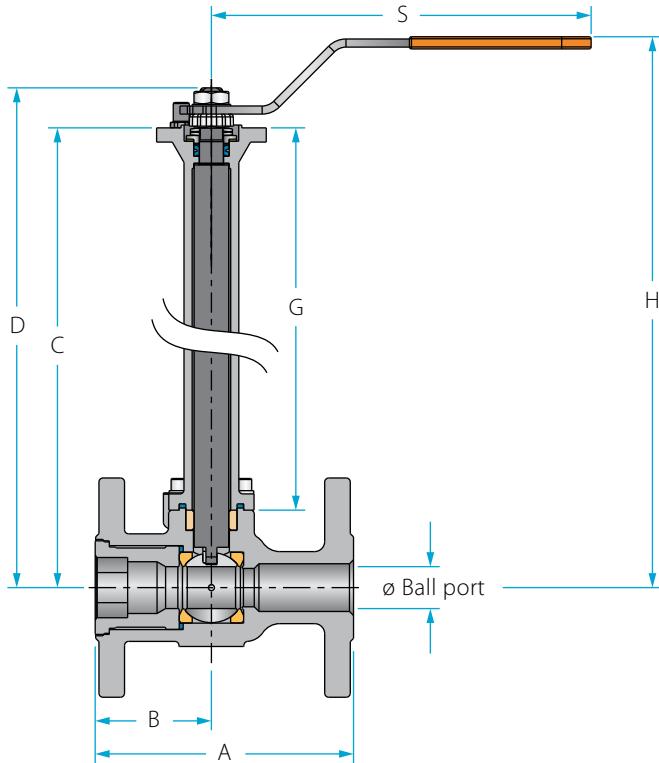
High pressure

Multiport

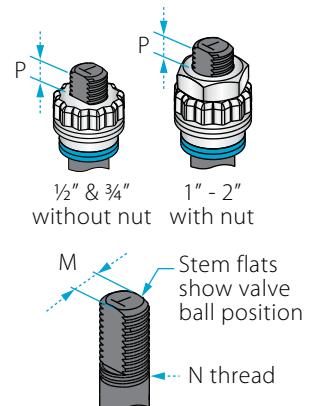
Ordering code system

Size 1/2" - 2" | DN15-DN50 | ANSI Class 300 | C32W/C32C⁽¹⁾ Series

Valve dimensions

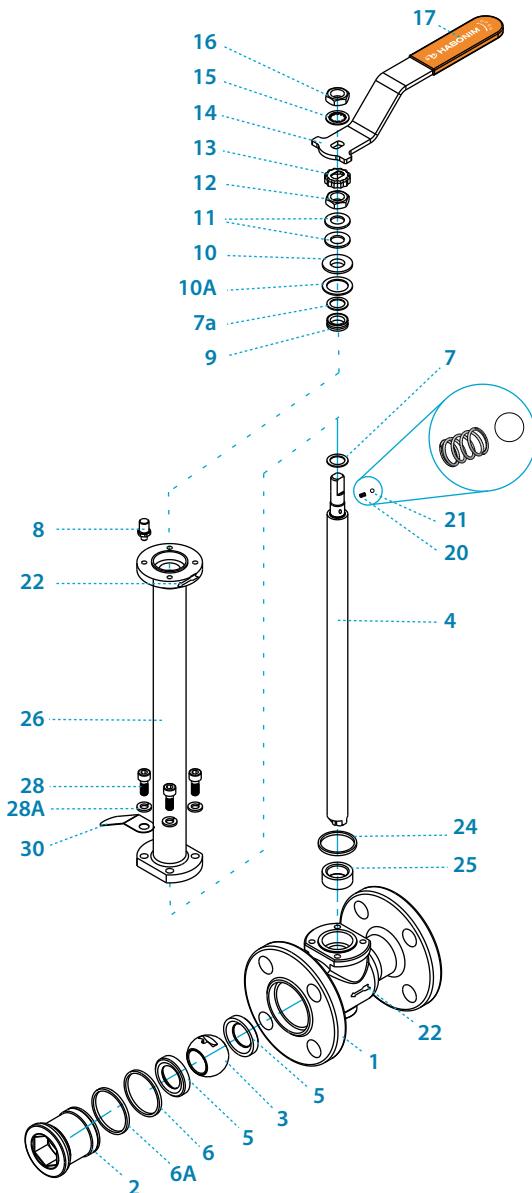


Preparation for actuation



Std. port	Unit	Ball port	A	B	Standard design				6.0" bonnet				S	W	M	N	P	F	TxL	Weight kg/lb Kv			
					C	D	G	H	C	D	G	H								Std.	6.0"	Cv	
DN15	mm	11.15	140.00	46.00	333.00	341.90	304.00	367.00	181.40	190.30	152.40	215.40	150.00	95.00	5.50	3/8" UNF	7.20	(F03)	36.00	M5X7	3.10	2.80	7
	inch	0.44	5.51	1.81	13.11	13.46	11.97	14.45	7.14	7.49	6.00	8.48	5.91	3.74	0.22		0.28		1.42		6.80	6.10	8
DN20	mm	14.30	152.40	49.33	335.40	344.30	304.00	369.40	183.80	192.70	152.40	217.80	150.00	117.00	5.50	3/8" UNF	7.20	(F03)	36.00	M5X7	4.00	3.70	10
	inch	0.56	6.00	1.94	13.20	13.56	11.97	14.54	7.24	7.59	6.00	8.57	5.91	4.61	0.22		0.28		1.42		8.80	8.10	12
DN25	mm	20.60	165.00	57.00	342.05	359.55	304.00	387.00	190.55	208.05	152.40	235.40	187.00	124.00	7.54	7/16" UNF	7.20	(F04)	42.00	M5X7	5.50	5.20	27
	inch	0.81	6.50	2.24	13.47	14.16	11.97	15.24	7.50	8.19	6.00	9.27	7.36	4.88	0.30		0.28		1.65		12.10	11.40	32
DN40	mm	31.80	190.50	62.30	347.45	376.95	304.00	404.00	195.95	225.45	152.40	252.40	237.00	156.00	8.71	9/16" UNF	8.00	(F05)	50.00	M6X8	10.00	9.60	70
	inch	1.25	7.50	2.45	13.68	14.84	11.97	15.91	7.71	8.88	6.00	9.94	9.33	6.14	0.34		0.31		1.97		22.50	21.20	82
DN50	mm	38.10	216.00	67.80	352.25	381.8	304.00	408.00	200.65	230.15	152.40	256.40	237.00	165.00	8.71	9/16" UNF	8.50	(F05)	50.00	M6X8	12.10	11.70	103
	inch	1.50	8.50	2.67	13.87	15.0	11.97	16.06	7.90	9.06	6.00	10.09	9.33	6.50	0.34		0.33		1.97		26.00	24.80	120

Components & materials



Item	Description	Material specifications	Qty.
1	Body	A351 CF8M, A494 M35-1, Bronze RG5	1
2	Plug	A351 CF8M, A494 M35-1, Bronze RG5	1
3	Ball	A351 CF8M, B574 N06022, Bronze RG5	1
4	Stem	A479 316/316L, A564 Gr.630 H1150D 17-4PH, B574 N06022	1
5*	Seat	CF PTFE, TFM, PCTFE (KEL-F)	2
6*	Body seal	PTFE, Graphite	1
6A	Support ring	A479 316L, B574 N06022	1
7*	Stem thrust seal	TFM ⁽²⁾ , PCTFE (KEL-F)	1
7a*	Anti-abrasion ring	TFM ⁽²⁾ , PCTFE (KEL-F)	1
8	Stop pin	A582 303	1
9*	Stem seal	TFM, Graphite ⁽²⁾	1
10	Follower	B783 316L	1
10A**	Slide bearing	TF316	1
11	Disc spring	A693 Gr. 631 17-7PH	2

⁽¹⁾ C32C series is Habonim's standard valve design without the HermetiX™ stem seal construction.

⁽²⁾ This material can only be used as part of the C32C design.

Item	Description	Material specifications	Qty.
12	Stem nut	EN3506-2 A4-80, A194 Gr 8M	1
13	Locking clip	A167 304	1
14	Handle	A240 430	1
15	Serrated washer	A240 410	1
16	Handle nut	EN3506-2 A4-80, A194 Gr 8M	1
17	Sleeve	PVC	1
20	Anti-static spring	A313 302	1
21	Anti-static plunger	A479 304	1
22	Arrow flow	A167 304	2
23	Tag (not shown)	A167 304	1
24	Bonnet seal	PTFE, Graphite	1
25	Stem bearing	PTFE	1
26	Bonnet	A479 316L, A351 CF8M	1
28	Bolt	A193 B8, EN3506-1 A2-70	4
28A	Spring washer	DIN 127 A2	4
30	Dog tag	A167 304	1

* Repair kit components

** Only with HermetiX™ fire safe design

Floating Ball Valves

Cryogenic valves

General

3 Piece

Flanged

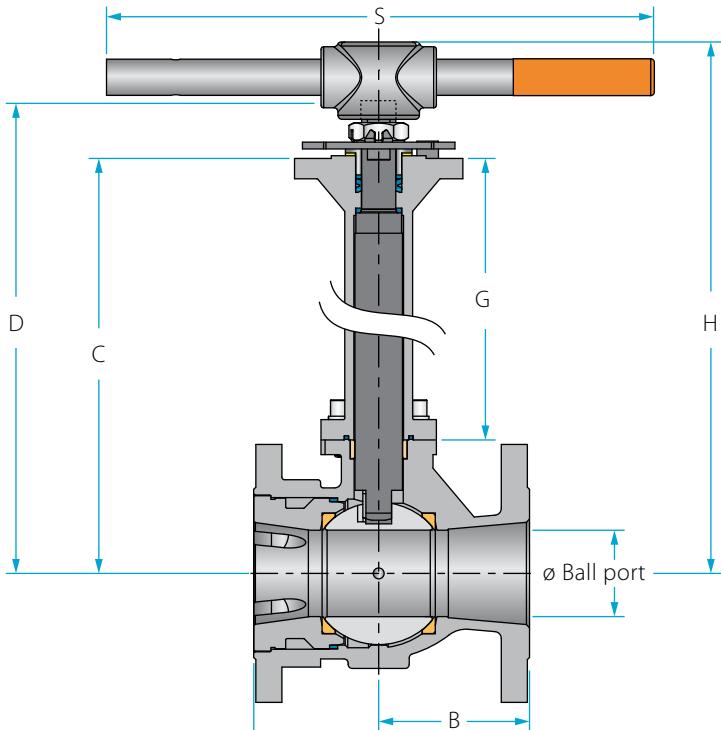
High pressure

Multiport

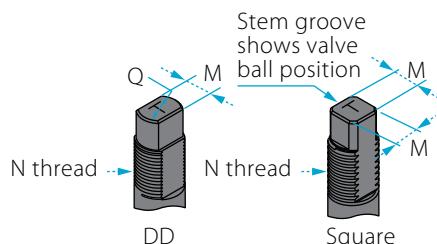
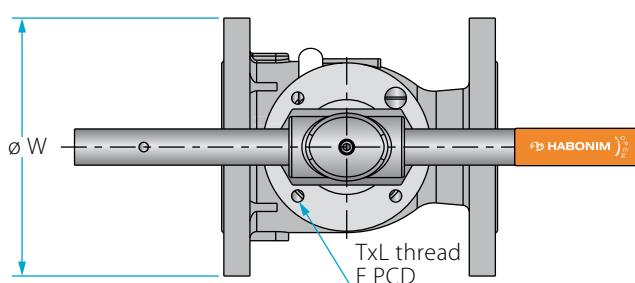
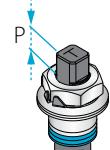
Ordering code system

Size 3"- 8" | DN80-DN200 | ANSI Class 300 | C32W/C32C⁽¹⁾ Series

Valve dimensions



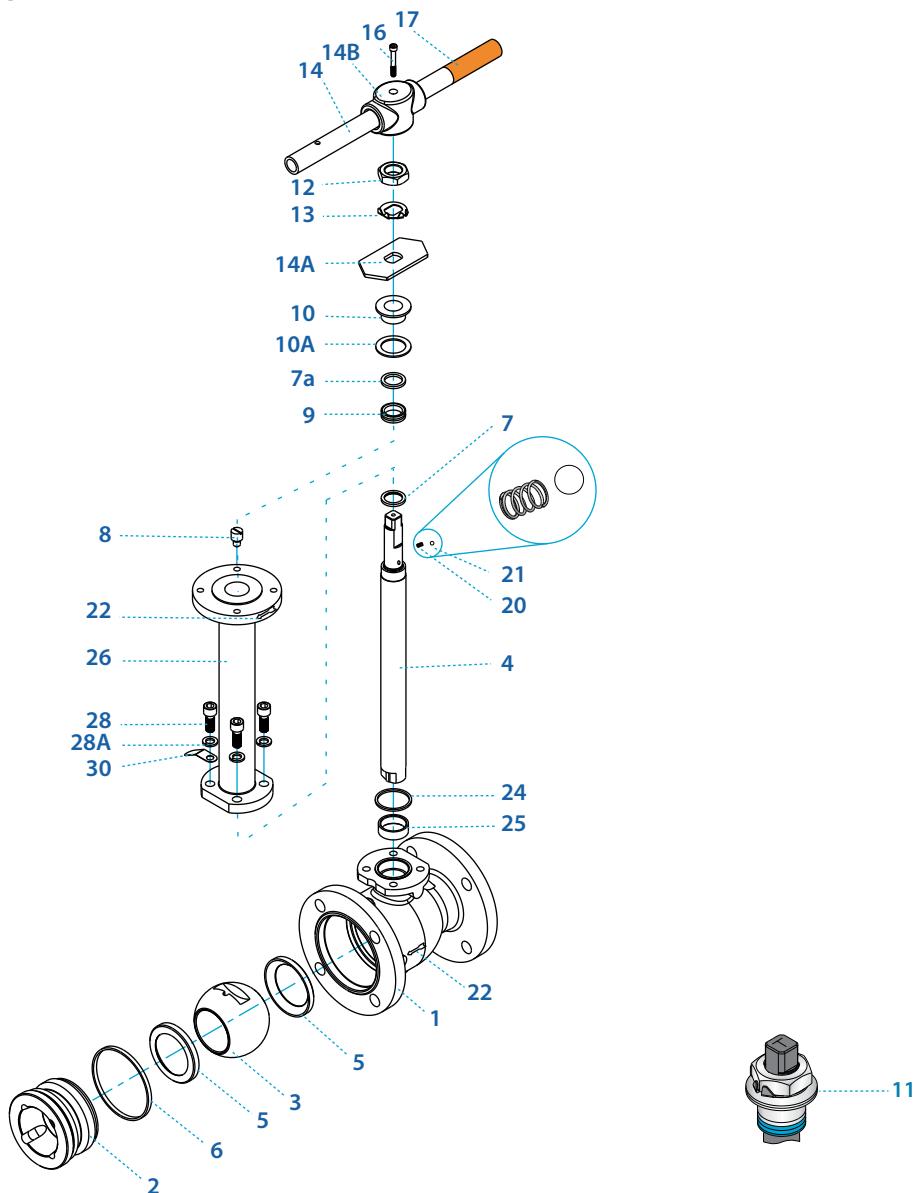
Preparation for actuation



Std. port	Unit	Ball port	A	B	Standard design				6.0" bonnet				S	W	M	MDD	N	P	Q	F	TxL	Weight kg/lb Kv			
					C	D	G	H	C	D	G	H										Std.	6.0"	Cv	
DN80	mm	63.8	282.00	92.10	463.30	509.90	343.50	550.50	272.20	318.80	152.40	359.40	610.00	210.00	18.92	15.90	1"-14	16.70	22.70	(F10)	102.00	M10X15	29.00	27.80	385
3"	inch	2.51	11.10	3.63	18.24	20.07	13.52	21.67	10.72	12.55	6.00	14.15	24.02	8.27	0.74	0.63	UNS-2A	0.66	0.89		4.02		63.90	61.30	450
DN100	mm	82.80	304.80	101.60	457.60	504.20	343.50	543.40	266.50	313.10	152.40	352.30	610.00	254.00	18.92	15.90	1"-14	16.70	22.70	(F10)	102.00	M10X15	44.60	43.40	615
4"	inch	3.26	12.00	4.00	18.02	19.85	13.52	21.39	10.49	12.33	6.00	13.87	24.02	10.00	0.74	0.63	UNS-2A	0.66	0.89		4.02		98.30	95.70	720
DN150	mm	111.3	403.20	107.80	561.00	630.50	385.00	-	328.40	397.90	152.40	-	-	318.00	28.45	23.75	1-1/2"	26.20	35.20	(F12)	125.00	M12X15	92.00	89.00	872
6"	inch	4.38	15.87	4.24	22.09	24.82	15.16	-	12.93	15.67	6.00	-	-	12.52	1.12	0.94	UNF-2A	1.03	1.39		4.92		202.40	195.80	1020
DN200	mm	144.40	419.10	142.25	570.10	639.60	385.00	-	337.50	407.00	152.40	-	-	381.00	28.45	23.75	1-1/2"	26.20	35.20	(F12)	125.00	M12X15	118.60	114.50	1607
8"	inch	5.69	16.50	5.60	22.44	25.18	15.16	-	13.29	16.02	6.00	-	-	15.00	1.12	0.94	UNF-2A	1.03	1.39		4.92		261.40	252.40	1880

⁽¹⁾ Due to high valve torque, pipe handle cannot be used. A manual gear or automation means should be used to operate the valve.

Components & materials



Item	Description	Material specifications	Qty.
1	Body	A351 CF8M, A494 M35-1, Bronze RG5	1
2	Plug	A351 CF8M, A494 M35-1, Bronze RG5	1
3	Ball	A351 CF8M, B574 N06022, Bronze RG5	1
4	Stem	A479 316/316L, A564 Gr.630 H1150D 17-4PH, B574 N06022	1
5*	Seat	CF PTFE, TFM, PCTFE (KEL-F)	2
6*	Body seal	PTFE, Graphite	1
7*	Stem thrust seal	TFM ⁽²⁾ , PCTFE (KEL-F)	1
7a*	Anti-abrasion ring	TFM ⁽²⁾ , PCTFE (KEL-F)	1
8	Stop pin	A582 303	1
9*	Stem seal	TFM, Graphite ⁽²⁾	1
10	Follower	B783 316L	1
10A**	Slide bearing	TF316	1
11	Disc spring	A693 Gr. 631 17-7PH	2
12	Stem nut	C.st B18 ZP	1
13	Tab lock washer	A240 304	1

Item	Description	Material specifications	Qty.
14***	Handle	C.St. Zinc plate, A240 316L	1
14A	Stop plate	A240 430	1
14B	Wrench head	A351 CF8M	1
16	Wrench bolt	EN3506-1 A2-70/A4-80, A193 Gr B8/B8M	1
17	Sleeve	PVC	1
20	Anti-static spring	A313 302	2
21	Anti-static plunger	A479 304	2
22	Arrow flow	A167 304	2
23	Tag (not shown)	A167 304	1
24	Bonnet seal	PTFE, Graphite	1
25	Stem bearing	PTFE	1
26	Bonnet	A479 316L, A351 CF8M	1
28	Bolt	A193 B8, EN3506-1 A2-70	4
28A	Spring washer	DIN 127 A2	4
30	Dog tag	A167 304	1

* Repair kit components

** Only with HermetiX™ fire safe design

*** Gear operator should be used for size 6" DN150 and above (handle components are not included)

⁽¹⁾ C32C series is Habonim's standard valve design without the HermetiX™ stem seal construction.⁽²⁾ This material can only be used as part of the C32C design.

Floating Ball Valves

Cryogenic valves

General

3 Piece

Flanged

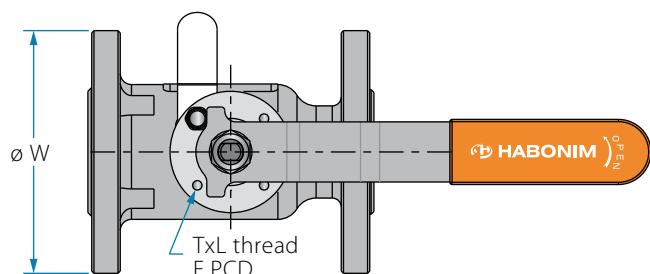
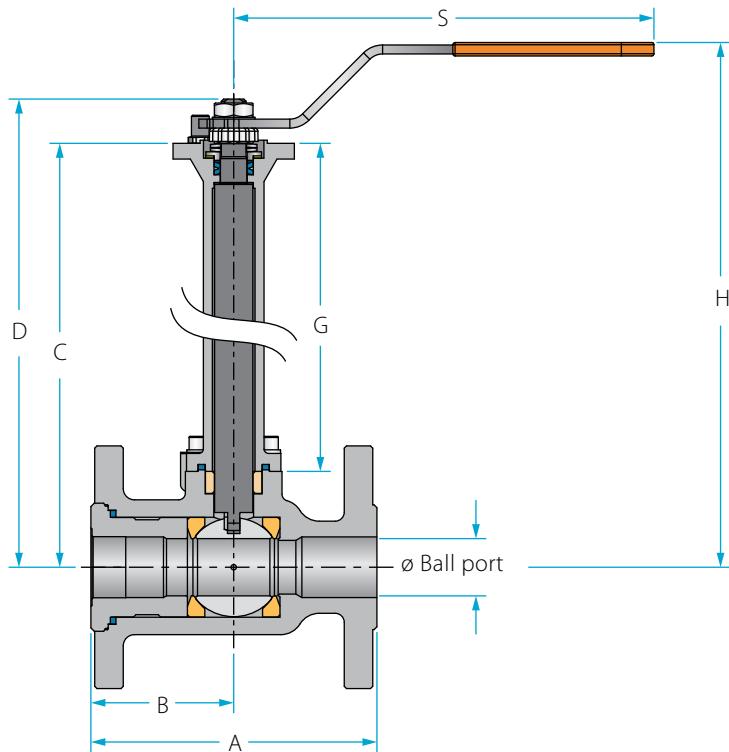
High pressure

Multiport

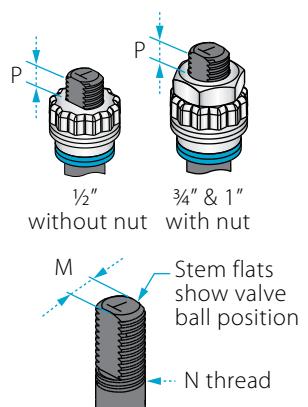
Ordering code system

Size 1/2"-1" | DN15-DN25 | ANSI Class 150 | C73W/C73C⁽¹⁾ Series

Valve dimensions

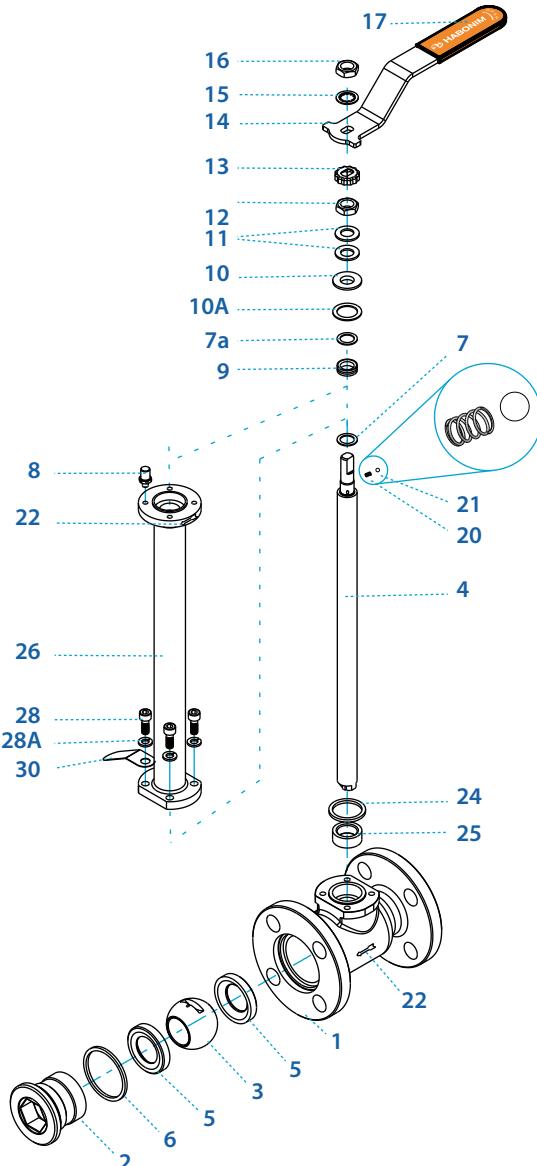


Preparation for actuation



Full Port	Unit	Ball port	A	B	Standard design				6.0" bonnet				S	W	M	N	P	F	TxL	Weight kg/lb Kv			
					C	D	G	H	C	D	G	H								Std.	6.0"	Cv	
DN15	mm	14.30	108.20	48.20	335.40	344.30	304.00	400.00	183.80	192.70	152.40	248.40	150.00	89.00	5.50	3/8" UNF	7.20	(F03)	36.00	M5X7	2.60	2.28	26
	inch	0.56	4.26	1.90	13.20	13.56	11.97	15.75	7.24	7.59	6.00	9.78	5.91	3.50	0.22		0.28		1.42		5.73	5.03	30
DN20	mm	20.60	117.00	59.00	342.15	359.65	304.00	406.80	190.55	208.05	152.40	255.20	187.00	98.00	7.54	7/16" UNF	7.20	(F04)	42.00	M5X7	3.80	3.45	43
	inch	0.81	4.61	2.32	13.47	14.16	11.97	16.02	7.50	8.19	6.00	10.05	7.36	3.86	0.30		0.28		1.65		8.38	7.60	50
DN25	mm	25.40	127.00	64.00	346.65	364.15	304.00	411.30	195.05	212.55	152.40	259.70	187.00	108.00	7.54	7/16" UNF	7.20	(F04)	42.00	M5X7	4.60	4.25	85
	inch	1.00	5.00	2.52	13.65	14.34	11.97	16.19	7.68	8.37	6.00	10.22	7.36	4.25	0.30		0.28		1.65		10.14	9.37	105

Components & materials



Item	Description	Material specifications	Qty.
1	Body	A351 CF8M, A494 M35-1, Bronze RG5	1
2	Plug	A351 CF8M, A494 M35-1, Bronze RG5	1
3	Ball	A351 CF8M, B574 N06022, Bronze RG5	1
4	Stem	A479 316/316L, A564 Gr.630 H1150D 17-4PH, B574 N06022	1
5*	Seat	CF PTFE, TFM, PCTFE (KEL-F)	2
6*	Body seal	PTFE, Graphite	2
7*	Stem thrust seal	TFM ⁽²⁾ , PCTFE (KEL-F)	1
7a*	Anti-abrasion ring	TFM ⁽²⁾ , PCTFE (KEL-F)	1
8	Stop pin	A582 303	1
9*	Stem seal	TFM, Graphite ⁽²⁾	1
10	Follower	B783 316L	1
10A**	Slide bearing	TF316	1
11	Disc spring	A693 Gr. 631 17-7PH	2
12	Stem nut	EN3506-2 A4-80, A194 Gr 8M	1

⁽¹⁾ C73C series is Habonim's standard valve design without the HermetiX™ stem seal construction.

⁽²⁾ This material can only be used as part of the C73C design.

Item	Description	Material specifications	Qty.
13	Locking clip	A167 304	1
14	Handle	A240 430	1
15	Serrated washer	A240 410	1
16	Handle nut	EN3506-2 A4-80, A194 Gr 8M	1
17	Sleeve	PVC	1
20	Anti-static spring	A313 302	1
21	Anti-static plunger	A479 304	1
22	Arrow flow	A167 304	2
23	Tag (not shown)	A167 304	1
24	Bonnet seal	PTFE, Graphite	1
25	Stem bearing	PTFE	1
26	Bonnet	A479 316L, A351 CF8M	1
28	Bolt	A193 B8, EN3506-1 A2-70	4
28A	Spring washer	DIN 912 A2-70	4
30	Dog tag	A167 304	1

* Repair kit components

** Only with HermetiX™ fire safe design

Floating Ball Valves

Cryogenic valves

General

3 Piece

Flanged

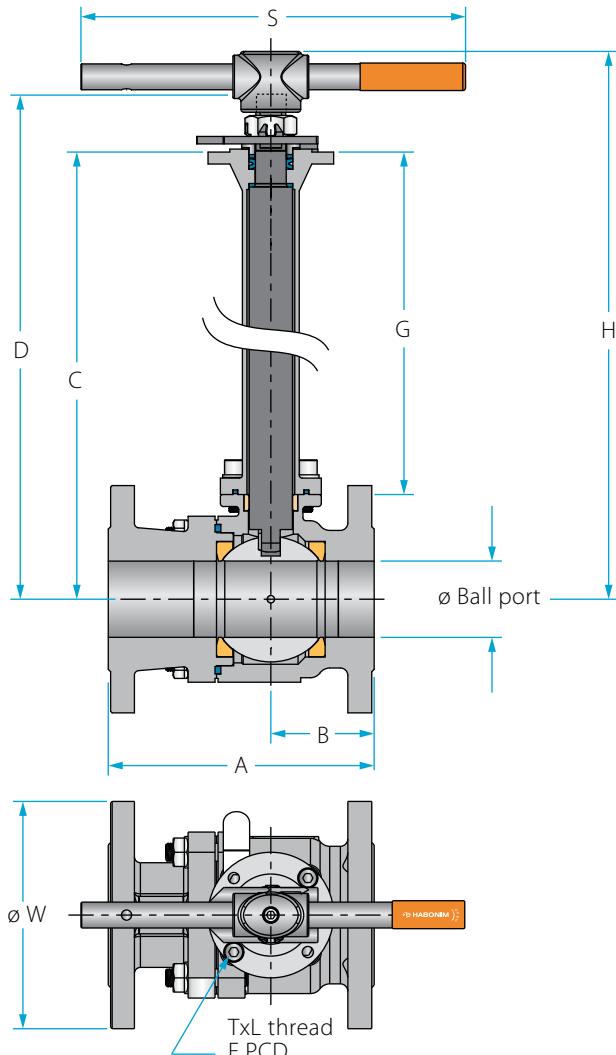
High pressure

Multiport

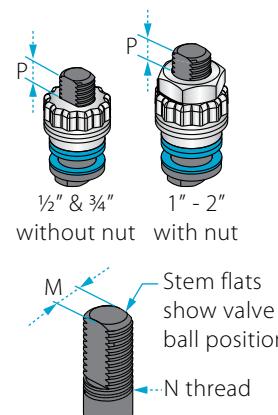
Ordering code system

Size 1¹/₂" - 2" | DN40-DN50 | ANSI Class 150 | C73W/C73C⁽¹⁾ Series

Valve dimensions

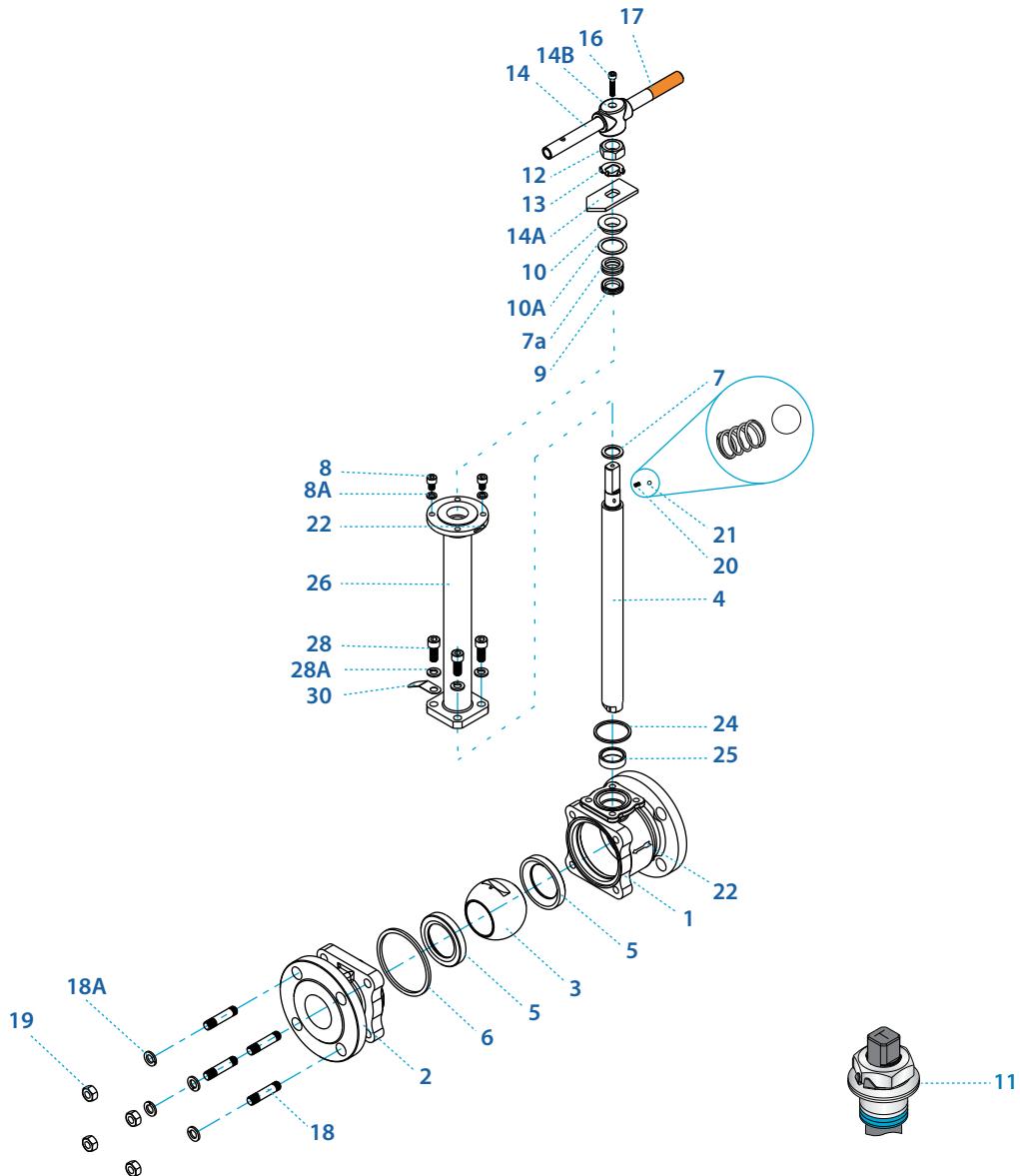


Preparation for actuation



Full Port	Unit	Ball port	A	B	Standard design				6.0" bonnet				S	W	M	N	P	F	TxL	Weight kg/lb Kv		
					C	D	G	H	C	D	G	H								Std.	6.0"	Cv
DN40	mm	38.10	165.00	68.00	352.3	381.8	304.00	406.60	200.65	230.15	152.40	255.00	237.00	127.00	8.71	9/16" UNF	8.50 (F05)	50.00	M6X8	8.50	7.93	214
1 1/2"	inch	1.50	6.50	2.68	13.87	15.0	11.97	16.01	7.90	9.06	6.00	10.04	9.33	5.00	0.34		0.33	1.97		18.73	17.48	250
DN50	mm	51.00	178.00	69.00	397.50	439.10	327.50	430.35	222.40	264.00	152.40	255.25	400.00	152.00	13.90	M20x2.5	13.50 (F07)	70.00	M8X8	16.00	14.50	410
2"	inch	2.01	7.01	2.72	15.65	17.29	12.89	16.94	8.76	10.39	6.00	10.05	15.75	5.98	0.55		0.53	2.76		35.20	31.90	480

Components & materials



Item	Description	Material specifications	Qty.
1	Body	A351 CF8M, A494 M35-1, Bronze RG5	1
2	End	A351 CF8M, A494 M35-1, Bronze RG5	1
3	Ball	A351 CF8M, B574 N06022, Bronze RG5	1
4	Stem	A479 316/316L, A564 Gr.630 H1150D 17-4PH, B574 N06022	1
5*	Seat	CF PTFE, TFM, PCTFE (KEL-F)	2
6*	Body seal	PTFE, Graphite	1
7*	Stem thrust seal	TFM ⁽²⁾ , PCTFE (KEL-F)	1
7a*	Anti-abrasion ring	TFM ⁽²⁾ , PCTFE (KEL-F)	1
8	Stop bolt	A582 303	2
8A	Spring washer	DIN 127 A2	2
9*	Stem seal	TFM, Graphite	1
10	Follower	B783 316L	1
10A**	Slide bearing	TF316	1
11	Disc spring	A693 Gr. 631 17-7PH	2
12	Stem nut	EN3506-2 A4-80, A194 8M	1
13	Tab lock washer	A240 304	1

⁽¹⁾ C73C series is Habonim's standard valve design without the HermetiX™ stem seal construction.

⁽²⁾ This material can only be used as part of the C73C design.

Item	Description	Material specifications	Qty.
14	Handle	C.St. Zinc plate, A240 316L	1
14A	Stop plate	A240 430	1
14B	Wrench head	A351 CF8M	1
16	Wrench bolt	EN3506-1 A2-70/A4-80, A193 Gr B8/B8M	1
17	Sleeve	PVC	1
18	Body bolt	EN 3506-1 A2-70, A193 Gr B8	4
18A	Spring washer	DIN 127 A2	4
19	Body Nut	EN3506-2 A4-80, A194 8M	4
20	Anti-static spring	A313 302	1
21	Anti-static plunger	A479 304	1
22	Arrow flow	A167 304	2
23	Tag (not shown)	A167 304	1
24	Bonnet seal	PTFE, Graphite	1
25	Stem bearing	PTFE	1
26	Bonnet	A479 316L, A351 CF8M	1
28	Bolt	EN3506-1 A2-70, A193 B8	4
28A	Spring washer	DIN 127 A2	4
30	Dog tag	A167 304	1

* Repair kit components

** Only with HermetiX™ fire safe design

Floating Ball Valves

Cryogenic valves

General

3 Piece

Flanged

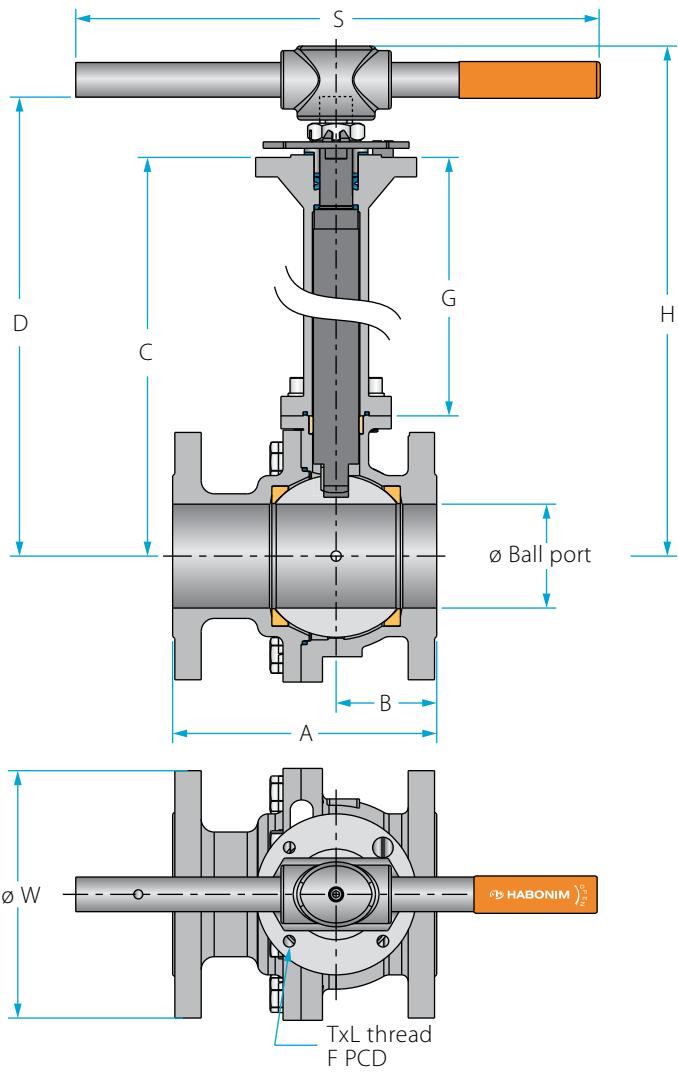
High pressure

Multiport

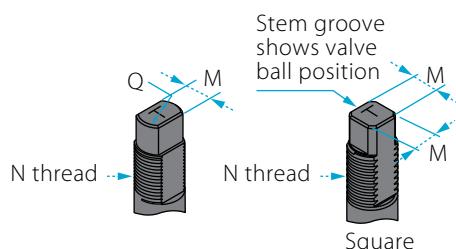
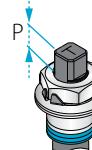
Ordering code system

Size 3"- 8" | DN80-DN200 | ANSI Class 150 | C73W/C73C⁽¹⁾ Series

Valve dimensions



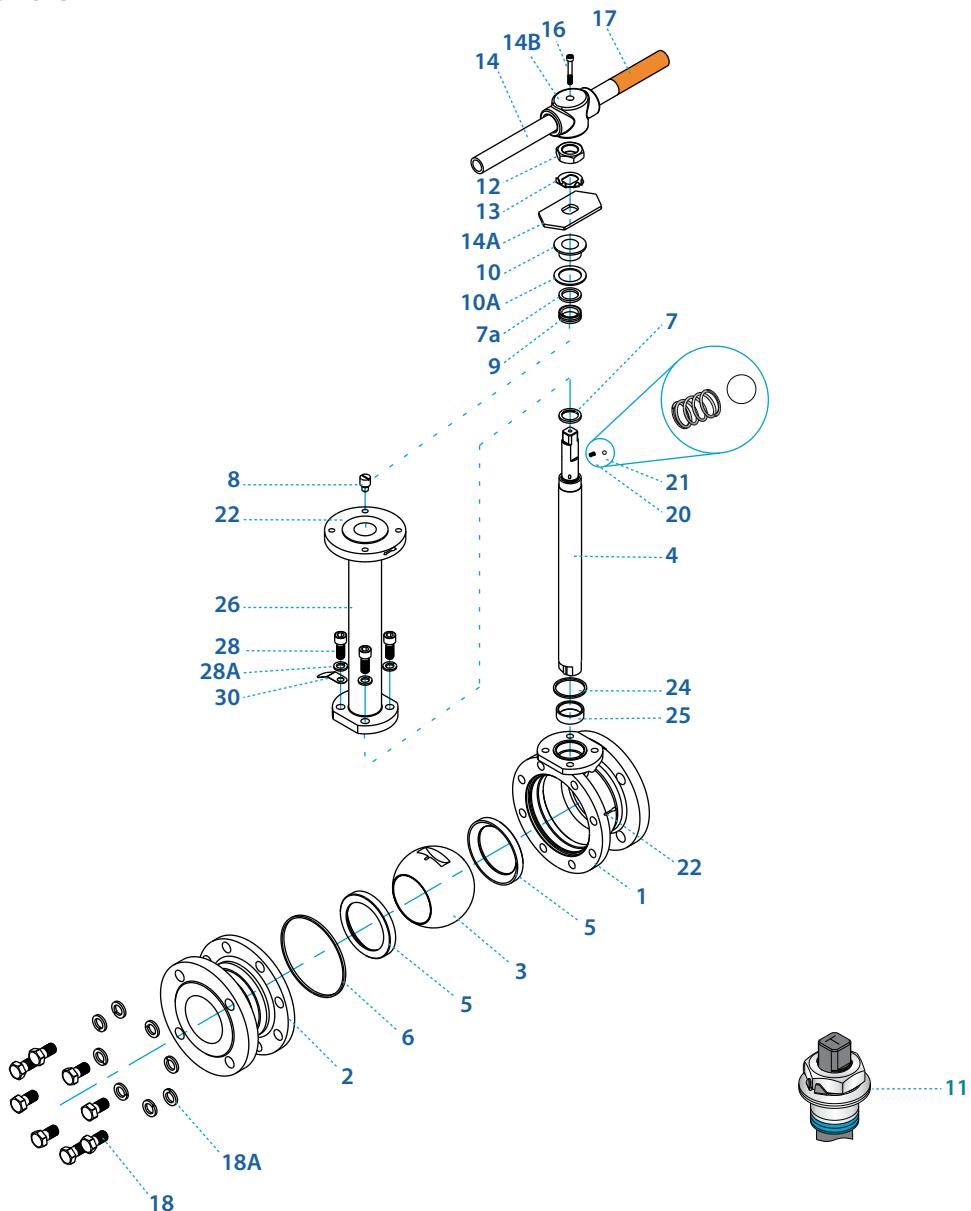
Preparation for actuation



Full Port	Unit	Ball port	A	B	Standard design				6.0" bonnet				S	W	M	M DD	N	P	Q	F	TxL	Weight kg/lb Kv			
					C	D	G	H	C	D	G	H										Std.	6.0"	Cv	
DN80	mm	80.00	203.00	77.50	441.50	488.10	343.50	538.60	250.40	297.00	152.40	347.50	610.00	190.50	18.90	15.90	1"-14	16.70	22.70	(F10)	102.00	M10X15	27.00	25.00	1111
3"	inch	3.15	7.99	3.05	17.38	19.22	13.52	21.20	9.86	11.69	6.00	13.68	24.02	7.50	0.74	0.63	UNS-2A	0.66	0.89		4.02		59.40	41.44	1300
DN100	mm	100.00	229.00	84.50	467.50	514.10	343.50	566.60	276.40	323.00	152.40	375.50	610.00	230.00	18.90	15.90	1"-14	16.70	22.70	(F10)	102.00	M10X15	44.00	42.00	2051
4"	inch	3.94	9.02	3.33	18.41	20.24	13.52	22.31	10.88	12.72	6.00	14.78	24.02	9.06	0.74	0.63	UNS-2A	0.66	0.89		4.02		67.22	64.58	2379
DN150	mm	150.00	394.00	163.50	564.00	633.50	385.00	-	331.40	400.90	152.40	-	-	279.40	28.45	23.75	1-1/2"	26.20	35.20	(F12)	125.00	M12X15	97.00	93.50	4615
6"	inch	5.91	15.51	6.44	22.20	24.94	15.16	-	13.05	15.78	6.00	-	-	11.00	1.12	0.94	12 UNF-2A	1.03	1.39		4.92		154.28	145.24	5400
DN200	mm	200.00	457.00	242.60	627.00	627.00	385.00	-	394.40	463.90	152.40	-	-	343.00	35.90	35.90	2" UN-2A	40.00	46.50	(F14)	140.00	M16X20	210.00	203.00	7949
8"	inch	7.87	17.99	9.55	24.69	24.69	15.16	-	15.53	18.26	6.00	-	-	13.50	1.41	1.41	1.57	1.83	5.51			231.42	222.38	9300	

⁽¹⁾ Due to high valve torque, pipe handle cannot be used. A manual gear or automation means should be used to operate the valve.

Components & materials



Item	Description	Material specifications	Qty.
1	Body	A351 CF8M, A494 M35-1, Bronze RG5	1
2	End	A351 CF8M, A494 M35-1, Bronze RG5	1
3	Ball	A351 CF8M, B574 N06022, Bronze RG5	1
4	Stem	A479 316/316L, A564 Gr.630 H1150D 17-4PH, B574 N06022	1
5*	Seat	CF PTFE, TFM, PCTFE (KEL-F)	2
6*	Body seal	PTFE, Graphite	1
7*	Stem thrust seal	TFM ⁽²⁾ , PCTFE (KEL-F)	1
7a*	Anti-abrasion ring	TFM ⁽²⁾ , PCTFE (KEL-F)	1
8	Stop pin	A582 303	1
9*	Stem seal	TFM, Graphite ⁽²⁾	1
10	Follower	B783 316L	1
10A**	Slide bearing	TF316	1
11	Disc spring	A693 Gr. 631 17-7PH	2
12	Stem nut	C.st B18 ZP	1
13	Tab lock washer	A240 304	1

⁽¹⁾ C73C series is Habonim's standard valve design without the HermetiX™ stem seal construction.

⁽²⁾ This material can only be used as part of the C73C design.

Item	Description	Material specifications	Qty.
14***	Handle	C.St. Zinc plate, A240 316L	1
14A	Stop plate	A240 430	1
14B	Wrench head	A351 CF8M	1
16	Wrench bolt	EN3506-1 A2-70/A4-80, A193 Gr B8/B8M	1
17	Sleeve	PVC	1
18	Body bolt	EN3506-1 A2-70, A193 B8	8-10
18A	Spring washer	DIN 127 A2	8-10
20	Anti-static spring	A313 302	2
21	Anti-static plunger	A479 304	2
22	Arrow flow	A167 304	2
23	Tag (not shown)	A167 304	1
24	Bonnet seal	PTFE, Graphite	1
25	Stem bearing	PTFE	1
26	Bonnet	A479 316L, A351 CF8M	1
28	Bolt	EN3506-1 A2-70, A193 B8	4
28A	Spring washer	DIN 127 A2	4
30	Dog tag	A167 304	1

* Repair kit components

** Only with HermetiX™ fire safe design

*** Gear operator should be used for size 6" DN150 and above (handle components are not included)

Floating Ball Valves

Cryogenic valves

General

3 Piece

Flanged

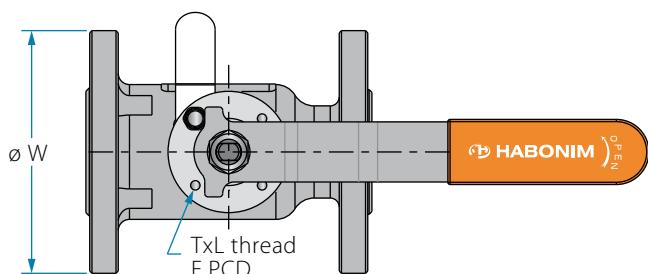
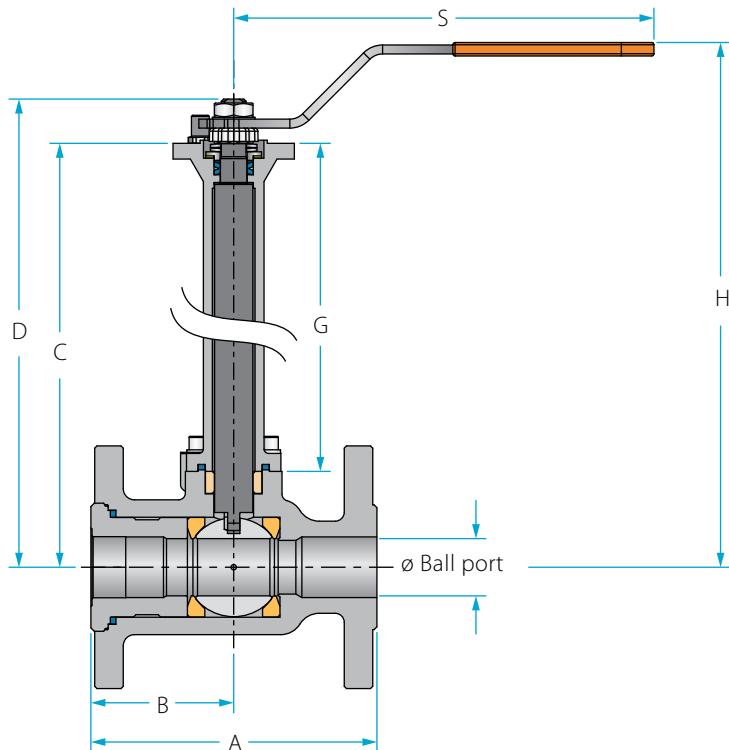
High pressure

Multiport

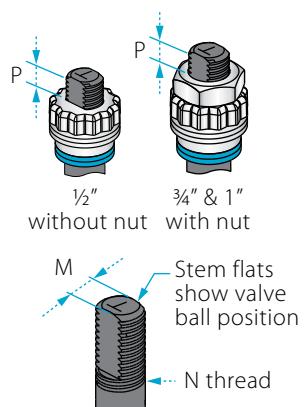
Ordering code system

Size 1/2"-1" | DN15-DN25 | ANSI Class 300 | C74W/C74C⁽¹⁾ Series

Valve dimensions

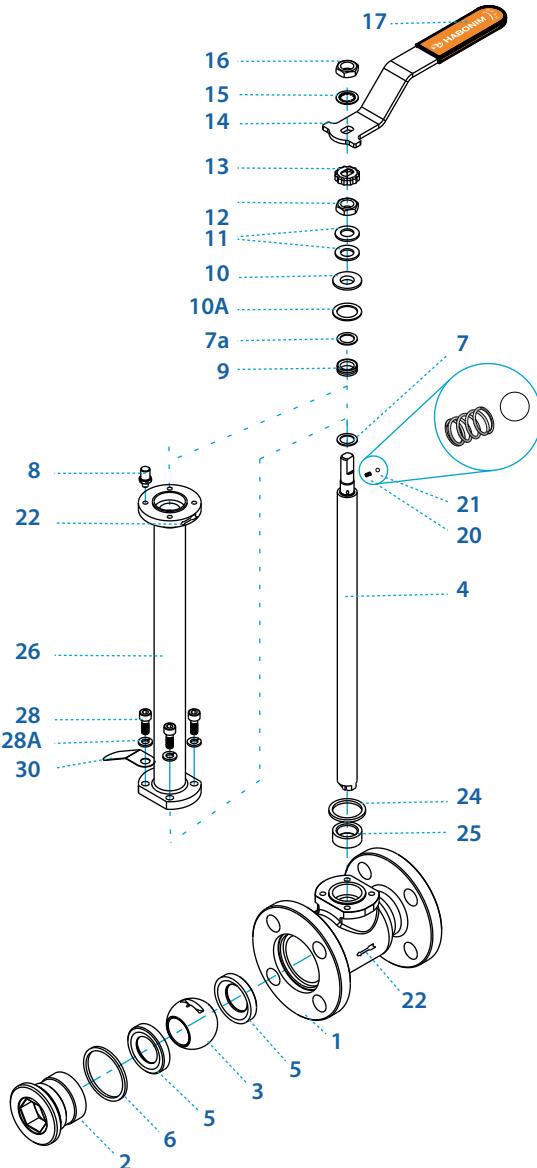


Preparation for actuation



Full Port	Unit	Ball port	A	B	Standard design				6.0" bonnet				S	W	M	N	P	F	TxL	Weight kg/lb Kv			
					C	D	G	H	C	D	G	H								Std.	6.0"	Cv	
DN15	mm	14.30	140.00	48.00	335.40	344.30	304.00	400.00	183.80	192.70	152.40	248.40	150.00	95.00	5.50	3/8" UNF	7.20	(F03)	36.00	M5X7	3.10	2.78	26
1/2"	inch	0.56	5.51	1.89	13.20	13.56	11.97	15.75	7.24	7.59	6.00	9.78	5.91	3.74	0.22		0.28		1.42		6.83	6.13	30
DN20	mm	20.60	153.00	59.00	342.2	359.7	304.00	406.80	190.55	208.05	152.40	255.20	187.00	117.00	7.54	7/16" UNF	7.20	(F04)	42.00	M5X8	4.90	4.55	43
3/4"	inch	0.81	6.02	2.32	13.47	14.16	11.97	16.02	7.50	8.19	6.00	10.05	7.36	4.61	0.30		0.28		1.65		10.80	10.03	50
DN25	mm	25.40	165.00	64.00	346.7	364.15	304.00	411.30	195.05	212.55	152.40	259.70	187.00	124.00	7.54	7/16" UNF	7.20	(F04)	42.00	M5X8	6.00	5.65	85
1"	inch	1.00	6.50	2.52	13.65	14.34	11.97	16.19	7.68	8.37	6.00	10.22	7.36	4.88	0.30		0.28		1.65		13.22	1245	105

Components & materials



Item	Description	Material specifications	Qty.
1	Body	A351 CF8M, A494 M35-1, Bronze RG5	1
2	Plug	A351 CF8M, A494 M35-1, Bronze RG5	1
3	Ball	A351 CF8M, B574 N06022, Bronze RG5	1
4	Stem	A479 316/316L, A564 Gr.630 H1150D 17-4PH, B574 N06022	1
5*	Seat	CF PTFE, TFM, PCTFE (KEL-F)	2
6*	Body seal	PTFE, Graphite	2
7*	Stem thrust seal	TFM ⁽²⁾ , PCTFE (KEL-F)	1
7a*	Anti-abrasion ring	TFM ⁽²⁾ , PCTFE (KEL-F)	1
8	Stop pin	A582 303	1
9*	Stem seal	TFM, Graphite ⁽²⁾	1
10	Follower	B783 316L	1
10A**	Slide bearing	TF316	1
11	Disc spring	A693 Gr. 631 17-7PH	2
12	Stem nut	EN3506-2 A4-80, A194 Gr 8M	1

⁽¹⁾ C74C series is Habonim's standard valve design without the HermetiX™ stem seal construction.

⁽²⁾ This material can only be used as part of the C74C design.

Item	Description	Material specifications	Qty.
13	Locking clip	A167 304	1
14	Handle	A240 430	1
15	Serrated washer	A240 410	1
16	Handle nut	EN3506-2 A4-80, A194 Gr 8M	1
17	Sleeve	PVC	1
20	Anti-static spring	A313 302	1
21	Anti-static plunger	A479 304	1
22	Arrow flow	A167 304	2
23	Tag (not shown)	A167 304	1
24	Bonnet seal	PTFE, Graphite	1
25	Stem bearing	PTFE	1
26	Bonnet	A479 316L, A351 CF8M	1
28	Bolt	EN3506-1 A2-70, A193 B8	4
28A	Spring washer	DIN 127 A2	4
30	Dog tag	A167 304	1

* Repair kit components

** Only with HermetiX™ fire safe design

Floating Ball Valves

Cryogenic valves

General

3 Piece

Flanged

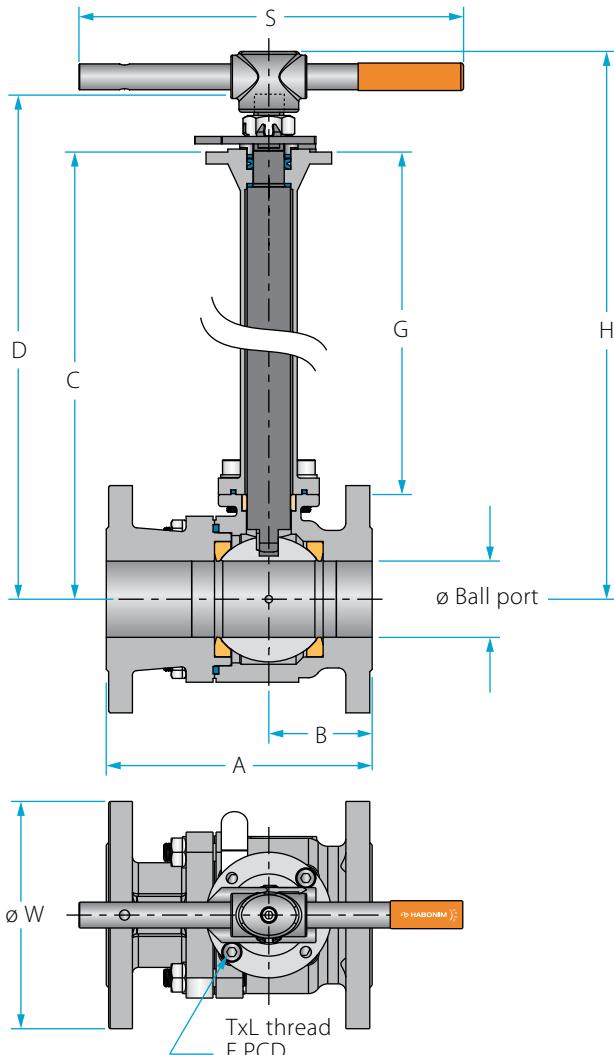
High pressure

Multiport

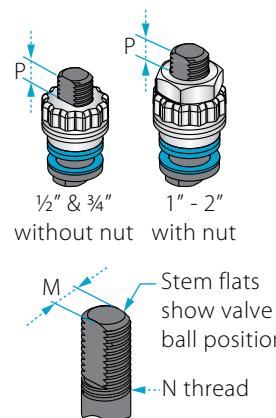
Ordering code system

Size 1¹/₂" - 2" | DN40-DN50 | ANSI Class 300 | C74W/C74C⁽¹⁾ Series

Valve dimensions

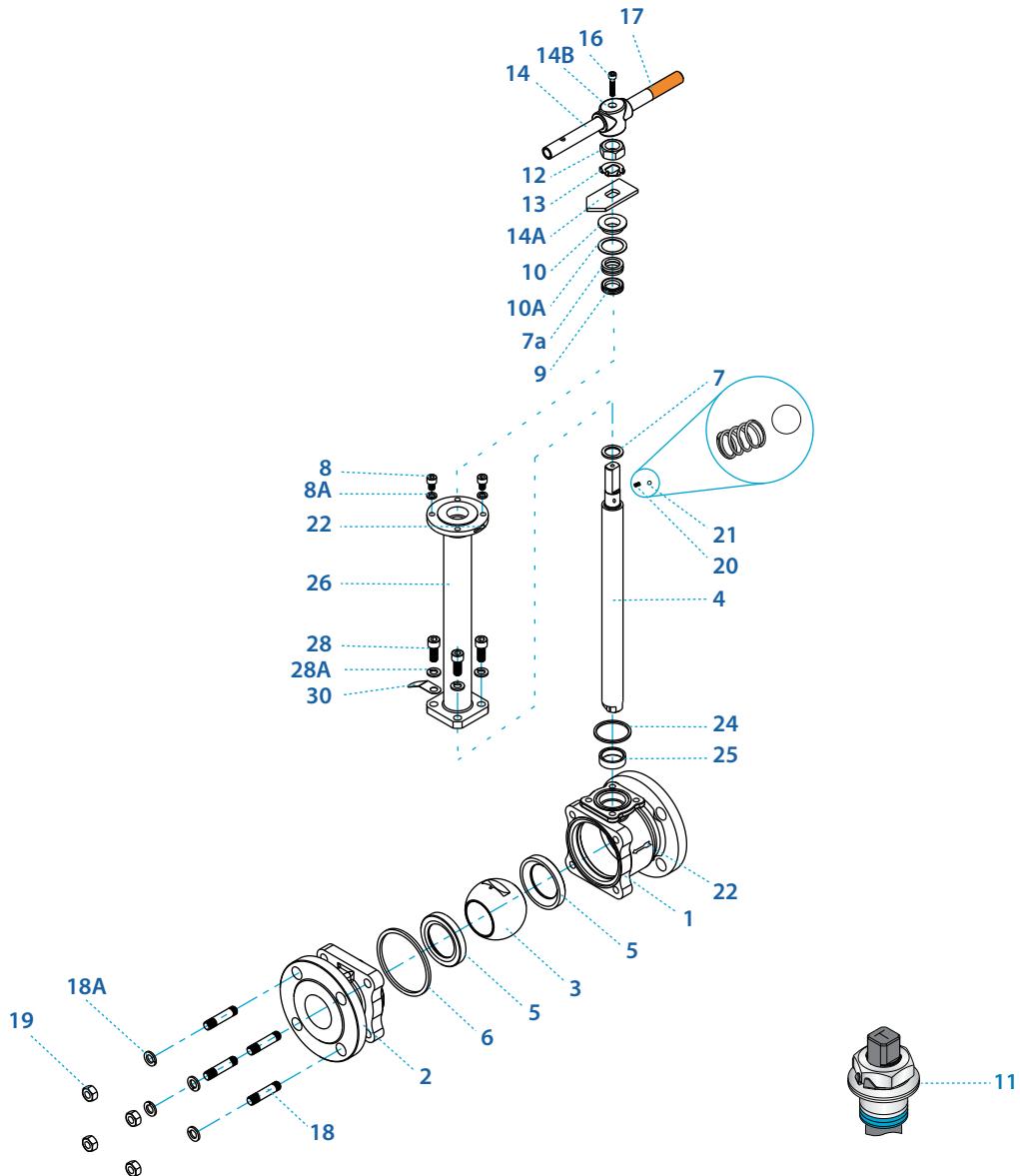


Preparation for actuation



Full Port	Unit	Ball port	A	B	Standard design				6.0" bonnet				S	W	M	N	P	F	TxL	Weight kg/lb Kv			
					C	D	G	H	C	D	G	H								Std.	6.0"	Cv	
DN40	mm	38.10	190.50	110.00	352.25	381.75	304.00	408.00	200.65	230.15	152.40	256.40	237.00	156.00	8.71	%16"UNF	8.50	(F05)	50.00	M6X8	11.70	11.13	214
1 ¹ / ₂ "	inch	1.50	7.50	4.33	13.87	15.03	11.97	16.06	7.90	9.06	6.00	10.09	9.33	6.14	0.34		0.33		1.97		25.79	24.53	250
DN50	mm	51.00	216.00	141.00	374.00	415.60	304.00	442.60	222.40	264.00	152.40	291.00	400.00	165.00	13.90	M20X2.5	13.50	(F07)	70.00	M8X8	18.00	16.50	410
2"	inch	2.01	8.50	5.55	14.72	16.36	11.97	17.43	8.76	10.39	6.00	11.46	15.75	6.50	0.55		0.53		2.76		39.60	36.30	480

Components & materials



Item	Description	Material specifications	Qty.
1	Body	A351 CF8M, A494 M35-1, Bronze RG5	1
2	End	A351 CF8M, A494 M35-1, Bronze RG5	1
3	Ball	A351 CF8M, B574 N06022, Bronze RG5	1
4	Stem	A479 316/316L, A564 Gr.630 H1150D 17-4PH, B574 N06022	1
5*	Seat	CF PTFE, TFM, PCTFE (KEL-F)	2
6*	Body seal	PTFE, Graphite	1
7*	Stem thrust seal	TFM ⁽²⁾ , PCTFE (KEL-F)	1
7a*	Anti-abrasion ring	TFM ⁽²⁾ , PCTFE (KEL-F)	1
8	Stop bolt	A582 303	2
8A	Spring washer	DIN 127 A2	2
9*	Stem seal	TFM, Graphite ⁽²⁾	1
10	Follower	B783 316L	1
10A**	Slide bearing	TF316	1
11	Disc spring	A693 Gr. 631 17-7PH	2
12	Stem nut	EN3506-2 A4-80, A194 8M	1
13	Tab lock washer	A240 304	1

⁽¹⁾ C74C series is Habonim's standard valve design without the HermetiX™ stem seal construction.

⁽²⁾ This material can only be used as part of the C74C design.

Item	Description	Material specifications	Qty.
14	Handle	C.St. Zinc plate, A240 316L	1
14A	Stop plate	A240 430	1
14B	Wrench head	A351 CF8M	1
16	Wrench bolt	EN3506-1 A2-70/A4-80, A193 Gr B8/B8M	1
17	Sleeve	PVC	1
18	Body stud	EN3506-2 A2-70, A193 B8	4
18A	Spring washer	DIN 127 A2	4
19	Body Nut	EN3506-2 A4-80, A194 8M	4
20	Anti-static spring	A313 302	1
21	Anti-static plunger	A479 304	1
22	Arrow flow	A167 304	2
23	Tag (not shown)	A167 304	1
24	Bonnet seal	PTFE, Graphite	1
25	Stem bearing	PTFE	1
26	Bonnet	A479 316L, A351 CF8M	1
28	Bolt	EN3506-1 A2-70, A193 B8	4
28A	Spring washer	DIN 127 A2	4
30	Dog tag	A167 304	1

* Repair kit components

** Only with HermetiX™ fire safe design

Floating Ball Valves

Cryogenic valves

General

3 Piece

Flanged

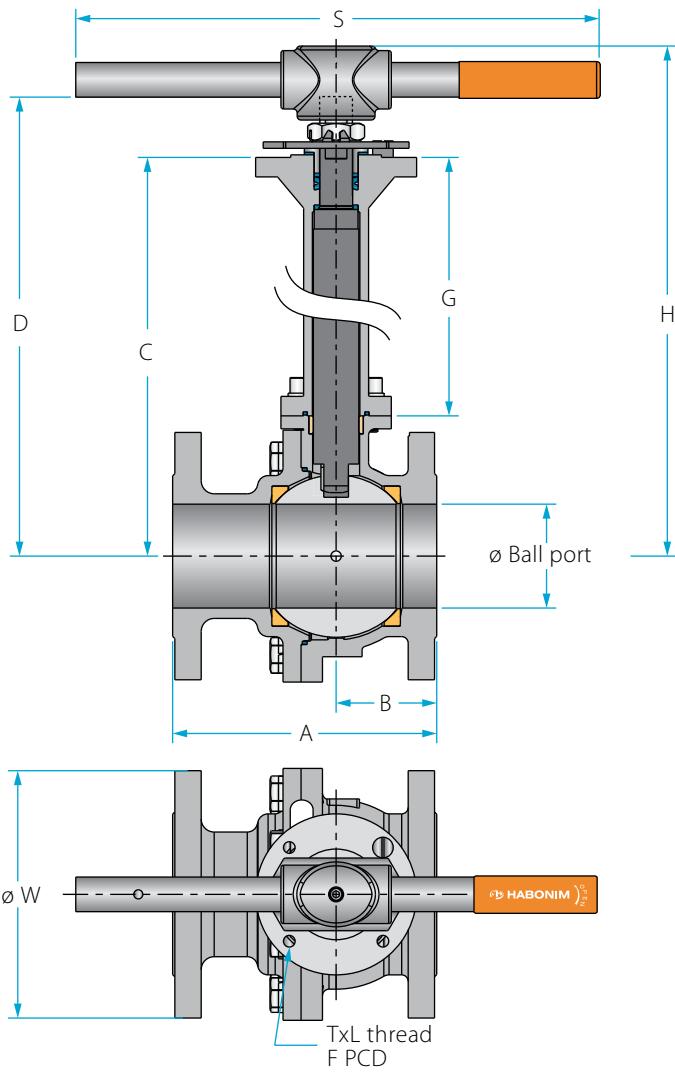
High pressure

Multiport

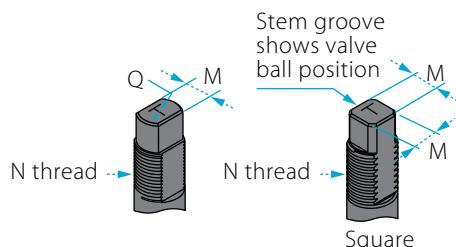
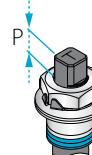
Ordering code system

Size 3"- 8" | DN80-DN200 | ANSI Class 300 | C74W/C74C⁽¹⁾ Series

Valve dimensions



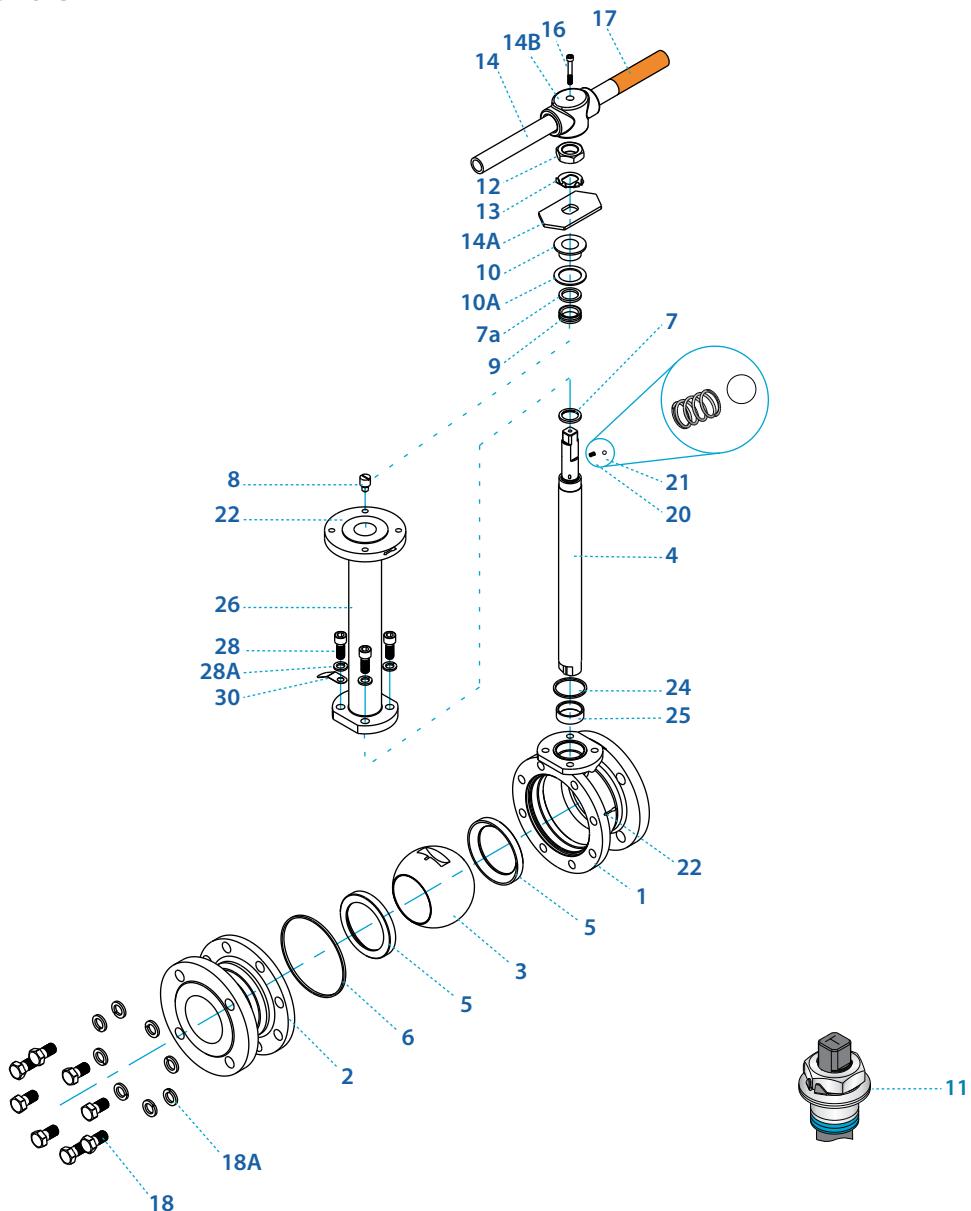
Preparation for actuation



Full Port	Unit	Ball port	A	B	Standard design				6.0" bonnet				S	W	M	M DD	N	P	Q	F	TxL	Weight kg/lb Kv			
					C	D	G	H	C	D	G	H										Std.	6.0"	Cv	
DN80	mm	80.00	282.00	96.50	451.50	498.10	343.50	538.60	260.40	307.00	152.40	347.50	610.00	210.00	18.90	18.90	1"-14	16.70	22.70	(F10)	102.00	M10X15	31.50	30.30	1111
3"	inch	3.15	11.10	3.80	17.78	19.61	13.52	21.20	10.25	12.09	6.00	13.68	24.02	8.27	0.74	0.74	UNF-2A	0.66	0.89		4.02		69.43	6.78	1300
DN100	mm	100.00	305.00	105.00	467.50	514.10	343.50	554.80	276.40	323.00	152.40	363.70	610.00	254.00	18.90	18.90	1"-14	16.70	22.70	(F10)	102.00	M10X15	45.50	44.30	2051
4"	inch	3.94	12.01	4.13	18.41	20.24	13.52	21.84	10.88	12.72	6.00	14.32	24.02	10.00	0.74	0.74	UNF-2A	0.66	0.89		4.02		100.28	97.64	2400
DN150	mm	150.00	404.00	174.50	564.00	633.50	385.00	-	331.40	400.90	152.40	-	-	328.00	28.45	23.75	1-1/2"-12	26.20	35.20	(F12)	125.00	M12X15	110.00	98.40	4615
6"	inch	5.91	15.91	6.87	22.20	24.94	15.16	-	13.05	15.78	6.00	-	-	12.91	1.12	0.94	UNF-2A	1.03	1.39		4.92		225.91	216.87	5400
DN200	mm	200.00	502.00	241.00	626.00	738.65	385.00	-	393.40	506.05	152.40	-	-	381.00	35.90	35.90	2" UN-2A	40.00	46.50	(F14)	140.00	M16X20	240.00	228.4	7949
8"	inch	7.87	19.76	9.49	24.65	29.08	15.16	-	15.49	19.92	6.00	-	-	15.00	1.41	1.41	Square	1.57	1.83		5.51		528.00	503.39	9300

⁽¹⁾ Due to high valve torque, pipe handle cannot be used. A manual gear or automation means should be used to operate the valve.

Components & materials



Item	Description	Material specifications	Qty.
1	Body	A351 CF8M, A494 M35-1, Bronze RG5	1
2	End	A351 CF8M, A494 M35-1, Bronze RG5	1
3	Ball	A351 CF8M, B574 N06022, Bronze RG5	1
4	Stem	A479 316/316L, A564 Gr.630 H1150D 17-4PH, B574 N06022	1
5*	Seat	CF PTFE, TFM, PCTFE (KEL-F)	2
6*	Body seal	PTFE, Graphite	1
7*	Stem thrust seal	TFM ⁽²⁾ , PCTFE (KEL-F)	1
7a*	Anti-abrasion ring	TFM ⁽²⁾ , PCTFE (KEL-F)	1
8	Stop pin	A582 303	1
9*	Stem seal	TFM, Graphite ⁽²⁾	1
10	Follower	B783 316L	1
10A**	Slide bearing	TF316	1
11	Disc spring	A693 Gr. 631 17-7PH	2
12	Stem nut	C.st B18 ZP	1
13	Tab lock washer	A240 304	1

⁽¹⁾ C74C series is Habonim's standard valve design without the HermetiX™ stem seal construction.

⁽²⁾ This material can only be used as part of the C74C design.

Item	Description	Material specifications	Qty.
14***	Handle	C.St. Zinc plate, A240 316L	1
14A	Stop plate	A240 430	1
14B	Wrench head	A351 CF8M	1
16	Wrench bolt	EN3506-1 A2-70/A4-80, A193 Gr B8/B8M	1
17	Sleeve	PVC	1
18	Body bolt	EN3506-1 A2-70, A193 B8	8-10
18A	Spring washer	DIN 127 A2	8-10
20	Anti-static spring	A313 302	2
21	Anti-static plunger	A479 304	2
22	Arrow flow	A167 304	2
23	Tag (not shown)	A167 304	1
24	Bonnet seal	PTFE, Graphite	1
25	Stem bearing	PTFE	1
26	Bonnet	A479 316L, A351 CF8M	1
28	Bolt	A193 B8, DIN 912 A2-70	4
28A	Spring washer	DIN 127 A2	4
30	Dog tag	A167 304	1

* Repair kit components

** Only with HermetiX™ fire safe design

*** Gear operator should be used for size 6" DN150 and above (handle components are not included)

Floating Ball Valves

Cryogenic valves

General

3 Piece

Flanged

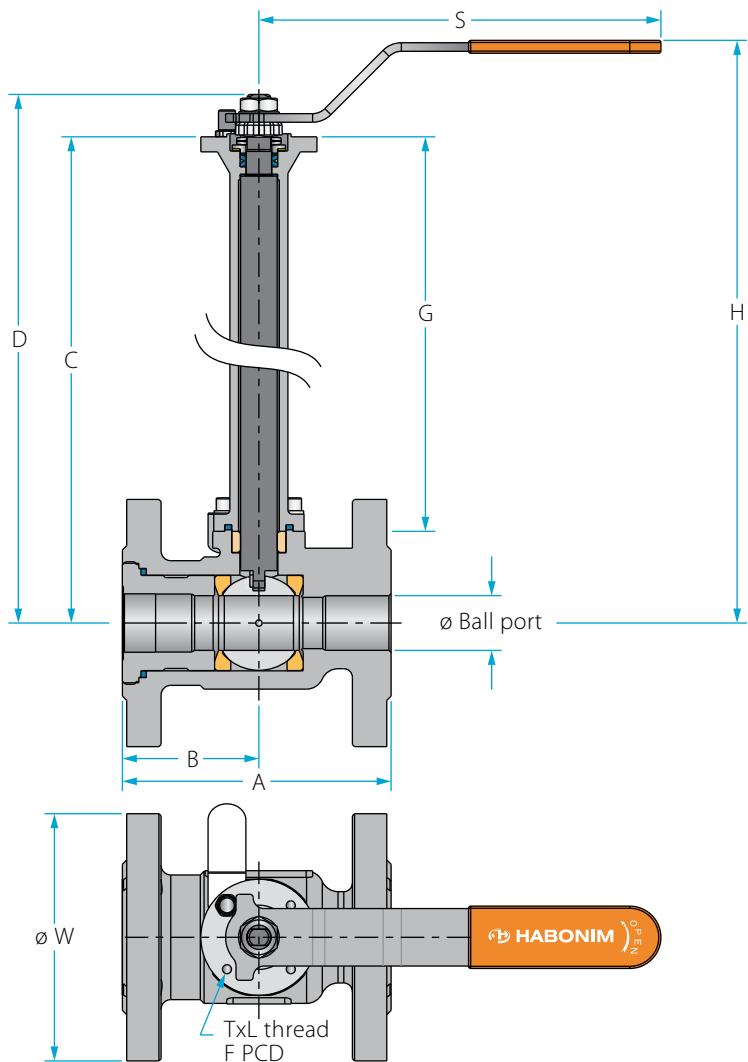
High pressure

Multiport

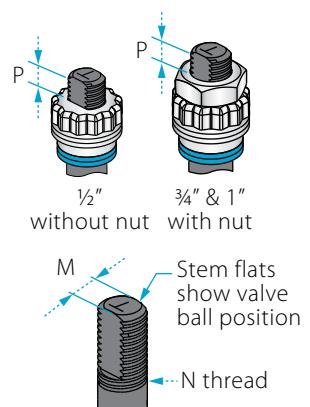
Ordering code system

Size $\frac{1}{2}''$ - $1''$ | DN15-DN25 | DIN PN40 | C78W/C78C⁽¹⁾ Series

Valve dimensions

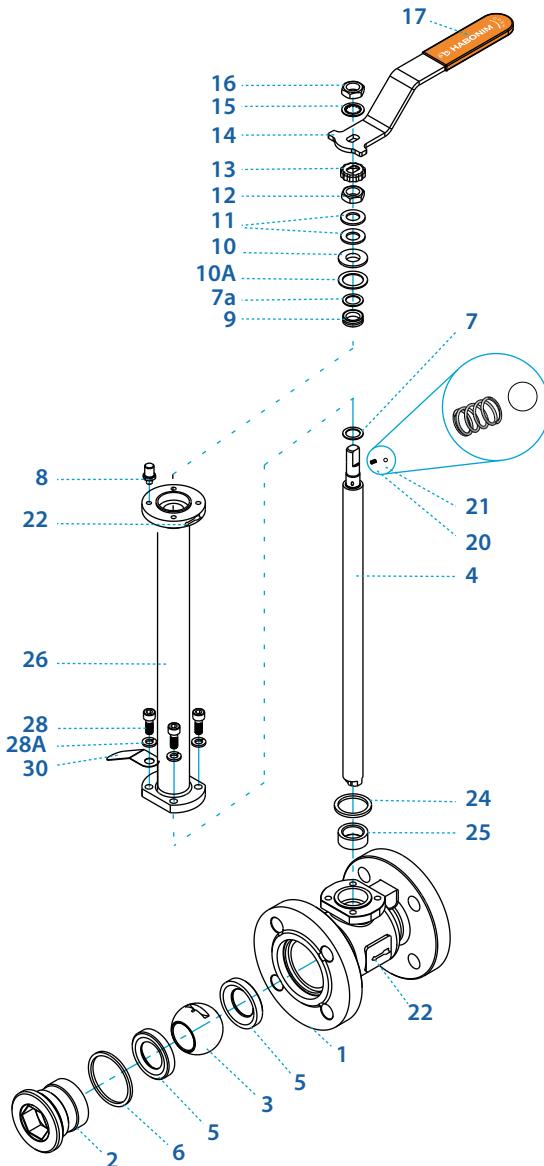


Preparation for actuation



Full Port	Unit	Ball port	A		B	Standard design				6.0" bonnet				S	W	M	N	P	F	TxL	weight kg/lb			Kv
			F1	F4		C	D	G	H	C	D	G	H								F1	F4	Cv	
DN15	mm	80.00	130.00	115.00	48.00	335.40	344.30	304.00	369.60	183.80	192.70	152.40	218.00	150.00	95.00	5.50	$\frac{3}{8}$ " UNF	7.20	(F03)	36.00	M5X7	3.10	3.00	27
$\frac{1}{2}''$	inch	3.15	5.12	4.53	1.89	13.20	13.56	11.97	14.55	7.24	7.59	6.00	8.58	15.79	3.74	0.22		0.28		1.42		6.80	6.60	32
DN20	mm	100.00	150.00	120.00	58.60	342.2	359.7	304.00	383.50	190.55	208.05	152.40	231.90	187.00	105.00	7.50	$\frac{7}{16}$ " UNF	7.20	(F04)	42.00	M5X7	4.50	4.30	46
$\frac{3}{4}''$	inch	3.94	5.91	4.72	2.31	13.47	14.16	11.97	15.10	7.50	8.19	6.00	9.13	7.36	4.13	0.30		0.28		1.65		9.80	9.40	54
DN25	mm	150.00	160.00	125.00	61.50	346.65	364.15	304.00	394.00	195.05	212.55	152.40	242.40	187.00	115.00	7.50	$\frac{7}{16}$ " UNF	7.20	(F04)	42.00	M5X7	5.50	5.30	90
1"	inch	5.91	6.30	4.92	2.42	13.65	14.34	11.97	15.51	7.68	8.37	6.00	9.54	7.36	4.53	0.30		0.28		1.65		12.00	11.60	105

Components & materials



Item	Description	Material specifications	Qty.
1	Body	A351 CF8M, A494 M35-1, Bronze RG5	1
2	Plug	A351 CF8M, A494 M35-1, Bronze RG5	1
3	Ball	A351 CF8M, B574 N06022, Bronze RG5	1
4	Stem	A479 316/316L, A564 Gr.630 H1150D 17-4PH, B574 N06022	1
5*	Seat	CF PTFE, TFM, PCTFE (KEL-F)	2
6*	Body seal	PTFE, Graphite	1
7*	Stem thrust seal	TFM ⁽²⁾ , PCTFE (KEL-F)	1
7a*	Anti-abrasion ring	TFM ⁽²⁾ , PCTFE (KEL-F)	1
8	Stop pin	A582 303	1
9*	Stem seal	TFM, Graphite ⁽²⁾	1
10	Follower	B783 316L	1
10A**	Slide bearing	TF316	1
11	Disc spring	A693 Gr. 631 17-7PH	2

⁽¹⁾ C78C series is Habonim's standard valve design without the HermetiX™ stem seal construction.

⁽²⁾ This material can only be used as part of the C78C design.

Item	Description	Material specifications	Qty.
12	Stem nut	EN3506-2 A4-80, A194 Gr 8M	1
13	Locking clip	A167 304	1
14	Handle	A240 430	1
15	Serrated washer	A240 410	1
16	Handle nut	EN3506-2 A4-80, A194 Gr 8M	1
17	Sleeve	PVC	1
20	Anti-static spring	A313 302	1
21	Anti-static plunger	A479 304	1
22	Arrow flow	A167 304	2
23	Tag (not shown)	A167 304	1
24	Bonnet seal	PTFE, Graphite	1
25	Stem bearing	PTFE	1
26	Bonnet	A479 316L, A351 CF8M	1
28	Bolt	EN3506-1 A2-70, A193 B8	4
28A	Spring washer	DIN 912 A2-70	4
30	Dog tag	A167 304	1

* Repair kit components

** Only with HermetiX™ fire safe design

Floating Ball Valves

Cryogenic valves

General

3 Piece

Flanged

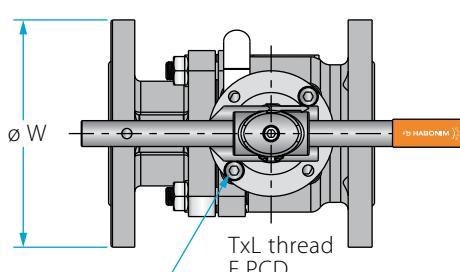
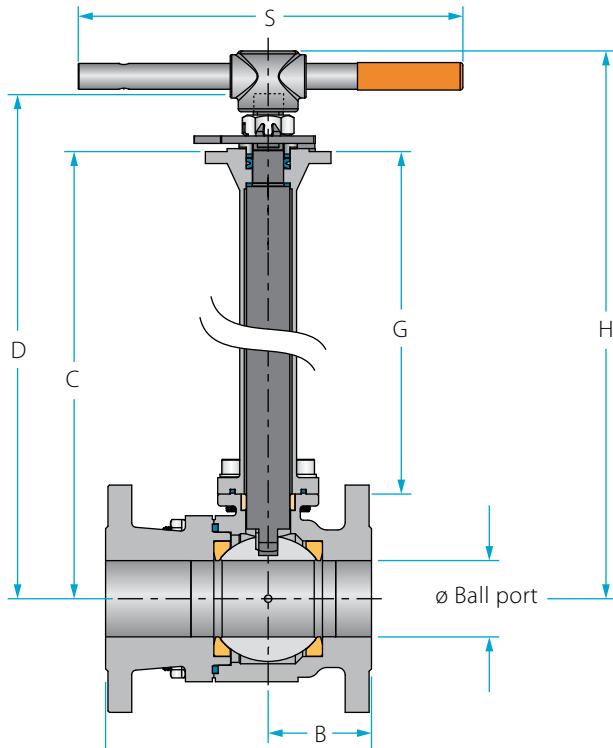
High pressure

Multiport

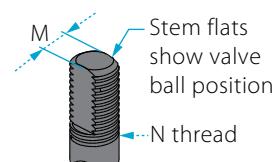
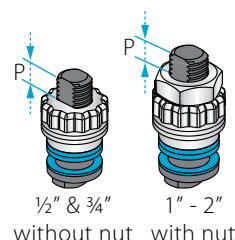
Ordering code system

Size 1¹/₂" - 2" | DN40-DN50 | DIN PN40 | C78W/C78C⁽¹⁾ Series

Valve dimensions

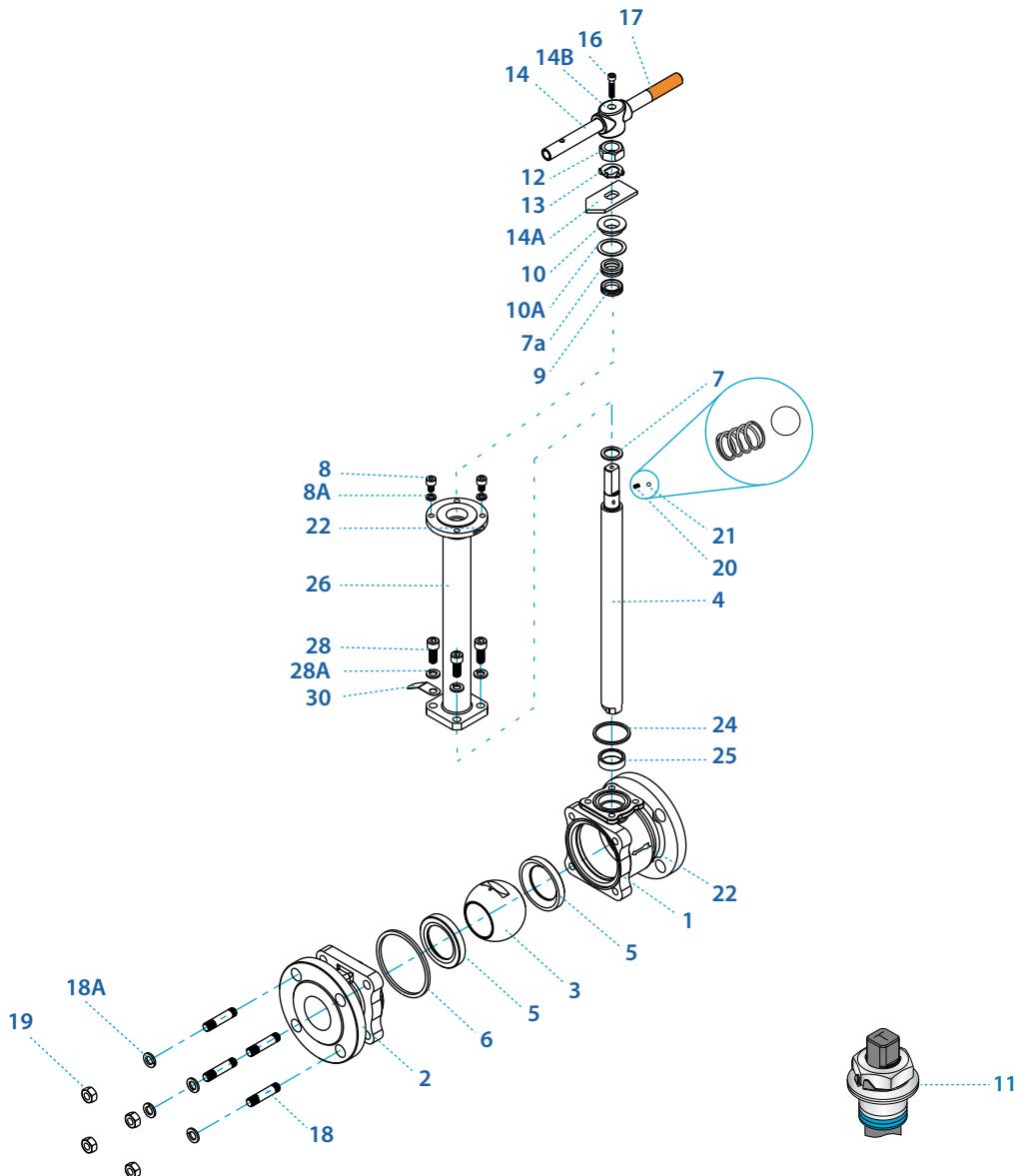


Preparation for actuation



Full Port	Unit	Ball port	A		B	Standard design				6.0" bonnet				S	W	M	N	P	F	TxL	Weight kg/lb				Kc		
			F1	F4		C	D	G	H	C	D	G	H								Std.	6.0"					
																					F1	F4					
DN40	mm	31.80	200.00	-	65.90	352.25	381.75	304.00	406.60	200.65	230.15	152.40	255.00	237.00	150.00	8.71	9/16" UNF	8.50	(F05)	50.00	M6X8	12.8	-	12.23	-	214	
1 1/2"	inch	1.25	7.87	-	2.59	13.87	15.03	11.97	16.01	7.90	9.06	6.00	10.04	9.33	5.91	0.34		0.33		1.97			5.81	-	5.55	-	250
DN50	mm	51.00	230.00	150.00	60.70	397.50	439.10	327.50	465.10	222.40	264.00	152.40	290.00	400.00	165.00	13.90	M20X2.5	13.50	(F07)	70.00	M8X8	16.15	14.15	14.70	12.70	410	
2"	inch	2.01	9.06	5.91	2.39	15.65	17.29	12.89	18.31	8.76	10.39	6.00	11.42	15.75	6.50	0.55		0.53		2.76			7.33	6.42	6.67	5.76	480

Components & materials



Item	Description	Material specifications	Qty.
1	Body	A351 CF8M, A494 M35-1, Bronze RG5	1
2	End	A351 CF8M, A494 M35-1, Bronze RG5	1
3	Ball	A351 CF8M, B574 N06022, Bronze RG5	1
4	Stem	A479 316/316L, A564 Gr.630 H1150D 17-4PH, B574 N06022	1
5*	Seat	CF PTFE, TFM, PCTFE (KEL-F)	2
6*	Body seal	PTFE, Graphite	1
7*	Stem thrust seal	TFM ⁽²⁾ , PCTFE (KEL-F)	1
7a*	Anti-abrasion ring	TFM ⁽²⁾ , PCTFE (KEL-F)	1
8	Stop bolt	A582 303	2
8A	Spring washer	DIN 127 A2	2
9*	Stem seal	TFM, Graphite	1
10	Follower	B783 316L	1
10A**	Slide bearing	TF316	1
11	Disc spring	A693 Gr. 631 17-7PH	2
12	Stem nut	EN3506-2 A4-80, A194 8M	1
13	Tab lock washer	A240 304	1

⁽¹⁾ C78C series is Habonim's standard valve design without the HermetiX™ stem seal construction.

⁽²⁾ This material can only be used as part of the C78C design.

Item	Description	Material specifications	Qty.
14	Handle	C.St. Zinc plate, A240 316L	1
14A	Stop plate	A240 430	1
14B	Wrench head	A351 CF8M	1
16	Wrench bolt	EN3506-1 A2-70/A4-80, A193 Gr B8/B8M	1
17	Sleeve	PVC	1
18	Body bolt	EN 3506-1 A2-70, A193 Gr B8	4
18A	Spring washer	DIN 127 A2	4
20	Anti-static spring	A313 302	1
21	Anti-static plunger	A479 304	1
22	Arrow flow	A167 304	2
23	Tag (not shown)	A167 304	1
24	Bonnet seal	PTFE, Graphite	1
25	Stem bearing	PTFE	1
26	Bonnet	A479 316L, A351 CF8M	1
28	Bolt	EN3506-1 A2-70, A193 B8	4
28A	Spring washer	DIN 127 A2	4
30	Dog tag	A167 304	1

* Repair kit components

** Only with HermetiX™ fire safe design

Floating Ball Valves

Cryogenic valves

General

3 Piece

Flanged

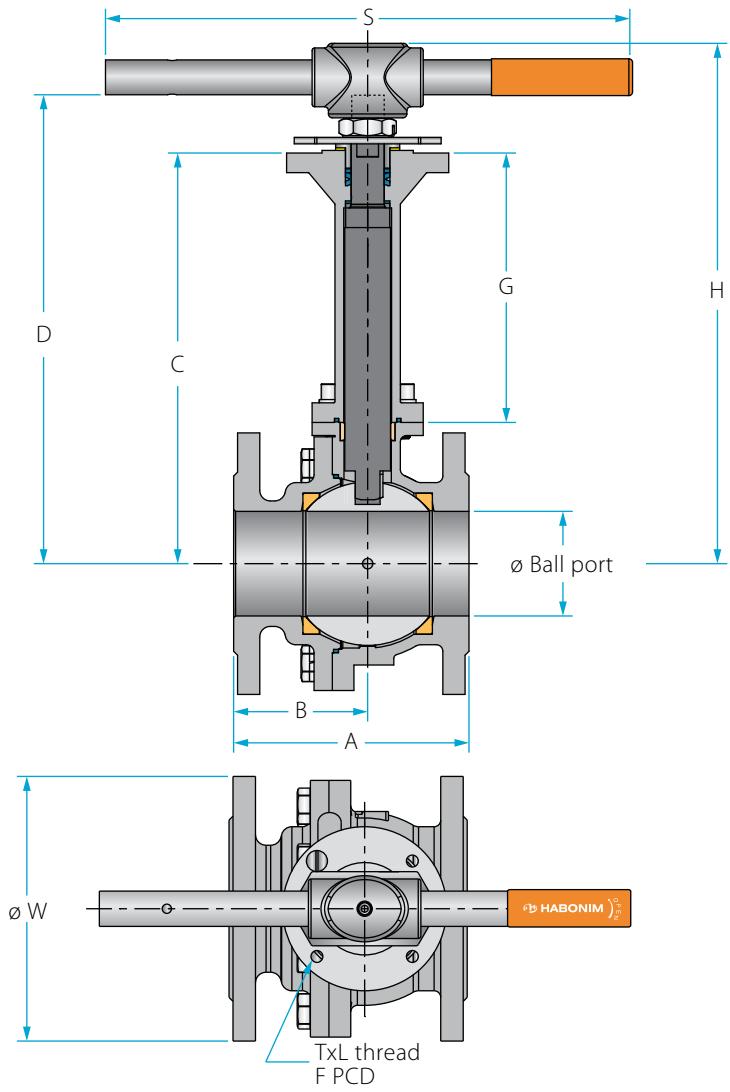
High pressure

Multiport

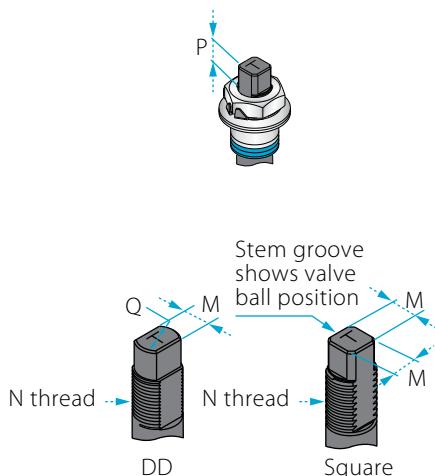
Ordering code system

Size 3" - 6" | DN80-DN150 | DIN PN16 | C77W/C77C⁽¹⁾ Series

Valve dimensions



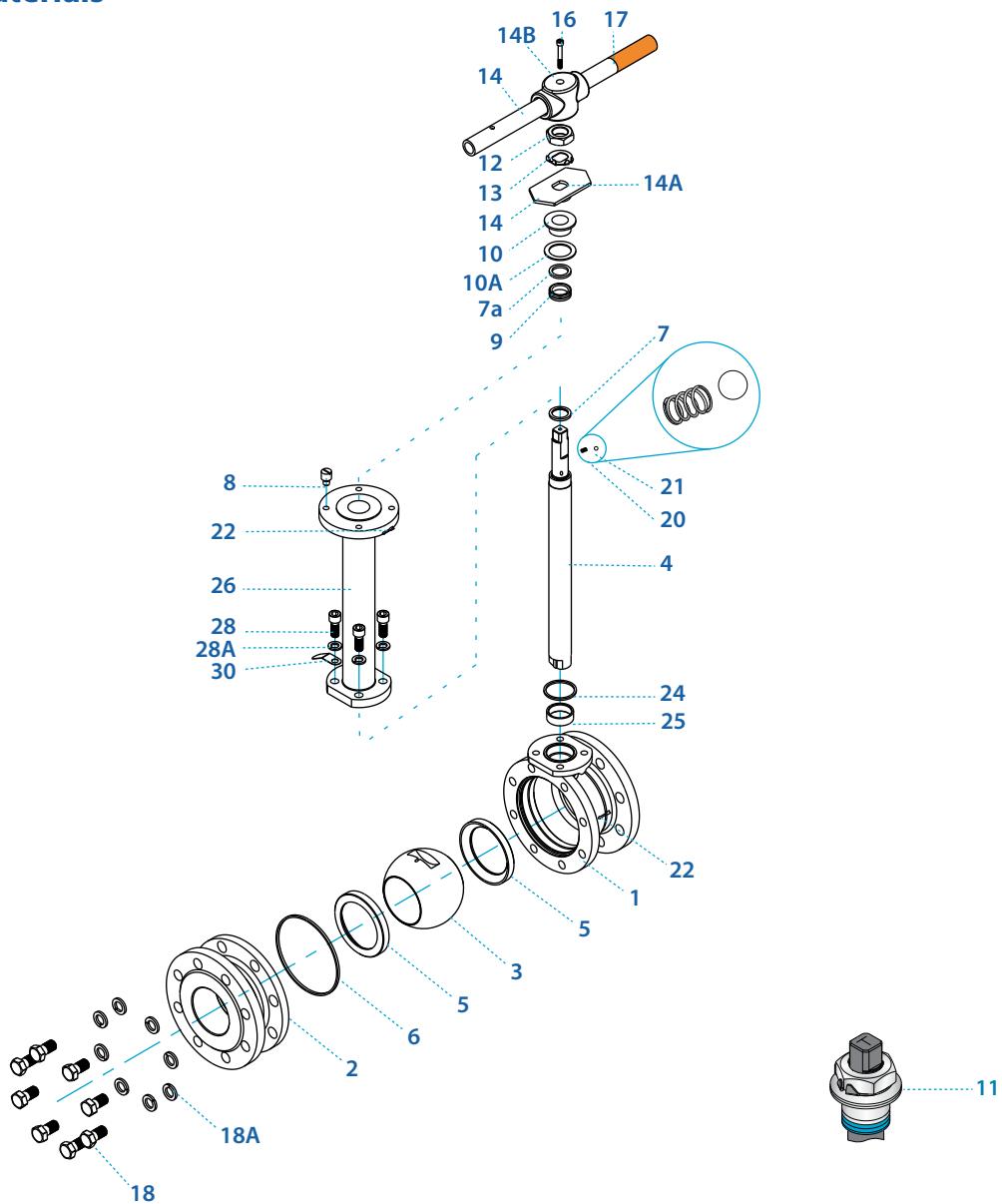
Preparation for actuation



Full Port	Unit	Ball port	A		B	Standard design				6.0" bonnet				S	W	M	M DD	N	P	F	TxL	weight kg/lb Kv			
			F1,F5	F4		C	D	G	H	C	D	G	H									F1,F5	F4	Cv	
DN80	mm	80.00	310.00	180.00	102.50	451.50	498.10	343.50	539.00	260.40	307.00	152.40	347.90	610.00	200.00	18.90	22.70	1"-14	16.70	(F10)	102.00	M10X15	31.50	30.30	1111
3"	inch	3.15	12.20	7.09	4.04	17.78	19.61	13.52	21.22	10.25	12.09	6.00	13.70	24.02	7.87	0.74	0.89	UNS-2A	0.66		4.02		69.43	66.48	1300
DN100	mm	100.00	350.00	190.00	105.50	467.50	514.10	343.50	555.00	276.40	323.00	152.40	363.90	610.00	220.00	18.90	22.70	1"-14	16.70	(F12)	125.00	M12X15	45.50	44.30	2051
4"	inch	3.94	13.78	7.48	4.15	18.41	20.24	13.52	21.85	10.88	12.72	6.00	14.33	24.02	8.66	0.74	0.89	UNS-2A	0.66		4.92		100.28	97.64	2400
DN150	mm	150.00	350.00	OPT	196.00	564.00	633.50	385.00	-	331.40	400.90	152.40	-	-	285.00	28.45	23.75	1-1/2"-12	26.20	(F12)	125.00	M12X15	85.00	81.00	4615
6"	inch	5.91	13.78	OPT	7.72	22.20	24.94	15.16	-	13.05	15.78	6.00	-	-	11.22	1.12	0.94	UNF-2A	1.03		4.92		187.00	178.20	5400

⁽¹⁾ Due to high valve torque, pipe handle cannot be used. A manual gear or automation means should be used to operate the valve.

Components & materials



Item	Description	Material specifications	Qty.
1	Body	A351 CF8M, A494 M35-1, Bronze RG5	1
2	End	A351 CF8M, A494 M35-1, Bronze RG5	1
3	Ball	A351 CF8M, B574 N06022, Bronze RG5	1
4	Stem	A479 316/316L, A564 Gr.630 H1150D 17-4PH, B574 N06022	1
5*	Seat	CF PTFE, TFM, PCTFE (KEL-F)	2
6*	Body seal	PTFE, Graphite	1
7*	Stem thrust seal	TFM ⁽²⁾ , PCTFE (KEL-F)	1
7a*	Anti-abrasion ring	TFM ⁽²⁾ , PCTFE (KEL-F)	1
8	Stop pin	A582 303	1
9*	Stem seal	TFM, Graphite ⁽²⁾	1
10	Follower	B783 316L	1
10A**	Slide bearing	TF316	1
11	Disc spring	A693 Gr. 631 17-7PH	2
12	Stem nut	EN3506-2 A4-80, A194 8M	1
13	Tab lock washer	A240 304	1
14***	Handle	C.St. Zinc plate, A240 316L	1

Item	Description	Material specifications	Qty.
14A	Stop plate	A240 430	1
14B	Wrench head	A351 CF8M	1
15	Tab lock washer	A240 304	1
16	Wrench bolt	EN3506-1 A2-70/A4-80,A193 Gr B8/B8M	1
17	Sleeve	PVC	1
18	Body bolt	EN3506-1 A2-70, A193 B8	8-10
18A	Spring washer	DIN 127 A2	8-10
20	Anti-static spring	A313 302	2
21	Anti-static plunger	A479 304	2
22	Arrow flow	A167 304	2
23	Tag (not shown)	A167 304	1
24	Bonnet seal	PTFE, Graphite	1
25	Stem bearing	PTFE	1
26	Bonnet	A479 316L, A351 CF8M	1
28	Bolt	EN3506-1 A2-70, A193 B8	4
28A	Spring washer	DIN 127 A2	4
30	Dog tag	A167 304	1

⁽¹⁾ C77C series is Habonim's standard valve design without the HermetiX™ stem seal construction.

⁽²⁾ This material can only be used as part of the C77C design.

* Repair kit components

** Only with HermetiX™ fire safe design

*** Gear operator should be used for size 6" DN150 (handle components are not included)

Floating Ball Valves

Cryogenic valves

General

3 Piece

Flanged

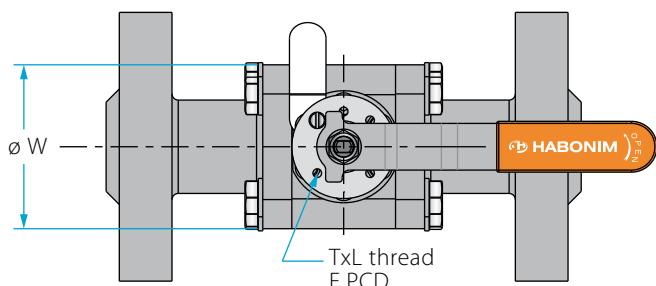
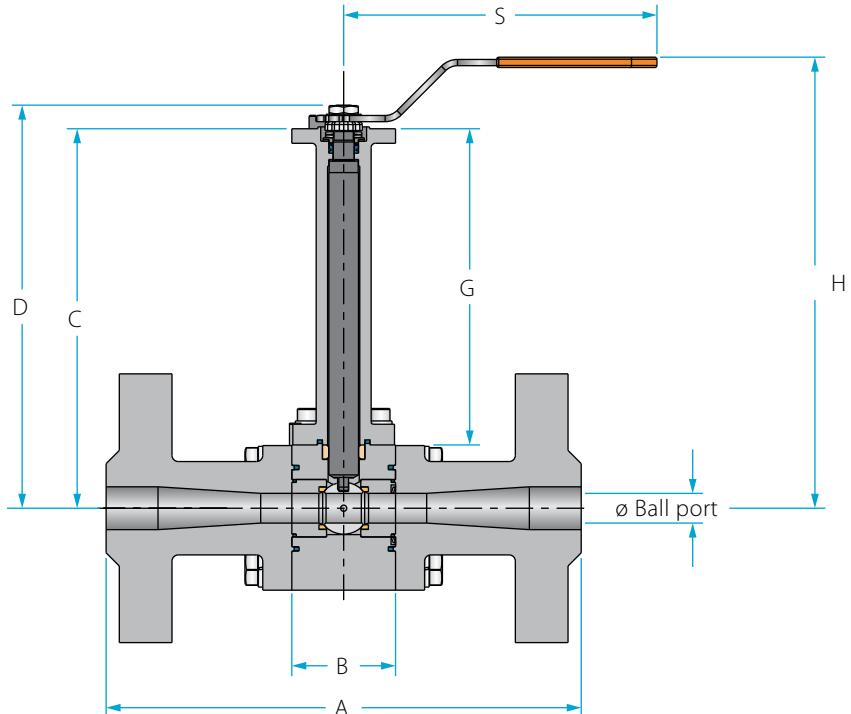
High pressure

Multiport

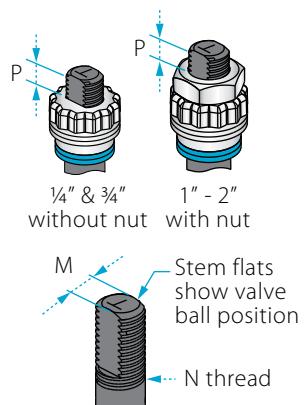
Ordering code system

Size $\frac{1}{4}''$ - $1\frac{1}{4}''$ | DN8-DN32 | ANSI Class 2500 | C28W/C28C⁽¹⁾ Series

Valve dimensions



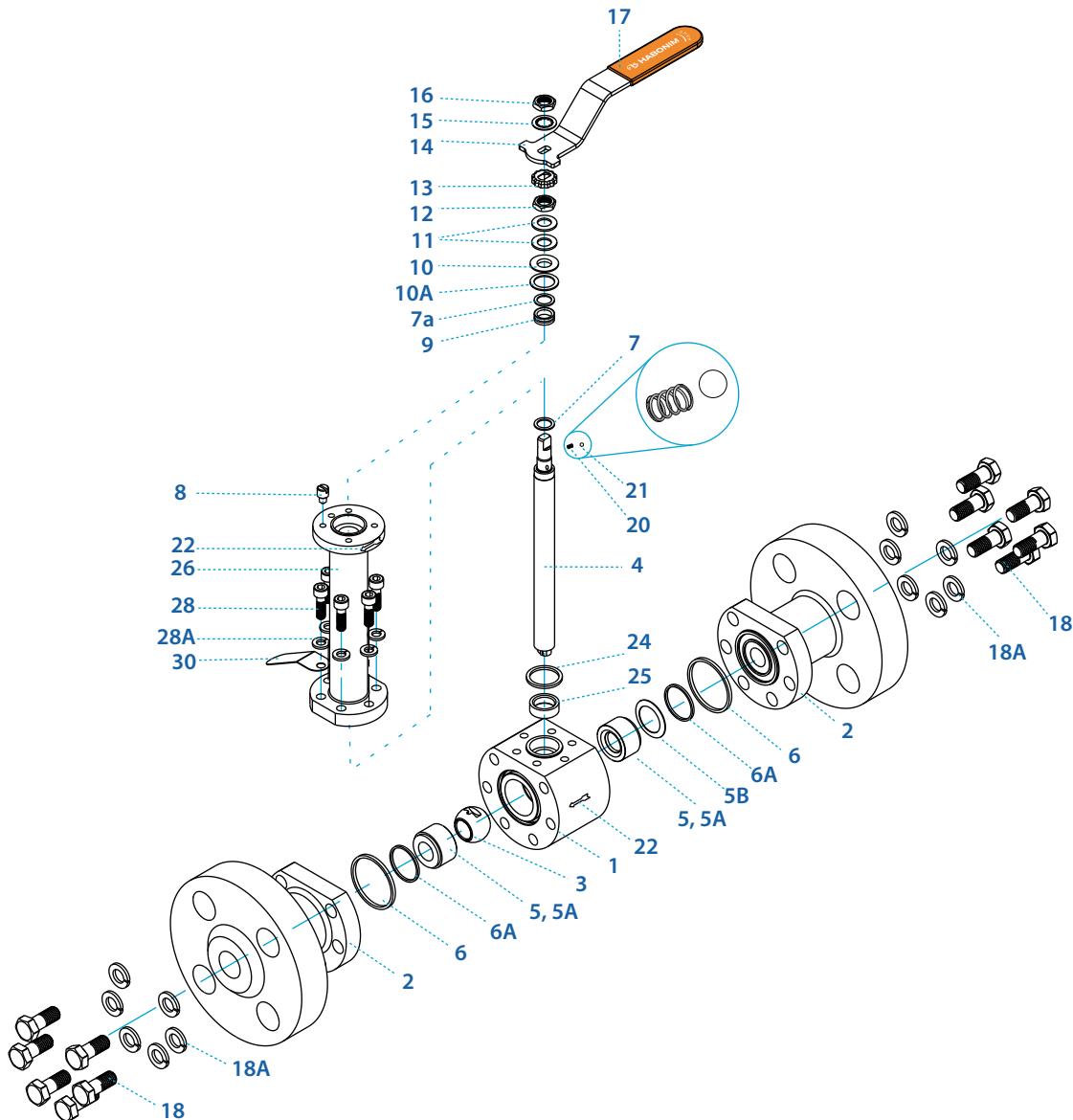
Preparation for actuation



Std. port	Full port	Unit	Ball port	A			B	Standard design				6.0" bonnet				S	W	M	N	P	F	TxL	Kv		
				Welded	Threaded	#1500		C	D	G	H	C	D	G	H								Cv		
DN15	DN8, DN10	mm	11.15	173.60	107.20	216.00	264.00	50.00	333.00	341.90	304.00	380.60	181.40	190.30	152.40	229.00	150.00	78.00	5.50	$\frac{3}{8}''$ UNF	7.20 0.28	F03 1.42	36.00	M5X8	6.9
$\frac{1}{2}''$	$\frac{3}{8}''$	inch	0.44	6.83	4.22	8.50	10.39	1.97	13.11	13.46	11.97	14.98	7.14	7.49	6.00	9.02	5.91	3.07	0.22						8
DN20	DN15	mm	13.00	188.60	120.00	229.00	273.00	60.00	338.10	355.60	304.00	386.60	186.50	204.00	152.40	235.00	187.00	98.00	7.50	$\frac{7}{16}''$ UNF	7.20 0.28	F04 1.65	42.00	M5X7	10
$\frac{3}{4}''$	$\frac{1}{2}''$	inch	0.51	7.43	4.72	9.02	10.75	2.36	13.31	14.00	11.97	15.22	7.34	8.03	6.00	9.25	7.36	3.86	0.30						12
DN25	DN20	mm	20.65	208.60	144.20	254.00	308.00	68.00	347.75	377.25	304.00	401.60	196.15	225.65	152.40	250.00	237.00	114.00	8.65	$\frac{9}{16}''$ UNF	7.20 0.28	F05 1.97	50.00	M6X8	28
1"	$\frac{3}{4}''$	inch	0.81	8.21	5.68	10.00	12.13	2.68	13.69	14.85	11.97	15.81	7.72	8.88	6.00	9.84	9.33	4.49	0.34						32
DN32	DN25	mm	25.50	211.60	152.00	279.00	349.00	68.00	355.50	385.00	304.00	410.00	203.90	233.40	152.40	258.40	237.00	124.00	8.65	$\frac{9}{16}''$ UNF	8.00 0.31	F05 1.97	50.00	M6X8	49
$1\frac{1}{4}''$	1"	inch	1.00	8.33	5.98	10.98	13.74	2.68	14.00	15.16	11.97	16.14	8.03	9.19	6.00	10.17	9.33	4.88	0.34						

* Data in the chart refers ANSI 2500 Flanges

Components & materials



Item	Description	Material specifications	Qty.
1	Body	A479 316/316L, B574 N06022	1
2	Ends	A479 316/316L, B574 N06022	2
3	Ball	A351 CF8M, B574 N06022	1
4	Stem	A564 Gr.630 H1150D 17-4PH, B574 N06022	1
5*	Seat	PCTFE (KEL-F)	2
5A*	Seat housing	A479 316/316L, B574 N06022	2
5B ⁽³⁾	Upstream seat spring	Inconel 718	1
6*	Body seal	PTFE, Graphite	2
6A*	Seat seal	PTFE, Graphite	2
7*	Stem thrust seal	PCTFE (KEL-F)	1
7a*	Anti-abrasion ring	PCTFE (KEL-F)	1
8	Stop pin	A582 303	1
9*	Stem seal	TFM, Graphite ⁽²⁾	1
10	Follower	B783 316L	1
10A**	Slide bearing	TF316	1
11	Disc spring	A693 631 17-7PH	2

⁽¹⁾ C28C series is Habonim's standard valve design without the HermetiX™ stem seal construction.

⁽²⁾ This material can only be used as part of the C28C design.

⁽³⁾ Spring loaded upstream seat is Habonim default design.

Item	Description	Material specifications	Qty.
12	Stem nut	EN3506-2 A4-80, A194 Gr 8M	2
13	Locking clip	A167 304	1
14	Handle	A240 430	1
15	Serrated washer	A240 410	1
16	Handle nut	EN3506-2 A4-80, A194 Gr 8M	1
17	Sleeve	PVC	1
18	Body bolt	EN 3506-1 A2-70, A193 Gr B8	8-16
18A	Spring washer	DIN 912 A2-70	8-16
20	Anti-static spring	A313 302	2
21	Anti-static plunger	A479 304	2
22	Arrow flow	A167 304	2
23	Tag (not shown)	A167 304	1
24	Bonnet seal	PTFE, Graphite	1
25	Stem bearing	PTFE	1
26	Bonnet	A479 316/316L, B574 N06022	1
28	Bolt	EN3506-1 A2-70, A193 B8	4-6
28A	Spring washer	DIN 127 A2	4-6
30	Dog tag	A167 304	1

* Repair kit components

** Only with HermetiX™ fire safe design

Floating Ball Valves

Cryogenic valves

General

3 Piece

Flanged

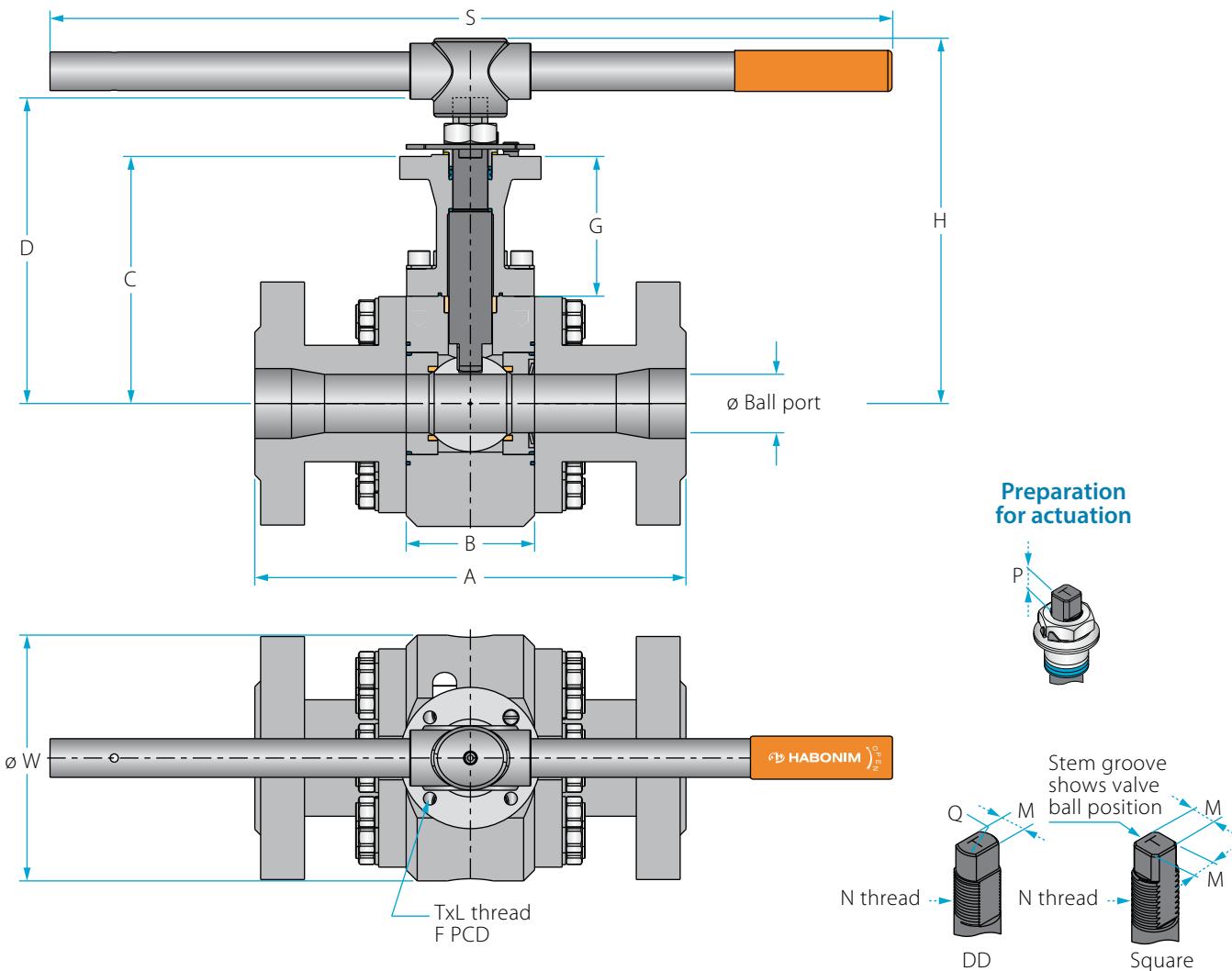
High pressure

Multiport

Ordering code system

Size 1¹/₂" - 8" | DN40-DN200 | ANSI Class 2500 | C28W/C28C⁽¹⁾ Series

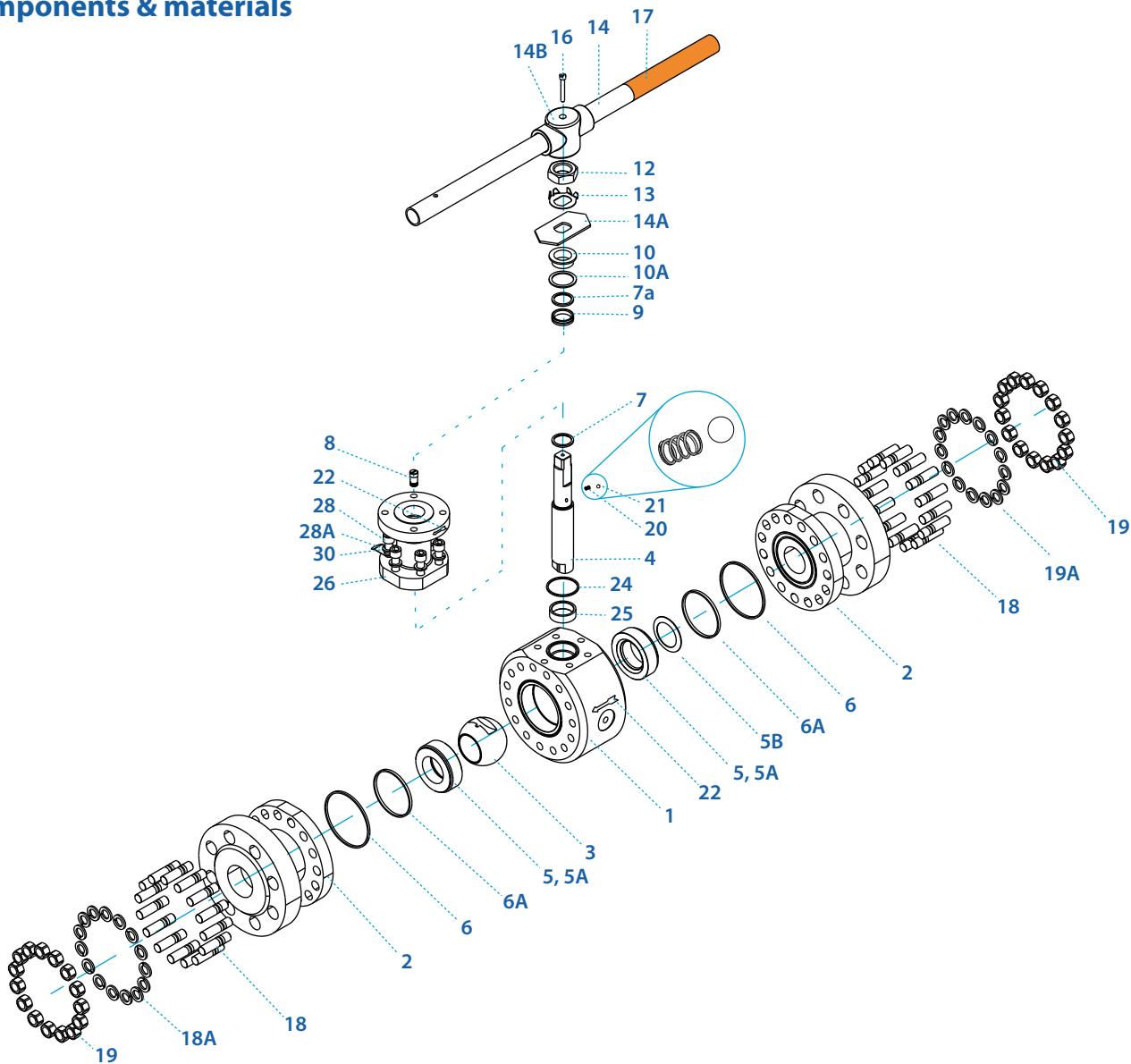
Valve dimensions



Std. port	Full port	Unit	Ball port	A				B	Standard design				6.0" bonnet				S	W	M	MDD	N	P	Q	F	TxL	Kv
				Welded	Threaded	#1500	#2500		C	D	G	H	C	D	G	H										
DN40	DN32	mm	31.8	262	179	305	384	95	357	398.6	304	425	205.4	247	152.4	273.4	400	140	13.9	13.90	M20X2.5	820.00 (F07)	70	M8X7	69	
1 ¹ / ₂ "	1 ¹ / ₄ "	inch	1.25	10.31	7.05	12.01	15.12	3.74	14.06	15.69	11.97	16.73	8.09	9.72	6.00	10.76	15.75	5.51	0.55	0.55		0.31	0.79		80	
DN50	DN40	mm	38.15	255.80	195.00	368.00	451.00	95.00	376.50	418.10	304.00	443.75	224.90	266.50	152.40	292.15	400.00	172.00	13.90	13.90	M20X2.5	15.75	20.00 (F07)	70.00	M8X10	102
2"	1 ¹ / ₂ "	inch	1.50	10.07	7.68	14.49	17.76	3.74	14.82	16.46	11.97	17.47	8.85	10.49	6.00	11.50	15.75	6.77	0.55	0.55		0.62	0.79	118		
DN65	DN50	mm	51.00	313.00	205.00	419.00	508.00	105.00	392.40	438.90	304.80	479.40	240.00	286.50	152.40	327.00	610.00	199.00	18.90	15.90	1"-14	16.70	22.70 (F10)	102.00	M10X15	208
2 ¹ / ₂ "	2"	inch	2.01	12.32	8.07	16.50	20.00	4.13	15.45	17.28	12.00	18.87	9.45	11.28	6.00	12.87	24.02	7.83	0.74	0.63		0.66	0.89	4.02		241
DN80	DN65	mm	63.75	343.20	-	470.00	578.00	140.00	421.00	490.10	304.00	-	269.40	338.50	152.40	-	-	268.00	28.45	23.75	1 ¹ / ₂ "	26.20	35.20 (F12)	125.00	M16X25	300
3"	2 ¹ / ₂ "	inch	2.51	13.51	-	18.50	22.76	5.51	16.57	19.30	11.97	-	10.61	13.33	6.00	-	-	10.55	1.12	0.94	UNF-2A	1.03	1.39	4.92		348
DN100	DN80	mm	82.80	419.20	-	546.00	673.00	140.00	438.00	550.65	304.00	-	286.40	399.05	152.40	-	-	298.00	28.45	23.75	1 ¹ / ₂ "	26.20	35.20 (F12)	125.00	M16X25	615
4"	3"	inch	3.26	16.50	-	21.50	26.50	5.51	17.24	21.68	11.97	-	11.28	15.71	6.00	-	-	11.73	1.12	0.94	UNF-2A	1.03	1.39	4.92		713
DN150	DN100	mm	100.00	510.00	-	705.00	914.00	175.00	451.00	563.65	304.00	-	299.40	412.05	152.40	-	-	339.00	35.90	35.90	2"	40.00	46.50 (F16)	165.00	M20X25	872
6"	4"	inch	3.94	20.08	-	27.76	35.98	6.89	17.76	22.19	11.97	-	11.79	16.22	6.00	-	-	13.35	1.41	1.41	UNF-2A	1.57	1.83	6.50		1012
DN200	DN150	mm	144.40	680.00	-	832.00	1022.00	210.00	496.00	637.00	304.00	-	344.40	485.40	152.40	-	-	423.00	45.90	45.90	2 ³ / ₄ "	40.00	59.00 (F16)	165.00	M20X25	1552
8"	6"	inch	5.69	26.77	-	32.76	40.24	8.27	19.53	25.08	11.97	-	13.56	19.11	6.00	-	-	16.65	1.81	1.81	UN-2A	1.57	2.32	6.50		1800

⁽¹⁾ Due to high valve torque, pipe handle cannot be used. A manual gear or automation means should be used to operate the valve.

Components & materials



Item	Description	Material specifications	Qty.
1	Body	A479 316/316L, B574 N06022	1
2	Ends	A479 316/316L, B574 N06022	2
3	Ball	A351 CF8M, B574 N06022	1
4	Stem	A564 Gr.630 H1150D 17-4PH, B574 N06022	1
5*	Seat	PCTFE (KEL-F)	2
5A*	Seat housing	A479 316/316L, B574 N06022	2
5B ⁽³⁾	Upstream seat spring	Inconel 718	1
6*	Body seal	PTFE, Graphite	2
6A*	Seat seal	PTFE, Graphite	2
7*	Stem thrust seal	PCTFE (KEL-F)	1
7a*	Anti-abrasion ring	PCTFE (KEL-F)	1
8	Stop pin	A582 303	1
9*	Stem seal	TFM, Graphite ⁽²⁾	1
10	Follower	B783 316L	1
10A**	Slide bearing	TF316	1
11	Disc spring	A693 631 17-7PH	2
12	Stem nut	EN3506-2 A4-80, A194 Gr 8M	1
13	Tab lock washer	A240 304	1
14***	Handle	C.St. Zinc plate, A240 316L	1

Item	Description	Material specifications	Qty.
14A	Stop plate	A240 430	1
14B	Wrench head	A351 CF8M	1
16	Wrench bolt	EN3506-1 A2-70/A4-80, A193 Gr B8/B8M	1
17	Sleeve	PVC	1
18	Body bolt	EN 3506-1 A2-70, A193 Gr B8	8-16
18A	Spring washer	DIN 127 A2	8-16
19	Body bolt	EN3506-1 A2-70, A193 B8	8-16
19A	Spring washer	DIN 912 A2-70	15
20	Anti-static spring	A313 302	2
21	Anti-static plunger	A479 304	2
22	Arrow flow	A167 304	2
23	Tag (not shown)	A167 304	1
24	Bonnet seal	PTFE, Graphite	1
25	Stem bearing	PTFE	1
26	Bonnet	A479 316/316L, B574 N06022	1
28	Bolt	EN3506-1 A2-70, A193 B8	6-8
28A	Spring washer	DIN 127 A2	6-8
30	Dog tag	A167 304	1

^{*} Repair kit components^{**} Only with HermetiX™ fire safe design^{***} Gear operator should be used for size 3" DN80 (handle components are not included)⁽¹⁾ C28C series is Habonim's standard valve design without the HermetiX™ stem seal construction.⁽²⁾ This material can only be used as part of the C28C design.⁽³⁾ Spring loaded upstream seat is Habonim default design.

Floating Ball Valves

Cryogenic valves

General

3 Piece

Flanged

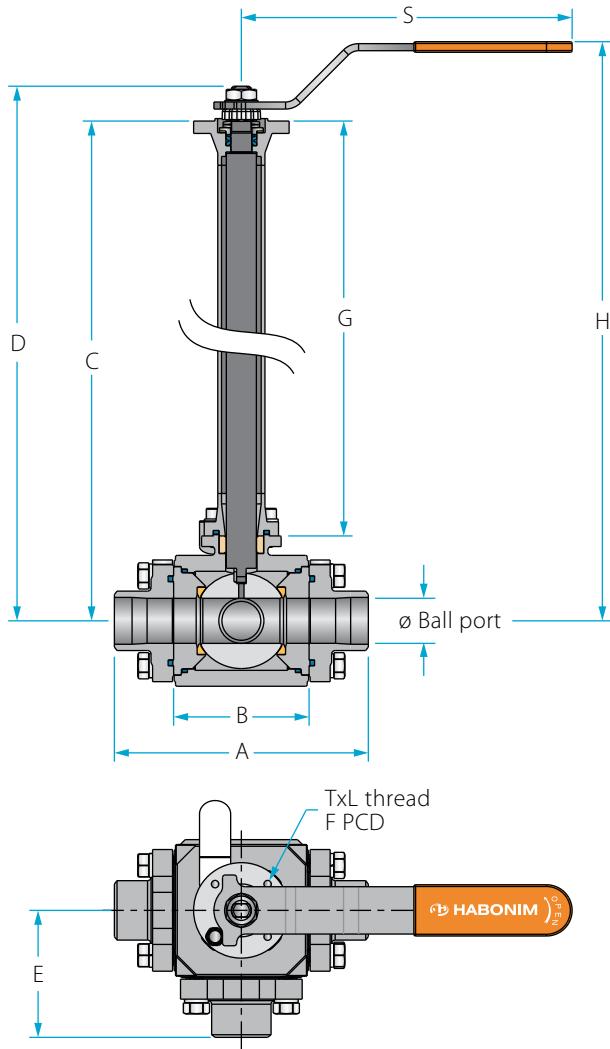
High pressure

Multiport

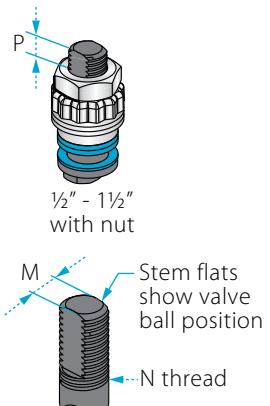
Ordering code system

Size $\frac{1}{2}''$ - $1\frac{1}{2}''$ | DN15-DN40 | ANSI Class 600 | C61W/C61C Series

Valve dimensions

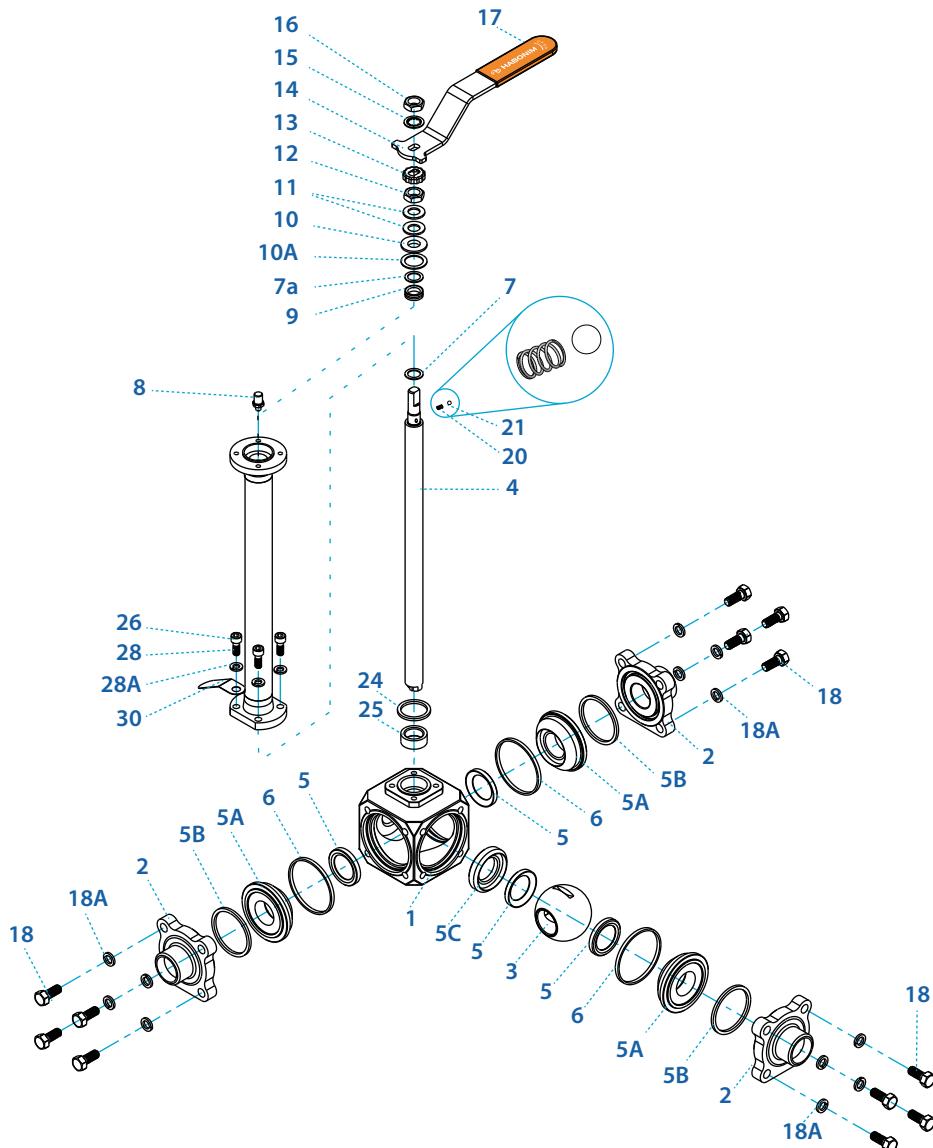


Preparation for actuation



Std. port	Full port	Unit	Ball port	A	B	Standard design					6.0" bonnet					E	S	M	N	P	F	TxL	Weight kg/lb	
						C	D	E	G	H	C	D	G	H	Std.	6.0 Bonnet								
DN20	DN15	mm	14.30	108.00	62.00	341.00	358.50	304.00	384.90	189.40	206.90	152.40	233.30	224.52	54.30	187.00	7.50	$\frac{7}{16}''$	7.20 (F04)	42.00	M5X7	3.65	3.33	
$\frac{3}{4}''$	$\frac{1}{2}''$		0.56	4.25	2.44	13.43	14.11	11.97	15.15	7.46	8.15	6.00	9.19	8.84	2.14	7.36	0.30	UNF	0.28	1.65		8.04	7.34	
DN25	DN20	mm	20.70	134.60	71.60	347.00	364.50	304.00	389.80	195.40	212.90	152.40	238.20	239.43	66.80	187.00	7.50	$\frac{7}{16}''$	7.20 (F04)	42.00	M5X7	5.25	4.90	
1"	$\frac{3}{4}''$		0.81	5.30	2.82	13.66	14.35	11.97	15.35	7.69	8.38	6.00	9.38	9.43	2.63	7.36	0.30	UNF	0.28	1.65		11.57	10.80	
DN32	DN25	mm	25.50	143.00	76.00	352.00	369.50	304.00	396.90	200.40	217.90	152.40	245.30	244.43	71.80	187.00	7.50	$\frac{7}{16}''$	8.50 (F04)	42.00	M5X7	7.42	6.85	
$1\frac{1}{4}''$	1"		1.00	5.63	2.99	13.86	14.55	11.97	15.63	7.89	8.58	6.00	9.66	9.62	2.83	7.36	0.30	UNF	0.33	1.65		16.35	15.10	
DN40	DN32	mm	31.65	158.00	91.00	353.40	382.90	304.00	408.10	201.80	231.30	152.40	256.50	257.13	79.00	237.00	8.71	$\frac{9}{16}''$	8.50 (F05)	50.00	M6X8	9.12	8.55	
$1\frac{1}{2}''$	$1\frac{1}{4}''$	inch	1.25	6.22	3.58	13.91	15.07	11.97	16.07	7.94	9.11	6.00	10.10	10.12	3.11	9.33	0.34	UNF	0.33	1.97		20.10	18.84	

Components & materials



Item	Description	Material specifications	Qty.
1	Body	A351 CF8M, A494 M35-1, Bronze RG5	1
2	Ends	A351 CF8M, A494 M35-1, Bronze RG5	3
3	Ball	A351 CF8M, B574 N06022, Bronze RG5	1
4	Stem	A479 316/316L, A564 Gr.630 H1150D 17-4PH, B574 N06022	1
5*	Seat	CF PTFE, TFM, PCTFE (KEL-F)	4
5A	Seat housing	A479 316/316L, B574 N06022, Bronze RG5	3
5B*	Seat seal	PTFE, Graphite	3
5C	Seat support	A479 316/316L, B574 N06022, Bronze RG5	1
6*	Body seal	PTFE, Graphite	3
7*	Stem thrust seal	TFM ⁽²⁾ , PCTFE (KEL-F)	1
7a*	Anti-abrasion ring	TFM ⁽²⁾ , PCTFE (KEL-F)	1
8	Stop pin	A582 303	1
9*	Stem seal	TFM, Graphite ⁽²⁾	1
10	Follower	B783 316L	1
10A**	Slide bearing	TF316	1

⁽¹⁾ C61C series is Habonim's standard valve design without the Hermetix™ stem seal construction.

⁽²⁾ This material can only be used as part of the C61C design.

Item	Description	Material specifications	Qty.
11	Disc spring	A693 631 17-7PH	2
12	Stem nut	EN3506-2 A4-80, A194 Gr 8M	1
13	Locking clip	A167 304	1
14	Handle	A240 430	1
15	Serrated washer	A240 410	1
16	Handle nut	EN3506-2 A4-80, A194 Gr 8M	1
17	Sleeve	PVC	1
18	Body bolt	EN 3506-1 A2-70, A193 Gr B8	12
18A	Spring washer	DIN 127 A2	12
20	Anti static spring	A313 302	1
21	Anti static plunger	A479 304	1
23	Tag (not shown)	A167 304	1
24	Bonnet seal	PTFE, Graphite	1
25	Stem bearing	PTFE	1
26	Bonnet	A479 316L, A351 CF8M	1
28	Bolt	EN3506-1 A2-70, A193 B8	4
28A	Spring washer	DIN 127 A2	4
30	Dog tag	A167 304	1

* Repair kit components

** Only with Hermetix™ fire safe stem seal

Floating Ball Valves

Cryogenic valves

General

3 Piece

Flanged

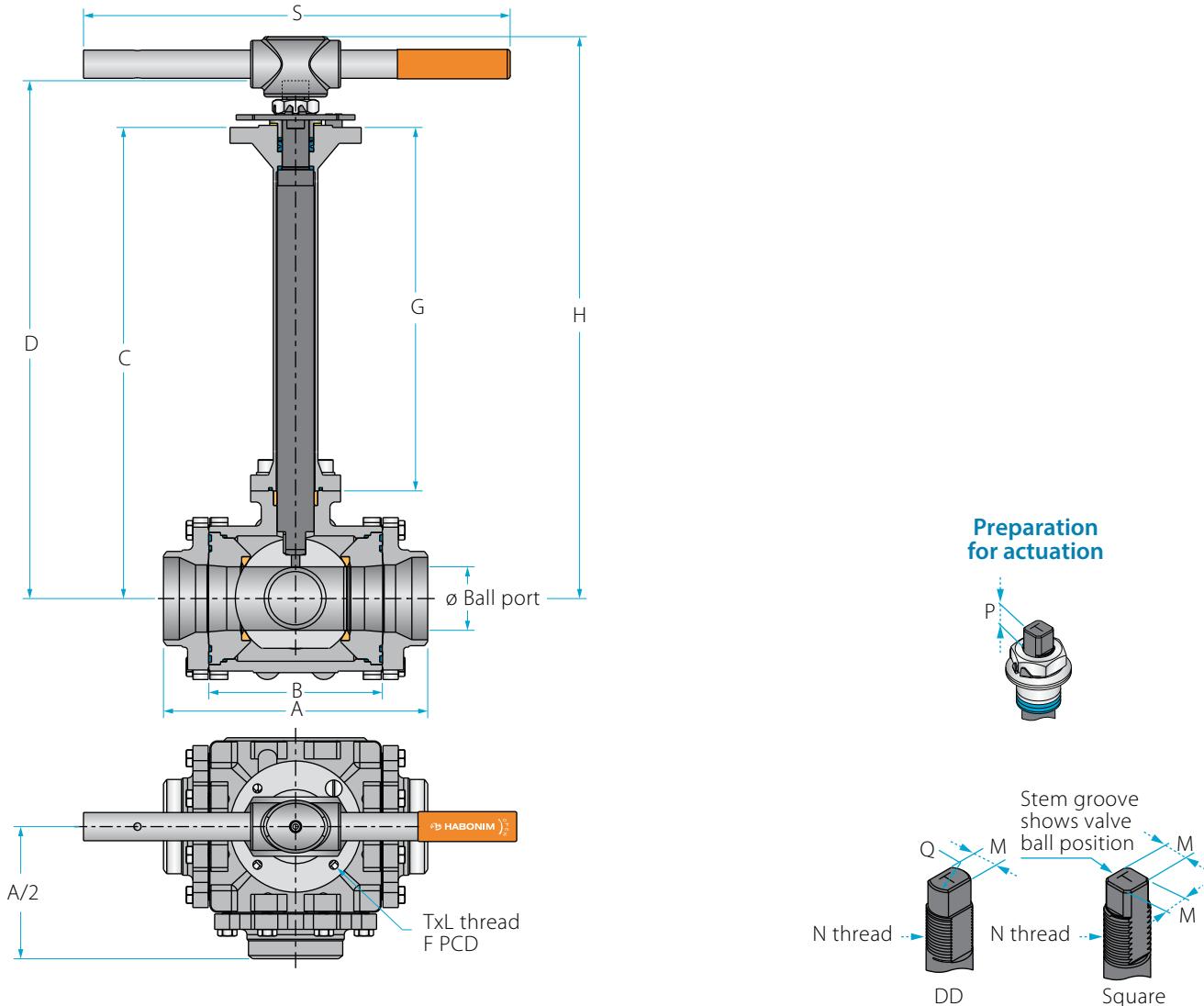
High pressure

Multiport

Ordering code system

Size 2" - 4" | DN50-DN100 | ANSI Class 300 | C61W/C61C Series

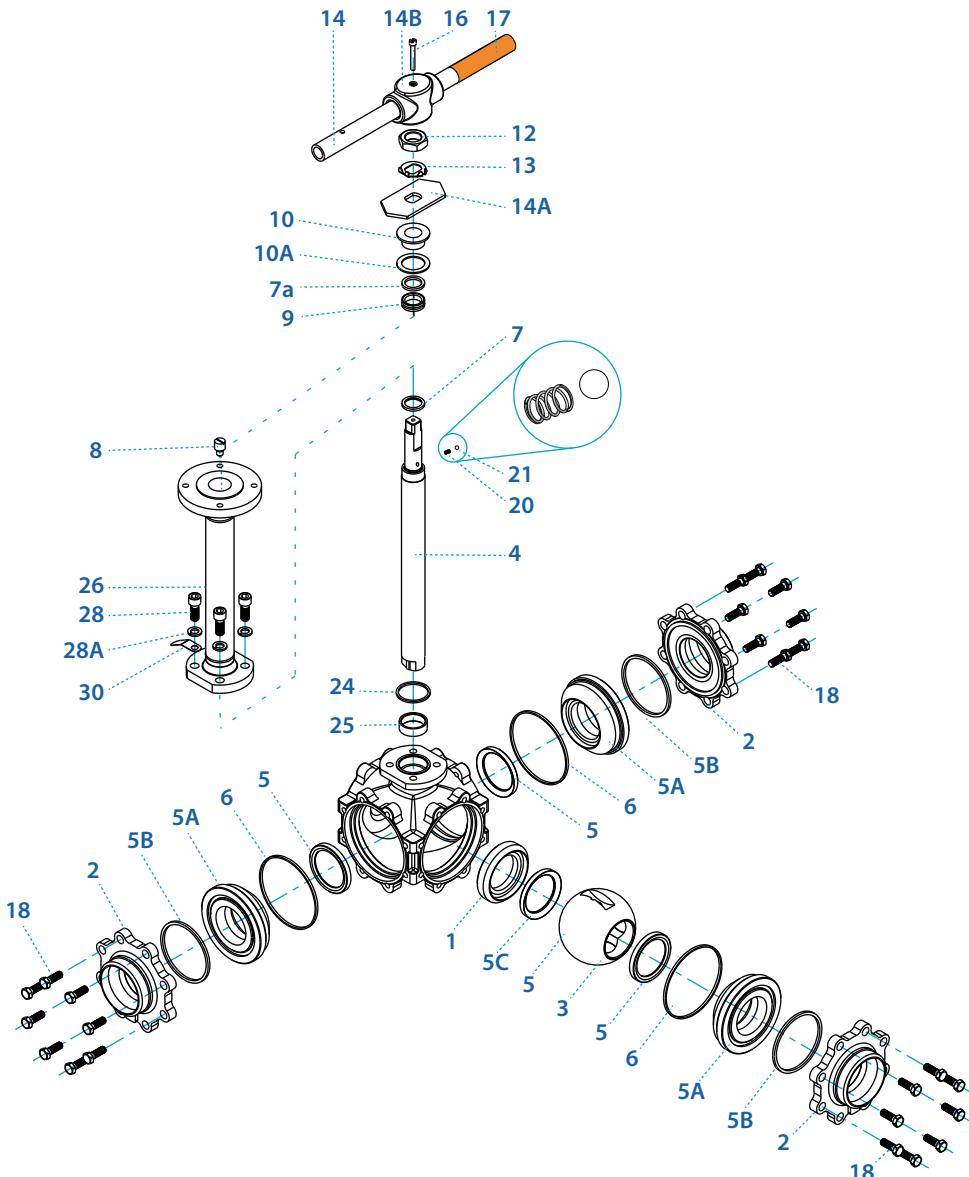
Valve dimensions



Std. port	Full port	Unit	Ball port	A	B	Standard design					6.0" bonnet					S	M	MDD	N	P	Q	F	TxL	Weight kg/lb	
						C	D	E	G	H	C	D	G	H	Std.	6.0 Bonnet									
DN50	DN40	mm	38.10	178.80	107.20	397.10	438.70	327.50	465.90	222.00	263.60	152.40	290.80	224.52	400.00	13.90	13.90	M20X2.5	14.36	20.00 (F07)	70.00	M8X8	24.70	23.25	
2"	1½"	inch	1.50	7.04	4.22	15.63	17.27	12.89	18.34	8.74	10.38	6.00	11.45	8.84	15.75	0.55	0.55		0.57	0.79	2.76		54.44	51.24	
DN65	DN50	mm	48.00	210.00	125.00	406.60	453.10	327.50	480.30	231.50	278.00	152.40	305.20	239.43	400.00	18.90	15.90	1"-14	16.70	22.70 (F10)	102.00	M10X15	24.70	23.25	
2½"	2"	inch	1.89	8.27	4.92	16.01	17.84	12.89	18.91	9.11	10.94	6.00	12.02	9.43	15.75	0.74	0.63	UNS-2A	0.66	0.89	4.02		54.44	51.24	
DN80	DN65	mm	60.00	249.80	164.00	486.75	555.85	385.00	-	254.15	323.25	152.40	-	244.43	-	28.45	23.75	1-½"-12	26.20	35.20 (F12)	125.00	M12X15	42.40	41.20	
3"	2½"	inch	2.36	9.83	6.46	19.16	21.88	15.16	-	10.01	12.73	6.00	-	9.62	-	1.12	0.94	UNF-2A	1.03	1.39	4.92		93.45	90.80	
DN100	DN80	mm	76.00	309.80	205.00	519.50	588.60	385.00	-	286.90	356.00	152.40	-	257.13	-	28.45	23.75	1-½"-12	26.20	35.20 (F12)	125.00	M12X15	66.40	65.20	
4"	3"	inch	2.99	12.20	8.07	20.45	23.17	15.16	-	11.30	14.02	6.00	-	10.12	-	1.12	0.94	UNF-2A	1.03	1.39	4.92		146.35	143.7	

⁽¹⁾ Due to high valve torque, pipe handle cannot be used. A manual gear or automation means should be used to operate the valve.

Components & materials



Item	Description	Material specifications	Qty.
1	Body	A351 CF8M, A494 M35-1, Bronze RG5	1
2	Ends	A351 CF8M, A494 M35-1, Bronze RG5	3
3	Ball	A351 CF8M, B574 N06022, Bronze RG5	1
4	Stem	A479 316/316L, A564 Gr.630 H1150D 17-4PH, B574 N06022	1
5*	Seat	CF PTFE, TFM, PCTFE (KEL-F)	4
5A	Seat housing	A479 316/316L, B574 N06022, Bronze RG5	3
5B*	Seat seal	PTFE, Graphite	3
5C	Seat support	A479 316/316L, B574 N06022, Bronze RG5	1
6*	Body seal	PTFE, Graphite	3
7*	Stem thrust seal	TFM ⁽²⁾ , PCTFE (KEL-F)	1
7a*	Anti-abrasion ring	TFM ⁽²⁾ , PCTFE (KEL-F)	1
8	Stop pin	A582 303	1
9*	Stem seal	TFM, Graphite ⁽²⁾	1
10	Follower	B783 316L	1
10A**	Slide bearing	TF316	1
11	Disc spring	A693 631 17-7PH	2

⁽¹⁾ C61C series is Habonim's standard valve design without the Hermetix™ stem seal construction.

⁽²⁾ This material can only be used as part of the C61C design.

Item	Description	Material specifications	Qty.
12	Stem nut	EN3506-2 A4-80, A194 Gr 8M	1
13	Tab lock washer	A240 304	1
14***	Handle	C.St. Zinc plate, A240 316L	1
14A	Stop plate	A240 430	1
14B	Wrench head	A351 CF8M	1
16	Wrench bolt	EN3506-1 A2-70/A4-80, A193 Gr B8/B8M	1
17	Sleeve	PVC	1
18	Body bolt	EN 3506-1 A2-70, A193 Gr B8	12-24
18A	Spring washer	DIN 127 A2	12-24
20	Anti static spring	A313 302	2
21	Anti static plunger	A479 304	2
23	Tag (not shown)	A167 304	1
24	Bonnet seal	PTFE, Graphite	1
25	Stem bearing	PTFE	1
26	Bonnet	A479 316L, A351 CF8M	1
28	Bolt	EN3506-1 A2-70, A193 B8	4
28A	Spring washer	DIN 127 A2	4
30	Dog tag	A167 304	1

* Repair kit components

** Only with Hermetix™ fire safe stem seal

*** Gear operator should be used for size 3" DN80 and above (handle components are not included)

Floating Ball Valves

Cryogenic valves

General

3 Piece

Flanged

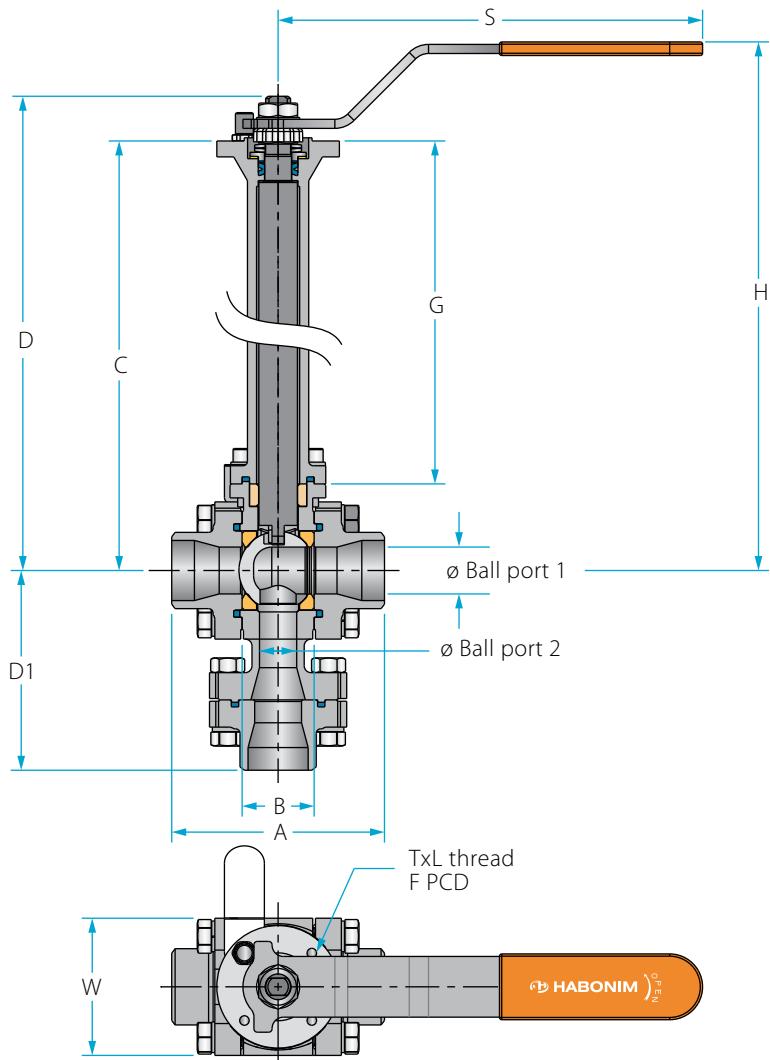
High pressure

Multiport

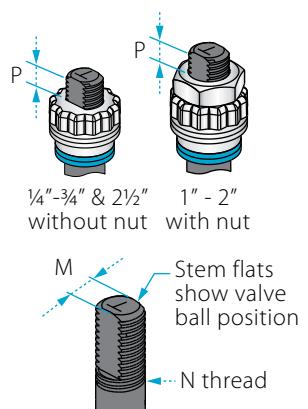
Ordering code system

Size $\frac{1}{2}''$ - $2''$ | DN15-DN50 | ANSI Class 600 | DC47W Series

Valve dimensions

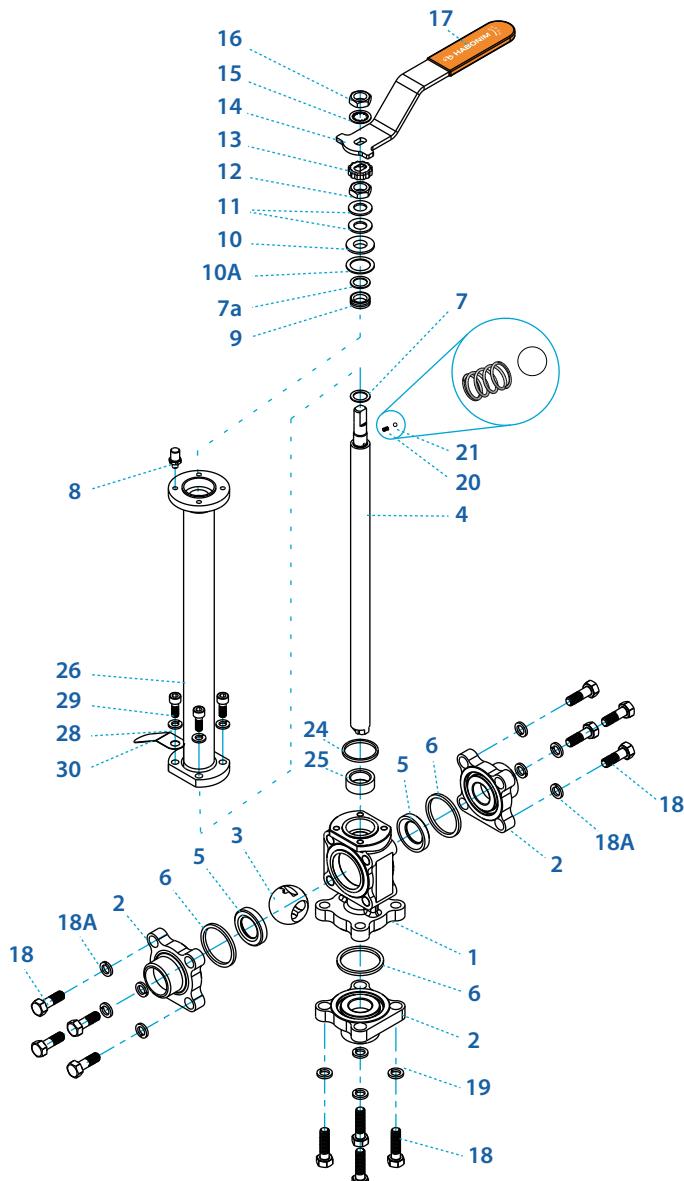


Preparation for actuation



Std. port	Full Port	Unit	Ball port1	Ball port2	A	B	Standard design					6.0" bonnet					S	W	M	N	P	F	TxL	Weight kg/lb	
							C	D	K	G	H	C	D	K	G	H								Std.	6.0 Bonnet
DN15	DN10	mm	10.50	9.50	65.80	20.60	333.00	341.90	304.00	367.30	181.40	190.30	152.40	215.70	152.80	214.30	150.00	45.80	5.50	$\frac{3}{8}$ " UNF	7.20 (F03)	36.00	M5X7	1.79	1.47
$\frac{1}{2}''$	$\frac{3}{8}''$	inch	0.41	0.37	2.59	0.81	13.11	13.46	11.97	14.46	7.14	7.49	6.00	8.49	6.02	8.44	5.91	1.80	0.22		0.28	1.42		3.93	3.23
DN20	DN15	mm	14.30	11.90	70.55	24.55	335.40	344.30	304.00	369.60	183.80	192.70	152.40	218.00	152.80	216.70	150.00	52.10	5.50	$\frac{3}{8}$ " UNF	7.20 (F03)	36.00	M5X7	1.52	1.20
$\frac{3}{4}''$	$\frac{1}{2}''$	inch	0.56	0.47	2.78	0.97	13.20	13.56	11.97	14.55	7.24	7.59	6.00	8.58	6.02	8.53	5.91	2.05	0.22		0.28	1.42		3.35	2.64
DN25	DN20	mm	20.65	15.90	93.75	31.75	342.15	359.65	304.00	387.00	190.55	208.05	152.40	235.40	152.80	232.20	187.00	60.45	7.54	$\frac{7}{16}$ " UNF	7.20 (F04)	42.00	M5X7	3.19	2.84
$1''$	$\frac{3}{4}''$	inch	0.81	0.63	3.69	1.25	13.47	14.16	11.97	15.24	7.50	8.19	6.00	9.27	6.02	9.14	7.32	2.38	0.30		0.28	1.65		7.02	6.25
DN40	DN25	mm	26.60	31.80	115.35	48.35	347.55	377.05	304.00	404.00	195.95	225.45	152.40	252.40	152.80	249.80	237.00	79.15	8.71	$\frac{9}{16}$ " UNF	8.00 (F05)	50.00	M6X8	5.22	4.65
$1\frac{1}{2}''$	$1''$	inch	1.05	1.25	4.54	1.90	13.68	14.84	11.97	15.91	7.71	8.88	6.00	9.94	6.02	9.83	9.29	3.12	0.34		0.31	1.97		11.51	10.25
DN50	DN40	mm	38.15	35.00	127.90	56.30	352.25	381.75	304.00	409.00	200.65	230.15	152.40	257.40	152.80	254.60	237.00	90.70	8.71	$\frac{9}{16}$ " UNF	8.50 (F05)	50.00	M6X8	6.68	6.11
$2''$	$1\frac{1}{2}''$	inch	1.50	1.38	5.04	2.22	13.87	15.03	11.97	16.10	7.90	9.06	6.00	10.13	6.02	11.96	9.29	3.57	0.34		0.33	1.97		14.72	13.47

Components & materials



Item	Description	Material specifications	Qty.
1	Body	A351 CF8M, A494 M35-1, Bronze RG5	1
2	Ends	A351 CF8M, A494 M35-1, Bronze RG5	3
3	Ball	A351 CF8M, B574 N06022, Bronze RG5	1
4	Stem	A479 316/316L, A564 Gr.630 H1150D 17-4PH, B574 N06022	1
5*	Seat	CF PTFE, TFM, PCTFE (KEL-F)	2
6*	Body seal	PTFE, Graphite	3
7*	Stem thrust seal	TFM ⁽²⁾ , PCTFE (KEL-F)	1
7a*	Anti-abrasion ring	TFM ⁽²⁾ , PCTFE (KEL-F)	1
8	Stop pin	A582 303	1
9*	Stem seal	TFM, Graphite ⁽²⁾	1
10	Follower	B783 316L	1
10A**	Slide bearing	TF316	1
11	Disc spring	A693 631 17-7PH	2
12	Stem nut	EN3506-2 A4-80, A194 Gr 8M	1
13	Locking clip	A167 304	1
14	Handle	A240 430	1

⁽¹⁾ DC47C series is Habonim's standard valve design without the HermetiX™ stem seal construction.

⁽²⁾ This material can only be used as part of the DC47C design.

Item	Description	Material specifications	Qty.
15	Serrated washer	A240 410	1
16	Handle nut	EN3506-2 A4-80, A194 Gr 8M	1
17	Sleeve	PVC	1
18	Body bolt	EN 3506-1 A2-70, A193 Gr B8	12
18A	Spring washer	DIN 127 A2	12
20	Anti static spring	A313 302	1
21	Anti static plunger	A479 304	1
23	Tag (not shown)	A167 304	1
24	Bonnet seal	PTFE, Graphite	1
25	Stem bearing	PTFE	1
26	Bonnet	A479 316L, A351 CF8M	1
28	Bolt	EN3506-1 A2-70, A193 B8	12
28A	Spring washer	DIN 127 A2	12
30	Dog tag	A167 304	1
26	Bonnet	A479 316L, A351 CF8M	1
28	Bolt	EN3506-1 A2-70, A193 B8	4
28A	Spring washer	DIN 127 A2	4
30	Dog tag	A167 304	1

* Repair kit components

** Only with HermetiX™ fire safe stem seal

Vannes cryogéniques

Général

3 Pièces

A Brides

H
Pression

Multivoies

Référence
des vannes

Information pour commander

Codification des vannes cryogéniques HABONIM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	.	.	30		
1	0	F	C	4	7	W	-	6	6	6	M	C	G	/	X	B	W	-	21	22	.	.	30			
Taille	Caract.	Series ⁽¹⁾												Brosseau/Tige Siège/Joint connection												OPTIONS

Taille		
Code	inch	mm
02	1/4"	8
03	3/8"	10
05	1/2"	15
07	3/4"	20
10	1"	25
12	1 1/4"	32
15	1 1/2"	40
20	2"	50
25	2 1/2"	65
30	3"	80
40	4"	100
60	6"	150
80	8"	200

Caractéristiques ⁽¹⁾	
F	Série FEU
B	Passage intégral
N	Régulation
D ⁽²⁾	3 voies par le bas
I	Haute pureté assemblée en Classe 10000

Vannes hautes pression sièges Hydrides, nous consulter.

Series		Boisseau/Tige		Connections	
C47	3 Pièces	6	S. Steel A351 CF8M	A souder	
C31	ANSI 150	M	17-4PH A564 Gr 630 H1150D	BW5	Buttweld schd. 5
C32	ANSI 300	1 ⁽³⁾	Bronze B62 C83600	BW10	Buttweld schd. 10
C73	ANSI 150 passage intégral	7	Monel A494 M-35-1	BW	Buttweld schd. 40
Type		Siège		Siège	
C	Cryogénique Basique	A	TFM	A	TFM
X	Cryogénique Tige HermetiX™	C	PCTFE (KEL-F)	C	PCTFE (KEL-F)
W	Cryogénique Tige HermetiX™ série Feu	P	CF PTFE	P	CF PTFE
		T	PTFE	T	PTFE
Corps/Extrémités		Joint		Joint	
6	S. St. A351 CF8M / CF3M / S.St. 316/316L	G	Graphite expansé	G	Graphite expansé
1	Bronze RG5	I	Graphite Imprégné	I	Graphite Imprégné
7	Monel A494 M-35-1	T	PTFE	T	PTFE
Options		Options		Options	
RTJ	Face RTJ	RTJ	Face RTJ	NPT	ANSIB1.20.1-NPT Femelle
B	Corps usiné	B	Corps usiné	MNPT	Male NPT
EP	Electropoli	EP	Electropoli	BSPT	EN 10226-1 - British Standard Pipe Taper thread
WR	Tige DD	WR	Tige DD	MBSPT	Male BSPT
G..	Polissage des surfaces (G24, G32)	G..	Polissage des surfaces (G24, G32)	DIN2999	EN 10226-1 – parallèle BSPP
VB30	Boisseau de régulation	VB30	Boisseau de régulation	DIN3852	EN 10226-1 - parallèle BSPP
6.0	Chapeau court	6.0	Chapeau court	AS5202	SAE Interne
FF	Face plane	FF	Face plane	Clamp	
				LL	Double bague (Imperial)
				LM	Doble bague (métrique)
				TC	Tri-Clamp
				GR	Graylock
A brides		A brides		A brides	
150	ANSI B16.5 #150 RF	150	ANSI B16.5 #150 RF	150	ANSI B16.5 #150 RF
300	ANSI B16.5 #300 RF	300	ANSI B16.5 #300 RF	300	ANSI B16.5 #300 RF
600	ANSI B16.5 #600 RF	600	ANSI B16.5 #600 RF	600	ANSI B16.5 #600 RF
900	ANSI B16.5 #900 RF	900	ANSI B16.5 #900 RF	900	ANSI B16.5 #900 RF
PN16	EN1092 PN16 RF	PN16	EN1092 PN16 RF	PN16	EN1092 PN16 RF
PN40	EN1092 PN40 RF	PN40	EN1092 PN40 RF	PN40	EN1092 PN40 RF
PN64	EN1092 PN64 RF	PN64	EN1092 PN64 RF	PN64	EN1092 PN64 RF
PN100	EN1092 PN100 RF	PN100	EN1092 PN100 RF	PN100	EN1092 PN100 RF
PN160	EN1092 PN160 RF	PN160	EN1092 PN160 RF	PN160	EN1092 PN160 RF

⁽¹⁾ La série cryogénique est compatible pour service O₂, pas de nettoyage autre à spécifier .

⁽²⁾ Seulement pour les series C47 series

⁽³⁾ Ne convient pas comme matériaux de tige

Toutes les vannes Habonim cryogéniques sont pouvus d'un système anti-statique en standard.

Dans certains cas, les options sont limitées à des tailles de vannes, nous consulter.