

CO2 Transfer Hoses 450 PSIG MAWP



A lightweight, yet durable rubber hose manufactured specially for the demands of Carbon Dioxide

Transfer hoses are manufactured specifically for the demanding requirements of CO2 liquid and vapor transfer. Unlike rubber hydraulic hose that is constructed with carbon steel reinforcing, these hoses are reinforced with stainless steel braids to resist carbonic acid – the result of CO2 and moisture combination. In addition, our pricked cover solves the problem of bubbling that the covers of hydraulic hoses have experienced. These hoses will be dramatically more flexible in CO2 transfer than standard rubber hoses due to a specially blended tube rated to minus 65° F. The two-braid construction also offers much better kink resistance than comparable single braid products.

SPECIFICATIONS

Liquid / Vapor CO2 Transfer Hose

Tube Special Neoprene blend rated for -65° F

Reinforcement Two stainless steel braids

Cover Special Neoprene blend. Black with blue Mylar

Temperature -65° F to +180° F

Pressure Range 450 PSIG MAWP

Branding Blue Mylar

CGA Fittings Brass sleeve, nut, and dust caps available

Other Fittings Available Female NPT brass bar-stock fitting with aluminum crimp collar

See below to Order Custom Length Hoses

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Part #	I.D. (In.)	O.D. (In.)	Max WP PSIG	Min Burst PSIG	Weight Per Foot
CTH1	1	1.58	450	2250	0.83
CTH112	1 1/2	2.08	450	2250	1.19
CTH2	2	2.60	450	2250	1.90

CO2 Transfer Hoses – 450 PSIG MAWP

Female NPT x Female NPT

1" I.D. - 1" FNPT x 1" FNPT

Hose Length	Part #
10'	CTH-11D-F1BH120
20'	CTH-11D-F1BH240

1 1/2" I.D. - 1 1/2" FNPT x 1 1/2" FNPT

Hose Length	Part #
10'	CTH-112ID-F112BH120
20'	CTH-112ID-F112BH240

2" I.D. - 2" FNPT x 2" FNPT

Hose Length	Part #
10'	CTH-21D-F2BH120
20'	CTH-21D-F2BH240

CO2 Connections

1" Carbon Dioxide Connection

Hose Length	Part #
10'	CTH-11D-CGA320BH120
20'	CTH-11D-CGA320BH240

1 1/2" Carbon Dioxide Connection

Hose Length	Part #
10'	CTH-112ID-CGA320BH120
20'	CTH-112ID-CGA320BH240

2" I.D. - Carbon Dioxide Connection

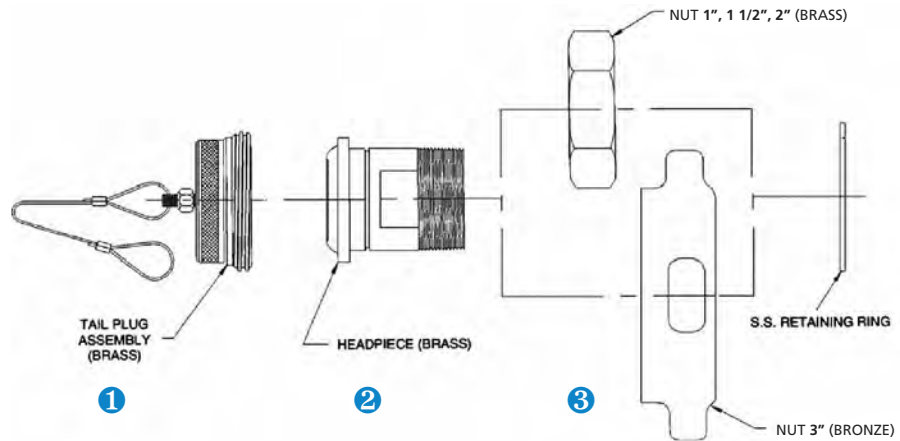
Hose Length	Part #
10'	CTH-21D-CGA320BH120
20'	CTH-21D-CGA320BH240

Carbon Dioxide Hose End Assembly

Part Number	Size
BHEA-CO2-100	1"
BHEA-CO2-150	1 1/2"
BHEA-CO2-200	2"

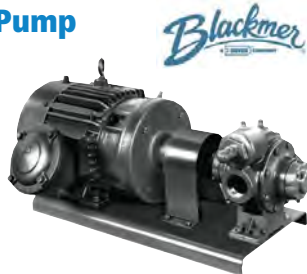
Complete Unit Includes:

- 1 Dust Plug Assembly
- 2 Head Piece
- 3 Nut



Carbon Dioxide Pump

Positive Displacement Pumps and Oil-Free Gas Compressors for Liquid CO2 Applications



Part # CO2P-114-BPM3H

Carbon Dioxide Pump 1 1/4" on a base plate with Motor.

- Recirculation
- Processing
- Bulk Transfer
- Truck & Transport
- Railcar Unloading
- Vapor Recovery

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Custom Length Hose – CO2 Transfer Hoses 450 PSIG MAWP

ORDER CUSTOM LENGTH HOSE*

CO2 Transfer Hose

Hose I.D. Size

- Pt # 11"
Pt # 1121 1/2"
Pt #22"

Choose Your Hose Ends Pt #

- 1" FNPT x 1" FNPTPt # F1
1 1/2" FNPT x 1 1/2" FNPTPt # F112
2" FNPT x 2" FNPTPt # F2

Length of Hose in Inches

Pt # _____

CTH – ID → BH →

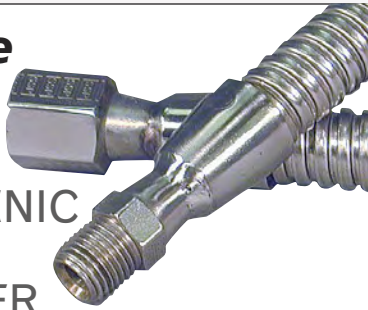
*Custom length hoses are not returnable for either credit or refund.

Mini Bulk Liquid 792 & 1,330 PSIG MAWP

Transfer Armored Hoses

Flexible

**INERT
CRYOGENIC
LIQUID
CYLINDER
HOSES**



1/2" & 3/4" inner diameter standard duty stainless steel hose to provide a dependable, high pressure hose for your cryogenic transfer applications. Machine flare ends and stainless steel hex nuts are standard on these hoses.

Stamped with PSIG MAWP, and month/year of manufacturer.



For Oxygen Transfer Hoses,
please see 19A 9 & 11

MINI BULK FLEXIBLE INERT CRYOGENIC HOSES

1/2" ID Hose – 1,330 PSIG MAWP



Without Armor Casing



With Armor Casing*

CGA 295 x CGA 295

Hose Length	Part #
20'	FPCGA295CH240
25'	FPCGA295CH300
50'	FPCGA295CH600

* Hoses under 18" cannot be armored.

Hose Length	Part #
20'	FPACGA295CH240
25'	FPACGA295CH300
50'	FPACGA295CH600



Without Armor Casing



With Armor Casing*

CGA 295 x CGA 295

Hose Length	Part #
20'	FP34IDCGA295CH240
25'	FP34IDCGA295CH300
50'	FP34IDCGA295CH600

* Hoses under 18" cannot be armored.

Hose Length	Part #
20'	FPA34IDCGA295CH240
25'	FPA34IDCGA295CH300
50'	FPA34IDCGA295CH600



CGA 295 x 1/2" NPT Male

Hose Length	Part #
20'	FPM12C295CH240
25'	FPM12C295CH300
50'	FPM12C295CH600

Hose Length	Part #
20'	FPAM12C295CH240
25'	FPAM12C295CH300
50'	FPAM12C295CH600

CGA 295 x 3/4" NPT Male

Hose Length	Part #
20'	FP34IDM34C295CH240
25'	FP34IDM34C295CH300
50'	FP34IDM34C295CH600

Hose Length	Part #
20'	FPA34IDM34C295CH240
25'	FPA34IDM34C295CH300
50'	FPA34IDM34C295CH600



1/2" NPT Male x 1/2" NPT Male

Hose Length	Part #
20'	FPM12CH240
25'	FPM12CH300
50'	FPM12CH600

Hose Length	Part #
20'	FPAM12CH240
25'	FPAM12CH300
50'	FPAM12CH600

3/4" NPT Male x 3/4" NPT Male

Hose Length	Part #
20'	FP34IDM34CH240
25'	FP34IDM34CH300
50'	FP34IDM34CH600

Hose Length	Part #
20'	FPA34IDM34CH240
25'	FPA34IDM34CH300
50'	FPA34IDM34CH600

OTHER LENGTHS AVAILABLE

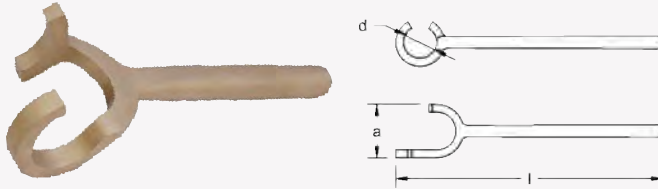
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Non-Sparking Tools

NON-SPARKING TOOLS ZONES DEFINED



Non-Sparking Wrench, Valve Wheel (DIN 87311)



Part #	d Inch	a Inch	l Inch	Wt. lbs.	d mm	a mm	l mm	kg
NST-WRVW-08	1 1/4	2 1/4	8 9/16	0.86	32	56	215	0.39
NST-WRVW-11	1 7/16	2 1/4	11 9/16	2.27	36	56	290	1.03
NST-WRVW-16	1 7/8	3 3/16	16	1.90	48	80	400	0.86
NST-WRVW-19	2 3/8	4	19 9/16	4.30	60	100	490	1.95
NST-WRVW-32	2 3/8	4 3/8	32	12.57	60	110	800	5.70

Non-Sparking Wrench, Adjustable End



Part #	s max Inch	l Inch	Wt. lbs.	s max mm	l mm	kg
NST-WRAE-06	3/4	6	0.29	19	150	0.13
NST-WRAE-08	15/16	8	0.62	24	200	0.28
NST-WRAE-10	1 1/8	10	1.06	28	250	0.48
NST-WRAE-12	1 3/8	12	1.68	34	300	0.76
NST-WRAE-15	1 3/4	15	3.13	45	375	1.42
NST-WRAE-18	2 3/16	18	6.19	55	450	2.81
NST-WRAE-24	2 3/8	24	10.87	60	600	4.93

Non-Sparking Wrench, Pipe (American Type)



Part #	d max Inch	l Inch	Wt. lbs.	d max mm	l mm	kg
NST-WRP-06	3/4	6	0.66	20	150	0.30
NST-WRP-08	1	8	1.04	25	200	0.47
NST-WRP-10	1 3/16	10	2.25	30	250	1.02
NST-WRP-12	1 9/16	12	3.26	40	300	1.48
NST-WRP-14	2	14	3.59	50	350	1.63
NST-WRP-18	2 3/8	18	6.28	60	450	2.85
NST-WRP-24	3	24	10.67	75	600	4.84
NST-WRP-36	3 3/8	36	17.17	85	900	7.79
NST-WRP-48	4 3/8	48	29.92	110	1200	13.57

Non-Sparking Hammer Club

Part #	Material	Head Wt. Lbs.	Head Wt. Kg
NST-HM-1A	Aluminum Bronze	1	0.50
NST-HMC-2A	Aluminum Bronze	2	0.91
NST-HMC-2C	Copper Beryllium	2	0.91
NST-HMC-4A	Aluminum Bronze	4	1.81
NST-HMC-4C	Copper Beryllium	4	1.81
NST-HMC-7A	Aluminum Bronze	7	3.18
NST-HMC-7C	Copper Beryllium	7	3.18

Zone Definitions Gas, Mists or Vapors

- **Zone 0** - An atmosphere where a mixture of air and flammable substances in the form of gas, vapor or mist is present frequently, continuously or for long periods.
- **Zone 1** - An atmosphere where a mixture of air and flammable substances in the form of gas, vapor or mist is likely to occur in normal operation occasionally.
- **Zone 2** - An atmosphere where a mixture of air and flammable substances in the form of gas, vapor or mist is not likely to occur in normal operation but, if it does occur, will persist for only a short period.

Other Zone Information Available – Contact us, we will be happy to get the info to you!

How to Choose the Correct Alloy for Your Application

	Aluminum-Bronze (AlBr) Alloy	Copper-Beryllium (CuBez) Alloy
Zone Compatibility	Fulfill demand in ATEX directive for work in Zones 1 and 2	Fulfill demand in ATEX directive for work in Zones 0, 1 and 2
Hardness	23-35 HRC	33-45 HRC
Durability	Not as durable as CuBez.	Very durable due to high hardness and tensile strength.
Magnetic Properties	Low magnetism due to minimal ferrous components. Appropriate for non-critical non-magnetic applications.	Non-ferrous components; safer for applications demanding non-magnetic properties.
Composition	Al: 9.5-11% Fe: 3.5-5.5% Ni: 3.5-5.5% Other: 0.5% max Cu: Balance	Be: 1.8-2.1% Co + Ni: 0.6% max Other: 0.5% max Cu: Balance

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ARGON

Cryogenic Bulk Hose



Full Length Armor



18" Armor Cuffs



No Armor No Cuffs

1 1/2 INCH HOSE 472 PSIG MAWP LINER: CORRUGATED 321 STAINLESS STEEL

INLET



AR-150

OUTLET



1 1/2" NPT Male

AR-150 x 1 1/2" NPT Male

Size in ft.	Part #
12'	BHA-112ID-144AR150M112
16'	BHA-112ID-192AR150M112
20'	BHA-112ID-240AR150M112

▶ **MOST COMMON**

Size in ft.	Part #
12'	BH-A18-112ID-144AR150M112
16'	BH-A18-112ID-192AR150M112
20'	BH-A18-112ID-240AR150M112

Size in ft.	Part #
12'	BH-112ID-144AR150M112
16'	BH-112ID-192AR150M112
20'	BH-112ID-240AR150M112

INLET



AR-150

OUTLET



AR-150

AR-150 x AR-150

Size in ft.	Part #
12'	BHA-112ID-144AR150
16'	BHA-112ID-192AR150
20'	BHA-112ID-240AR150

Size in ft.	Part #
12'	BH-A18-112ID-144AR150
16'	BH-A18-112ID-192AR150
20'	BH-A18-112ID-240AR150

Size in ft.	Part #
12'	BH-112ID-144AR150
16'	BH-112ID-192AR150
20'	BH-112ID-240AR150

INLET



1 1/2" NPT Male

OUTLET



1 1/2" NPT Male

1 1/2" NPT Male x 1 1/2" NPT Male

Size in ft.	Part #
12'	BHA-112ID-144M112
16'	BHA-112ID-192M112
20'	BHA-112ID-240M112

Size in ft.	Part #
12'	BH-A18-112ID-144M112
16'	BH-A18-112ID-192M112
20'	BH-A18-112ID-240M112

Size in ft.	Part #
12'	BH-112ID-144M112
16'	BH-112ID-192M112
20'	BH-112ID-240M112

2 INCH HOSE 516 PSIG MAWP LINER: CORRUGATED 321 STAINLESS STEEL

INLET



AR-250

OUTLET



2" NPT Male

AR-250 x 2" NPT Male

Size in ft.	Part #
12'	BHA-2ID-144AR250M2
16'	BHA-2ID-192AR250M2
20'	BHA-2ID-240AR250M2

Size in ft.	Part #
12'	BH-A18-2ID-144AR250M2
16'	BH-A18-2ID-192AR250M2
20'	BH-A18-2ID-240AR250M2

Size in ft.	Part #
12'	BH-2ID-144AR250M2
16'	BH-2ID-192AR250M2
20'	BH-2ID-240AR250M2

INLET



AR-250

OUTLET



AR-250

AR-250 x AR-250

Size in ft.	Part #
12'	BHA-2ID-144AR250
16'	BHA-2ID-192AR250
20'	BHA-2ID-240AR250

Size in ft.	Part #
12'	BH-A18-2ID-144AR250
16'	BH-A18-2ID-192AR250
20'	BH-A18-2ID-240AR250

Size in ft.	Part #
12'	BH-2ID-144AR250
16'	BH-2ID-192AR250
20'	BH-2ID-240AR250

INLET



2" NPT Male

OUTLET



2" NPT Male

2" NPT Male x 2" NPT Male

Size in ft.	Part #
12'	BHA-2ID-144M2
16'	BHA-2ID-192M2
20'	BHA-2ID-240M2

Size in ft.	Part #
12'	BH-A18-2ID-144M2
16'	BH-A18-2ID-192M2
20'	BH-A18-2ID-240M2

Size in ft.	Part #
12'	BH-2ID-144M2
16'	BH-2ID-192M2
20'	BH-2ID-240M2

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Argon Tail Dust Plug Assembly

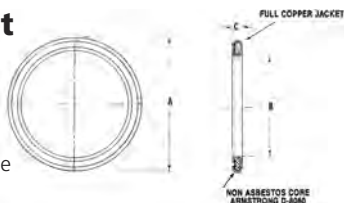
Plug material cast aluminum, black anodized Tenzalloy B-179 Alum. #713.1



Part #	Liquid Service	Size	CGA Designation	"T" Thread Size	A Inches	A MM
BH-DP-150-AR	Argon	1 1/2"	AR-150	2.76-4 Stub Acme	4.000	101.6
BH-DP-250-AR	Argon	2 1/2"	AR-250	3.813-4 Acme	4.000	101.6

Copper Clad Gasket (double jacket) or Virgin PTFE

Oxygen clean and certified. 25 Copper gaskets per package 100 PTFE gaskets per package



Part #	Size	Inches	A MM	B Inches	B MM	C Inches	C MM	Material
BH-FCG-150-COPPER	1 1/2"	1.94	49.3	1.50	38.1	.09	2.29	Copper
BH-FCG-250-COPPER	2 1/2"	3.00	76.2	2.50	63.5	.09	2.29	Copper
BH-FCG-150-PTFE	1 1/2"	1.94	49.3	1.50	38.1	.09	2.29	PTFE
BH-FCG-250-PTFE	2 1/2"	3.00	76.2	2.50	63.5	.09	2.29	PTFE

NITROGEN

Cryogenic Bulk Hose



Full Length Armor



18" Armor Cuffs



No Armor No Cuffs

1 1/2 INCH HOSE 472 PSIG MAWP LINER: CORRUGATED 321 STAINLESS STEEL

INLET



NI-150

OUTLET



1 1/2" NPT Male

NI-150 x 1 1/2" NPT Male

Size in ft.	Part #
12'	BHA-112ID-144NI150M112
16'	BHA-112ID-192NI150M112
20'	BHA-112ID-240NI150M112

Size in ft.	Part #
12'	BH-A18-112ID-144NI150M112
16'	BH-A18-112ID-192NI150M112
20'	BH-A18-112ID-240NI150M112

Size in ft.	Part #
12'	BH-112ID-144NI150M112
16'	BH-112ID-192NI150M112
20'	BH-112ID-240NI150M112

INLET



NI-150

OUTLET



NI-150

NI-150 x NI-150

Size in ft.	Part #
12'	BHA-112ID-144NI150
16'	BHA-112ID-192NI150
20'	BHA-112ID-240NI150

Size in ft.	Part #
12'	BH-A18-112ID-144NI150
16'	BH-A18-112ID-192NI150
20'	BH-A18-112ID-240NI150

Size in ft.	Part #
12'	BH-112ID-144NI150
16'	BH-112ID-192NI150
20'	BH-112ID-240NI150

INLET



1 1/2" NPT Male

OUTLET



1 1/2" NPT Male

1 1/2" NPT Male x 1 1/2" NPT Male

Size in ft.	Part #
12'	BHA-112ID-144M112
16'	BHA-112ID-192M112
20'	BHA-112ID-240M112

Size in ft.	Part #
12'	BH-A18-112ID-144M112
16'	BH-A18-112ID-192M112
20'	BH-A18-112ID-240M112

Size in ft.	Part #
12'	BH-112ID-144M112
16'	BH-112ID-192M112
20'	BH-112ID-240M112

2 INCH HOSE 516 PSIG MAWP LINER: CORRUGATED 321 STAINLESS STEEL

INLET



NI-250

OUTLET



2" NPT Male

NI-250 x 2" NPT Male

Size in ft.	Part #
12'	BHA-2ID-144NI250M2
16'	BHA-2ID-192NI250M2
20'	BHA-2ID-240NI250M2

Size in ft.	Part #
12'	BH-A18-2ID-144NI250M2
16'	BH-A18-2ID-192NI250M2
20'	BH-A18-2ID-240NI250M2

Size in ft.	Part #
12'	BH-2ID-144NI250M2
16'	BH-2ID-192NI250M2
20'	BH-2ID-240NI250M2

INLET



NI-250

OUTLET



NI-250

NI-250 x NI-250

Size in ft.	Part #
12'	BHA-2ID-144NI250
16'	BHA-2ID-192NI250
20'	BHA-2ID-240NI250

Size in ft.	Part #
12'	BH-A18-2ID-144NI250
16'	BH-A18-2ID-192NI250
20'	BH-A18-2ID-240NI250

Size in ft.	Part #
12'	BH-2ID-144NI250
16'	BH-2ID-192NI250
20'	BH-2ID-240NI250

INLET



2" NPT Male

OUTLET



2" NPT Male

2" NPT Male x 2" NPT Male

Size in ft.	Part #
12'	BHA-2ID-144M2
16'	BHA-2ID-192M2
20'	BHA-2ID-240M2

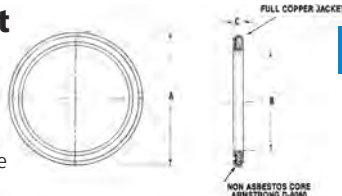
Size in ft.	Part #
12'	BH-A18-2ID-144M2
16'	BH-A18-2ID-192M2
20'	BH-A18-2ID-240M2

Size in ft.	Part #
12'	BH-2ID-144M2
16'	BH-2ID-192M2
20'	BH-2ID-240M2

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Copper Clad Gasket (double jacket) or Virgin PTFE

Oxygen clean and certified.
25 Copper gaskets per package
100 PTFE gaskets per package



Part #	Size	A		B		C		Material
		Inches	MM	Inches	MM	Inches	MM	
BH-FCG-150-COPPER	1 1/2"	1.94	49.3	1.50	38.1	.09	2.29	Copper
BH-FCG-250-COPPER	2 1/2"	3.00	76.2	2.50	63.5	.09	2.29	Copper
BH-FCG-150-PTFE	1 1/2"	1.94	49.3	1.50	38.1	.09	2.29	PTFE
BH-FCG-250-PTFE	2 1/2"	3.00	76.2	2.50	63.5	.09	2.29	PTFE

Nitrogen Tail Dust Plug Assembly

Plug material cast aluminum, black anodized Tenzalloy B-179 Alum. #713.1



For more details see 19B-15

Part #	Liquid Service	Size	CGA Designation	"T" Thread Size	A	
					Inches	MM
BH-DP-150-NI	Nitrogen	1 1/2"	NI-150	2.4-4 Stub Acme	4.000	101.6
BH-DP-250-NI	Nitrogen	2 1/2"	NI-250	3.5-4 Acme	4.000	101.6

OXYGEN

Cryogenic Bulk Hose

Cleaned for Oxygen Service to CGA G-4.1



Full Length Armor



18" Armor Cuffs

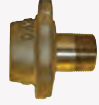


No Armor No Cuffs

1 1/2 INCH HOSE 472 PSIG MAWP

LINER: CORRUGATED 321 STAINLESS STEEL

INLET



OXY-150

OUTLET



1 1/2" NPT Male

OXY-150 x 1 1/2" NPT Male

Size in ft.	Part #
12'	BHA-112ID-144OX150M112
16'	BHA-112ID-192OX150M112
20'	BHA-112ID-240OX150M112

Size in ft.	Part #
12'	BH-A18-112ID-144OX150M112
16'	BH-A18-112ID-192OX150M112
20'	BH-A18-112ID-240OX150M112

Size in ft.	Part #
12'	BH-112ID-144OX150M112
16'	BH-112ID-192OX150M112
20'	BH-112ID-240OX150M112

INLET



OXY-150

OUTLET



OXY-150

OXY-150 x OXY-150

Size in ft.	Part #
12'	BHA-112ID-144OX150
16'	BHA-112ID-192OX150
20'	BHA-112ID-240OX150

Size in ft.	Part #
12'	BH-A18-112ID-144OX150
16'	BH-A18-112ID-192OX150
20'	BH-A18-112ID-240OX150

Size in ft.	Part #
12'	BH-112ID-144OX150
16'	BH-112ID-192OX150
20'	BH-112ID-240OX150

INLET



1 1/2" NPT Male

OUTLET



1 1/2" NPT Male

1 1/2" NPT Male x 1 1/2" NPT Male

Size in ft.	Part #
12'	BHA-112ID-144M112
16'	BHA-112ID-192M112
20'	BHA-112ID-240M112

Size in ft.	Part #
12'	BH-A18-112ID-144M112
16'	BH-A18-112ID-192M112
20'	BH-A18-112ID-240M112

Size in ft.	Part #
12'	BH-112ID-144M112
16'	BH-112ID-192M112
20'	BH-112ID-240M112

2 INCH HOSE 516 PSIG MAWP

LINER: CORRUGATED 321 STAINLESS STEEL

INLET



OXY-200

OUTLET



2" NPT Male

OXY-200 x 2" NPT Male

Size in ft.	Part #
12'	BHA-2ID-144OX200M2
16'	BHA-2ID-192OX200M2
20'	BHA-2ID-240OX200M2

Size in ft.	Part #
12'	BH-A18-2ID-144OX200M2
16'	BH-A18-2ID-192OX200M2
20'	BH-A18-2ID-240OX200M2

Size in ft.	Part #
12'	BH-2ID-144OX200M2
16'	BH-2ID-192OX200M2
20'	BH-2ID-240OX200M2

INLET



OXY-200

OUTLET



OXY-200

OXY-200 x OXY-200

Size in ft.	Part #
12'	BHA-2ID-144OX200
16'	BHA-2ID-192OX200
20'	BHA-2ID-240OX200

Size in ft.	Part #
12'	BH-A18-2ID-144OX200
16'	BH-A18-2ID-192OX200
20'	BH-A18-2ID-240OX200

Size in ft.	Part #
12'	BH-2ID-144OX200
16'	BH-2ID-192OX200
20'	BH-2ID-240OX200

INLET



2" NPT Male

OUTLET



2" NPT Male

2" NPT Male x 2" NPT Male

Size in ft.	Part #
12'	BHA-2ID-144M2
16'	BHA-2ID-192M2
20'	BHA-2ID-240M2

Size in ft.	Part #
12'	BH-A18-2ID-144M2
16'	BH-A18-2ID-192M2
20'	BH-A18-2ID-240M2

Size in ft.	Part #
12'	BH-2ID-144M2
16'	BH-2ID-192M2
20'	BH-2ID-240M2

3 INCH HOSE 315 PSIG MAWP

LINER: CORRUGATED 321 STAINLESS STEEL

INLET



OXY-300

OUTLET



3" NPT Male

OXY-300 x 3" NPT Male

Size in ft.	Part #
12'	BHA-3ID-144OX300M3
16'	BHA-3ID-192OX300M3
20'	BHA-3ID-240OX300M3

Size in ft.	Part #
12'	BH-A18-3ID-144OX300M3
16'	BH-A18-3ID-192OX300M3
20'	BH-A18-3ID-240OX300M3

Size in ft.	Part #
12'	BH-3ID-144OX300M3
16'	BH-3ID-192OX300M3
20'	BH-3ID-240OX300M3

INLET



OXY-300

OUTLET



OXY-300

OXY-300 x OXY-300

Size in ft.	Part #
12'	BHA-3ID-144OX300
16'	BHA-3ID-192OX300
20'	BHA-3ID-240OX300

Size in ft.	Part #
12'	BH-A18-3ID-144OX300
16'	BH-A18-3ID-192OX300
20'	BH-A18-3ID-240OX300

Size in ft.	Part #
12'	BH-3ID-144OX300
16'	BH-3ID-192OX300
20'	BH-3ID-240OX300

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ARGON

Double Braided Cryo Bulk Hose



Full Length Armor



18" Armor Cuffs



No Armor No Cuffs

1 1/2 INCH HOSE 665 PSIG MAWP LINER: CORRUGATED 321 STAINLESS STEEL DOUBLE BRAID

INLET



AR-150

OUTLET



1 1/2" NPT Male

AR-150 x 1 1/2" NPT Male

Size in ft.	Part #
12'	BHDA-112ID-144AR150M112
16'	BHDA-112ID-192AR150M112
20'	BHDA-112ID-240AR150M112

Size in ft.	Part #
12'	BHD-A18-112ID-144AR150M112
16'	BHD-A18-112ID-192AR150M112
20'	BHD-A18-112ID-240AR150M112

Size in ft.	Part #
12'	BHD-112ID-144AR150M112
16'	BHD-112ID-192AR150M112
20'	BHD-112ID-240AR150M112

INLET



AR-150

OUTLET



AR-150

AR-150 x AR-150

Size in ft.	Part #
12'	BHDA-112ID-144AR150
16'	BHDA-112ID-192AR150
20'	BHDA-112ID-240AR150

Size in ft.	Part #
12'	BHD-A18-112ID-144AR150
16'	BHD-A18-112ID-192AR150
20'	BHD-A18-112ID-240AR150

Size in ft.	Part #
12'	BHD-112ID-144AR150
16'	BHD-112ID-192AR150
20'	BHD-112ID-240AR150

INLET



1 1/2" NPT Male

OUTLET



1 1/2" NPT Male

1 1/2" NPT Male x 1 1/2" NPT Male

Size in ft.	Part #
12'	BHDA-112ID-144M112
16'	BHDA-112ID-192M112
20'	BHDA-112ID-240M112

Size in ft.	Part #
12'	BHD-A18-112ID-144M112
16'	BHD-A18-112ID-192M112
20'	BHD-A18-112ID-240M112

Size in ft.	Part #
12'	BHD-112ID-144M112
16'	BHD-112ID-192M112
20'	BHD-112ID-240M112

2 INCH HOSE 700 PSIG MAWP LINER: CORRUGATED 321 STAINLESS STEEL DOUBLE BRAID

INLET



AR-250

OUTLET



2" NPT Male

AR-250 x 2" NPT Male

Size in ft.	Part #
12'	BHDA-2ID-144AR250M2
16'	BHDA-2ID-192AR250M2
20'	BHDA-2ID-240AR250M2

Size in ft.	Part #
12'	BHD-A18-2ID-144AR250M2
16'	BHD-A18-2ID-192AR250M2
20'	BHD-A18-2ID-240AR250M2

Size in ft.	Part #
12'	BHD-2ID-144AR250M2
16'	BHD-2ID-192AR250M2
20'	BHD-2ID-240AR250M2

INLET



AR-250

OUTLET



AR-250

AR-250 x AR-250

Size in ft.	Part #
12'	BHDA-2ID-144AR250
16'	BHDA-2ID-192AR250
20'	BHDA-2ID-240AR250

Size in ft.	Part #
12'	BHD-A18-2ID-144AR250
16'	BHD-A18-2ID-192AR250
20'	BHD-A18-2ID-240AR250

Size in ft.	Part #
12'	BHD-2ID-144AR250
16'	BHD-2ID-192AR250
20'	BHD-2ID-240AR250

INLET



2" NPT Male

OUTLET



2" NPT Male

2" NPT Male x 2" NPT Male

Size in ft.	Part #
12'	BHDA-2ID-144M2
16'	BHDA-2ID-192M2
20'	BHDA-2ID-240M2

Size in ft.	Part #
12'	BHD-A18-2ID-144M2
16'	BHD-A18-2ID-192M2
20'	BHD-A18-2ID-240M2

Size in ft.	Part #
12'	BHD-2ID-144M2
16'	BHD-2ID-192M2
20'	BHD-2ID-240M2

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Non-Sparking Tools – Wrench, Valve Wheel (DIN 87311)

• Non-Sparking tools are made of aluminum bronze alloy

Pt #	d Inch	a Inch	l Inch	Wt. lbs.	d mm	a mm	l mm	kg
NST-WRVW-08	1 1/4	2 1/4	8 9/16	0.86	32	56	215	0.39
NST-WRVW-11	1 7/16	2 1/4	11 9/16	2.27	36	56	290	1.03
NST-WRVW-16	1 7/8	3 3/16	16	1.90	48	80	400	0.86
NST-WRVW-19	2 3/8	4	19 9/16	4.30	60	100	490	1.95
NST-WRVW-32	2 3/8	4 3/8	32	12.57	60	110	800	5.70

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See entire selection 19B-4

NITROGEN

Double Braided Cryo Bulk Hose



Full Length Armor



18" Armor Cuffs



No Armor No Cuffs

1 1/2 INCH HOSE 665 PSIG MAWP LINER: CORRUGATED 321 STAINLESS STEEL DOUBLE BRAID

INLET



NI-150

OUTLET



1 1/2" NPT Male

NI-150 x 1 1/2" NPT Male

Size in ft.	Part #
12'	BHDA-112ID-144NI150M112
16'	BHDA-112ID-192NI150M112
20'	BHDA-112ID-240NI150M112

Size in ft.	Part #
12'	BHD-A18-112ID-144NI150M112
16'	BHD-A18-112ID-192NI150M112
20'	BHD-A18-112ID-240NI150M112

Size in ft.	Part #
12'	BHD-112ID-144NI150M112
16'	BHD-112ID-192NI150M112
20'	BHD-112ID-240NI150M112

INLET



NI-150

OUTLET



NI-150

NI-150 x NI-150

Size in ft.	Part #
12'	BHDA-112ID-144NI150
16'	BHDA-112ID-192NI150
20'	BHDA-112ID-240NI150

Size in ft.	Part #
12'	BHD-A18-112ID-144NI150
16'	BHD-A18-112ID-192NI150
20'	BHD-A18-112ID-240NI150

Size in ft.	Part #
12'	BHD-112ID-144NI150
16'	BHD-112ID-192NI150
20'	BHD-112ID-240NI150

INLET



1 1/2" NPT Male

OUTLET



1 1/2" NPT Male

1 1/2" NPT Male x 1 1/2" NPT Male

Size in ft.	Part #
12'	BHDA-112ID-144M112
16'	BHDA-112ID-192M112
20'	BHDA-112ID-240M112

Size in ft.	Part #
12'	BHD-A18-112ID-144M112
16'	BHD-A18-112ID-192M112
20'	BHD-A18-112ID-240M112

Size in ft.	Part #
12'	BHD-112ID-144M112
16'	BHD-112ID-192M112
20'	BHD-112ID-240M112

2 INCH HOSE 700 PSIG MAWP LINER: CORRUGATED 321 STAINLESS STEEL DOUBLE BRAID

INLET



NI-250

OUTLET



2" NPT Male

NI-250 x 2" NPT Male

Size in ft.	Part #
12'	BHDA-2ID-144NI250M2
16'	BHDA-2ID-192NI250M2
20'	BHDA-2ID-240NI250M2

Size in ft.	Part #
12'	BHD-A18-2ID-144NI250M2
16'	BHD-A18-2ID-192NI250M2
20'	BHD-A18-2ID-240NI250M2

Size in ft.	Part #
12'	BHD-2ID-144NI250M2
16'	BHD-2ID-192NI250M2
20'	BHD-2ID-240NI250M2

INLET



NI-250

OUTLET



NI-250

NI-250 x NI-250

Size in ft.	Part #
12'	BHDA-2ID-144NI250
16'	BHDA-2ID-192NI250
20'	BHDA-2ID-240NI250

Size in ft.	Part #
12'	BHD-A18-2ID-144NI250
16'	BHD-A18-2ID-192NI250
20'	BHD-A18-2ID-240NI250

Size in ft.	Part #
12'	BHD-2ID-144NI250
16'	BHD-2ID-192NI250
20'	BHD-2ID-240NI250

INLET



2" NPT Male

OUTLET



2" NPT Male

2" NPT Male x 2" NPT Male

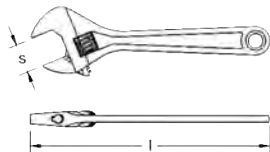
Size in ft.	Part #
12'	BHDA-2ID-144M2
16'	BHDA-2ID-192M2
20'	BHDA-2ID-240M2

Size in ft.	Part #
12'	BHD-A18-2ID-144M2
16'	BHD-A18-2ID-192M2
20'	BHD-A18-2ID-240M2

Size in ft.	Part #
12'	BHD-2ID-144M2
16'	BHD-2ID-192M2
20'	BHD-2ID-240M2

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Non-Sparking Wrench, Adjustable End



• Non-Sparking tools are made of aluminum bronze alloy

Pt #	s max Inch	l Inch	Wt. lbs.	s max mm	l mm	kg
NST-WRAE-06	3/4	6	0.29	19	150	0.13
NST-WRAE-08	15/16	8	0.62	24	200	0.28
NST-WRAE-10	1 1/8	10	1.06	28	250	0.48
NST-WRAE-12	1 3/8	12	1.68	34	300	0.76
NST-WRAE-15	1 3/4	15	3.13	45	375	1.42
NST-WRAE-18	2 3/16	18	6.19	55	450	2.81
NST-WRAE-24	2 3/8	24	10.87	60	600	4.93

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See entire selection 19B-4

NITROGEN DOUBLE BRAIDED CRYO BULK HOSES

OXYGEN

Double Braided Cryo Bulk Hose

Cleaned for Oxygen Service to CGA G-4.1



Full Length Armor



18" Armor Cuffs



No Armor No Cuffs

1 1/2 INCH HOSE 665 PSIG MAWP

LINER: CORRUGATED 321 STAINLESS STEEL DOUBLE BRAID

INLET



OXY-150

OUTLET



1 1/2" NPT Male

OXY-150 x 1 1/2" NPT Male

Size in ft.	Part #
12'	BHDA-112ID-144OX150M112
16'	BHDA-112ID-192OX150M112
20'	BHDA-112ID-240OX150M112

Size in ft.	Part #
12'	BHD-A18-112ID-144OX150M112
16'	BHD-A18-112ID-192OX150M112
20'	BHD-A18-112ID-240OX150M112

Size in ft.	Part #
12'	BHD-112ID-144OX150M112
16'	BHD-112ID-192OX150M112
20'	BHD-112ID-240OX150M112

INLET



OXY-150

OUTLET



OXY-150

OXY-150 x OXY-150

Size in ft.	Part #
12'	BHDA-112ID-144OX150
16'	BHDA-112ID-192OX150
20'	BHDA-112ID-240OX150

Size in ft.	Part #
12'	BHD-A18-112ID-144OX150
16'	BHD-A18-112ID-192OX150
20'	BHD-A18-112ID-240OX150

Size in ft.	Part #
12'	BHD-112ID-144OX150
16'	BHD-112ID-192OX150
20'	BHD-112ID-240OX150

INLET



1 1/2" NPT Male

OUTLET



1 1/2" NPT Male

1 1/2" NPT Male x 1 1/2" NPT Male

Size in ft.	Part #
12'	BHDA-112ID-144M112
16'	BHDA-112ID-192M112
20'	BHDA-112ID-240M112

Size in ft.	Part #
12'	BHD-A18-112ID-144M112
16'	BHD-A18-112ID-192M112
20'	BHD-A18-112ID-240M112

Size in ft.	Part #
12'	BHD-112ID-144M112
16'	BHD-112ID-192M112
20'	BHD-112ID-240M112

2 INCH HOSE 700 PSIG MAWP

LINER: CORRUGATED 321 STAINLESS STEEL DOUBLE BRAID

INLET



OXY-200

OUTLET



2" NPT Male

OXY-200 x 2" NPT Male

Size in ft.	Part #
12'	BHDA-2ID-144OX200M2
16'	BHDA-2ID-192OX200M2
20'	BHDA-2ID-240OX200M2

Size in ft.	Part #
12'	BHD-A18-2ID-144OX200M2
16'	BHD-A18-2ID-192OX200M2
20'	BHD-A18-2ID-240OX200M2

Size in ft.	Part #
12'	BHD-2ID-144OX200M2
16'	BHD-2ID-192OX200M2
20'	BHD-2ID-240OX200M2

INLET



OXY-200

OUTLET



OXY-200

OXY-200 x OXY-200

Size in ft.	Part #
12'	BHDA-2ID-144OX200
16'	BHDA-2ID-192OX200
20'	BHDA-2ID-240OX200

Size in ft.	Part #
12'	BHD-A18-2ID-144OX200
16'	BHD-A18-2ID-192OX200
20'	BHD-A18-2ID-240OX200

Size in ft.	Part #
12'	BHD-2ID-144OX200
16'	BHD-2ID-192OX200
20'	BHD-2ID-240OX200

INLET



2" NPT Male

OUTLET



2" NPT Male

NPT Male x NPT Male

Size in ft.	Part #
12'	BHDA-2ID-144M2
16'	BHDA-2ID-192M2
20'	BHDA-2ID-240M2

Size in ft.	Part #
12'	BHD-A18-2ID-144M2
16'	BHD-A18-2ID-192M2
20'	BHD-A18-2ID-240M2

Size in ft.	Part #
12'	BHD-2ID-144M2
16'	BHD-2ID-192M2
20'	BHD-2ID-240M2

3 INCH HOSE 500 PSIG MAWP

LINER: CORRUGATED 321 STAINLESS STEEL DOUBLE BRAID

INLET



OXY-300

OUTLET



3" NPT Male

OXY-300 x 3" NPT Male

Size in ft.	Part #
12'	BHDA-3ID-144OX300M3
16'	BHDA-3ID-192OX300M3
20'	BHDA-3ID-240OX300M3

Size in ft.	Part #
12'	BHD-A18-3ID-144OX300M3
16'	BHD-A18-3ID-192OX300M3
20'	BHD-A18-3ID-240OX300M3

Size in ft.	Part #
12'	BHD-3ID-144OX300M3
16'	BHD-3ID-192OX300M3
20'	BHD-3ID-240OX300M3

INLET



OXY-300

OUTLET



OXY-300

OXY-300 x OXY-300

Size in ft.	Part #
12'	BHDA-3ID-144OX300
16'	BHDA-3ID-192OX300
20'	BHDA-3ID-240OX300

Size in ft.	Part #
12'	BHD-A18-3ID-144OX300
16'	BHD-A18-3ID-192OX300
20'	BHD-A18-3ID-240OX300

Size in ft.	Part #
12'	BHD-3ID-144OX300
16'	BHD-3ID-192OX300
20'	BHD-3ID-240OX300

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Bulk Liquid Transfer Hoses



Smart-Hose Cryogenic Bulk Tank and Truck Loading and Unloading Hoses

FEATURES

- 1-1/2" or 2" I.D. close pitch corrugated 304 stainless steel inner core.
- Full coverage heavy-duty braid.
- Heavy-duty fully machined female NPT end fittings.
- 18" armor casing cuffs (bend restrictors) each end.
- Cryogenic to 1500 degrees F



THE WORLD'S SAFEST HOSE ASSEMBLIES!!

LL3 – Open Flow

(Valves Kept Open by Internal Cable)



Coupling Failure

(Valves are Closed by Separation and/or Back Pressure)



Smart-Hose Cryogenic

Part #	Description
SHB-180F1-3	Bulk Smart Hose 1" ID, 15 feet
SHB-180F112-3	Bulk Smart Hose 1 1/2" ID, 15 feet
SHB-180F2-3	Bulk Smart Hose 2" ID, 15 feet
SHB-180F212-3	Bulk Smart Hose 2 1/2" ID, 15 feet
SHB-180F3-3	Bulk Smart Hose 3" ID, 15 feet

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Carbon Dioxide Bulk Liquid Transfer Hoses for Truck and Rail Car Loading

The **Smart-Hose Safety System** is built into a special rubber Carbon Dioxide discharge hose. Common uses include in-plant, truck and rail car loading. This low temperature hose has been uniquely developed to meet the rugged requirements of this application. Smooth elastomer inner tube resistant to deterioration from CO2 and flexible between -65° F and 125° F. Stainless Steel reinforced braid. Pin-pricked outer cover resistant to deterioration from elements and abrasion. Corrosion resistant stainless steel end fittings with stainless steel crimp collar.

FEATURES

- Smooth inner tube elastomer formulated to be resistant to deterioration from CO2 and maintain flexibility from -65° (-53.9° C) to 125°F (51.7° C) without cracking.
- Reinforcing braid of 300 Series Stainless Steel
- Outer cover resistant to deterioration due to exposure to the elements, oil, and abrasion.
- Fitting material is brass, the crimp collar or ferrule is aluminum.
- All assemblies are hydrostatically tested to 900 psig.
- End of fittings are stamped with month and year of manufacture

COVER – Black, Special low temperature abrasions resistant copolymer

REINFORCEMENT TUBE – 2 layers of stainless steel wire braid

BRANDING – Black, Special low temperature co-polymer resistant to CO2 permeation, Orange Mylar brand – CO2 Discharge

TEMPERATURE – -65° to 180° F (-55° to 83° C)

MAINTENANCE – See Smart-Hose "Proper Use, Care & Maintenance" Booklet Form # 1999-1

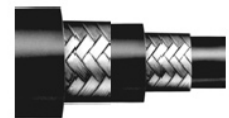
LL3 – Open Flow

(Valves Kept Open by Internal Cable)



Coupling Failure

(Valves are Closed by Separation and/or Back Pressure)



Carbon Dioxide Bulk Liquid Transfer Smart Hose

Part #	Description
SHCDT-180F1-3	Carbon Dioxide Bulk Liquid Transfer Smart Hose 1" ID, 15 feet
SHCDT-180F112-3	Carbon Dioxide Bulk Liquid Transfer Smart Hose 1 1/2" ID, 15 feet
SHCDT-180F2-3	Carbon Dioxide Bulk Liquid Transfer Smart Hose 2" ID, 15 feet

*For other lengths, replace the 180 in the part number with the desired length in inches.

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