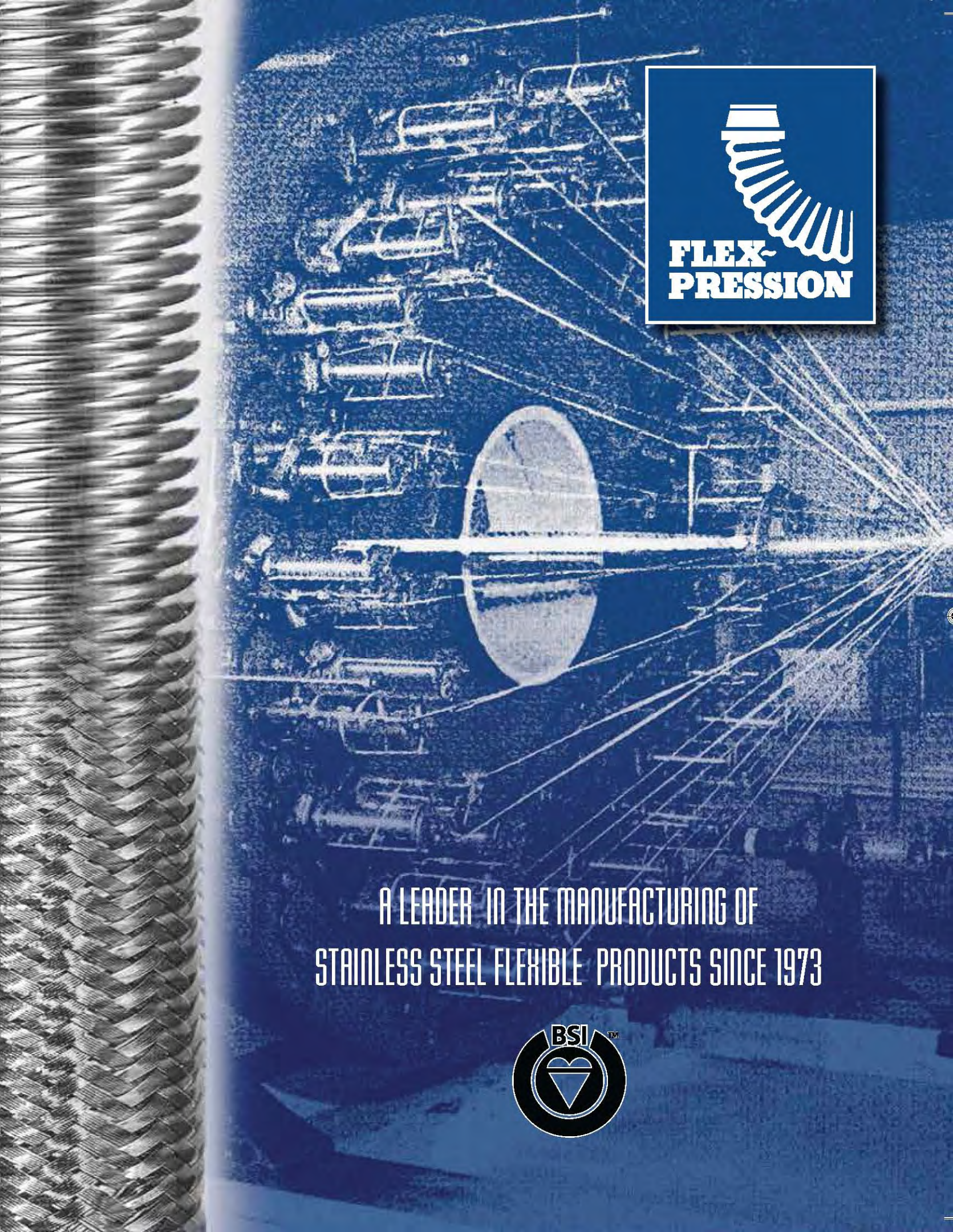
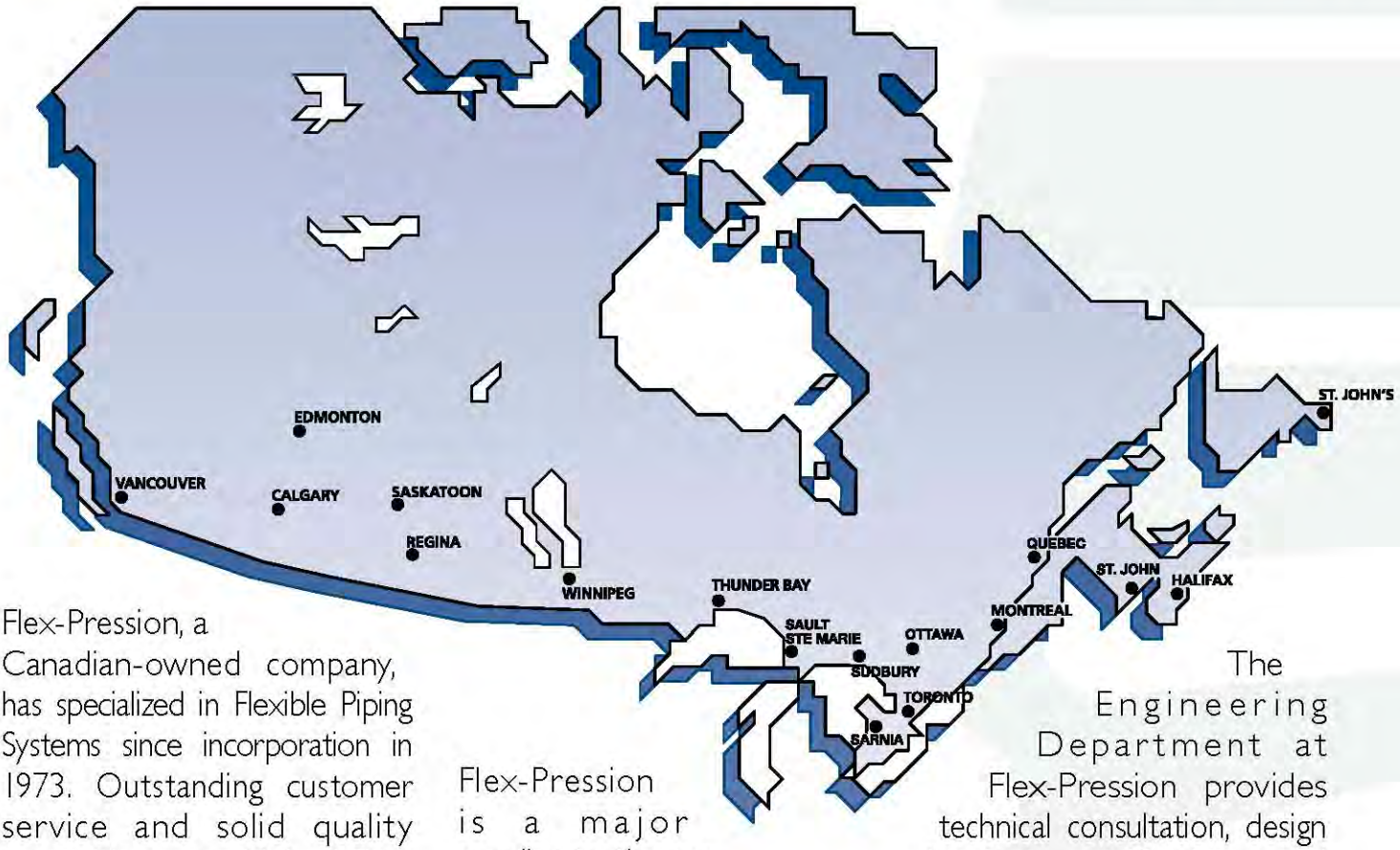

FLEX-
PRESSION
A LEADER IN THE MANUFACTURING OF
STAINLESS STEEL FLEXIBLE PRODUCTS SINCE 1973
BSI™

Covering Industry from Coast to Coast



Flex-Pression, a Canadian-owned company, has specialized in Flexible Piping Systems since incorporation in 1973. Outstanding customer service and solid quality control have established Flex-Pression as a leader in the manufacture of Stainless Steel flexible products. Flex-Pression manufactures Stainless Steel Braid, Convoluted Flexible Hose, Metal Hose Assemblies and Expansion Joints to meet all flexible piping applications.

Flex-Pression is a major supplier to the gas, steel, chemical and paper industries, and has an excellent reputation for the flexible transfer of combustible and toxic substances. Flex-Pression uses new technology and innovative production methods to satisfy the needs of international industrial markets, and fully guarantees every product it manufactures.

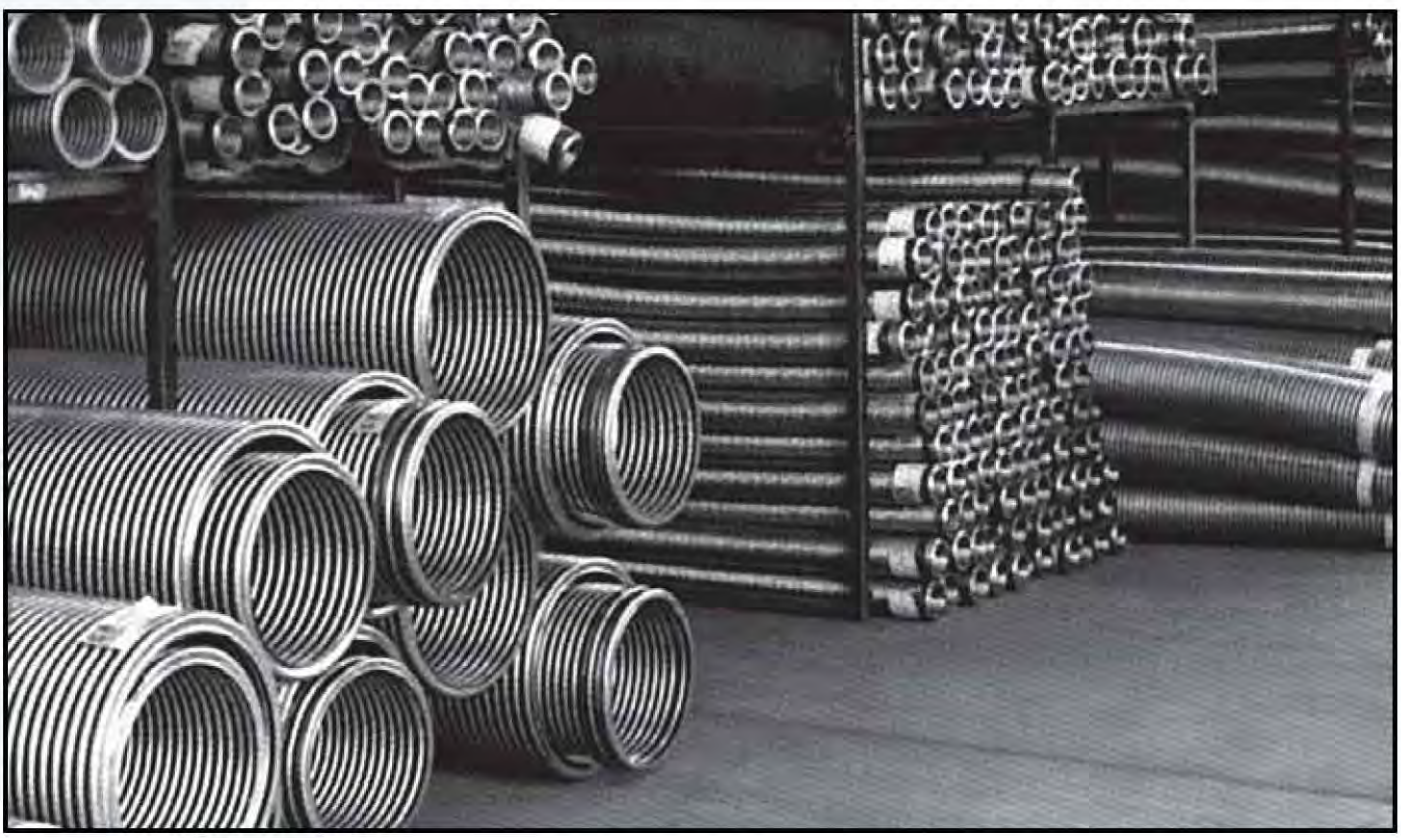
The Engineering Department at Flex-Pression provides technical consultation, design drawings, specifications, and documentation support. Engineering oversees quality control and technical archives, and fully supports the Sales Department as needed.

Flex-Pression continues to improve production capacities, quality control, and customer service to anticipate the demands of new piping applications.

Through a Complete Distribution Network.

In house capabilities include:

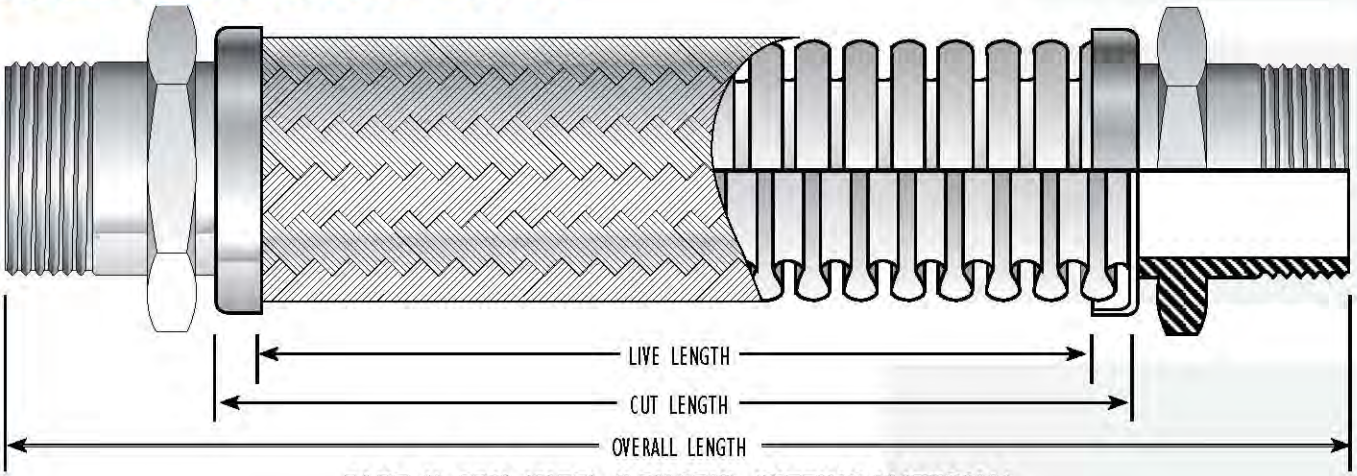
- Quality assurance certification ISO 9001-2008
- Machinery for manufacturing corrugated metal hose
- Machinery for tubular braiding
- Assembly division for production of hose assemblies and expansion joints
- Destructive and non-destructive testing facilities
- Cleaning and degreasing facilities
- Complete inventory of components



Flex-Pression stocks a wide variety of flexible piping to meet their clients needs.

The technical and engineering data in this catalog is based on many years of experience in the metal hose industry. Since Flex Pression Ltd. does not control or supervise any additional fabrication, installation or improper application of our products, we cannot assume responsibility for subsequent performance.

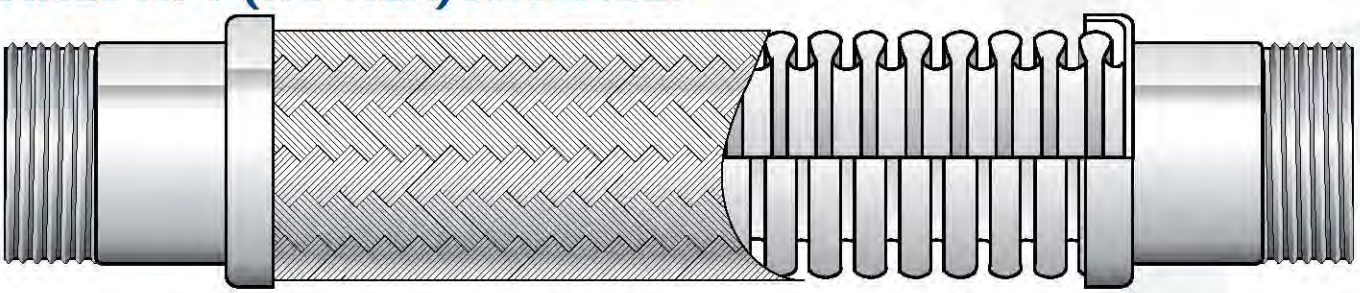
MALE NPT HEX ASSEMBLY



PART #: FPH-(SIZE)-(LENGTH)-(FITTING MATERIAL)

- All hose assemblies from 1/4" to 1" come standard with a steel male NPT solid hex fitting.
- This allows for:
  - Easier installation
  - Longer live hose length
  - Greater flexibility
- Also available with stainless steel 304, 316, and Monel 400 hex fittings up to 4".

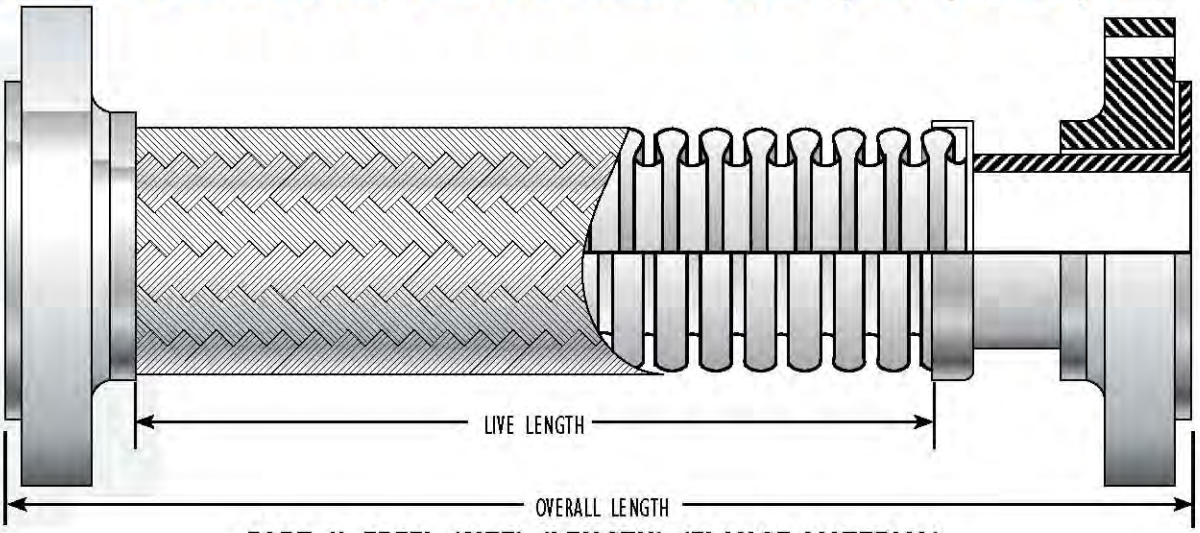
MALE NPT (NO HEX) ASSEMBLY



PART #: FPM-(SIZE)-(LENGTH)-(FITTING MATERIAL)

- Standard hose assembly available up to 6" I.D.
- Available with steel, stainless steel 304 & 316 as well as Monel 400 fittings.

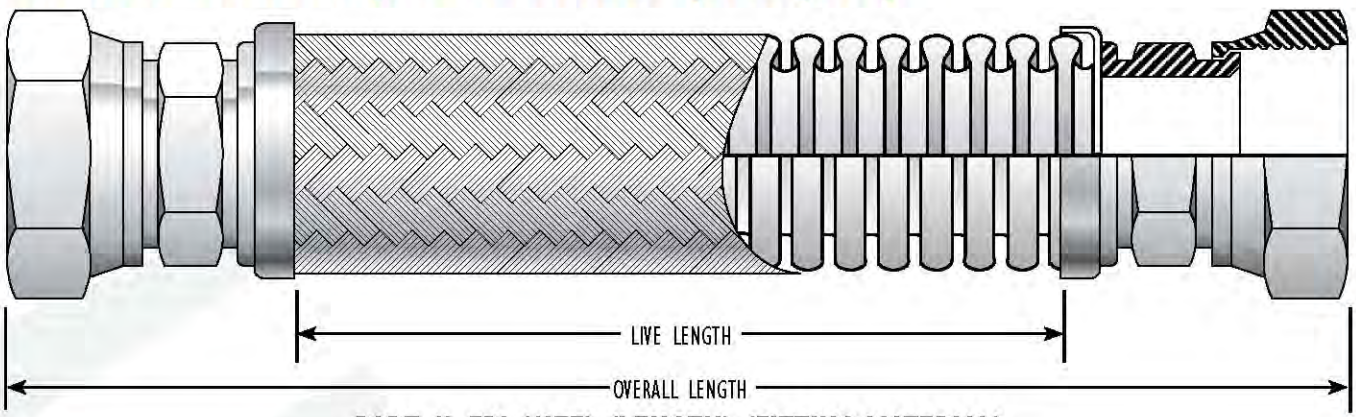
FIXED BY FLOATING, FLANGE ASSEMBLY (LAP JOINT)



PART #: FPFFL-(SIZE)-(LENGTH)-(FLANGE MATERIAL)

- Flanges available in #150, #300, #600 class as well as metric DIN.
- Flanged assemblies can be supplied with galvanized carbon, stainless steel or Monel flanges.
- All stub-ends for floating flanges are stainless steel or Monel. SCH #10, #40 and #80

FEMALE SWIVEL JIC ASSEMBLY (SAE J514)



PART #: FPJ-(SIZE)-(LENGTH)-(FITTING MATERIAL)

- Available with SS316 or Plated Steel nuts and seats

ALL FLEX-PRESSION HOSE ASSEMBLIES ARE:

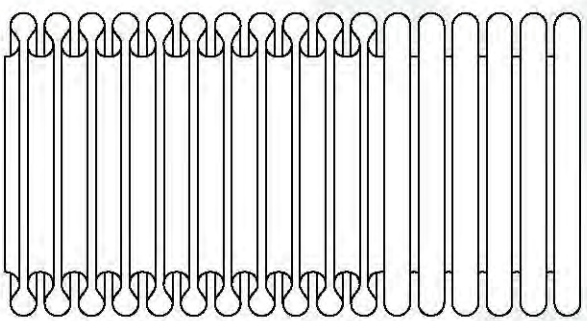
- Available in 304, 321, 316L and Monel 400.
- Welded by certified welders, using approved welding procedures, to section IX of the ASME boiler and pressure vessel code.
- Adhere to a strict quality assurance program during all stages of production.
- 100% tested: Hydrostatic, pneumatic and Nitrogen testing available.
- Available with permanent stainless steel tags to include any information requested.
- Available with CRN#
- Available with many other fitting configurations.

FLEX-PRESSION ANNULAR CORRUGATED HOSE

STAINLESS STEEL: 304, 321, 316L & MONEL 400
STANDARD, CLOSE PITCH & SUPERFLEX

NOMINAL I.D. (INCHES)	HOSE TYPE	HOSE O.D. (INCHES)	WALL THICKNESS (INCHES)	BEND RADIUS STATIC (INCHES)	BEND RADIUS CONSTANT (INCHES)	MAX WORKING PRESSURE (PSIG)	BURST PRESSURE (PSIG)
1/2"	SSU SSB	0.76 0.81	0.010	1.7	7.0	75 1125	--- 4500
3/4"	SSU SSB	1.05 1.10	0.010	2.0	8.0	50 1050	--- 4200
1"	SSU SSB	1.35 1.40	0.010	3.0	10.0	40 875	--- 3500
1 1/4"	SSU SSB	1.78 1.83	0.015	3.1	10.0	40 650	--- 2600
1 1/2"	SSU SSB	2.17 2.25	0.016	3.5	11.0	20 650	--- 2600
2"	SSU SSB	2.63 2.71	0.016	4.5	12.0	15 495	--- 1980
2 1/2"	SSU SSB	3.39 3.47	0.016	5.0	13.0	12 365	--- 1475
3"	SSU SSB	3.97 4.05	0.016	7.5	16.0	8 250	--- 1000
3 1/2"	SSU SSB	4.43 4.51	0.016	8.0	17.0	7 330	--- 1325
4"	SSU SSB	4.83 4.91	0.016	10.0	20.0	5 270	--- 1090
5"	SSU SSB	5.97 6.07	0.018	12.0	24.0	3 225	--- 900
6"	SSU SSB	6.95 7.05	0.018	15.0	30.0	3 185	--- 739
8"	SSU SSB	9.10 9.30	0.020	20.0	40.0	3 142	--- 569
10"	SSU SSB	11.24 11.44	0.024	25.0	50.0	2 160	--- 650
12"	SSU SSB	13.26 13.46	0.028	30.0	60.0	2 150	--- 600
14"	SSU SSB	14.85 15.05	0.040	38.0	75.0	2 130	--- 520
16"	SSU SSB	18.43 18.68	0.040	36.0	72.0	1 110	--- 440
18"	SSU SSB	20.40 20.70	0.040	37.0	74.0	1 100	--- 400
20"	SSU SSB	22.80 23.10	0.040	38.0	76.0	1 80	--- 340

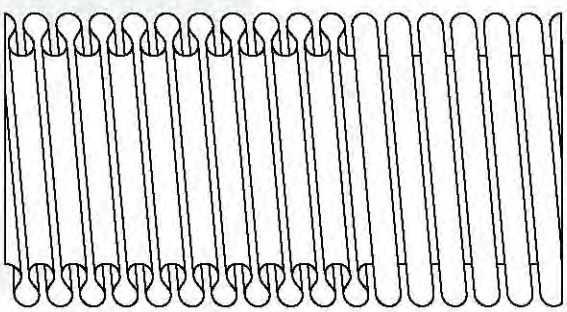
SSU = hose only SSB = with single braid
For SS2B = with double braid, multiply SSB max. working pressure by 1.5
Specified pressure ratings are valid at 70°F, for greater operating temperatures, maximum allowable working pressures must be decreased according to the temperature correction factors chart.
6" I.D. and above available with heavy duty braided braid. Full vacuum service all sizes. Heavy duty braid and (heavy wall) hose available for higher working pressures.



Annular Corrugation.

STAINLESS STEEL: 304, 321, 316L & MONEL 400
STANDARD, CLOSE PITCH & SUPERFLEX

NOMINAL I.D. (INCHES)	HOSE TYPE	HOSE O.D. (INCHES)	WALL THICKNESS (INCHES)	BEND RADIUS CLOSE PITCH STATIC (INCHES)	BEND RADIUS CLOSE PITCH CONSTANT (INCHES)	MAX WORKING PRESSURE (PSIG)	BURST PRESSURE (PSIG)
1/4"	SSU SSB	0.43 0.48	0.010	1.7	3.5	140 2000	- 8000
3/8"	SSU SSB	0.59 0.64	0.010	2.5	5.1	100 1850	- 7400
1/2"	SSU SSB	0.73 0.78	0.010	3.4	5.9	75 1125	- 4500
3/4"	SSU SSB	1.00 1.05	0.010	4.3	7.4	50 1050	- 4200
1"	SSU SSB	1.30 1.35	0.010	5.5	8.4	40 875	- 3500



Helical Corrugation.

SSU = hose only SSB = with single braid

For SS2B = with double braid, multiply SSB max. working pressure by 1.5. Specified pressure ratings are valid at 70°F, for greater operating temperatures, maximum allowable working pressures must be decreased according to the temperature correction factors chart.

TEMPERATURE CORRECTION FACTORS

TEMPERATURE °F	°C	304-316 STAINLESS	321 STAINLESS	MONEL
70	21	1.00	1.00	1.00
150	66	.96	.97	.93
200	93	.92	.94	.90
250	121	.91	.92	.87
300	149	.86	.88	.83
350	177	.83	.86	.82
400	204	.82	.83	.79
450	232	.80	.81	.77
500	260	.77	.78	.73
600	316	.73	.74	.72
700	371	.69	.70	.71
800	427	.64	.66	.70
900	482	.58	.62	
1000	538		.60	
1100	593		.58	
1200	649		.55	
1300	704		.50	
1400	760		.44	
1500	816		.40	

COMPUTING MINIMUM LENGTHS FOR HOSE ASSEMBLIES

For optimum service life, each hose assembly must be designed to the specific application.

1. Select proper hose, from product pages taking into consideration the size, pressure, and temperature requirement.
2. To compute minimum live length requirements, follow the instructions below:

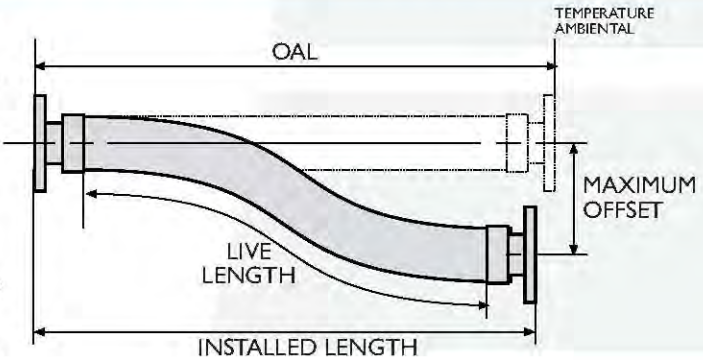
A. Locate the minimum bend radius for intermittent flexure by referring to that column on the product specification page for that hose.

B. Locate this bend radii number in the left column of the table below. (If the radii falls between numbers on the table, use next highest number).

C. Locate the required offset for your applications in the figures at the top of the table.

D. The minimum live length required is the intersecting box of the 2 columns.

E. To determine static bend minimum lengths, simply substitute static bend radii data in step B and continue in the same manner.



OFFSET MOTION (max. dist. from center line)	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	5"	6"	8"	10"
CENTER LINE BEND RADIUS (in.)	**MINIMUM LIVE LENGTH REQUIRED FOR OFFSET MOTION**													
2	1 1/4	1 3/4	2 1/4	2 1/2	3 1/4	3 3/4	4 1/2	5 1/4	6 3/4	8	9 1/4	10 1/2	12 3/4	15
4	1 3/4	2 1/2	3	3 1/2	4 1/2	5	6 1/4	7 1/4	9	11 3/4	12	13 1/2	16	18 1/2
6	2 1/4	3 1/4	3 3/4	4 1/4	5 1/4	6 1/4	7 1/2	8 3/4	10 3/4	12 3/4	14 1/4	16	19	21 1/2
8	2 1/2	3 1/2	4 1/4	5	6	7	8 3/4	10	12 1/2	14 1/2	16 1/4	18	21 1/4	24 1/4
10	2 3/4	4	4 3/4	5 1/2	6 3/4	8	9 3/4	11 1/4	13 3/4	16	18	20	23 1/2	26 1/2
12	3	4 1/4	5 1/4	6	7 1/2	8 1/2	10 1/2	12 1/4	15	17 1/2	19 1/2	21 1/2	25 1/2	28 3/4
14	3 1/4	4 3/4	5 3/4	6 1/2	8	9 1/4	11 1/4	13 1/4	16 1/4	18 3/4	21	23 1/2	27 1/4	30 3/4
16	3 1/2	5	6	7	8 1/2	10	12 1/4	14	17 1/4	20	22 1/2	25	29	32 3/4
18	3 3/4	5 1/4	6 1/2	7 1/2	9	10 1/2	13	14 3/4	18 1/4	21 1/4	24	26	30 1/2	34
20	4	5 1/2	6 3/4	7 3/4	9 1/2	11	13 1/2	15 3/4	19 1/4	22 1/2	25	27 1/2	32 1/4	36 1/4
25	4 1/2	6 1/4	7 1/2	8 3/4	10 3/4	12 1/4	15	17 1/2	21 1/2	25	28	30 1/2	35 3/4	40
30	4 3/4	6 3/4	8 1/4	9 1/2	11 3/4	13 1/2	16 1/2	19	23 1/2	27 1/4	30 1/2	33 1/2	40	43 3/4
35	5 1/4	7 1/4	9	10 1/4	12 1/2	14 1/4	17 3/4	20 1/4	26 1/4	29 1/2	32 3/4	36	42	47
40	5 1/2	8	9 1/2	11	13 1/2	15 1/2	19	22	27	31 1/4	35	38 1/2	44 3/4	50
45	6	8 1/4	10	11 3/4	14 1/4	16 1/2	20 1/4	23 1/2	28 1/2	33	37	41	47 1/2	53
50	6 1/4	8 3/4	10 3/4	12 1/4	15	17 1/2	21 1/2	24 1/2	30	35	39	43	50	56
60	6 3/4	9 1/2	11 3/4	13 1/2	16 1/2	19	23 1/4	27	33	38	43	47	54 1/2	61
70	7 1/4	10 1/4	12 3/4	14 3/4	17 3/4	20 1/2	25	29	35 1/2	41 1/2	46	51	58 3/4	65 3/4

APPLICABLE FOR STATIC BEND ONLY

MINIMUM LIVE HOSE LENGTH FOR NORMAL VIBRATION

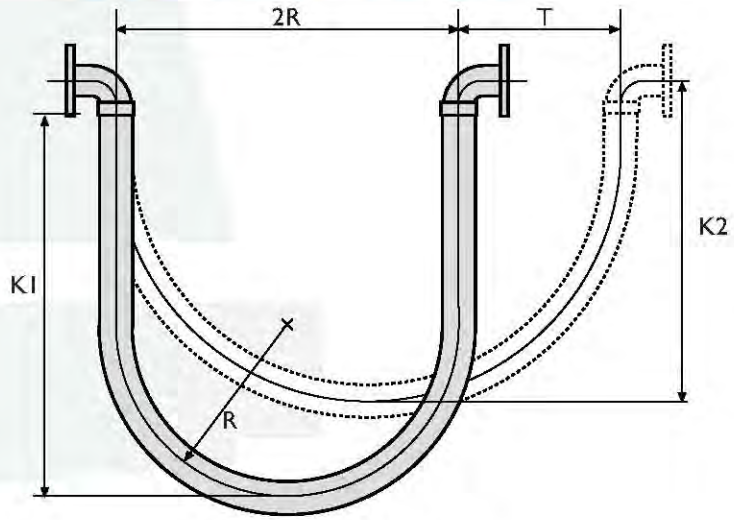
1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	8"
5"	5 1/2"	6"	6 1/2"	7"	8 1/2"	9"	9 1/4"	9 1/2"	10 1/2"	11"	12"	13"	14 1/2"	16 3/4"

NOTES:

1. If vibration is severe, add 20% to minimum live length.
2. Add braid sleeves length: 1/4" to 3/4" dia add 1", 1" to 2" dia add 1 1/2" and 2 1/2" to 12" dia add 2".
3. Add fittings length to obtain overall length.
4. If vibration is extremely severe, consult our engineering department.

COMPUTING MINIMUM LENGTHS FOR HOSE ASSEMBLIES

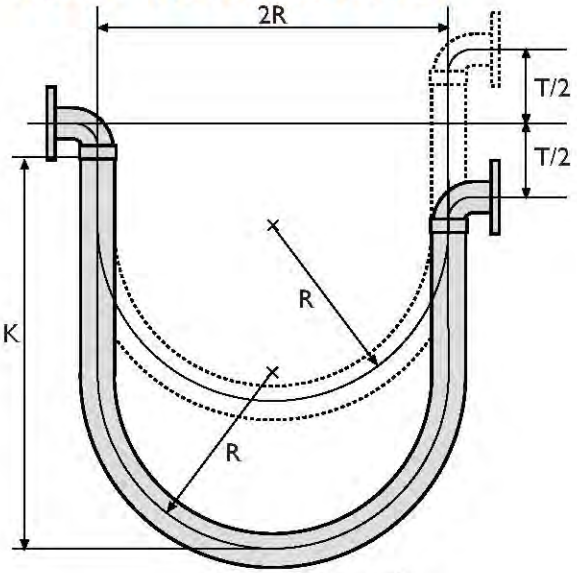
HORIZONTAL TRAVEL LOOP INSTALLATION



$$L.L. = 4*R + 1.57T$$
$$K1 = 1.43*R + 0.785T$$
$$K2 = 1.43*R + T/2$$

Note: Always use pipe elbows for this type of installation.

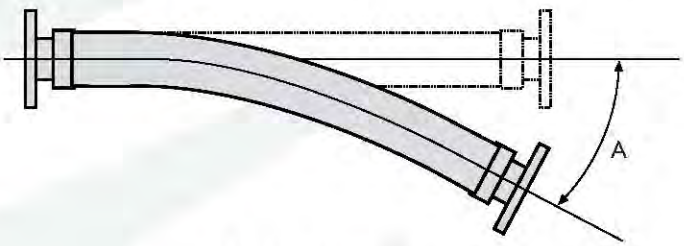
VERTICAL TRAVEL LOOP INSTALLATION



$$L.L. = 4*R + T/2$$
$$K = 1.43*R + T/2$$

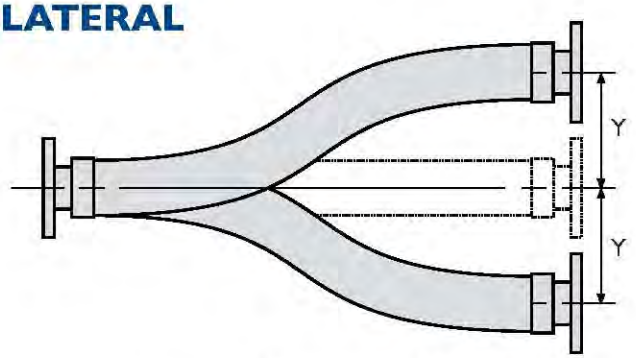
Note: Always use pipe elbows for this type of installation.

ANGULAR



$$L.L. = \frac{3.1416*R*A}{180} + 2*F$$

LATERAL



$$L.L. = \sqrt{(6*Y*R) + Y^2} + (2*F)$$
$$I.L.L = 0.95*L.L.$$

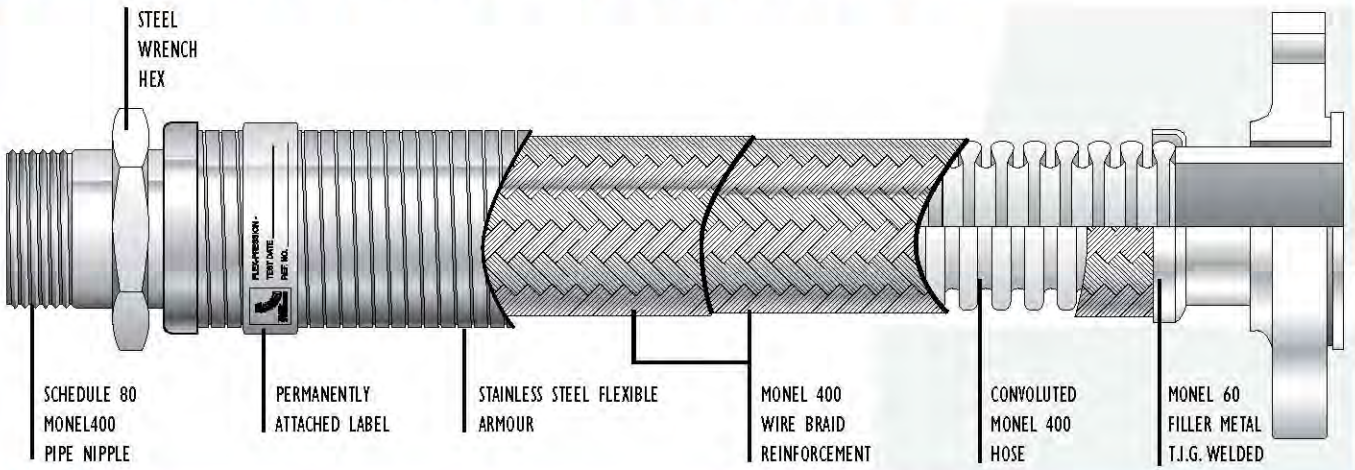
Note: Where motion "Y" occurs both sides of centerline, hose live length should be based on total travel or 2 times "Y"

L.L. = HOSE LIVE LENGTH (INCHES)
I.L.L.= INSTALLED HOSE LIVE LENGTH (INCHES)
R = CENTERLINE BEND RADIUS (INCHES)
Y = LATERAL OFFSET (INCHES)
A = BEND ANGLE (DEGREES)
T = TRAVERSE (INCHES)
F = HOSE NOMINAL DIAMETER (INCHES)

NOTES:
1. For intermittent offset, movement must not exceed 25% R value.
2. F is a safety factor to eliminate stress on welds caused by movement.

CHLORINE TRANSFER HOSE ASSEMBLIES

MONEL CHLORINE TRANSFER HOSE ASSEMBLIES



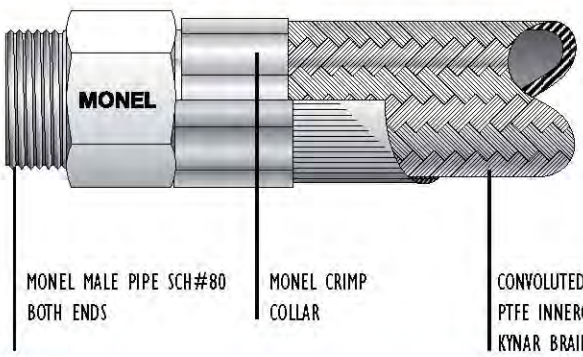
- Complies with Chlorine Institute Pamphlet #6 specifications.
- All assemblies tested at twice the operating pressure.
- Flanged assemblies also made using schedule 80 Monel stub ends with steel floating flanges.
- All components in stock for prompt assembly.
- All assemblies permanently labeled, cleaned, dried and capped.

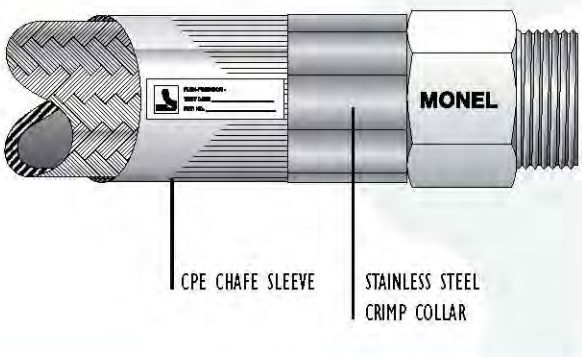
How to order:

SIZE (INCHES)	BASIC PART NO.*	LENGTH (INCHES)	FITTINGS
1/2"*	*FP-MON2B-8		MONEL SCHEDULE 80
3/4"	FP-MON2B-12	IN	MALE NIPPLES
1"*	FP-MON2B-16	INCHES	OR
1 1/4"	FP-MON2B-20	AS	MONEL SCHEDULE 80
1 1/2"*	FP-MON2B-24	REQUIRED	STUB ENDS WITH STEEL
2"	FP-MON2B-32		FLOATING FLANGES

* *N.B. Basic Part No.* *FPMON: Monel Hose*
FPTFE: PTFE Hose

TEFLON CHLORINE TRANSFER HOSE ASSEMBLIES

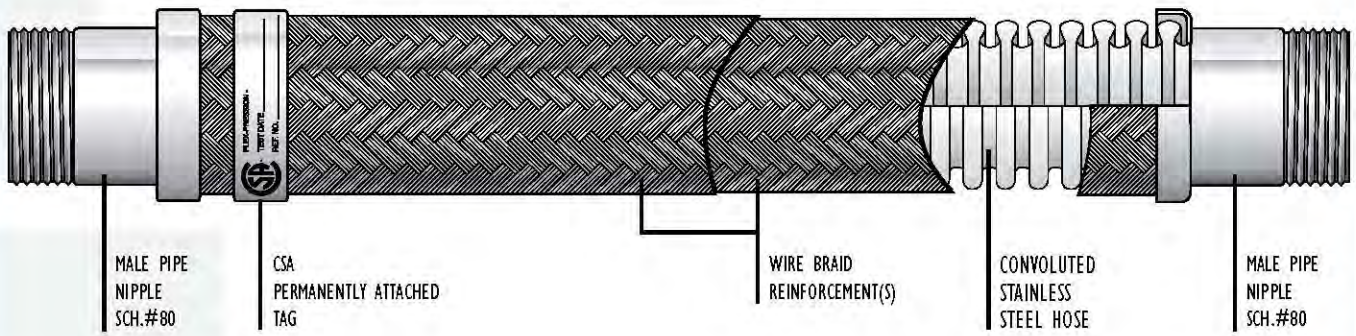




CSA INTERNATIONAL CERTIFICATION FOR FLEX-PRESSION

STAINLESS STEEL CSA METAL HOSE ASSEMBLIES

for natural gas, propane and ammonia transfer, all sizes



Meets the requirements of standard CR96-001

- Stainless steel flexible metal hose assemblies for natural gas, propane and ammonia service.
- 1/2" I.D. through 6" I.D. with fittings welded each end.
- Permanently attached CSA TAGS
- All assemblies tested for 350 P.S.I. Max. working pressure with 1750 P.S.I. Min. burst
- All standard steel and stainless steel fittings and flanges can be supplied from stock.
- Special threads, elbows etc., also available.
- CSA Group certificate 1102447

How to order:

SIZE (INCHES)	BASIC PART NO.	LENGTH (INCHES)		FITTINGS
1/2"	FP-SSB-8	OVERALL LENGTH		SPECIFY
3/4"	FP-SSB-12	AS REQUIRED.	(EXAMPLES	MATERIAL,
1"	FP-SSB-16	USE 4 DIGITS,	0144 IS	THREAD,
1 1/4"	FP-SSB-20	FIRST 3 TOTAL	14 1/2"	FLANGE ETC,
1 1/2"	FP-SSB-24	INCHES AND	OVERALL	FIXED OR
2"	FP-SSB-32	LAST DIGIT	-3000 IS	FLOATING,
2 1/2"	FP-SSB-40	FRACTIONS	25 FEET	SPECIAL
3"	*FP-SS2B-48	OF AN INCH	OVERALL)	ELBOWS,
4"	*FP-SS2B-64	IN EIGHTS.		
6"	*FP-SS2B-96			

* Denotes double braid Note: When B16.5 150# flanges are used, the maximum rated working pressure is 275 P.S.I.

FLEX-PRESSION

PTFE HOSE

WCS/BCS STYLE

PTFE Tube:

- Pure PTFE: white or static dissipating conductive.
  WCS: natural white PTFE tube
  BCS: conductive tube to 10^{-6} MΩ
- Tubes are "low profile", self-draining, helical convolution form.
- Neutral to taste, color or odor.
- Non-stick, non-contaminating tube cleans easily.
- Steam, detergent or caustic cleanable.
- High tensile type 304 stainless steel braided

Approvals:

- F.D.A. (Food and Drug Administration)
- United States PHARMACOPEIA Class VI

Size Range: 1/2" to 4"

Temperature Rating:

- -100°F (-73°C) to +450°F (+232°C)

TS/TB SERIES

Inner Tube:

- Pure PTFE: white or static dissipating conductive.
  TS Series: white
  TB Series: conductive
- Stainless steel braided.
- Neutral to taste, color or odor.
- Non-stick, non-contaminating tube cleans easily.
- Steam, detergent or caustic cleanable.

Approvals:

- F.D.A. Approved
- United States PHARMACOPEIA Class VI

Temperature Rating:

- -100°F (-73°C) to +500°F (+260°C)

TLCT/WTLCT

Construction:

- Smooth tube internally bonded to a rubber hose type construction. Multiple reinforcement, double helix wire supported. Chemically resistant, ozone and abrasion resistant cover.
- Pure PTFE: white tube (TLCT) or antistatic (CTLCT).
- Easy to clean
  -Assured sterility
  -Non-stick smooth tube
  -Can be cleaned with steam, caustics, solvents or other cleaning agents.

Approvals:

- F.D.A. (Food and Drug Administration)
- PHARMACOPEIA Class VI

Temperature Rating:

- 177°C (350°F) to -40°C (-40°F). Hose has successfully passed internal steam tests at 208°C (406°F).

FGR SERIES HOSE (RUBBER)

- From water to wine, from fragrance to flavours, our FGR is a proven transfer hose.

Construction:

- TUBE: high temperature rated Nitrile-PVC blend. Pure white.
- REINFORCEMENT AND COVER: multi plies of high temperature rated rubber; fabric reinforcements for pressure capability and a dual helix wire that enables the hose to flex easily, withstand vacuum and facilitate static grounding.

Approvals: A registered and U.S.D.A. approved. All hose materials and fittings exceed F.D.A., U.S.D.A., N.D.A. and A standards.

Size Range: 1/2 inch I.D. through 4 inch I.D.

Temperature Rating: -40°F to +250°F

CONVOLUTED SS BRAIDED WCS/BCS

SIZE INCHES	I.D. INCHES	O.D. INCHES	PART NUMBER	MINIMUM BEND RADIUS INCHES	VACUUM IN./HG	MAXIMUM WORKING PRESSURE (P.S.I.)	MINIMUM BURST PRESSURE (ROOM TEMP.) (P.S.I.)	WEIGHT
1/2	0.50	0.687	2708WCS or BCS	2.50	Full	1500	6000	0.20
3/4	0.75	1.093	2712WCS or BCS	3.00	Full	1200	4800	0.32
1	1.00	1.360	2716WCS or BCS	3.25	Full	1000	4300	0.41
1 1/4	1.25	1.594	2720WCS or BCS	6.00	26	750	3200	0.70
1 1/2	1.50	1.900	2724WCS or BCS	6.50	24	650	2600	0.75
2	2.00	2.425	2732WCS or BCS	7.50	20	450	2100	1.05
3	3	3.85	48TWOB/TBOB	14.00	FULL	175	700	2.60
4	4	5.00	64TWOB/TBOB	16.00	FULL	150	600	3.20

SMOOTH "*TRUE*" BORE SS BRAIDED TS/TB

I.D. INCHES	O.D. INCHES	PART NUMBER	MINIMUM BEND RADIUS INCHES	VACUUM IN./HG	MAXIMUM WORKING PRESSURE (P.S.I.)	MINIMUM BURST PRESSURE (ROOM TEMP.) (P.S.I.)	WEIGHT
1/8"	.24	-2TS/TB	1.5	29.9	3.000	15.000	.05
1/4"	.38	-4TS/TB	2.5	29.9	3.000	13.500	.08
3/8"	.52	-6TS/TB	3.5	29.9	2.500	10.000	.12
1/2"	.66	-8TS/TB	4.0	29.9	2.000	8.500	.15
3/4"	.88	-12TS/TB	7.0	29.9	1.200	4.800	.22
1"	1.160	-16TS/TB	12.0	20	800	3.200	.31
1"	1.275	-16TD/TBD	9.0	20	1.200	4.800	.33
1 1/2"	1.740	-24TD/TBD	15.0	15	900	4.000	.44

SMOOTH BORE RUBBER COVERED TLCT

I.D. INCHES	O.D. INCHES	PART NUMBER	MINIMUM BEND RADIUS INCHES	VACUUM IN./HG	RECOMMENDED WORKING PRESSURE (P.S.I.)	(BAR)	MINIMUM BURST PRESSURE (ROOM TEMP.) (P.S.I.)	(BAR)	WEIGHT
1/2	0.91	8TLCT/WTLCT	3.0		500	35.0	2100	147	0.35
3/4	1.25	12TLCT/WTLCT	4.5		500	35.0	2100	140	0.62
1	1.50	16TLCT/WTLCT	6.0	FULL	450	31.5	1800	126	0.75
1 1/4	1.75	20TLCT/WTLCT	9.0	VACUUM	320	22.4	1600	112	0.98
1 1/2	2.05	24TLCT/WTLCT	11.0	RATED	300	21.0	1350	94	1.20
2	2.65	32TLCT/WTLCT	13.5	ALL	250	17.5	1200	84	1.50
2 1/2	3.20	40TLCT/WTLCT	20.0	SIZES	200	14.0	900	63	2.35
3	3.70	48TLCT/WTLCT	22.0		150	10.5	700	49	2.50
4	4.70	64TLCT/WTLCT	40.0		150	10.5	600	42	3.60

FOOD GRADE HOSE FGR

I.D. INCHES	O.D. INCHES	PART NUMBER	DYNAMIC BEND RADIUS	MAXIMUM WORKING PRESSURE (P.S.I.)	MINIMUM BURST PRESSURE (ROOM TEMP.) (P.S.I.)	WEIGHT
1/2	1	HOSFGR-08	5"	400	1650	0.4
3/4	1 3/16	HOSFGR-12	6"	375	1500	0.5
1	1 7/16	HOSFGR-16	8"	350	1450	0.6
1 1/2	2	HOSFGR-24	10"	300	1200	0.9
2	2 9/16	HOSFGR-32	12"	250	1050	1.3
2 1/2	3 1/8	HOSFGR-40	16"	150	700	1.9
3	3 5/8	HOSFGR-48	20"	150	600	2.3
4	4 11/16	HOSFRG-64	28"	150	600	3.1

PTFE HOSE FITTINGS: 316SS, MONEL & PTFE ENCAPSULATED

MALE NPT & FEMALE NPT FJIC & MJIC UNION

STYLE 03
MALE PIPE THREAD

STYLE 06
FEMALE PIPE THREAD

STYLE 02
JIC FEMALE SWIVEL

STYLE 08
JIC/ADAPTOR UNION, MALE

COMPRESSION FITTINGS

STYLE 31FN
COMPRESSION CONNECTOR
(WITH FERRULE AND NUT)

STYLE 32
COMPRESSION TUBE
ADAPTOR

SANITARY

STYLE 10
SOME SIZES AVAILABLE
PTFE 'ENCAPSULATED'

STYLE 11
'MINI' SERIES

STYLE 20
BEVEL SEAT

PTFE 'ENCAPSULATED' CAM & GROOVE FITTINGS

STYLE 16T
FEMALE CAM & GROOVE

STYLE 17T
MALE CAM & GROOVE

STYLE 18T
CAM & GROOVE
X FLG. ADAPTOR

"O" RING FEMALE WITH NUT

STYLE 16
FEMALE WITH NUT

LAP JOINT FLANGE

STYLE 12T
PTFE LINED FLANGE
RETAINER, LAP JOINT

STYLE 12
FLANGE RETAINER, LAP JOINT

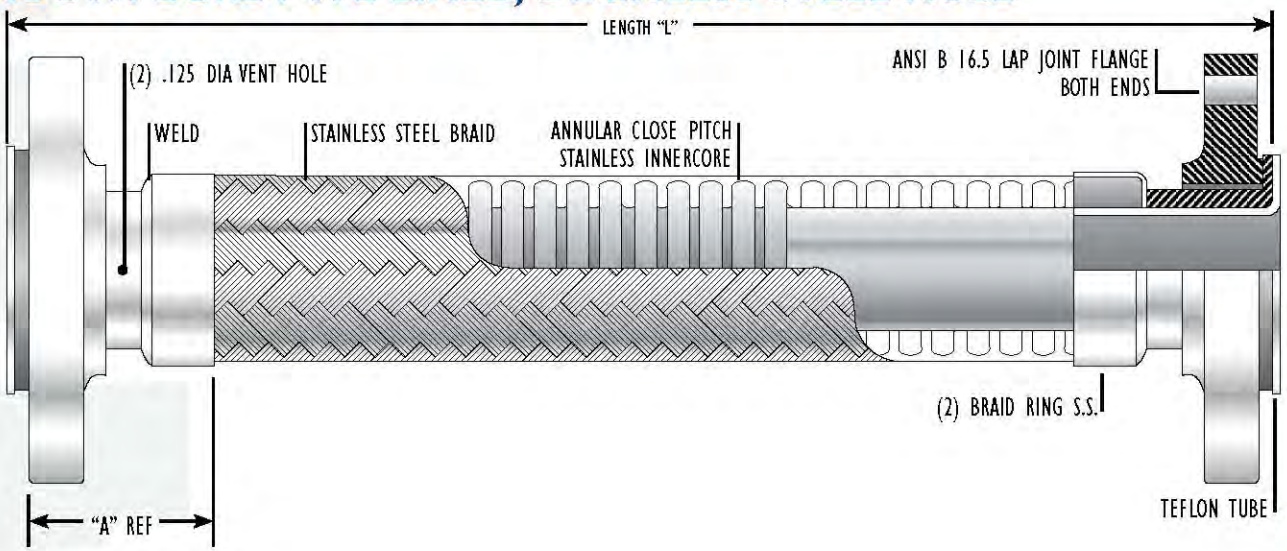
BUTT WELD

STYLE 41
TUBE BUTT WELD

STYLE 01
PIPE BUTT WELD

NOTE: Also available in plated carbon, steel and brass in select styles
Many other fittings available

SMOOTH BORE PTFE LINED, STAINLESS STEEL HOSE



How to order:

PART NUMBER	NOM SIZE	HOSE I.D.	HOSE O.D.	WORKING PRESSURE (P.S.I.) 70°F	350°F	MIN. BEND RADIUS (INCHES)	VACUUM RATING @ 70°F	VACUUM RATING @250°F	"A" REF
16MTL1212SCT-"L"	1"	0.86	1.50	275	200	10	FULL	FULL	3.00
24MTL1212SCT-"L"	1 1/2"	1.32	2.12	275	200	12	FULL	FULL	3.00
32MTL1212SCT-"L"	2"	1.82	2.75	275	200	18	FULL	FULL	3.50
48MTL1212SCT-"L"	3"	2.90	4.10	275	200	28	FULL	26"	3.50
64MTL1212SCT-"L"	4"	3.75	5.12	250	190	42	FULL	24"	4.00
96MTL1212SCT-"L"	6"	5.75	7.30	200	160	60	22" Hg	20"	4.50
128MTL1212SCT-"L"	8"	7.75	9.45	185	160	84	22" Hg	C.F.	5.00

1. Temperature range: -65°F to +350°F
2. Test pressure: 1.5 times oper. pressure
3. Clean, dry, cap and seal
4. Class 300 flanges also available.

HIGH PRESSURE PTFE HOSE

FEMALE PIPE FNPT

MALE NPT

FEMALE JIC SWIVEL

NOMINAL SIZE (IN.)	PART NUMBER	HOSE SIZE I.D. (In.)	NOM. HOSE SIZE O.D. (In.)	MAX. OPERATING PRESSURE (P.S.I.) ROOM TEMP.	MIN. BURST PRESSURE (P.S.I.) ROOM TEMP.	400°F/204°C	MIN. BEND RADIUS (INCHES)	WEIGHT PER FOOT (Lbs.)
1/4	1704TH000	0.212	0.375	5000	16000	12000	1.50	0.11
3/8	1706TH000	0.308	0.475	5000	16000	12000	2.50	0.18
1/2	1708TH000	0.402	0.600	5000	16000	12000	2.88	0.24
5/8	1710TH000	0.495	0.710	5000	16000	12000	3.25	0.33
3/4	1712TH000	0.618	0.970	5000	16000	12000	4.00	0.66
1	1716TH000	0.868	1.250	5000	16000	9000	5.00	1.02

Construction:

Smooth tube of anti-static (conductive) PTFE. Braid(s) reinforcements of densely packed, high tensile Type 304 stainless steel wire. Reinforcement design varies size by size. Fittings are Type 316 stainless steel.

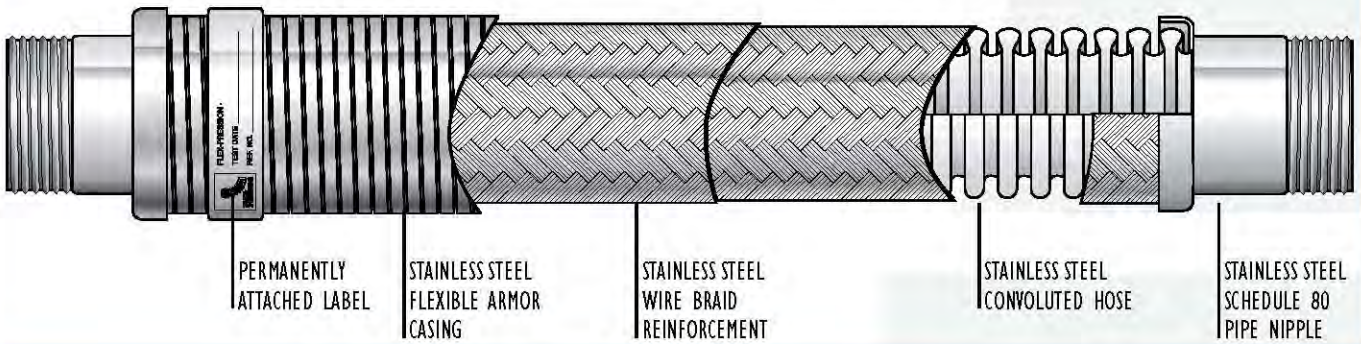
Operating Temperature:

-65°F (-54°C) to 400°F (204°C)

CHOOSE THE RIGHT HOSE FOR THE RIGHT APPLICATION

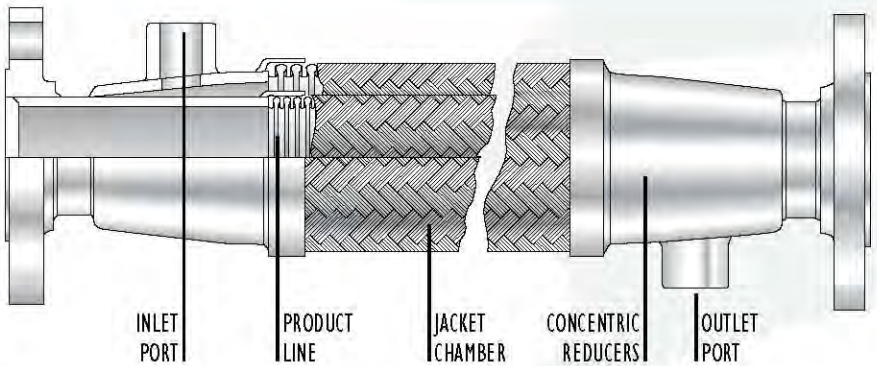
ANHYDROUS AMMONIA TRANSFER HOSE

Complies with standards ANSI K61.1/CGA - G2.1/TFI - M1 all stainless steel construction



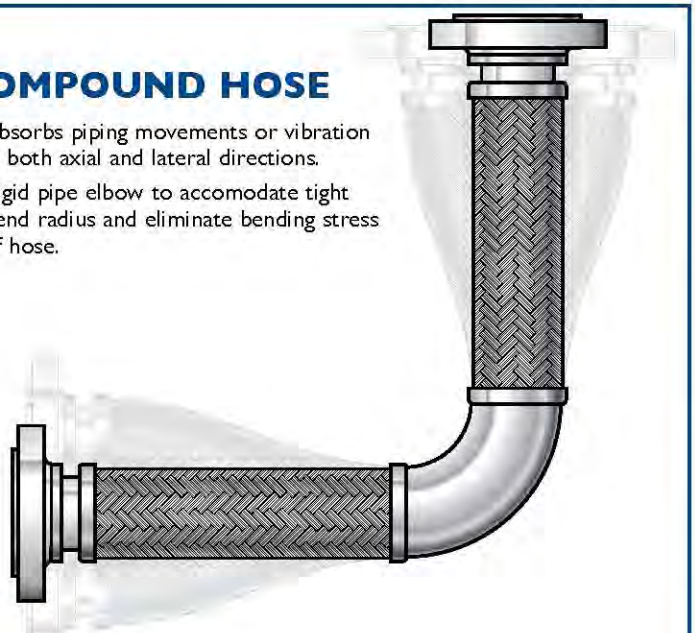
JACKETED HOSE

- For transfer lines where temperature must be maintained for steady flow of product.
- Jacket can be used under full vacuum and in cryogenic applications.
- Inlet & Outlet ports designed to allow injection of steam, hot oil or coolant.
- Available with many end fitting configurations including: male NPT, female JIC, Butt Weld pipe or tube.



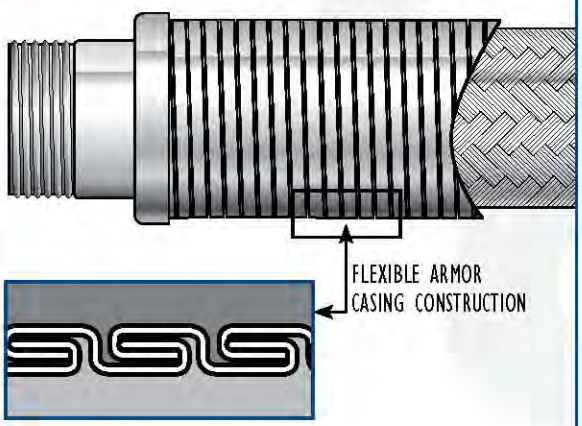
COMPOUND HOSE

- Absorbs piping movements or vibration in both axial and lateral directions.
- Rigid pipe elbow to accomodate tight bend radius and eliminate bending stress of hose.



FLEXIBLE ARMOUR CASING

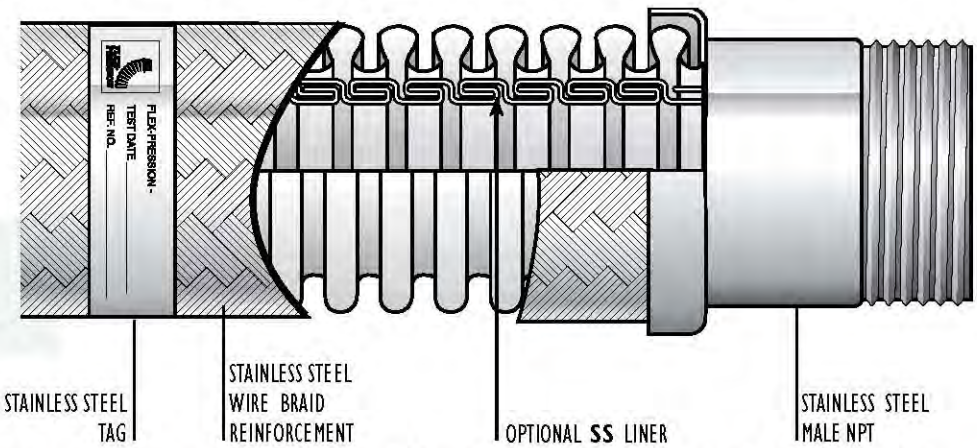
- Protection against kinking and braid abrasion
- Added measure of protection for operators



CHOOSE THE RIGHT HOSE FOR THE RIGHT APPLICATION

OXYGEN TRANSFER HOSE

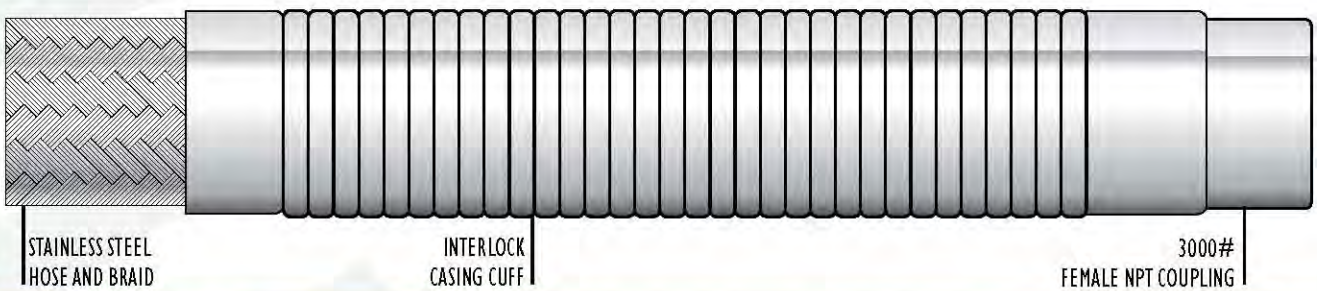
- **Stainless steel construction**
- **Cleaned, degreased, capped and bagged for Oxygen Service**
- **Optional stainless steel liner for high velocity applications**



- **Interlock casing also available for strain relief or rugged applications**

CRYOGENIC TRANSFER HOSE

- **Stainless steel construction**
- **For bulk transfer of liquids**
- **Used on cryogenic liquid cylinders and vaporizer manifolds**
- **Many other fitting options available**



FLOW VELOCITY RESTRICTIONS IN METAL HOSES

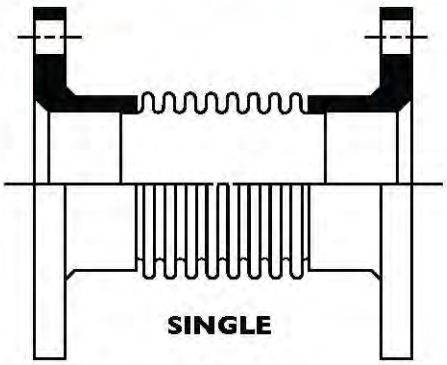
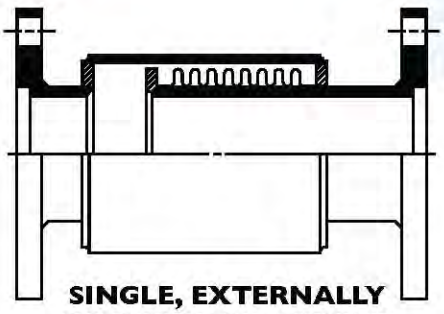
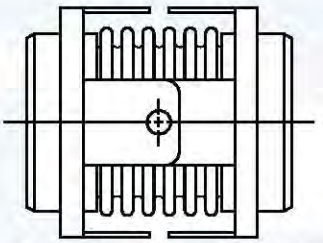
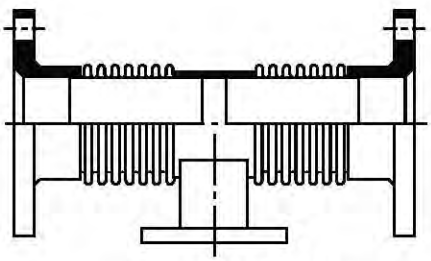
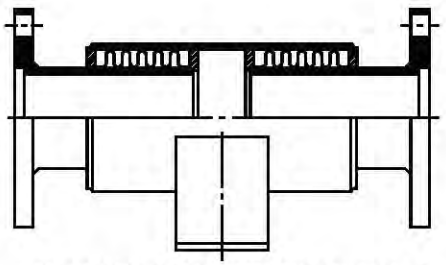
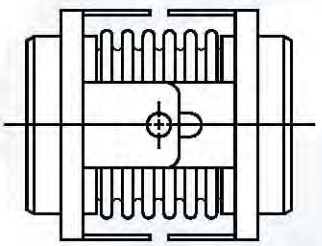
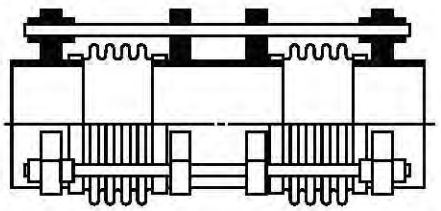
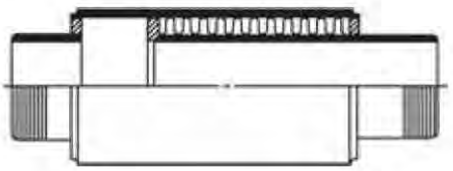
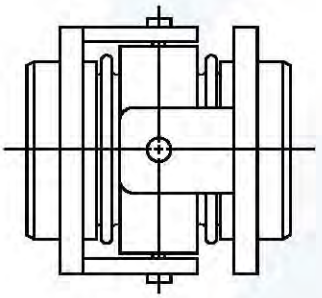
When flow velocity exceeds the values shown below, resonant vibration can occur in hoses and cause premature failure. When flow velocity exceeds these values, an increase in the hose inside diameter or an inside interlocked metal liner are advised.

INSTALLATION CONFIGURATION	MAXIMUMVELOCITY (FT/SEC)			
	GAS		LIQUID	
	UNBRAIDED	BRAIDED	UNBRAIDED	BRAIDED
STRAIGHT RUN	100	150	50	75
45° BEND	75	115	40	60
90° BEND	50	75	25	40
180° BEND	25	38	12	19

EXPANSION JOINTS

Flex-Pression will assist you with the correct selection of a metal expansion joint to absorb pipe or ducting movements. Our engineering department can provide information regarding style, material and design parameters to ensure safe and effective operation of the expansion joint. A full range of materials including stainless steel, inconel and hastelloy is available for consideration as well as a complete selection of joints to accomodate virtually any media and movement.

CLASSIFICATION BY MOVEMENTS

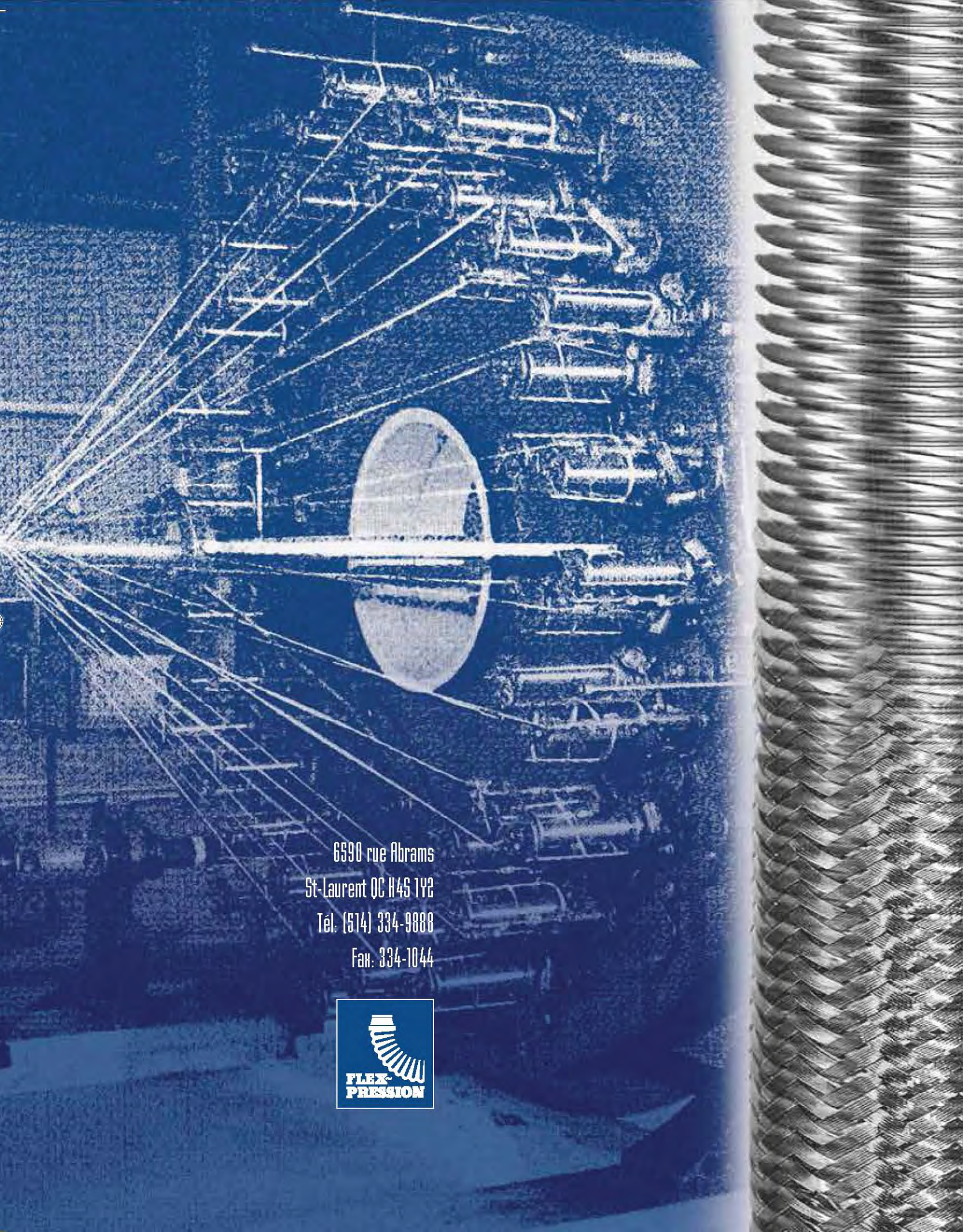
AXIAL, LATERAL, ANGULAR ROTATION, VIBRATION ISOLATION	*AXIAL MOVEMENT*	*VARIOUS COMBINATIONS TO ABSORB AXIAL, LATERAL AND ANGULAR MOVEMENTS*
 **SINGLE**	 **SINGLE, EXTERNALLY PRESSURIZED, GUIDED**	 **STANDARD HINGE**
 **DUAL WITH CENTER ANCHOR BASE**	 **EXTERNALLY PRESSURIZED DUAL WITH CENTER ANCHOR BASE**	 **SLOTTED HINGE**
 **UNIVERSAL**	 **COMPENSATOR**	 **GIMBAL**

Typical expansion joints are designed to E.J.M.A. standards.
Expansion joints with "U" stamp are designed to A.S.M.E. boiler and pressure vessel code.
Welding is per A.S.M.E. boiler and pressure vessel code section IX.
Inspection and testing include: Hydrostatic pressure test, liquid penetrant and x-ray examination. (as requested)

CORROSION RESISTANCE CHART

MEDIA	TEMP °F	18-8 STAINLESS	18-8 MO STEEL	PTFE
Acetic Acid	70°	A	A	A
Acetic Anhydride	Boiling	A	A	A
Acetone	Boiling	A	A	A
Acetylene	70°	A	A	A
Alcohols	Boiling	B	A	A
Aluminum Chloride	70°	C	C	A
Aluminum Hydroxide	70°	A	A	A
Aluminum Sulfate (10%)	Boiling	B	A	A
Ammonia, Dry	Hot	A	A	A
Ammonia, Moist	Boiling	A	A	A
Ammonium Hydroxide	70°	A	A	A
Ammonium Chloride (50%)	Boiling	B	B	A
Ammonium Nitrate	70°	A	A	A
Ammonium Sulfate	Boiling	B	A	A
Amyl Acetate (conct)	70°	A	A	A
Amyl Alcohol	70°	A	A	A
Aniline (conct)	70°	A	A	A
Aniline Hydrochloride	70°	C	C	A
Asphalt	Hot	A	A	A
Atmosphere, Industrial	70°	A	A	A
Barium Carbonate	70°	A	A	A
Barium Chloride	Hot	B	A	A
Barium Hydroxide	Hot	A	A	A
Barium Sulfate	70°	A	A	A
Barium Sulfide	70°	A	A	A
Beer	70°	A	A	A
Benzine	Hot	A	A	A
Benzoic Acid	70°	A	A	A
Benzol	Hot	A	A	A
Black Liquor	Hot	B	B	A
Bleaching Powder, Wet	70°	C	C	A
Borax (5%)	Hot	A	A	A
Boric Acid (5%)	Boiling	B	A	A
Bromine, Dry	70°	C	C	C
Bromine, Moist	70°	C	C	C
Butane	70°	A	A	A
Buttermilk	70°	A	A	A
Butyl Alcohol	70°	A	A	A
Butyric Acid (5%)	Boiling	A	A	A
Calcium Chloride	70°	B	A	A
Calcium Hydroxide (20%)	Boiling	C	A	A
Calcium Hypochlorite (20%)	70°	C	B	A
Cane Sugar Syrups	Hot	A	A	A
Carbolic Acid (phenol)	Boiling	A	A	A
Carbon Dioxide, Dry	Hot	A	A	A
Carbon Dioxide, Moist	Hot	A	A	A
Carbonated Water	70°	A	A	A
Carbonated Beverages	70°	A	A	A
Carbon Tetrachloride, Dry	Boiling	A	A	A
Carbon Tetrachloride, Moist	Boiling	C	C	A
Chlorine, Dry	70°	C	B	A
Chlorine, Moist	70°	C	C	A
Chlorinated Water	70°	C	C	A
Chloroform, Dry	70°	A	A	A
Chromic Acid (10%)	Boiling	C	B	A
Cider	70°	A	A	A
Citric Acid (15%)	Boiling	B	A	A
Coffee	Boiling	A	A	A
Copper Chloride (5%)	70°	C	C	A
Copper Nitrate	Hot	A	A	A
Copper Sulfate	Boiling	A	A	A
Corn Oil	70°	A	A	A
Cottonseed Oil	70°	A	A	A
Creosote	Hot	A	A	A
Crude Oil	Hot	B	A	A
Ethers	70°	A	A	A
Ethyl Acetate (conct)	70°	A	A	A
Ethyl Chloride	70°	A	A	A
Ethylene Glycol	70°	A	A	A
Ferric Chloride	70°	C	C	A
Ferric Sulfate (10%)	Boiling	B	A	A
Ferrous Sulfate	Boiling	B	A	A
Formaldehyde (40%)	70°	B	B	A
Formic Acid (50%)	50°	B	A	A
Freon	70°	A	A	B
Fruit Juices	70°	A	A	A
Furfural	70°	A	A	A
Gasoline	70°	A	A	A
Gelatine	70°	A	A	A
Glue (Acid Solution)	70°	B	A	A
Glycerine	70°	A	A	A
Hydrobromic Acid	70°	C	C	A
Hydrochloric Acid	70°	C	C	A
Hydrocyanic Acid	70°	A	A	A
Hydrofluoric Acid	70°	C	C	A
Hydrogen Peroxide	70°	A	A	A
Hydrogen Sulfide, Dry	70°	A	A	A
Hydrogen Sulfide, Moist	70°	B	A	A
Kerosene	70°	A	A	A
Lacquers	70°	C	A	A
Lacquers Solvents	70°	C	A	A
Lactic Acid (5%)	150°	B	A	A
Lime	70°	A	A	A
Lime-Sulfur	70°	B	B	B
Linseed Oil	70°	A	A	A
Magnesium Chloride (5%)	Hot	C	B	A
Magnesium Sulfate	Hot	B	A	A
Mercury	70°	A	A	A
Mercury Salts	70°	C	C	A
Methyl Chloride, Dry	70°	A	A	A
Milk	Hot	A	A	A
Mine Water	70°	A	A	A
Natural Gas	70°	A	A	A
Nitric Acid (conct)	Boiling	B	A	A
Nitrogen	70°	A	A	A
Oleic-Acid	Boiling	B	A	A
Oxalic Acid (10%)	Boiling	C	B	A
Oxygen	70°	A	A	A
Parafin	Hot	A	A	A
Phosphoric Acid (20%)	Boiling	C	B	A
Potassium Carbonate	Hot	A	A	A
Potassium Chloride (5%)	Boiling	B	B	A
Potassium Chromate (25%)	Boiling	A	A	A
Potassium Cyanide	70°	A	A	A
Potassium Hydroxide (50%)	Boiling	B	A	A
Potassium Sulfate (5%)	Hot	B	A	A
Propane	70°	A	A	A
Rosin	Molten	A	A	A
Sea Water	70°	B	B	A
Sewage	70°	A	A	A
Soap Solutions	70°	A	A	A
Sodium Bicarbonate (5%)	150°	A	A	A
Sodium Bisulfite	70°	A	A	A
Sodium Carbonate (50%)	Boiling	A	A	A
Sodium Chloride (5%)	150°	C	B	A
Sodium Cyanide	70°	A	A	A
Sodium Hydroxide	Boiling	A	A	A
Sodium Hypochlorite (5%)	70°	C	B	A
Sodium Nitrate	70°	B	B	A
Sodium Peroxide (10%)	150°	A	A	A
Sodium Phosphate	70°	A	A	A
Sodium Sulfate (10%)	150°	B	A	A
Sodium Sulfide (10%)	150°	B	A	A
Sodium Thiosulfate	70°	A	A	A
Steam	200°	A	A	A
Stearic Acid	70°	B	A	A
Sugar Solutions	70°	A	A	A
Sulfur, Dry	350°	A	A	A
Sulfur, Molten	200°	C	B	A
Sulfur Chloride, Dry	Hot	C	C	A
Sulfur Dioxide, Dry	70°	A	A	A
Sulfur Dioxide, Moist	70°	C	B	A
Sulfur Trioxide, Dry	70°	B	B	A
Sulfuric Acid (95-100%)	70°	A	A	A
Sulfuric Acid (80-95%)	70°	B	B	A
Sulfuric Acid (40-80%)	Boiling	C	C	A
Sulfuric Acid (40%)	300°	C	C	A
Tannic Acid	150°	A	A	A
Tar	150°	A	A	A
Tartaric Acid (10%)	70°	B	A	A
Toluene	70°	A	A	A
Trichloracetic Acid	70°	C	C	A
Trichlorethylene, Dry	70°	A	A	A
Trichlorethylene, Moist	70°	C	B	A
Turpentine	70°	A	A	A
Varnish	70°	A	A	A
Vinegar	70°	A	A	A
Water	70°	A	A	A
Zinc Chloride	Boiling	C	B	A
Zinc Sulfate	Boiling	B	A	A

A = Resistant B = Partially Resistant C = Non Resistant



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