

# Your Application. Our Solution.

Fabricators of Metal Hose Assemblies

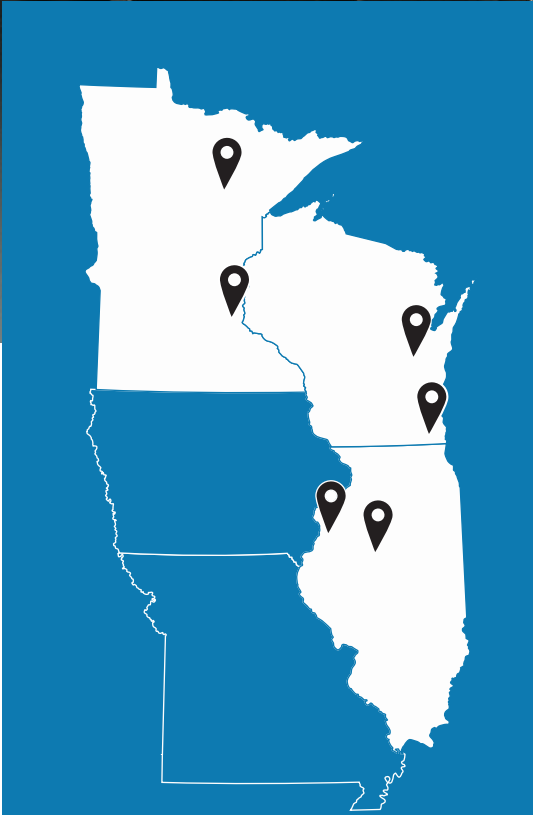


An ISO Certified Company

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- Saint Paul, MN
- Grand Rapids, MN
- Milwaukee WI
- Appleton, WI
- Galesburg, IL
- Peoria, IL

## Who We Are

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MFC is a leading fabricator of metal, industrial and hydraulic hose, fittings, and formed tube products.

We market our products throughout North America to various industrial and commercial customers. Founded in 1969 as manufacturer of metal hose assemblies, MFC has continually expanded our product offering in an effort to become a complete supplier of fluid and exhaust conveyance products.



# StandardFlex

**Description:** StandardFlex is a medium weight, medium flexibility hose that works well in most metal hose applications

**Construction:** Annular hose construction

**Hose Material:** 321 stainless steel  
(other alloys available)

**Braid Material:** 304L stainless steel  
(other alloys available)

Inside Diameter (in.)	Number of Braid Layers	Outside Diameter (in.)	Static Minimum Bend Radius (in.)	Dynamic Minimum Bend Radius (in.)	Maximum Working Pressure (psi)	Burst Pressure (psi)	Weight Per Foot (lbs.)
1/4"	0	0.40	1.00	5.00	200	N/A	0.08
	1	0.48			2,500	10,000	0.17
	2	0.56			4,000	16,000	0.26
5/16"	0	0.48	1.00	5.00	180	N/A	0.09
	1	0.57			2,200	8,800	0.19
	2	0.64			3,520	14,080	0.29
3/8"	0	0.63	1.25	5.50	100	N/A	0.13
	1	0.70			1,530	6,120	0.27
	2	0.81			2,448	9,792	0.41
1/2"	0	0.82	1.50	6.00	80	N/A	0.23
	1	0.89			1,200	4,800	0.39
	2	0.96			1,920	7,680	0.55
3/4"	0	1.21	2.25	8.00	70	N/A	0.39
	1	1.28			850	3,400	0.62
	2	1.35			1,360	5,440	0.85
1"	0	1.51	2.75	9.00	40	N/A	0.53
	1	1.58			590	2,360	0.79
	2	1.65			944	3,776	1.05
1-1/4"	0	1.85	3.50	10.50	25	N/A	0.76
	1	1.93			540	2,160	1.12
	2	2.02			864	3,456	1.48
1-1/2"	0	2.19	4.00	12.00	20	N/A	0.84
	1	2.28			475	1,900	1.29
	2	2.37			760	3,040	1.74
2"	0	2.60	5.00	15.00	15	N/A	.90
	1	2.72			530	2,120	1.61
	2	2.84			848	3,392	2.33
2-1/2"	0	3.23	8.00	20.00	12	N/A	1.16
	1	3.33			410	1,640	1.86
	2	3.43			656	2,624	2.56
3"	0	3.78	9.00	22.00	10	N/A	1.21
	1	3.88			335	1,340	2.00
	2	3.98			536	2,145	2.80
4"	0	4.85	13.00	27.00	8	N/A	1.69
	1	4.98			240	960	2.68
	2	5.08			384	1,536	3.68
5"	0	5.90	18.00	31.00	6	N/A	2.50
	1	6.03			191	764	3.75
	2	6.15			306	1,222	5.00
6"	0	6.87	19.00	36.00	5	N/A	3.47
	1	7.10			165	660	4.75
	2	7.33			264	1,056	6.04
8"	0	9.09	20.00	40.00	6	N/A	5.56
	1	9.19			234	934	9.44
	2	9.28			374	1,495	13.36
10"	0	11.18	25.00	50.00	5	N/A	6.80
	1	11.32			230	918	12.90
	2	11.45			367	1,469	19.000
12"	0	13.23	30.00	60.00	3	N/A	9.02
	1	13.37			161	643	14.83
	2	13.50			257	1,029	20.64
14"	0	3	35.00	70.00	3	N/A	14.10
	1	119			476	21.70	
	2	190			760	29.30	

# SuperFlex

**Description:** Superflex is similar in design to StandardFlex but has more corrugations creating a much more flexible hose

**Construction:** Annular hose construction

**Hose Material:** T321 stainless steel  
(other alloys available)

**Braid Material:** T304 stainless steel  
(other alloys available)

Inside Diameter (in.)	Number of Braid Layers	Outside Diameter (in.)	Static Minimum Bend Radius (in.)	Dynamic Minimum Bend Radius (in.)	Maximum Working Pressure (psi)	Burst Pressure (psi)	Weight Per Foot (lbs.)
1/4"	0	.42	0.9	3.7	90	N/A	.07
	1	.48			1800	7233	.14
	2	.54			2700	9100	.20
3/8"	0	.65	1	4	70	N/A	.15
	1	.71			1558	6230	.25
	2	.77			2336	9345	.36
1/2"	0	.77	1.2	4.4	70	N/A	.18
	1	.83			1186	4743	.32
	2	.89			1779	7115	.47
5/8"	0	.96	1.4	5.6	57	N/A	.19
	1	1.02			1205	4820	.37
	2	1.08			1808	7230	.54
3/4"	0	1.16	1.7	6.4	43	N/A	.31
	1	1.22			898	3591	.53
	2	1.28			1347	5387	.74
1"	0	1.47	2.1	7.1	43	N/A	.41
	1	1.53			718	2872	.76
	2	1.63			1077	4308	1.11
1 1/4"	0	1.75	2.5	7.9	43	N/A	.63
	1	1.83			645	2581	1.00
	2	1.91			968	3872	1.37
1 1/2"	0	2.08	3.1	8.7	28	N/A	.7
	1	2.16			531	2125	1.16
	2	2.24			797	3188	1.63
2"	0	2.61	4	10.3	14	N/A	.88
	1	2.69			449	1797	1.44
	2	2.77			674	2696	1.99
2 1/2"	0	3.40	5.4	12.8	14	N/A	1.36
	1	3.50			417	1669	2.16
	2	3.60			626	2504	2.96
3"	0	3.88	6.3	14.5	14	N/A	1.63
	1	3.98			346	1384	2.50
	2	4.08			519	2076	3.37
4"	0	4.96	7.7	17.4	14	N/A	2.53
	1	5.06			299	1194	3.90
	2	5.16			448	1791	5.29
5"	0	6	10	21.9	14	N/A	4.07
	1	6.12			275	1099	5.53
	2	6.24			412	1649	6.99
6"	0	7.01	11.6	25	11	N/A	4.46
	1	7.13			210	839	6.34
	2	7.25			315	1259	8.22

# PressureFlex

**Description:** Heavy duty industrial hose for high pressure and highly corrosive applications

**Hose Material:** 321 stainless steel  
(other alloys available)

**Construction:** Annular hose construction

**Braid Material:** 304 stainless steel  
(other alloys available)

Inside Diameter (in.)	Number of Braid Layers	Outside Diameter (in.)	Static Minimum Bend Radius (in.)	Dynamic Minimum Bend Radius (in.)	Maximum Working Pressure (psi)	Burst Pressure (psi)	Weight Per Foot (lbs.)
1/4"	0	0.50	1.00	5.00	180	N/A	0.09
	1	0.57			2,562	10,250	0.17
	2	0.64			4,099	16,400	0.26
3/8"	0	0.67	1.25	5.50	100	N/A	0.13
	1	0.74			1,501	6,004	0.25
	2	0.81			2,401	9,604	0.36
1/2"	0	0.82	1.50	8.00	80	N/A	0.39
	1	0.92			2,194	8,777	0.63
	2	1.02			3,510	14,040	0.87
3/4"	0	1.21	2.00	8.00	70	N/A	0.48
	1	1.31			1,311	5,244	0.79
	2	1.41			2,098	8,392	1.10
1"	0	1.50	3.00	9.00	40	N/A	0.79
	1	1.60			1,069	4,276	1.20
	2	1.70			1,710	6,840	1.61
1-1/4"	0	1.85	3.25	10.00	33	N/A	1.02
	1	1.97			1,111	4,444	1.66
	2	2.10			1,776	7,040	2.30
1-1/2"	0	2.17	3.25	10.00	20	N/A	1.36
	1	2.30			868	1,887	2.11
	2	2.43			1,388	3,021	2.86
2"	0	2.51	5.75	11.50	15	N/A	1.60
	1	2.64			810	3,240	2.56
	2	2.76			1,296	5,184	3.52
2-1/2"	0	3.23	7.00	20.00	10	N/A	2.00
	1	3.36			578	2,312	3.12
	2	3.49			925	3,700	3.30
3"	0	3.78	7.50	26.00	10	N/A	2.97
	1	3.91			540	2,160	4.42
	2	4.03			864	3,456	5.87
4"	0	4.81	20.00	40.00	8	N/A	3.10
	1	4.93			333	1,332	4.55
	2	5.05			533	2,132	6.00
6"	0	6.87	24.00	48.00	5	N/A	3.85
	1	7.10			266	1,062	6.45
	2	7.33			425	1,700	9.05

# Technical Information

## Temperature Adjustment Factors

In general, the strength and therefore the pressure rating of metal hose decreases as the temperature increases. Thus, as the operating temperature of a metal hose assembly increases, the maximum allowable working pressure of the assembly decreases. The pressure ratings shown in the specification charts for corrugated hose are valid at 70°F. Elevated service temperatures will decrease these pressure ratings by the factors shown in the following chart. What also must be considered is the maximum working temperature of the end fittings of the hose and their method of attachment.

Temperature	304/304L Stainless Steel	316L Stainless Steel	321 Stainless Steel	Carbon Steel	Monel	Bronze
70	1.00	1.00	1.00	1.00	1.00	1.00
150	.95	.93	.97	.99	.93	.92
200	.91	.89	.94	.97	.90	.89
250	.88	.86	.92	.96	.87	.86
300	.85	.83	.88	.93	.83	.83
350	.81	.81	.86	.91	.82	.81
400	.78	.78	.83	.87	.79	.78
450	.77	.78	.81	.86	.77	.75
500	.77	.77	.78	.81	.73	
600	.76	.76	.77	.74	.72	
700	.74	.76	.76	.66	.71	
800	.73	.75	.68	.52	.70	
900	.63	.74	.62			
1,000	.60	.73	.60			
1,100	.58	.67	.58			
1,200	.53	.61	.53			
1,300	.44	.55	.46			
1,400	.35	.48	.42			
1,500	.26	.39	.37			

## Saturated Steam Pressure To Temperature (PSIG)

Saturated Steam (PSIG)	Temp (F)	Saturated Steam (PSIG)	Temp (F)	Saturated Steam (PSIG)	Temp (F)
0	212	150	366	450	460
10	238	175	377	475	465
20	259	200	388	500	470
30	274	225	397	550	480
40	287	250	406	600	489
50	298	275	414	700	505
60	307	300	422	800	520
75	320	325	429	900	534
80	324	350	436	1000	546
90	331	375	442	1250	574
100	338	400	448	1500	606
125	353	425	454	2500	669

## Saturated Steam Pressure To Temperature (Hg)

Saturated Steam Vacuum (in. of Hg)	Temp (F)
-	0
29.84	20
29.74	32
29.67	40
29.39	60
28.89	80
27.99	100
26.48	120
24.04	140
20.27	160
15.20	180
6.46	200

# Fitting Options



Male Pipe Nipple

Alloys: 304 and 316 Stainless Steel, Carbon Steel  
Sizes: 1/8" thru 8"  
Schedules: 40 and 80



Female Union

Alloys: 304 and 316 Stainless Steel, Carbon Steel, Malleable Iron, Brass  
Sizes: 1/4" thru 4"  
Class: 125#, 150#, 300#



Hex Males

Alloys: 304 and 316 Stainless Steel, Carbon Steel, Brass  
Sizes: 1/4" thru 4"



37 degree JIC

Alloys: 304 and 316 Stainless Steel, Carbon Steel  
Sizes: 1/2" thru 2"



Female Coupling

Alloys: 304 and 316 Stainless Steel, Carbon Steel  
Sizes: 1/4" thru 4"  
Class: 150# and 300#



Fixed Flange

Alloys: 304 and 316 Stainless Steel, Carbon Steel  
Sizes: 1/2" thru 12"  
Class: 150#, 300#

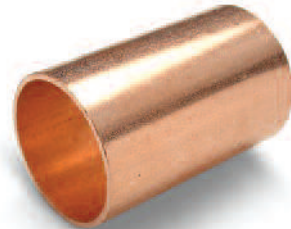


# Fitting Options



Floating Flange

Alloys: 304 and 316 Stainless Steel, Carbon Steel  
Sizes: 1/2" thru 12"  
Class: 150#, 300#



Copper Sweat Ends

Alloys: Copper  
Sizes: 1/2" thru 3"



Groove End

Alloys: 304 and 316 Stainless Steel, Carbon Steel  
Sizes: 1" thru 8"  
Schedule: 40



Female Ground Joint

Alloys: Malleable Iron  
Sizes: 1/2" thru 4"



Tube Ends

Alloys: 304 and 316 Stainless Steel, Carbon Steel  
Sizes: 1/8" thru 8"  
Wall Thickness: Multiple



Tri-Clamp

Alloys: 304 and 316 Stainless Steel  
Sizes: 1" thru 3"

# Cover Options



Abrasion Cover

This light weight hose protection option is great way to keep external abrasion from the stainless steel braid. The sleeving comes in a variety of sizes to protect almost any size hose.



Fire Sleeve

If the hose assembly is going to convey hot materials, fire sleeve is an excellent way to protect the handler from potential burns. It can also be used to prevent heat loss.



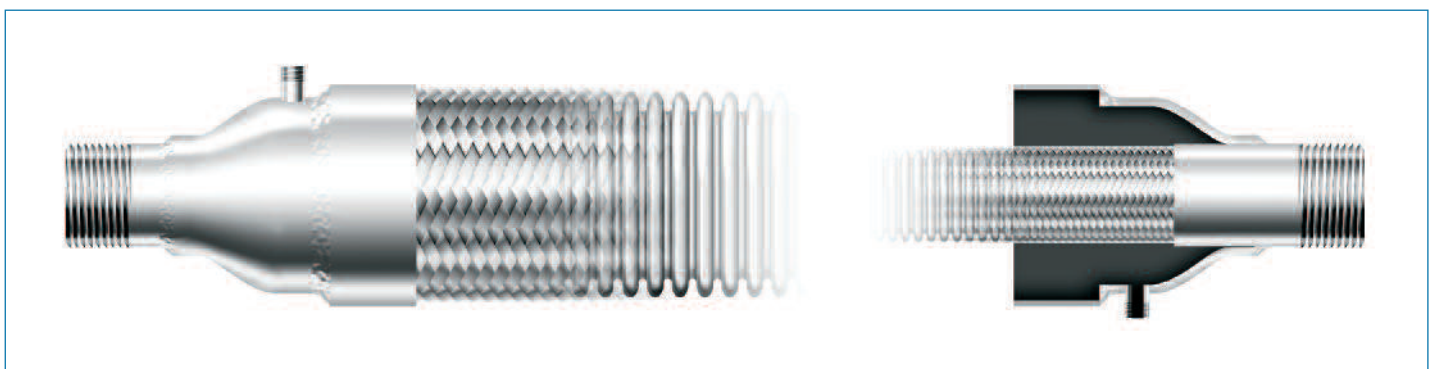
Armor Guard

An armor jacket can be added to the outside of the hose to protect it from extreme external abrasion. The outer jacket can also help protect the hose from over-bending, impact, and thermal damage.



Spring Guard

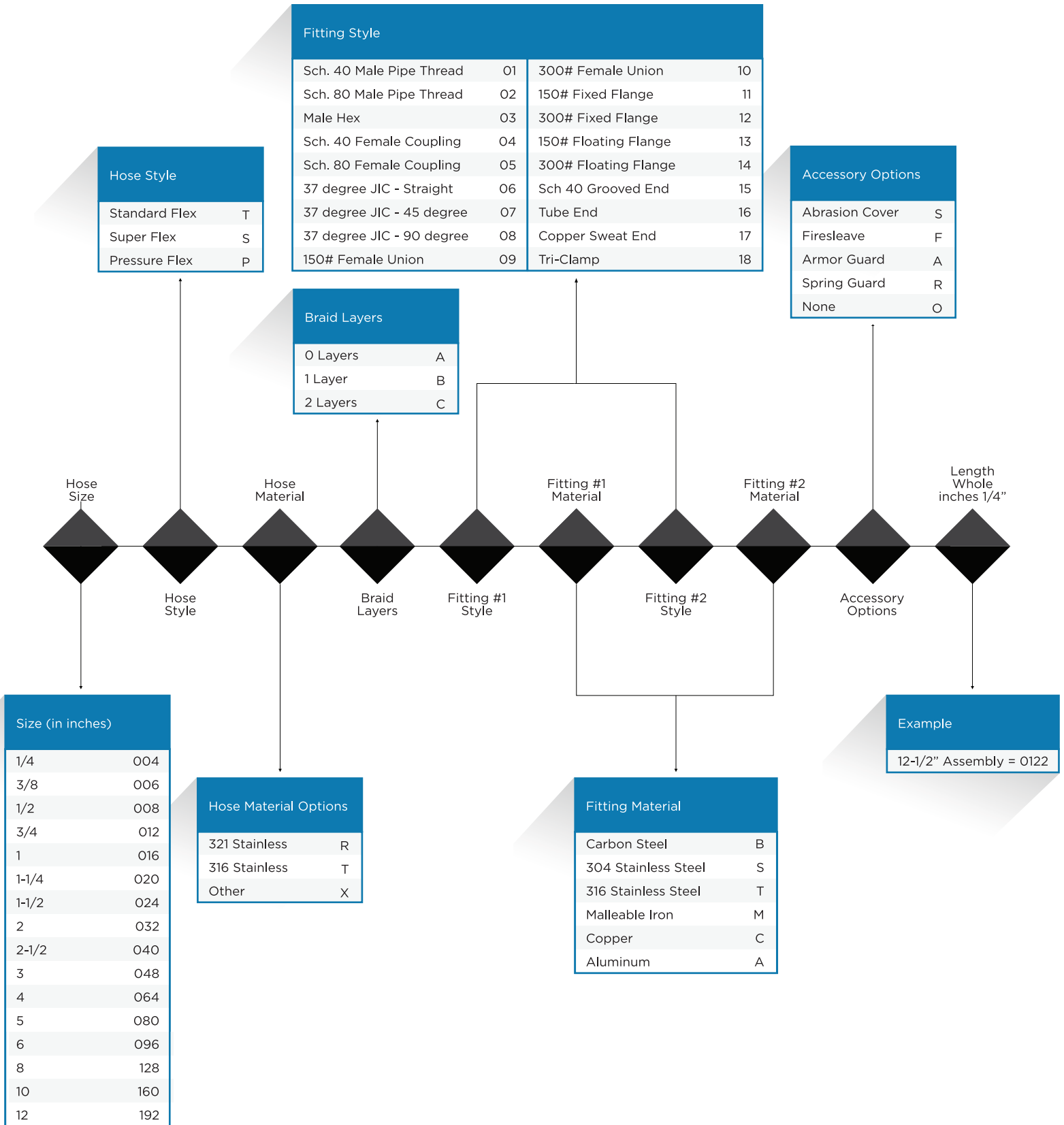
Spring guards are commonly added to the exterior of metal hose assemblies to prevent over-bending or to protect the hose from external abrasion. Custom springs can be made to meet any size or requirement.



Jacketed Assemblies

A jacketed assembly is a hose within a hose that is often used when the primary media needs to be kept at an elevated or cryogenic temperature. These assemblies are custom produced based on the specific requirements of the application. Please contact MFC to discuss options, sizes, and pricing.

# Part Number Configurator





# When Quality Matters

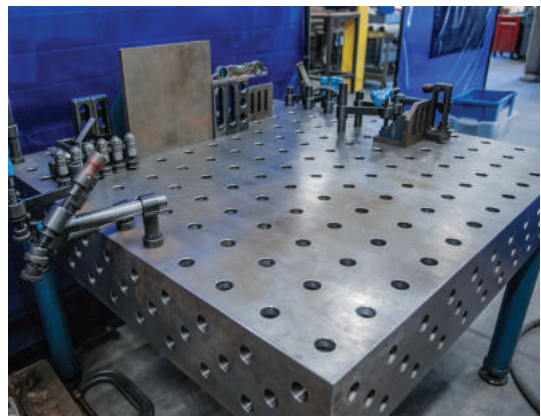
Building quality products at competitive prices was our mission statement when MFC was founded in 1969.



MFC welders are certified to section IX, including B31.3 and B31.1 standards



Over the last four decades that goal has only intensified. Today, MFC is proud to be certified as an ISO company, a certification few hose fabricators can claim.





### Testing

Every corrugated metal hose that is used for a liquid application is tested prior to shipment. MFC's standard testing process consists of filling the assembly with compressed air and then submerging the entire assembly under water. Upon request, assemblies can also be hydrostatically, nitrogen, or vacuum tested.

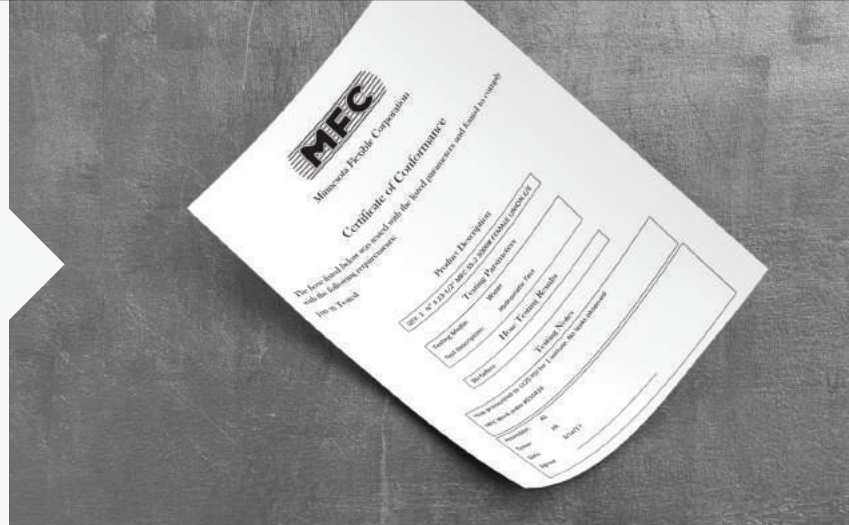


### Cleaning

Although every care is taken to produce a clean assembly, some applications require a higher level of cleanliness. For those instances, MFC can have your assembly cleaned and degreased or oxygen cleaned.

### Certification

When requested, MFC can provide certification of material composition. Additionally certification of testing or conformance to a specific customer requirement can also be provided.



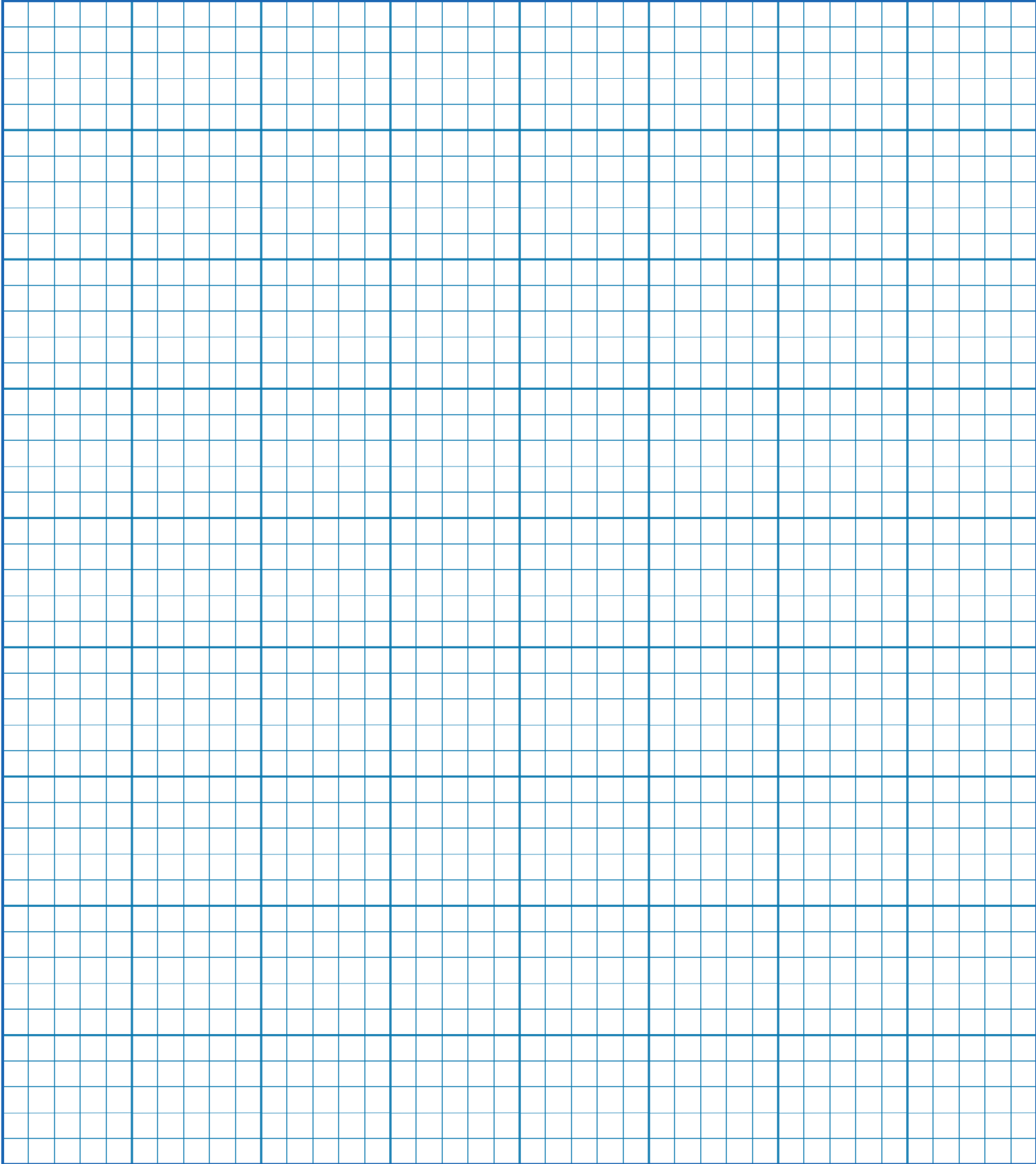
### Packaging

All assemblies will be shipped in a manner to assure they arrive safely to you. Crating, staking, thread covers, caps, and anti-contamination bags are all options that are available to our customers.



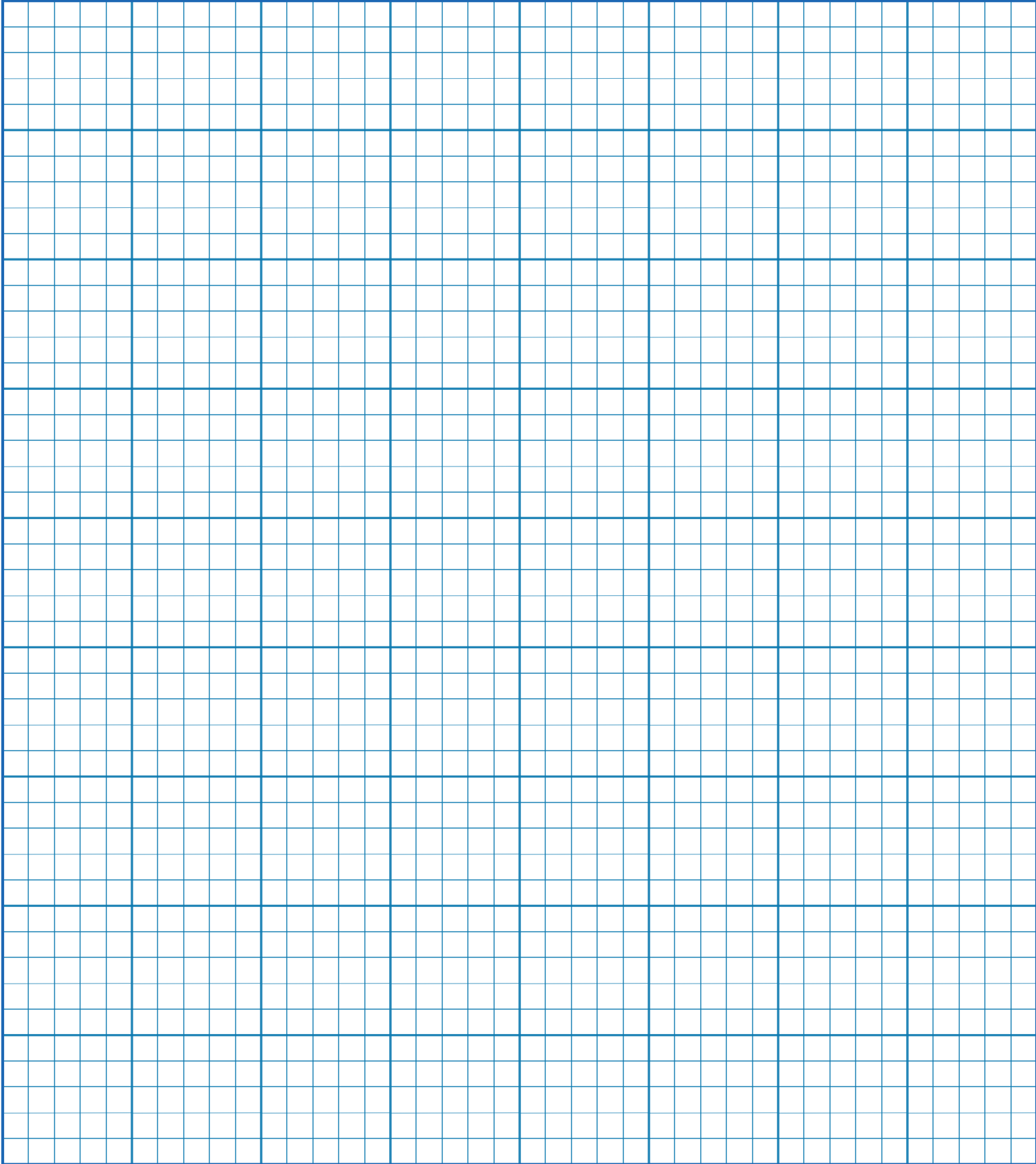
# Notes

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# Notes

TITLE	
NAME	DATE





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