

APPLICATIONS:

- ▶ Thermal expansion in all types of piping systems
- ▶ Seismic protection
- ▶ Protection of high vibration equipment
- ▶ Offset and misaligned piping
- ▶ Limited space requirements

ADVANTAGES OVER CONVENTIONAL BELLOWS-TYPE EXPANSION JOINTS

- ◆ Less space required to install
- ◆ Easier to install
- ◆ Lower product & installed cost
- ◆ Less system hardware cost
- ◆ Fewer anchors & guides needed
- ◆ Maintains connectivity and media flow during catastrophic occurrences

MODELS & END FITTINGS

<i>Model (Add L, U or V to complete)</i>	<i>End Fitting</i>
KFCB_FSE	Copper Sweat Ends
KFCS_FLG	150# Drilling Flanges
KFCS_MPT	Male Pipe Threads
KFCS_GR	Victaulic Grooved Ends
KFCS_WE	Carbon Steel Weld Ends

Features:

- ▶ Motion in 3 planes
- ▶ “L, U or V” Design
- ▶ Variety of sizes & end fitting combinations
- ▶ Nested configurations
- ▶ Maximum vibration absorption

Benefits:

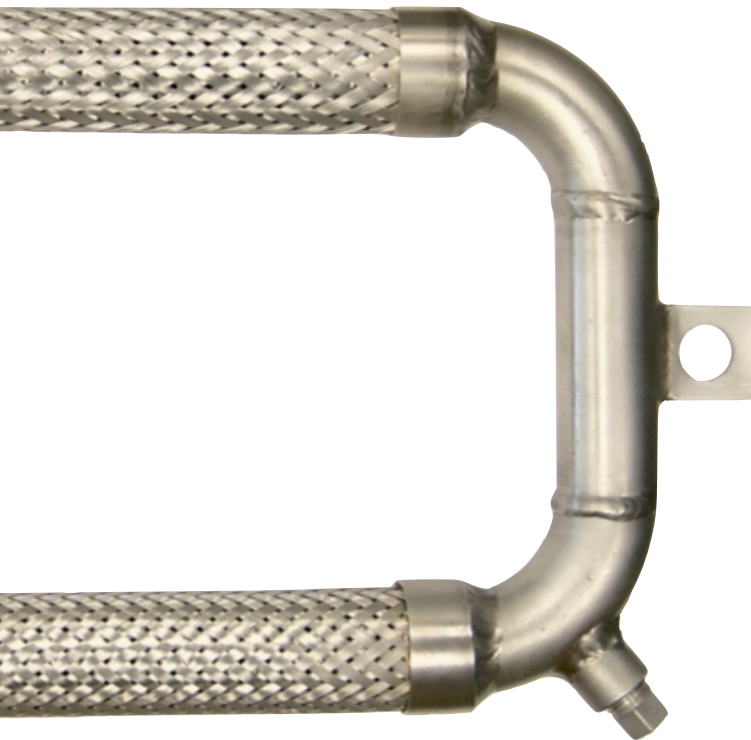
- ▶ Compensates for offset, lateral and axial motion
- ▶ Saves space
- ▶ Meets most installation requirements
- ▶ Simplifies protection of multi-pipe runs
- ▶ Seismic protection of equipment & piping



KE-LOOPS™ REDUCE INSTALLATION COST IS 3 WAYS...

- 1. Since the force to compress is less then with traditional bellows–type expansion joints, smaller, less expensive anchors can be used.*
- 2. Only 2 guides are required at the entrance and exit of the loop. This reduces the number of guides required for installation with traditional bellows–type expansion joints.*
- 3. Lower product cost versus traditional bellows–type expansion joints.*

So, for many thermal expansion and seismic applications choosing KE-LOOPS™ can save you on your total installed cost.



All KE-LOOPS™ are now available with an integral hanger bracket and drain port.

Just specify the “H” Option.



U-FLEX

KFCSUWE

- ▶ Schedule 40 Carbon Steel Weld Ends
- ▶ Stainless Steel Hose & Braid

PIPE SIZE	PART #	MOVEMENT	OAL	LENGTH	PSI SINGLE BRAID	WEIGHT (LBS)
1/2"	F004KFCSUWE14	1.5	7"	14"	1,050	5
	F004KFCSUWE40	4	10"	19-1/2"		
3/4"	F006KFCSUWE14	1.5	7-1/2"	15"	675	5
	F006KFCSUWE40	4	11"	20-1/2"		
1"	F010KFCSUWE14	1.5	7-1/2"	16"	550	7
	F010KFCSUWE40	4	11-1/2"	22"		
1-1/4"	F012KFCSUWE14	1.5	8-1/2"	18"	510	9
	F012KFCSUWE40	4	11-1/2"	24-1/2"		
1-1/2"	F014KFCSUWE14	1.5	10"	20"	450	13
	F014KFCSUWE40	4	13-1/2"	26"		
2"	F020KFCSUWE14	1.5	12"	22"	435	16
	F020KFCSUWE40	4	15-1/2"	30"		
2-1/2"	F024KFCSUWE14	1.5	15-1/2"	26"	350	26
	F024KFCSUWE40	4	17-1/2"	33-1/2"		
3"	F030KFCSUWE14	1.5	18"	28"	325	39
	F030KFCSUWE40	4	18"	36"		
4"	F040KFCSUWE14	1.5	24"	32"	270	54
	F040KFCSUWE40	4	24"	42-1/2"		
5"	F050KFCSUWE14	1.5	30"	38"	200	91
	F050KFCSUWE40	4	30"	47-1/2"		
6"	F060KFCSUWE14	1.5	36"	42"	185	140
	F060KFCSUWE40	4	36"	53-1/2"		
8"	F080KFCSUWE14	1.5	48"	54"	185	267
	F080KFCSUWE40	4	48"	69"		

KFCSUGR

- ▶ Schedule 40 Carbon Steel Groove Ends
- ▶ Stainless Steel Hose & Braid

PIPE SIZE	PART #	MOVEMENT	OAL	LENGTH	PSI SINGLE BRAID	WEIGHT (LBS)
2"	F020KFCSUGR14	1.5	18"	22"	435	24
	F020KFCSUGR40	4	21"	30"		
2-1/2"	F024KFCSUGR14	1.5	21"	26"	350	36
	F024KFCSUGR40	4	23"	33-1/2"		
3"	F030KFCSUGR14	1.5	24"	28"	325	50
	F030KFCSUGR40	4	24"	36"		
4"	F040KFCSUGR14	1.5	30"	32"	270	69
	F040KFCSUGR40	4	30"	42-1/2"		
5"	F050KFCSUGR14	1.5	36"	38"	200	101
	F050KFCSUGR40	4	36"	47-1/2"		
6"	F060KFCSUGR14	1.5	42"	42"	185	163
	F060KFCSUGR40	4	42"	53-1/2"		
8"	F080KFCSUGR14	1.5	56"	54"	185	309
	F080KFCSUGR40	4	56"	69"		

Note: For safe working pressures over 70 °F., multiply the pressures shown at 70 °F. by the correction factor for the required temperature....

TEMPERATURE °F	CORRECTION FACTOR	
	BRONZE	STAINLESS STEEL
70	1.0	1.0
200	0.89	0.94
300	0.83	0.88
400	0.78	0.83
500	—	0.78
600	—	0.74





U-FLEX

KFCBUFSE

- ▶ Female Copper Sweat Ends
- ▶ Bronze Hose & Braid

(Meets Low Lead Requirements)

PIPE SIZE	PART #	MOVEMENT	OAL	LENGTH	PSI SINGLE BRAID	WEIGHT (LBS)
1/2"	F004KFCBUFSE14	1.5	5-3/4"	14"	520	2.5
	F004KFCBUFSE40	4	7-3/4"	20"		
3/4"	F006KFCBUFSE14	1.5	7-1/4"	17"	420	2.5
	F006KFCBUFSE40	4	9-1/4"	25"		
1"	F010KFCBUFSE14	1.5	8-1/8"	18-1/4"	315	3
	F010KFCBUFSE40	4	10-1/8"	26"		
1-1/4"	F012KFCBUFSE14	1.5	9-1/2"	20-1/4"	290	4
	F012KFCBUFSE40	4	12-1/2"	27-3/4"		
1-1/2"	F014KFCBUFSE14	1.5	11-1/8"	22"	250	4.5
	F014KFCBUFSE40	4	14"	29-1/2"		
2"	F020KFCBUFSE14	1.5	14-1/8"	25"	225	12
	F020KFCBUFSE40	4	18"	33-1/2"		
2-1/2"	F024KFCBUFSE14	1.5	17-3/8"	27-3/8"	135	18
	F024KFCBUFSE40	4	21"	36-1/2"		
3"	F030KFCBUFSE14	1.5	21-5/8"	29-3/4"	125	24
	F030KFCBUFSE40	4	27"	39-1/2"		
4"	F040KFCBUFSE14	1.5	26-1/2"	35-7/8"	100	31
	F040KFCBUFSE40	4	34"	46-1/4"		

KFCSUFLG

- ▶ 150# Carbon Steel Plate Flange
- ▶ Stainless Steel Hose & Braid

PIPE SIZE	PART #	MOVEMENT	OAL	LENGTH	PSI SINGLE BRAID	WEIGHT (LBS)
2"	F020KFCSUFLG14	1.5	12-1/2"	22"	435	24
	F020KFCSUFLG40	4	15-1/2"	30"		
2-1/2"	F024KFCSUFLG14	1.5	15-1/2"	26"	350	36
	F024KFCSUFLG40	4	17-1/2"	33-1/2"		
3"	F030KFCSUFLG14	1.5	18-1/2"	28"	325	50
	F030KFCSUFLG40	4	18-1/2"	36"		
4"	F040KFCSUFLG14	1.5	24-1/2"	32"	270	69
	F040KFCSUFLG40	4	24-1/2"	42-1/2"		
5"	F050KFCSUFLG14	1.5	30-1/2"	38"	200	101
	F050KFCSUFLG40	4	30-1/2"	47-1/2"		
6"	F060KFCSUFLG14	1.5	36-1/2"	42"	185	163
	F060KFCSUFLG40	4	36-1/2"	53-1/2"		
8"	F080KFCSUFLG14	1.5	48-1/2"	54"	185	309
	F080KFCSUFLG40	4	48-1/2"	69"		

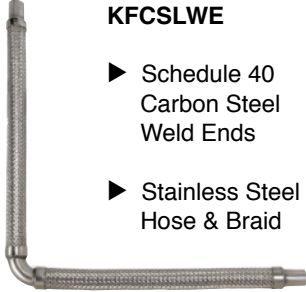
KFCSUMPT

- ▶ Schedule 40 Carbon Steel Male Pipe Threads
- ▶ Stainless Steel Hose & Braid

PIPE SIZE	PART #	MOVEMENT	OAL	LENGTH	PSI SINGLE BRAID	WEIGHT (LBS)
1/2"	F004KFCSUMPT14	1.5	10"	14"	1050	5
	F004KFCSUMPT40	4	13"	19-1/2"		
3/4"	F006KFCSUMPT14	1.5	10-1/2"	15"	675	5
	F006KFCSUMPT40	4	14"	20-1/2"		
1"	F010KFCSUMPT14	1.5	11"	16"	550	8
	F010KFCSUMPT40	4	15"	22"		
1-1/4"	F012KFCSUMPT14	1.5	13"	18"	510	10
	F012KFCSUMPT40	4	16"	24-1/2"		
1-1/2"	F014KFCSUMPT14	1.5	14-1/2"	20"	450	14
	F014KFCSUMPT40	4	18"	26"		
2"	F020KFCSUMPT14	1.5	16-1/2"	22"	435	18
	F020KFCSUMPT40	4	20"	30"		
2-1/2"	F024KFCSUMPT14	1.5	19-1/2"	26"	350	29
	F024KFCSUMPT40	4	22"	33-1/2"		
3"	F030KFCSUMPT14	1.5	22-1/2"	28"	325	43
	F030KFCSUMPT40	4	22-1/2"	36"		
4"	F040KFCSUMPT14	1.5	28-1/2"	42-1/2"	270	
	F040KFCSUMPT40	4	28-1/2"	42-1/2"		



L-FLEX



KFCSLWE

- ▶ Schedule 40 Carbon Steel Weld Ends
- ▶ Stainless Steel Hose & Braid

PIPE SIZE	PART #	MOVEMENT	OAL	MAX. WORKING PRESSURE @70 ° F.
1/2"	F004KFCSLWE40	4	19-1/2"	1,050
	F004KFCSLWE80	8	26-1/2"	
3/4"	F006KFCSLWE40	4	20-5/8"	675
	F006KFCSLWE80	8	28-1/8"	
1"	F010KFCSLWE40	4	22"	550
	F010KFCSLWE80	8	29-3/4"	
1-1/4"	F012KFCSLWE40	4	24-1/8"	510
	F012KFCSLWE80	8	32-1/2"	
1-1/2"	F014KFCSLWE40	4	25-1/4"	450
	F014KFCSLWE80	8	33-3/4"	
2"	F020KFCSLWE40	4	27-3/4"	435
	F020KFCSLWE80	8	37"	
2-1/2"	F024KFCSLWE40	4	30-1/2"	350
	F024KFCSLWE80	8	40-1/4"	
3"	F030KFCSLWE40	4	32"	325
	F030KFCSLWE80	8	42-1/4"	
4"	F040KFCSLWE40	4	36-1/4"	270
	F040KFCSLWE80	8	47-3/4"	

KFCSLRG

- ▶ Schedule 40 Carbon Steel Groove Ends
- ▶ Stainless Steel Hose & Braid

PIPE SIZE	PART #	MOVEMENT	OAL	MAX. WORKING PRESSURE @70 ° F.
2"	F020KFCSLGR40	4	28-1/2"	435
	F020KFCSLGR80	8	36-3/4"	
2-1/2"	F024KFCSLGR40	4	31-1/4"	350
	F024KFCSLGR80	8	37-1/2"	
3"	F030KFCSLGR40	4	32-3/4"	325
	F030KFCSLGR80	8	40-1/2"	
4"	F040KFCSLGR40	4	36-1/2"	270
	F040KFCSLGR80	8	48-1/2"	
5"	F050KFCSLGR40	4	40"	200
	F050KFCSLGR80	8	50-5/8"	
6"	F060KFCSLGR40	4	44"	185
	F060KFCSLGR80	8	56"	
8"	F080KFCSLGR40	4	49-1/2"	185
	F080KFCSLGR80	8	63"	

Note: For safe working pressures over 70 ° F., multiply the pressures shown at 70 ° F. by the correction factor for the required temperature....

TEMPERATURE ° F	CORRECTION FACTOR	
	BRONZE	STAINLESS STEEL
70	1.0	1.0
200	0.89	0.94
300	0.83	0.88
400	0.78	0.83
500	—	0.78
600	—	0.74

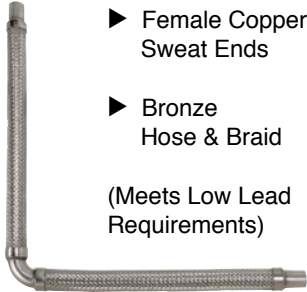


L-FLEX

KFCBLFSE

- ▶ Female Copper Sweat Ends
- ▶ Bronze Hose & Braid

(Meets Low Lead Requirements)



PIPE SIZE	PART #	MOVEMENT	OAL	MAX. WORKING PRESSURE @70 ° F.
1/2"	F004KFCBLFSE40	4	18"	520
	F004KFCBLFSE80	8	24-1/8"	
3/4"	F006KFCBLFSE40	4	20"	420
	F006KFCBLFSE80	8	27"	
1"	F010KFCBLFSE40	4	22-1/4"	315
	F010KFCBLFSE80	8	29-3/4"	
1-1/4"	F012KFCBLFSE40	4	24-1/4"	290
	F012KFCBLFSE80	8	32-1/4"	
1-1/2"	F014KFCBLFSE40	4	26"	250
	F014KFCBLFSE80	8	34-3/4"	
2"	F020KFCBLFSE40	4	29-1/2"	225
	F020KFCBLFSE80	8	38-3/4"	

KFCSLFLG

- ▶ 150# Carbon Steel Plate Flange
- ▶ Stainless Steel Hose & Braid

PIPE SIZE	PART #	MOVEMENT	OAL	MAX. WORKING PRESSURE @70 ° F.
2	F020KFCSLFLG40	4	26-1/8"	435
	F020KFCSLFLG80	8	34-3/8"	
2-1/2"	F024KFCSLFLG40	4	28-7/8"	350
	F024KFCSLFLG80	8	34-7/8"	
3"	F030KFCSLFLG40	4	30-3/8"	325
	F030KFCSLFLG80	8	38-1/8"	
4"	F040KFCSLFLG40	4	34-1/8"	270
	F040KFCSLFLG80	8	46-1/8"	
5"	F050KFCSLFLG40	4	37-3/4"	200
	F050KFCSLFLG80	8	48-3/8"	
6"	F060KFCSLFLG40	4	41-3/4"	185
	F060KFCSLFLG80	8	53-3/4"	
8"	F080KFCSLFLG40	4	46-1/2"	185
	F080KFCSLFLG80	8	60"	

KFCSLMPT

- ▶ Schedule 40 Carbon Steel Male Pipe Threads
- ▶ Stainless Steel Hose & Braid

PIPE SIZE	PART #	MOVEMENT	OAL	MAX. WORKING PRESSURE @70 ° F.
1/2"	F004KFCSLMPT40	4	19-1/2"	1050
	F004KFCSLMPT80	8	26-1/2"	
3/4"	F006KFCSLMPT40	4	20-5/8"	675
	F006KFCSLMPT80	8	28-1/8"	
1"	F010KFCSLMPT40	4	22"	550
	F010KFCSLMPT80	8	29-3/4"	
1-1/4"	F012KFCSLMPT40	4	24-1/8"	510
	F012KFCSLMPT80	8	32-1/2"	
1-1/2"	F014KFCSLMPT40	4	25-1/4"	450
	F014KFCSLMPT80	8	33-3/4"	
2"	F020KFCSLMPT40	4	27-3/4"	435
	F020KFCSLMPT80	8	37"	
2-1/2"	F024KFCSLMPT40	4	30-1/2"	350
	F024KFCSUMPT80	8	40-1/4"	
3"	F030KFCSLMPT40	4	32"	325
	F030KFCSLMPT80	8	42-1/2"	
4"	F040KFCSLMPT40	4	36-1/4"	270
	F040KFCSLMPT80	8	47-3/4"	





V-FLEX

KFCSVWE

- ▶ Schedule 40 Carbon Steel Weld Ends
- ▶ Stainless Steel Hose & Braid

PIPE SIZE	PART #	MOVEMENT	OAL	LENGTH	MAX. WORKING PRESSURE @70 °F.	WEIGHT (LBS)
1/2"	F004KFCSVWE20	2	18-1/4"	9-1/2"	1,050	4
	F004KFCSVWE40	4	26-1/2"	12-5/8"		
3/4"	F006KFCSVWE20	2	20"	10-1/8"	675	4
	F006KFCSVWE40	4	28-1/4"	13-1/2"		
1"	F010KFCSVWE20	2	21-3/4"	11"	550	5
	F010KFCSVWE40	4	31"	14-1/2"		
1-1/4"	F012KFCSVWE20	2	22-1/4"	12-1/8"	510	6
	F012KFCSVWE40	4	33-5/8"	15-7/8"		
1-1/2"	F014KFCSVWE20	2	24-3/4"	12-7/8"	450	9
	F014KFCSVWE40	4	35-5/8"	16-3/4"		
2"	F020KFCSVWE20	2	31-3/4"	14-1/2"	435	11
	F020KFCSVWE40	4	40"	18-5/8"		
2-1/2"	F024KFCSVWE20	2	34-1/2"	15-1/2"	350	18
	F024KFCSVWE40	4	46"	21-1/4"		
3"	F030KFCSVWE20	2	39-1/2"	17-3/4"	325	27
	F030KFCSVWE40	4	48-7/8"	22-1/2"		

KFCSVGR

- ▶ Schedule 40 Carbon Steel Groove Ends
- ▶ Stainless Steel Hose & Braid

PIPE SIZE	PART #	MOVEMENT	OAL	LENGTH	MAX. WORKING PRESSURE @70 °F.	WEIGHT (LBS)
1/2"	F004KFCSVGR20	2	24-1/4"	9-1/2"	435	17
	F004KFCSVGR40	4	37-3/4"	14-1/2"		
3/4"	F006KFCSVGR20	2	26"	10-1/8"	350	25
	F006KFCSVGR40	4	40-1/2"	15-1/2"		
1"	F010KFCSVGR20	2	27-3/4"	11"	325	35
	F010KFCSVGR40	4	45-1/2"	17-3/4"		
1-1/4"	F012KFCSVGR20	2	28-1/4"	12-1/8"	270	48
	F012KFCSVGR40	4	51-1/4"	20-1/4"		
1-1/2"	F014KFCSVGR20	2	30-3/4"	12-7/8"	350	25
	F014KFCSVGR40	4	40-1/2"	15-1/2"		
2"	F020KFCSVGR20	2	37-3/4"	14-1/2"	435	17
	F020KFCSVGR40	4	46"	18-5/8"		
2-1/2"	F024KFCSVGR20	2	40-1/2"	15-1/2"	350	25
	F024KFCSVGR40	4	52-1/4"	21-1/4"		
3"	F030KFCSVGR20	2	45-1/2"	17-3/4"	325	35
	F030KFCSVGR40	4	54-7/8"	22-1/2"		
4"	F040KFCSVGR20	2	51-1/4"	20-1/4"	270	48
	F040KFCSVGR40	4	62-5/8"	25-3/4"		

Note: For safe working pressures over 70 °F., multiply the pressures shown at 70 °F. by the correction factor for the required temperature....

TEMPERATURE °F	CORRECTION FACTOR	
	BRONZE	STAINLESS STEEL
70	1.0	1.0
200	0.89	0.94
300	0.83	0.88
400	0.78	0.83
500	—	0.78
600	—	0.74





V-FLEX

KFCBVFSE

- ▶ Female Copper Sweat Ends
 - ▶ Bronze Hose & Braid
- (Meets Low Lead Requirements)

PIPE SIZE	PART #	MOVEMENT	OAL	LENGTH	MAX. WORKING PRESSURE @70° F.	WEIGHT (LBS)
1/2"	F004KFCBVFSE20	2	19-7/8"	9-1/2"	520	2
	F004KFCBVFSE40	4	26-7/8"	12-5/8"		
3/4"	F006KFCBVFSE20	2	23-1/2"	11-1/8"	420	2
	F006KFCBVFSE40	4	31-1/4"	14-1/2"		
1"	F010KFCBVFSE20	2	25-1/4"	12"	315	2.5
	F010KFCBVFSE40	4	33-3/4"	15-1/2"		
1-1/4"	F012KFCBVFSE20	2	28"	13-1/8"	290	3
	F012KFCBVFSE40	4	36-1/2"	16-7/8"		
1-1/2"	F014KFCBVFSE20	2	29-7/8"	14"	250	3.5
	F014KFCBVFSE40	4	38-3/4"	17-3/4"		
2"	F020KFCBVFSE20	2	34-1/8"	15-3/4"	225	8
	F020KFCBVFSE40	4	44"	20"		
2-1/2"	F024KFCBVFSE20	2	43-1/8"	18-1/2"	135	12
	F024KFCBVFSE40	4	52-1/4"	23-1/8"		
3"	F030KFCBVFSE20	2	46-3/8"	19-7/8"	125	16
	F030KFCBVFSE40	4	55-7/8"	24-5/8"		
4"	F040KFCBVFSE20	2	54-1/2"	23-1/8"	100	22
	F040KFCBVFSE40	4	65-1/4"	28-1/2"		

KFCVFLG

- ▶ 150# Carbon Steel Plate Flange
- ▶ Stainless Steel Hose & Braid

PIPE SIZE	PART #	MOVEMENT	OAL	LENGTH	MAX. WORKING PRESSURE @70° F.	WEIGHT (LBS)
2"	F020KFCVFLG20	2	32-1/4"	14-1/2"	435	16
	F020KFCVFLG40	4	40-1/2"	18-5/8"		
2-1/2"	F024KFCVFLG20	2	35"	15-1/2"	350	25
	F024KFCVFLG40	4	46-1/2"	21-1/4"		
3"	F030KFCVFLG20	2	40"	17-3/4"	325	35
	F030KFCVFLG40	4	49-3/8"	22-1/2"		
4"	F040KFCVFLG20	2	45-3/4"	20-1/4"	270	48
	F040KFCVFLG40	4	57-1/8"	25-3/4"		
5"	F050KFCVFLG20	2	53"	23"	200	72
	F050KFCVFLG40	4	63-1/2"	28-3/8"		
6"	F060KFCVFLG20	2	59-1/4"	25 3/4"	185	144
	F060KFCVFLG40	4	71"	31-1/2"		
8"	F080KFCVFLG20	2	71-1/4"	30-1/2"	185	216
	F080KFCVFLG40	4	85-1/2"	37-1/2"		

KFCVMP

- ▶ Schedule 40 Carbon Steel Male Pipe Threads
- ▶ Stainless Steel Hose & Braid

PIPE SIZE	PART #	MOVEMENT	OAL	LENGTH	MAX. WORKING PRESSURE @70° F.	WEIGHT (LBS)
1/2"	F004KFCVMP20	2	21-1/4"	9-1/2"	1050	4
	F004KFCVMP40	4	29-1/2"	12-5/8"		
3/4"	F006KFCVMP20	2	23"	10-1/8"	675	4
	F006KFCVMP40	4	31-1/4"	13-1/2"		
1"	F010KFCVMP20	2	25-1/4"	11"	550	6
	F010KFCVMP40	4	34-1/2"	14-1/2"		
1-1/4"	F012KFCVMP20	2	26-3/4"	12-1/8"	510	7
	F012KFCVMP40	4	38-1/8"	15-7/8"		
1-1/2"	F014KFCVMP20	2	29-1/4"	12-7/8"	450	10
	F014KFCVMP40	4	40-1/8"	16-3/4"		
2"	F020KFCVMP20	2	36-1/4"	14-1/2"	435	12
	F020KFCVMP40	4	44-1/2"	18-5/8"		
2-1/2"	F024KFCVMP20	2	39"	15-1/2"	350	20
	F024KFCVMP40	4	50-1/2"	21-1/4"		
3"	F030KFCVMP20	2	44"	17-3/4"	325	30
	F030KFCVMP40	4	53-1/2"	21-1/4"		

